

CHAPTER-I

INTRODUCTION

1.1 Scope of the study:

It is said that the God created the villages and, man created the cities in their own image. Normally, the cities were established on the banks of the rivers, sea-coasts and fertile agricultural flat lands in the past (Chakraborty, 2006). The kings established cities as their capitals on the strategically important locations. There were cities as ports, trading marts, industrial centres and places of pilgrimage, holy shrines, and focal points of transport and so on (Jones, 1966). Certainly, the cities mean concentration of population at a point on a particular location.

The term 'urbanization' may put before us an idea of a modern humanization, but its presence dates back to the pages of history since the ancient civilization (Bose, 1973). Due to different social, economic, cultural, historical or even political reformations, we have been well acquainted about a city's origin, its development, evolution, and its decay several times. In this connection, Cooch Behar, the headquarter of the District of Cooch Behar, which even 300 years ago had been a Koch kingdom, was a planned urban centre (Bandyopadhyay, 1879). Though this settlement has been greatly developed and progressed by rapid urbanization, still different problems and gaps related to the development of this town are also undeniable facts. It has also been a demonstrated truth that urbanization brings in its wake a number of unwanted situations which are inseparably and organically related to each other and thus, unfortunately, hard to avoid. Right at that stage, a fully flourished town starts deterioration and the urban life becomes horrible and gradually loses its progress, if not swift and carefully planned renewable programme are introduced. The present research work thus tries to aim at the appearance of Cooch Behar town from a princely state capital to a town, its growth, evolution and development as well as highlights the problems that have been originated due to the proximate result of urbanization (Debnath, 2007).

Settlements are often divided into two types-rural and urban. In the beginning, these settlements bear simple forms, but with the growth of civilization and technical knowledge, the degree of variability in their size and the complexity of their relationships become overwhelmingly greater (Bhattacharya, 2010). The term 'urban' is usually applied to a spatial or areal unit, having marked secondary and tertiary functions which differentiate it from a rural unit. 'Urbanism' is 'the way of life' (Wirth, 1938) prevails in an urban area, while 'urbanization' is the process of evolution of urban units or areas. Jones (1966, p79) has defined an urban settlement as a physical accumulation of houses and streets or it is a centre of exchange and commerce or it is a kind of society or even a frame of mind. However, urban areas may be defined according to different criteria such as size, population density, and type of local government like the municipality or notified town area committee. It is related to a town or a city with a large nucleated settlement in which the majority of the employed inhabitants are engaged in secondary and tertiary activities (Datta, 2006). It is customary in every country to classify the population as rural and urban. In general, a town is defined as a compact settlement with inhabitants engaged chiefly in non-agricultural occupations. However, there is no universally agreed definition of a town in terms of population size as to distinguish it from a city or village. It is essentially an urban settlement with a business centre that serves its own inhabitants and others who live outside its boundaries. The term 'urban' is usually applied Specific characteristics of settlements. It refers to towns or cities having marked secondary and tertiary functions along with a municipality or Committee. It concerns with the geography, their situations, patterns, layout, Housing and hierarchical organization of population concentration and service Urban habitat, on the other hand, includes the habitat of urban their mode, relationship with the neighbouring have an impact urban environment and of the area (Bapat, 2006).

By definition, the Indian Census (2001 similar to 1991) treats those areas as urban which are either statutory town i.e. all places with a Municipal Corporation, Municipal Board, Cantonment Board, Town committee or notified area or which have been got a (i) minimum population of 5000 persons coupled with (ii) three-fourths (75%) of its male workforce is engaged in non-agricultural economic activities and (iii) a density of at least 400 persons /km². As rural administratively would be treated also as urban in the census if they fulfil the above

three criteria (Chandana, 1992). Such urban areas are called 'Census Town'. The term 'Urban' refers to towns or cities having marked secondary and tertiary functions along with a municipality or notified area committee. So, urban areas concern with the geography of towns, their situation, pattern, layout, housing and hierarchical organization of population concentration and service area (Mandal, 1999).

West Bengal Municipal Act, 1993 specifies a set of criteria for the constitution of any municipal area. However, such criteria are subject to relaxation for the constitution of notified areas (Ghosh, 2011). The criteria are:

- (1) The population of the area should not be less than 20,000.
- (2) The density of population should not be less than 750 inhabitants /sq. km.
- (3) One half of the adult population should be chiefly engaged in pursuits other than agriculture, and
- (4) Income from taxation and other sources should likely to be adequate for the discharge of municipal functions under the Municipal Act.

However, the requirements and aims started to change with time and many of them gradually lost their relevance during post-independence era. During this period hardly few new municipalities were formed and most of them were under bureaucratic control without any provision of the election (Hesselberg, 2002). From the mid-eighties, a consistency of decentralization was found to observe which started to give emphasis not only in the increasing numbers but also in the activities of several municipal corporations and other Urban Local Bodies (ULBs).

It is the fact that 21st century is the age of urbanization, more so for the developing countries. Urbanization is associated with the concentration of population in towns and cities (Bhattacharya, 1995). It is a process through which a society gets transformed from an agrarian economy to an industrial economy and from a small homogeneous society to a large heterogeneous society. According to most conservative demographic analysis, 60% of the world population will live in cities by another quarter of a century, a paradigm shift in comparison to the last century when the similar percentage of people were actually lived in the rural habitats throughout the world. In terms of percentage of population living in urban areas, India is not highly urbanized. However, the growth of urbanization in India has been quite rapid in the last few decades and India is meant to be a major player in this pace of urbanization which is considerably fast among the developing countries.

Urbanization is a special significance in the developing countries, as the latter it has been a relatively recent phenomenon (Knowles and Wareing, 2011). Since independence, the state of West Bengal has been witnessed a steady rate of urbanization and the percentage of urban population in West Bengal has always been higher than the national average. During the decade 1951-61, due to historical reason and in recent years, as fallout of agricultural prosperity, the state had significantly stemmed the process of the rural to urban migration. According to census 2011, the state shares about 31.87% of the urban population than that of the national level of 31.16%. There are 3784 census town as per 2011 census where as against 1362 in 2001 census. As per 2011 census there are 4041 statutory town as against such town 3799 in 2001 census. As a matter of fact, the number of class-I towns in the state has gone up almost 12 times during the last three decades (Census of India, 2011).

There is no doubt that due to the applications of government policies and efforts, resultant rapid urban growth provides various opportunities for the state to develop, though the additional problems of inadequate infrastructure, unemployment or underemployment, urban poverty, slums, blights, overcrowding, congestion, insanitation, traffic problems, low provision of basic urban amenities, scarcity of goods and services, gender inequality, environmental pollution, socio-cultural degradation etc. are creating continual and acute crisis to such urban centres (Kaur, 1995).

1.2 Selection of the topic:

The present study is incarnate of the problems of urbanization and their effects on the people. There are some motivating factors which attract the researcher to study a particular town like Cooch Behar where 'Koch Dynasty' as a causative factor behind the origin of Cooch Behar town, rapid increase in population due to heavy influx of immigrants from erstwhile East Pakistan (Bangladesh), rural depopulation in the surroundings of the town, changes in the trend of population growth as well as land use pattern and related problems. Cooch Behar is the oldest urbanized area in North Bengal and even it is the oldest one in West Bengal also. The princely state was transformed into Cooch Behar District, with Cooch Behar town as its headquarters. Cooch Behar town is also the largest town in the district (Saha, 2008).

Cooch Behar is the only planned town in the entire North Bengal region having the memories of the royal heritage. The monuments and palaces depict the lives of the

golden ages. Cooch Behar was an independent kingdom before merging up with India. The land of glorious past with rich heritage and culture- lies of the eastern state in West Bengal bordering Assam in the east and neighboring country Bangladesh in the south. Although the metropolitan and big cities are always getting the priority to the town planners to formulate planning policies for the betterment of their environment which suits for an ideal place to live in the small and medium towns are becoming always neglected in terms of proper planning and development (Siddhartha, 2010). So, the planners should have a new look upon the growing needs of the small and medium towns to reduce the pressure from the big cities on one hand, and on the other hand to create a balance urbanization over the whole country. Keeping it in mind such conditions, the present research is going to discuss the problems of urban setting in Cooch Behar town and strategies for development in future (Siddhartha and Mukherjee, 2009).

1.3 Statements of the problems:

The increasing rate of urbanization has generated lots of problems in Cooch Behar town which are both physical and cultural and that can be realized through the occurrence of the following phenomena:

- I. Rapid population growth induced increase of slums, shortage of housing, overcrowding and congestion, unhealthy living condition etc.
- II. Uncontrolled growth of urbanization becomes responsible for damaging environmental stability with the haphazard growth of settlements, market places etc.
- III. Space constraint for physical and social barrier resultant discomfort in living, the risk of disease, insufficiency in water supply and difficulties in the disposal of waste. The slum pockets in the town are one of the important sources of environmental pollution and sanitation problems. The increase of anti-social activities in such slums along the fringe areas causes socio-cultural degradation.
- IV. Increased demand for urban service fails to keep pace with the available infrastructure and thereby a gap between the demand and availability of urban service due to resource constraint.

V. Unplanned urban growth on a pre-existed planned urban area shattering systematic development of the town.

Therefore the present study has been undertaken to assess the urbanization problems of Cooch Behar town and to propose corrective measures for sustainable development of this urban area.

The increasing rate of urbanization has been generating lots of environmental problems in Cooch Behar town. There has been found a changing pattern of environmental quality and sustainability in recent years due to increasing urbanization. The sewerage and drainage systems in the town are not so scientific in terms of the flow of water. The stagnant water leading to unhygienic conditions like a foul reputation, breeding places of mosquitoes etc. Not only that the problem of water logging causes in some parts of the town due to over flow of such drains during heavy rainfall (Jana, 1996).

The rapid rate of increase in population has been held responsible as one of the most significant factors of the unsustainable environment of this area. As a consequence of rapid population growth, several problems have been emerging e.g. growth of slums, shortage of housing, overcrowding and congestion, unhealthy living condition, the breakdown of infrastructure etc. (Mandal, 1990).

It is true that rapid population growth has accelerated the process of urbanization in this area, even worldwide but at the same time it cannot be denied that unplanned and random growth of urban morphological pattern has been damaging environmental stability in the heart of this settlement like Cooch Behar town. It is now very difficult to renew or redevelop those existing defective morphology to check the ever increasing environmental problems. The small town like Cooch Behar, which may emerge as a giant urban hub in coming future, should be viewed carefully considering the spread of environmental inequality and accordingly sustainable nature based developments will have to be established.

The area and population of an urban centre increase with the urbanization of the region. Due to population pressure on the one hand and marginally improving living standards on the other, the demand for urban service is steadily increasing in Cooch Behar town. Here the gap between available urban infrastructure and their demand among the public has been increasing continuously due to resource constraints. The

town under study has many such problems, of which some are very acute and need attention for identification. Maintenance of purity and safety of the environment in the face of increasing urbanization and mechanization of daily life is emerging as the most challenging problems facing Cooch Behar town today. The growing of people together in confined space has always produce discomfort, the risk of disease, problems of food and water supply and difficulties in arranging for the disposal of waste. As cities have grown, these environmental problems have become so severe that the liberation the cities provided appears to be reduced by the restrictions imposed by the urban environment (Mandal, 2001).

The Cooch Behar town has a unique historical background since 1510 A.D. The urbanization process in Cooch Behar town has occurred for more than three centuries. It is seen that infrastructural as well as public services (Amenities and facilities) of that town are faced various unscientific urbanization processes of occurrences. Though, there are some advanced techniques of urbanization followed by the "Coach dynasty" in the pre-independent era i.e. all the roads in the town are connected together at a right angle and most of the houses in the town are square in shaped. Beside this sewerage system of the town is highly developed and modernized. But, along with these facilities, Cooch Behar town are not rapidly growing by means of population and commercialization.

The Cooch Behar town in Cooch Behar district, West Bengal, India falls into the category of class-II town as classified by Census of India due to its population ranging between 50000 & 99999 (2001Census). It has all the criteria, which are required for the development of an urban area. As stated earlier, urbanization is a complex process of change affecting both people and places including the socio-economic, cultural as well as the physical structure of the area its adverse effect of has been increasing day by day, which becomes a serious problem of the town at present. So, growth pattern and environmental problems, both are very important aspects of the study to analyze the genesis of environmental sustainability in towns like Cooch Behar (District Statistical Handbook, Cooch Behar, 2008).

There are many environmental impacts of urbanization, due to factors such as paving over formerly vegetated land, increasing number of residences and high-rise apartments and commercial places, temperature increases drastically. Factories and automobiles are symbols of urbanization. Due to harmful emissions of gases and smoke from

factories and vehicles, air pollution occurs. Current research shows the high amount of suspended particulate matter in the air, particularly in cities, which contributes to allergies and respiratory problems thereby becoming a huge health hazard. When urbanization takes place, water cycle changes as cities have more rainwater than surrounding areas. Due to the dumping of sewage from factories in water bodies, water pollution occur which can lead to outbreaks of epidemics. To make an area urbanized, a lot of forested areas are destroyed. Usually, these areas would have been habitats for many birds and animals.

Along with above mentioned features Cooch Behar town is also poor in its infrastructural services, though it was more developed in the pre-independent era. For these reasons, we are trying to analyze and find out the basic needs for reforming its old glorious days. Even since independence, urban problems in India have been growing on a rapid scale over the decades, the problems of the cities and towns of India have gone up to nightmarish proportions in the absence of proper policy to rearrange them from gradual deterioration.

On the whole, these problems have arisen from the desperate development in the cities and towns. In 2011 census, it is found that the proportion of urban population is 31.16 percent of the total population of 1210.2 million. But the paradox of urban development in India is that there is a reflective tendency of population concentration in the large cities and towns. In spite of relatively slow pace of urbanization. It is revealed that almost 65 per cent of the urban population lives in 300 cities (with a population of 100000 or more) and only about 35 per cent live in 3400 smaller urban places, designated as towns. There has been increasing concentration of urban population in large cities as the number of cities has increased from 216 in 1981 to 300 in 1991. The significant point to note is that the growth rate of cities and large towns has been significantly higher than the growth rate of smaller towns. Clearly, the spatial imbalance is the predominant feature of Indian urbanization and has been the root course for the persistence of urban problems in India (Jhingan, et. al. 2016).

It is essential then, that the determination of imbalance in urban development in post-colonial India is responsible for the brake of the urban centres. Most of the towns and cities have grown on their own in the unplanned manner, almost devoid of basic living conditions, causing extreme hardship to the inhabitant, problems have been intensified for delaying appropriate action in the face of weakening urban condition. Crucial areas

of urban living such as water supply, trading, sewage, transport, electricity, housing, garbage disposal, sanitation, health, parks, playgrounds and wetlands for maintaining ecological balance, demarcation of market and residential places etc. are entirely below the required standard. It appears that the shortfalls in all these areas have hastened the impurities of cities and towns. Besides, the improper use of available resources and absence of mass accessibility to basic civic facilities have turned Indian urban problems in to a grave crisis. It is revealed in a study that the poor in the urban areas of Indian do not have adequate access even to such basic facilities like water supply, sanitation and sewage which leads to micro-level environmental degradation. The condition of other basic facilities in urban centres for the poor is understandable from a realistic understanding of the widespread condition. The argument is not only for a pro-people approach in urban planning, but also to emphasize that the inaccessibility of the urban poor to the basic needs of living rewards the environment to affect all (Verma, 2008).

After independence, several experiments have been made for the search of an appropriate policy. Policies, whatsoever undertaken by the government have been overtaken by events, for which the planners have been urged to look for an alternative policy. Initially, after independence, the conceptual basis and the actual practice of town planning have followed the British pattern. Afterward, there have been efforts to incorporate indigenous elements and the inclusion of local belief, culture, attitude etc. in the development process in order to make the policy more approachable to popular demand and also for self-reliance. Such a belief has gradually begun to influence the minds of the national policy makers that the mechanistic pursuance of the western models is incredible to be the solution, which should be replaced by a more culture specific indigenous alternative (Sing, 2010).

Hence, there is almost no other choice than to rely upon the government for the removal of impediments to healthy urban growth. It is then imperative that the national planners have to enhance the capacity of the administrative and political institutions by equipping them with adequate resources, technical, personnel, appropriate development policies etc. But the creation of administrative and political institutions of greater capacity cannot alone lift the cities and towns from the present stagnation and termination. The efficiency of the administrative machinery for urban development can be considered in terms of its sensitivity of the problems in the different cities and towns (Murty, 2014).

In India, remaining to the great disparity between the metropolis and the periphery, the development of the small and medium cities or towns is thought crucial for counterbalancing the distorted pattern of urban growth. On account of this, it is an undeniable necessity that the administrative and political institutions have to enhance their organizational ability and efficiency to meet the increasing problems of the cities and towns. But the functioning of the institutions is conditioned by the social, economic and political setting. Therefore, in India the working of the urban development machinery should not be conceived of in isolation from the social, economic and political environment within which they discharge functions (Hema and Jamal, 2004).

Here, in the case of Cooch Behar, a medium size town, administrative and political institutions, created for the improvement of the stagnant condition of the town, has also to discharge their functions within the social, economic and political environment. These urge for the re conceptualization of the process of functioning of the institutions and agencies, to understand the ability of them in relation to the changed perspective of development. Therefore, the critical assessment of the concepts of development, decentralization, participation, urban development integration, coordination, leadership, political linkage and conflict as well as regime variation, is required for understanding the reality and dynamics of change.

1.4 Review of literatures:

Urban geography is an outstanding branch of Human Geography without which development of an area cannot be imagined but unfortunately, this branch of Geography is very much neglected until recently. Urban geography deals with the study of site, evolution, morphology, spatial pattern, functional classification, urban economic structure and administration, a hierarchy of central places, urban development and planning etc. of towns. Historically, urban geography is standing on three main themes-the quantitative and descriptive approach which establishing the spatial organization in the town, the behavioural method that emphasizing the decision making process within the perceived environment and the radical tradition which not only stresses the spatial inequalities and the inequitable distribution of resources within a town, but suggests strategies to solution such problems (Jones, 1966).

Urban or Town planning is a common agenda for geographers, economist, planners, engineers, even of the politicians. Essentially, with the rapid growth of population,

industrialization, business, transportation, the importance of urbanization is being considered as the first agenda among the developmental processes and thus come to the forefront of different issues (Lodha, 1976). However, towns are the impression of civilization of a country. A country's state of economic development is judged by its cities-the quality of it and the quantity or number of it. In the modern era, cities and towns are known as much for their glamour as for their problems. Their nature and problems is becoming more novel which is an interesting but problematic field of study to the town planners. Substantial works have been done in this field by a lot of exponents who have made remarkable works on urban Geography. In the recent past, many eminent scholars have contributed a number of studies in the form of books, journals, papers and reports to study the process and pattern of urbanization, morphology and evolution of towns and related problems.

1. Louis Wirth (1964) in his book **“Urbanism As a Way of Life”** observed that urbanism is a way of life of the people who lives in urban areas tend to be highly mobile, there are weak bond between them, pace of life is faster, larger number of people live in close proximity to one another without knowing each other personally. Most contact between city dwellers are passing and partial rather than being satisfying relationships in themselves. There is a great deal of confusion in the use of the term ‘urbanization’ and ‘urbanism’. Urbanization is not urbanism and it is generally misconceived. Urbanism represents a particular way or style of life contrast with that of rural agriculturally dominated communities while urbanization refers to the process whereby a traditionally rural bond community wholly or partially moves to adopt different patterns of living. According to him, urbanism is a way of life of urban places. He defines it, “the complex of traits which makes up the characteristic mode of life in cities and urbanization which denotes the development and extension of these factors.

2. G.K. Roy (1988) in his article **“Economics of Urban Solid Waste Management”** analysed the social crisis arising out of energy and material shortage and ecological imbalance is going to hit of the developed and the developing nations of the world in a big way. Of late, the attention of the city planners and the scientists has rightly been focussed on the huge tonnages of solid waste generated by the urban folk, which otherwise poses a serious threat to the habitat due to its improper and unscientific disposal. On the other hand, hygienic solid waste management techniques are often cost-intensive. Technological innovations with resource or energy winning are

economically - balanced propositions for urban solid waste management. In this article, a socio-economic analysis of the traditional and the methods of urban solid waste management have been presented. Strategies for economic solid waste management in the Indian context have also been highlighted.

3. Amitabh Kundu (1994) published an article on “**Pattern of Urbanization with special reference to Small and Medium Towns in India**”. According to him, urban growth across the size categories presents some interesting features. Till the nineties Class I cities in developed states grew at a faster rate as compared to small and medium towns. Whereas in the less developed states, small and medium towns grew at a similar or higher rate than that of Class I cities. This pattern changed in the nineties. Many of the less developed states like Assam, Bihar, Himachal Pradesh, Orissa and Rajasthan experienced high urban growth in their Class I cities as compared to smaller towns. Cities with million plus population registered a higher growth than the overall growth of all the Class I cities during 1981 - 91 recorded 2.96 per cent growth while in 1991-2001 growth rate of 2.76 per cent was recorded. During the same period, million plus cities grew at the rate of 3.25 per cent and 2.88 per cent respectively.

4. Mahinder Chaudhry (1995) in his article “**Global Population Growth, Economic Development and Environmental Impact: Case-Study of India, 1991-2001**” discussed that both developed and developing economies face the challenge of sustained economic development without environmental damage. Although sustained economic growth is a necessary condition for eradication of poverty and wide-spread increase in human welfare. Economic progress has, in general, potential adverse environmental effects. Nature of environmental problems depends upon the level of economic development, the nature of industrialization, the degree of urbanization and the effectiveness of public policies. This article examines in the impact of population growth and economic development separately, but with reference to imagines the global warming between 1991 and 2001, with special reference to India.

5. John Bellamy Foster (1999) in his book “**The Vulnerable Planet: A Short Economic History of the Environment**” traced out the impact of development on planet as changes in four key areas via, population, energy, industrialization and urbanization. In his opinion environmental degradation is not the result of increased population, or increased accumulation or the introduction of less environmentally

benign technology. It is the product of all these factors. Therefore improvements in any one of these variables can have a beneficial environmental impact and vice versa.

6. Susan E. Chaplin (1999) in her paper entitled “**Cities, sewers and poverty: India's politics of sanitation**” discusses the political circumstances which help explain why the insanitary living conditions of such a large section of India’s urban population have been ignored, and contrasts these with the circumstances which explain successful sanitary reform in Britain in the second half of the 19th century. In India, there is a little middle class pressure for sanitary reform, in part because of the ability to the middle classes to monopolise what basic urban services the state provides, in part because modern medicine and civil engineering have lowered the health risks that they might face from the sanitation-related diseases that lower income groups suffer.

7. Darshini Mahadevia (2001) in her paper entitled “**Sustainable urban development in India: an inclusive perspective**” said that the mainstream debate on urban development looks either at urban development or sustainable cities, and tends to miss out on people-centred approaches to development. The former addresses the issues of economic growth, whereas the latter that of environmental problems, to the exclusion of development concerns of the poor. The new perspective of Sustainable Cities in the South is an ‘inclusive approach’, which puts the vision of the poor and marginalised sectors at the centre and includes all the dimensions of development in holistic and synergetic manner. The paper presents such a vision of sustainable cities in India and describes activities aimed at reaching this vision.

8. Amitabh Kundu (2003) published an “**Impact of Neo-Liberal Paradigm on Urban Dynamics in India**”. According to him, there has been changing the pattern of urban growth. The urban growth rate from 1951 to 1991 was generally high in relatively less developed states like Bihar, Madhya Pradesh, Orissa, Rajasthan and U.P. The relatively better-developed states like Punjab, Tamil Nadu, and West Bengal experienced low urban growth. The developed states like Gujarat, Haryana, and Maharashtra recorded high or medium growth. There was a significant departure of this pattern in the nineties from the earlier decades as the developed states registered urban growth above the national average while the less developed states experienced growth either below or equal to the Country's growth rate. Thus, Urbanization during the nineties is characterized by the concentration of population in developed regions or large cities.

9. Sudarsanam Padam & Sanjay Kumar Singh (2004) in their paper “**Urbanization and urban transport in India: the search for a policy**” has analyzed that urban population in India has increased significantly from 62 million in 1951 to 285 million in 2001 and is estimated to be around 540 million by the year 2021. In terms of percentage of total population, the urban population has gone up from 17 per cent in 1951 to 29 per cent in 2001 and is expected to increase up to around 37 per cent by the year 2021. Consequently, the number and size of cities have also increased significantly. Although circumstances differ considerably across cities in India, certain basic trends which determine transport demand (such as the substantial increase in urban population, household incomes, and industrial and commercial activities) are the same. These changes have placed heavy demands on urban transport systems, demand that many Indian cities have been unable to meet.

10. Siddharth Agarwal & Shivani Taneja (2005) in their article “**All Slums are Not Equal: Child Health Conditions Among the Urban Poor**” observed that increasing urbanization has resulted in a faster growth of slum population. Various agencies, especially those in developing countries are finding it difficult to respond to this situation effectively. Disparities among slums exist owing to various factors. This has led to varying degrees of health burden on the slum children. Child health conditions in slums with inadequate services are worse in comparison to relatively better served slums. Identification, mapping, and assessment of all slums are important for locating the hitherto missed out slums and focusing on the neediest slums.

11. Sancheta Ghosh (2005) in her paper entitled “**Concern of Environmental Degradation in India’s Planning—A Review**” analyses that India's environmental problems are gaining global significance because of the rapid and aggressive speed of urbanization and lack of infrastructure. Increasing urbanization, industrialization, and transportation, the second cousins of economic development put tremendous pressure on natural resources and therefore there is a pressing need to strike a balance between developmental planning and urgency to safeguard the environment. India is the first country, which has provided for the protection and improvement for the environment in its constitution. The author in her paper, therefore, made an attempt to throw light on the trends in India's planning for the reduction of environmental degradation.

12. Dewaram A. Nagdeve (2006) in his paper entitled “**Population, Poverty, and Environment in India**” examined the relationship of population of the environment

and with growing population, poverty and urbanization, the environments degrading. The study reveals that the country's population growth is imposing an increasing burden of the country's limited and continually degrading natural resource base. The natural resources are under increasing strain, even though the majority of people survive at subsistence level. Population pressure on arable land contributes to the land degradation.

13. Neha Madhiwalla (2007) in her article “**Healthcare in Urban Slums in India**” has analyzed that the growth of cities has always been accompanied by the growth of slums. The industrial revolution in Western Europe led to the migration of people to slums in cities which created by new conditions of ill health due to overcrowding, poor housing and unsanitary environment, coupled with poverty. While public health crisis was not unknown in earlier times, the institutions of family and church were primarily responsible for care and relief.

14. Siddharth Agarwal, et al. (2007) in their paper “**Urbanization, Urban Poverty and Health of the Urban Poor: Status, Challenges and the Way Forward**” have been suggested that one of the dominant concerns of the present age is improving the living conditions of the rapidly increasing population living in cities. For the first time in human history beginning 2007, more than half of the world’s population will live in cities. Estimates by the United Nations suggest that the world’s urban population has been increasing at a rate of 1.8 per cent annually and will soon outpace the overall world population growth rate of 1 per cent. Nearly 48 per cent of the world’s population lives in urban areas and the prime location of this extent in city dwellers are the developing countries such as India.

15. R.B. Bhagat (2011) in his article “**Emerging Pattern of Urbanization in India**” examined that the declining trend in the urban population growth rate observed during the 1980s and 1990s was reversed at the national level and the level of urbanization increased faster during 2001-2011. The urban population grew from 286 million in 2001 to 377 million in 2011 – an increment of 91 million, which is larger than the rural population increment of 90.5 million for the first time since independence. A substantial increase in the urban population is due to a net rural urban classification and rural-to-urban migration. A huge number of new towns emerged during the last decade, contributing significantly to the speeding up of urbanization.

Besides these, there are some books and some articles in journals, offering peripheral instance having some useful at various parts of this study, may be mentioned. These are Social Geography, by Michael Pacitone (1987) highlighting the pattern of geographical location and socio-spatial changes; 'Migration and urbanization' (1975) by Brin M. Du Toit stressing of the effect of migration on urbanization. 'Urbanization in India-problems and prospects' (1998) by U. Venkateswarlu ; 'A case study of a medium town'(1981) by H.G. Hanumappa, 'Rural migration in an urban setting'(1978) written by P.S. Majumdar and I. Majumdar have gone into the details of different aspects of urbanization in India; 'Urban development theory, fact and illusion' (1988) by J. Verson, 'Indian city poverty, Ecology and urban Development'(1978) edited by A. De Souza; Migration Geography (1996) by G. Kaur etc. are helpful in strengthening the ideas related to the study.

In this connection mention needs to be made of a few more publications have been helpful in explaining the urban situation in the area of study. 'A Reader in urban sociology' (1991) by M.S.A. Rao and 'Urban sociology in India' (1974) edited by M.S.A. Rao. There is another useful 'District Statistical Handbook' Cooch Behar, by Bureau of Applied Economics & Statistics, Government of West Bengal. Further, the Researcher was very much benefited in many ways gathering information of a wide range appearing in a number of journals, occasional papers and reports, North Bengal University Library, Internet Websites and other relevant sources etc.

1.4.1 Overview of literature relating to urban government in India: The Municipal government is not a new concept in Indian political life. These have been a lot of studies on urban administration and its problems. The present form of urban development in India is the legacy of the colonial rule. 'Rural Cities in India: Continuities and Discontinuities' is another notable work by Lynch Owen M. (1967) in which he has analyzed the role of caste and political parties in the affairs of Agra Corporation. Fox Richard, G. (1969) in the study 'From Zaminder to Ballot Box: Continuity and Change in a North Indian Market Town' have analyzed how have the modern ideas and structure replace the old structure of small town in Uttar Pradesh. Bhattacharya, N. (1976) in the book 'Management of Urban Government in India' has discussed the municipal organization and has highlighted the issues of municipal decision making and motivation of the functionaries to the work in the municipal environment. A number of authors like Chandrasekhar, C.S., Jha, G., Viswakarma,

R.K., Bijlali, H.U., Prasad, K., Misra, S.N., Julka, S.N., Pandit, V.L., and Hardikar, P.T., have contributed papers on different aspects and prospects of 'Integrated Development of Small and Medium Towns' edited By Viswakarma, R.K. and G. Jha (1983).

1.4.2 Overview of literature relating to urban government and management in West Bengal: In Bengal, municipal bodies were created before the independence of research in west Bengal. But before the eighties, there were very few studies in this area. In the book 'The City Government of Calcutta: A Study in Inertia' Ashraf Ali has studied municipal politics in Calcutta and has found that this city government has been incapable of providing even the basic service to the citizenry. Chowdhury, K. (1973) in the study 'Calcutta: Story of Its Government' has explored the gradual evolution of municipal government in Calcutta. Mukhopadhaya, A. (1984) in the book entitled 'Municipal Government and Urban Development: A Study of the Recent Reforms in West Bengal' has studied the reforms in municipal administration and the focuses behind the reforms during the period 1977, 1978, 1982-83. Dasgupta, B. (1988) in the book 'Urbanisation, Migration and Rural Development: A Study of West Bengal' has discussed the pattern of urbanization and the growth of small and medium towns in West Bengal. In an article 'Urbanisation and Migration in West Bengal' (1988), the author has observed that growing of urbanization in West Bengal has been due to migration.

Overview of literature relating to urban development and urban administration in North Bengal: Literature on urban development and urban government of north Bengal are limited. Mere few studies have been done so far on urban development and problems of municipal governments. There are two Ph.D. theses unpublished one done by Geographer J. Pal entitled 'Problems and Prospects of Developments of Kurseong town' (2002) and another by Sangita Lama entitled, 'Urban geomorphology of Darjeeling town' (1994). These two theses papers are about the urban centre which is Kurseong and Darjeeling town areas of Darjeeling hills. The first one deal with the problem and prospect of development of Kurseong town emphasizes on the factors that pose problems of the town and some prospects of development has been discussed. Sangita Lama has confined her studies to highlighting the urban Geomorphology and infrastructural situation on the associated morphology of the town.

There are three unpublished Ph.D. theses on the town of Siliguri. One done by an Economist R. Roy entitled, 'Economic change in Siliguri and problems of its urban development' (1985) and another by a Geographer P. Saha, entitled "Problems and prospects of development of Siliguri and Jalpaiguri town" (1991). While the third one "A study of problems and prospects of retail trade of consumer goods in Siliguri, District of Darjeeling, North Bengal" (1981) done by S. Chakraborty. The first of them "Economic change in Siliguri and problems of its urban Development "has focused primarily on the factors bringing about the economic changes in the overall activities of the town where as in the second thesis, Saha has confined her studies to highlighting the infrastructural situations on the associated problems. The study made by Chakraborty is, on the other hand, retail trade as its main focus. There is another unpublished Ph.D. thesis by B. Saha entitled, 'Urban habitat and level of development: a case study of Koch Bihar district' (2008), emphasizes on the habitat conditions and development in different towns in Koch Bihar district.

There are some of the research works available on urban development in North Bengal. Shyamal Mukhopadhyay (1977), in his research work "Urban Development in North Bengal, its process character and future trends" had made a study of central functional activities and the actual institutional scenario of the urban centres of North Bengal. Namita Choudhury (1988), in her work of "Urbanization in North Bengal in the post-independence period" explains the social, economic and demographic aspects of urbanization in North Bengal. Dilip Sarkar (1990), in his thesis, "Small and medium town development in West Bengal: A case study of selected towns in North Bengal" analyzed the historical background, growth pattern, the functional character, financial position and future prospects of urbanization in some towns in North Bengal. Utathya Bandopadhyaya (1996), in his thesis "Urban development and urban government in the districts of West Dinajpur and Malda" shows an elaborately study on demographic and socio-economic profile of some selected towns of these districts.

Many Scholars and writers have written on urban centres and urbanization at different times. As far as the study area is concerned, there are some articles and literature available on historical and sociological perspectives. But there is hardly any literature available particularly issues relating to problems of urbanization in Cooch Behar town.

However, the review of literature of an urban development suggested that no serious and exclusive work on urbanization in Cooch Behar town has been done by any scholar. The prime importance putting in to the problems of urbanization in Cooch Behar town demands such a serious study and the present work honestly attempts to remove the gap in this field.

1.5 Area of study:

Cooch Behar town 'the city of beauty' is situated at the centre in the district (Debnath, 2007). It is the part of Cooch Behar block no.-II. The town lies between the latitudes of 26°17'57"N to 26°21'00"N and longitudes of 89°25'49"E to 89°28'30"E. Cooch Behar town is located on the side of NH-31B at 153 Km from Siliguri and 771 km from Kolkata. The River Torsa flows by the western side of town. It is the largest town and districts headquarter in Cooch Behar District with an area of 8.29 sq. km. The 20 wards of the town are densely populated within 2.5 sq.km of its central periphery. The main feature of this town is the existence of ponds, Parks, Ground and heritage buildings. A major portion of the land of this town is under the settlement and commercial area.

Cooch Behar town has been submitted a proposal to the government to expand the municipal area. Once expanded the town may be upgraded to a C-category town from its present position, that is D-category, C-category municipality can be able to get many facilities from the Union government including additional funds under different developmental schemes. Presently there are twenty wards in Cooch Behar town. The number of wards may rise by seven to ten wards. The authority of Cooch Behar town expects a large portion of the Gram Panchayat areas adjacent to the municipal area like Khagrabari census town, Guriahati census town and Kharimala Khagrabari census town is likely to come under the Cooch Behar town. The residents of the proposed added areas may be able to enjoy all the civic facilities after merging of the Gram Panchayat areas with the town.

Administrative Boundary

Cooch Behar town area is bordered by Takagach village in the West, Chakchaka village in the East, Guriahati in the South and Khagrabari village in the North.

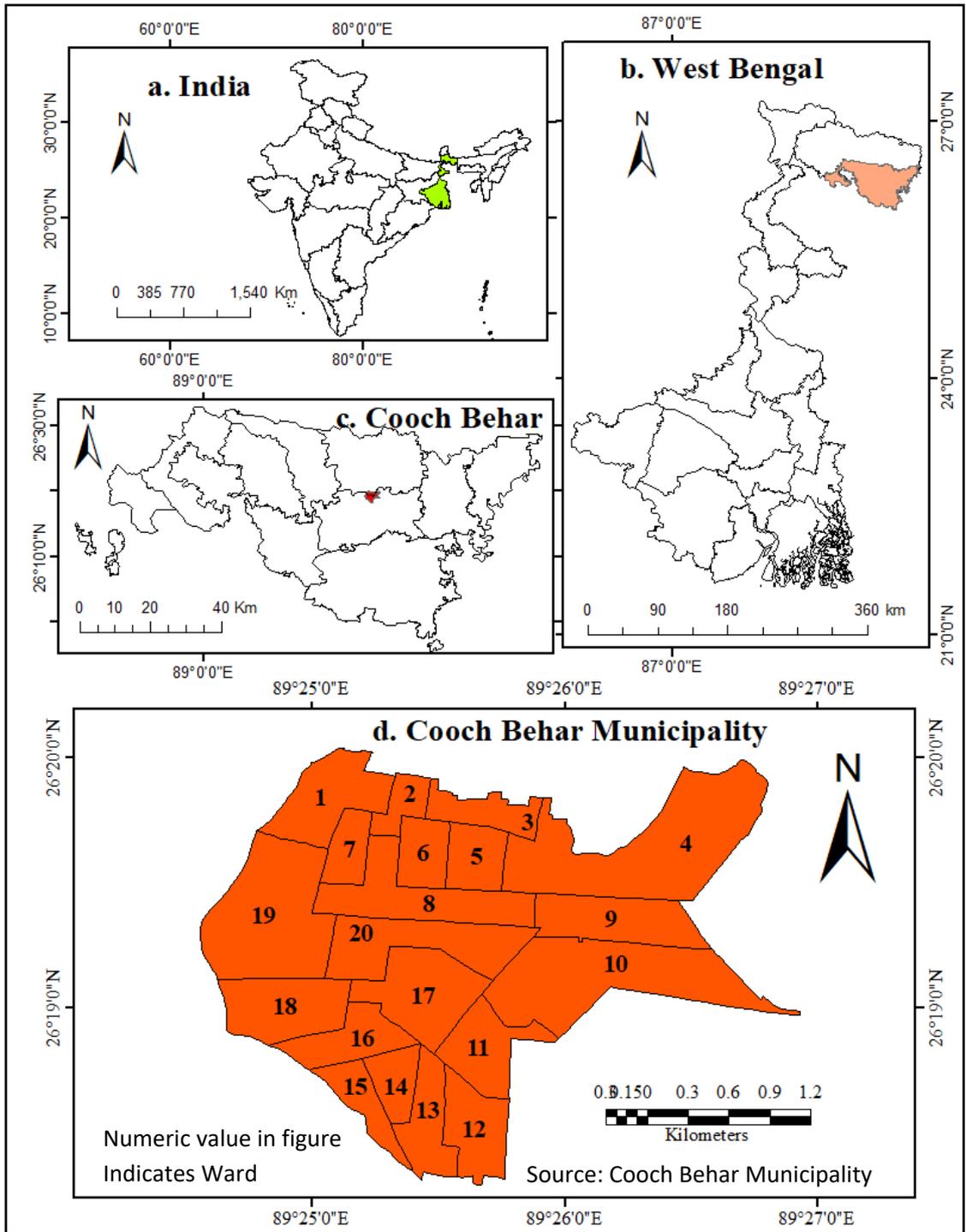


Figure 1.1: Location map of Cooch Behar town: a. India, b. West Bengal, c. Cooch Behar and d. Cooch Behar town.

1.6 Hypotheses:

Practically hypothesis has been defined as a tentative theory of supposition provisionally adopted to explain certain facts and to guide in the investigation of others. Hypotheses are propositions of a given set of facts which remain partly or wholly unverified. It determines the relationship between two variables and is accepted or rejected after empirical and experimental verifications.

The concept of 'environment' is often considered in a limited way to represent only the physical world around us. It is necessary to extend this concept to include not merely the biophysical natural environment, but also the man-made physical environment as well as the political, economic, cultural, technological, social and aesthetic environment.

In the present study, the Researcher will carry out the work with the help of following hypotheses

- i) There is a mutual relationship among physical, cultural and societal landscape with the urbanization in the study area.
- ii) Urbanization of Cooch Behar town encounters many environmental issues which are by nature anthropogenic.
- iii) Growing urbanization has resulted many negative impacts in Cooch Behar town.

1.7 Aims and Objectives:

The study basically deals to determine the degree and causes of environmental impact due to urban growth and development in the Cooch Behar town based on following objectives.

- i) To find out the factors leading to the urbanization in Cooch Behar town.
- ii) To study the land use characteristics of the town.
- iii) To highlight the major environmental issues created due to urbanization in Cooch Behar town.
- iv) To identify the major problems in Cooch Behar town.
- v) To suggest proposals to overcome the problems.

1.8 Methodology:

The study is based on a combination of historical, analytical, quantitative and empirical methods of enquiry. Accordingly, three sources of data have been explored: (i) primary sources; (ii) secondary sources and (iii) field investigation. Primary sources

include materials and information which have been collected from the reports of the committees and commissions, set up by the government, municipal and government records and documents. Secondary sources have been examined to explore the relevant issues covered in the study. These include books, journals, and periodicals which are relevant to the study. Apart from collecting information from primary and secondary sources, the survey method through the administration of questionnaire and interview has been applied for the collection of relevant data and enquiry in to the research questions. Field investigation has been conducted to obtain perceptive data from personal interviews, structured and non-structured questionnaire.

The structured questionnaire administered to all the categories of respondents have been divided into the following section:

- a) Personal identification of the respondents.
- b) Perception of the respondents about the relation between the municipality and the agencies like the PWD, PHE, state electricity board and the bank etc.
- c) Perception of the respondents about the problems in Cooch Behar.
- d) Perception of the respondents about the management of finance and personal affairs of the municipality.
- e) Policies of urban development in Cooch Behar.

Apart from the structured questionnaire, non-structured, open-ended questionnaires have been administered of the officials like PWD, PHE, WBSSED and the interagency coordination, its problems and organizational framework of urban development. Besides, personal interviews with the chairman of the municipal board have been undertaken to obtain their views about various aspects of the municipal area during the time.

Collection of data: In collecting data, the method of random sampling has been applied. The respondents have been selecting from the economic background through the method of random sampling to make the selection entirely objective and free from personal prejudice.

Sample Survey:

A sample is that part of the universe which we select for the purpose of investigation. A sample should exhibit for the characters of the universe; it should be a 'microcosm' a word which literally means small universe sampling is simply the process of learning about the population on the basis of a sample drawn from it. Thus in the sampling technique instead of every unit of the universe, only a part of the universe is studied and the conclusions are drawn on that basis for the entire universe. So the selected respondents constitute what is technically called a 'Sample' and the selection process is called 'sampling technique'. The survey so conducted is known as 'Sample Survey'.

The information has been collected by interviewing urban dwellers both slum and non-slum area in Cooch Behar town on the suitably framed questionnaire. For this purpose, 15 respondents were identified from each ward followed by stratified random sampling method. Following this method, 300 respondents were selected; out of this 100 are slum dwellers.

Interviews:

The author employed the interview technique for collection of data. Open interviews had been arranged with the different categories of respondents for collecting information and peoples' perception in Cooch Behar town (Plate 1.1). Generally, the author tried to make prior appointments with the respondents for setting up interviews and found no difficulty in setting up interviews with the officials, elected members and the general people in the time originally scheduled for the interview.

Before getting down to the schedule a number of queries had to be answered as to the author's profession, address, the intention in conducting the survey etc. Most of the respondents welcomed by the subject of the study and replied the questions in the schedules frankly and in a friendly atmosphere. In course of these interviews, the respondents also gave some relevant and useful information in addition to questions in the schedule.



During Household survey, 2017

Plate 1.1: During Household survey, 2017

Processing of data:

Data obtained from field survey have been processed normally. After the completion of the survey, these have been modified, processed and tabulated. In the case of non-structured and open-ended questions, the response has been categorized, processed and tabulated. Shortage of fund has prevented the adaptation of more sophisticated means for the analysis of data.

Statistical Tools Employed:

In order to analyze and interpret the data obtained from the census annual report in this district and data collected by interviewing, different statistical tools and techniques are used in this study. The statistical techniques are as follows.

Standard Score:

The composite index (CI) have been calculated by the following equation

$$CI = \frac{X_1 * \bar{X}/\sigma + X_2 * \bar{X}/\sigma + X_3 * \bar{X}/\sigma + X_4 * \bar{X}/\sigma + X_5 * \bar{X}/\sigma + \dots \dots \dots X_n}{W_1 + W_2 + W_3 + W_4 + W_5 + \dots \dots \dots W_n}$$

Where,

CI= Composite Index

X₁, X₂, X₃, X₄, X₅ X_n Are the selected indicators

\bar{X} = Mean value of the town

σ = Standard deviation of each indicator

The inter-wards variations are grouped into four categories of the less developed region, moderately developed region, developed region and highly developed region on the basis of natural break (Jenks) method.

Weighted Mean: When all observations do not have the same importance we compute weighted arithmetic mean. It is the most important tool for studying a number of economic problems. It is also used to calculate in the construction of index numbers.

Standard Deviation- It is by far the most important and widely used measures for the study of dispersion. It satisfies most of the properties of a good measure of dispersion. Standard deviation is also known as the root mean square deviation. The square of the standard deviation called the variance. It is conventionally symbolized by σ . The formulas for standard deviation for ungrouped and grouped data by direct and shortcut methods are given below.

Analysis of the data: The study seeks to find out the answers to the research questions, formulated in the earlier section. Both the structured and non-structured questionnaire is designed to find out the answers to the research questions. At first, the data have been classified into different categories on the basis of the problem studied in the different chapters. After making the categories in terms of the research questions, they have been modified for tabulation. After this, the data so categorized and modified have been arranged in the form of tables to obtain the findings of the survey. The data on the perception of the respondents on various issues of urban problems have been arranged in terms of age education, economic and political status of the respondents in a

selective manner. Field data on basis of the questionnaire have been arranged and integrated with their relevant selections instead of providing them in separate sections.

1.9 Sources of data:

For analytical purposes, both primary and secondary data sets are required to carry on this research work. Therefore, it is based on two types of data- primary and secondary.

Primary sources: The work is partly being based on field investigation. For the collection of data related to urban services in urban areas, appropriate officials of various departments have been consulted about the urban area. Associated officials also are consulted regarding the Govt. programmes towards planning and development of small towns. The primary data sets have been collected from the field by interacting with people to analyse the characteristics, pattern, and problems of urbanization. Sample survey at household level has been done for the collection of data related to housing and neighbourhood situation. In this study, attempt has made to chalk out the evolution of urban settlement also in brief.

Secondary sources: The secondary data has been collected from books, journals, official records, annual reports, the census reports, district census hand books, key of statistics in Cooch Behar district, district level planning report in Cooch Behar. In addition, secondary data have been collected from different Government, Non-Government establishments like Block offices, the office of S.D.O, the D.M., PHE office, NIC, Cooch Behar and so many other sources.

The description about the evolution of the township have been gathered by consultation of several books, journals, magazines, records, reports, literature etc. published both at personal levels and government levels and also by the municipal authority itself. Several interviews are conducted with the elderly, learned and knowledgeable persons of the town. Surveys have been made to understand the physical, socio-economic and cultural set-up of the town through the application of available theories, methods and techniques related to urban development and planning.

The methods adopted for this study has a rationalistic one being associated with various statistical and quantitative techniques. The data and information have been processed, analysed and the results derived from statistical and quantitative methods have been presented by suitable cartographic diagrams and methods, Physical and thematic maps prepared on GIS platform.

1.10 Design of the thesis:

The study on the problems of urbanization in Cooch Behar town area in Cooch Behar District's done from a geographical point of view and based upon the overall observation, statistical information, field survey, several visits and interviews in each and every wards of the town. Thus the thesis contains two main parts- the first part highlights the growth and overall problems of the town while the second part suggests some proposed developmental strategies for future. However, the entire research work is divided up into 7 chapters.

Chapter-1 deals with the conceptual framework about urban studies, site and location aspects of the townscape. It also reviews the existing literature on urban studies and points out the hypotheses, objectives and methodologies followed in the present study.

Chapter-2 focuses on the Geographical background in the Cooch Behar town. Here physical aspects like physiographic, climate, drainage, vegetation etc. are discussed and in cultural aspects demographic characteristics like population growth and density, household density etc. are discussed.

Chapter-3 focuses the evolution as well as the chronological growth of the urban area from the angle of historical, political and geographical perspectives.

Chapter-4 portrays the existing urban morphology with land use pattern; whole town land utilization, relative changes in past and present land use and its impact on human habitation.

Chapter-5 is concerned with the environmental issues of the town, besides physical environment, social and economic environments also given emphasis and shares the capability of existing urban infrastructure to fulfil the basic needs of the people.

Chapter-6 an effort has been made to identify the major problems of the town like environmental problems, infrastructural problems, socio economic problems etc. Origin and characteristics of slums, problems related to slums etc. have been made to find out the causes of rapid urbanization and its immediate consequences arise in the form of slums, environmental and sanitation problems are concerned with the most serious problem of water logging, the town facing almost frequently during continuous downpour due to poor drainage and sewerage systems. The transportation problems like the pattern of roads, scarcity of footpaths and passenger sheds, nature of traffic flow, the absence of automatic traffic signal, heavy congestion and probability of accidents, encroachment of shops along the roads, need for the better mode of transport

and communication etc. The ward wise disparities of development in the town also discussed with proper methods.

Chapter-7 deals with some suggestions and planning proposals in various aspects of Cooch Behar town for the overall development in future. Lastly, summary and conclusions have been presented in terms of the whole study.

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