

Full Length Research Paper

A study on factors related to urban growth of a municipal corporation and emerging challenges: A case of Siliguri Municipal Corporation, West Bengal, India

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Urbanization refers to the process of becoming urban or in other words urbanization is a cyclical process through which the nation passes as they evolve from agrarian to industrial societies. It is a spatial concomitant phenomenon involving population concentration, structural transformation and socio-psychological change affecting both people and place. Siliguri, the gate way to North East India is not only one of vital importance for the State of West Bengal but Eastern India also. Especially, in developing countries in a particular setting, chronological development of Siliguri Municipal Corporation and chaotic urbanization and industrialization created hardship particularly for local residents. Although there were also many positive effects of urbanization including improving housing condition, better urban amenities and services as well as higher living standards, these benefits were often ignored in respect of urban environmental issues. The main scopes of the study were to elaborate urban growth of Siliguri and its urbanization processes operated since past decades. The major findings were to explore the subsequent growth and development of Siliguri Municipal Corporation since past decades of early 20th century. In addition, various functions which the town had performed were intensively studied in relation to urban population for the determination of problems created by man to meet certain requirement.

Key words: Urbanization, growth, issues, problems.

INTRODUCTION

Urbanization has been considered as a problem in India till recently and the city governments in the country have always struggled to solve the problems. But in recent years the perception has changed (Bharadwaj, 1974). With the cities contributing more than 65% of the GDP in the recent years, the government has begun to look at the urban areas as an engine of growth. With rapidly increasing population in the urban areas due to immigration from rural areas and adjacent parts of the city, creates the most serious challenges before the planners (Berry, 1976). In India Municipal Corporation like Siliguri, rural poor come to the town to look for

productive work with a view to get two square meals for their families and secure better education for their children (Ahmed, 1954). They also migrate to the cities to ensure that they are able to lead a better life than their forefathers (Ramchandran, 1999) and the said Siliguri Municipal Corporation act as the dream destinations for the poor for a better tomorrow. But more often than not, their dreams get shattered as they arrive in the Corporation area. They are hassled by the problems like lack of affordable housing, lack of availability of clean drinking water, lack of cleanliness, sanitation and other civic amenities. There is a need to strengthen the Siliguri Municipal Corporation area to be able to brace up to the challenges ahead. To achieve the objectives, there should be some basic positive perceptions and commitments of various Government authorities and inhabitants also.

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Objectives

The basic objectives of this paper are to analyze the subsequent growth of Siliguri Municipal Corporation, impetus behind the growth and to highlight the allied problems related to growth of the Corporation.

MATERIALS AND METHODS

The data used for this study were obtained from both primary and secondary. Satellite images as a secondary source has assisted very much in describing the empirical view of magnitude of urbanization in Siliguri Municipal Corporation. The first stage in the collection of primary data involves the reconnaissance survey of the study area. This is to enhance the familiarization and also facilitates the easy administration of questionnaire. Some mapping techniques and quantitative analysis in population increase have been used for the better comprehension of the scenario related to urban growth of the study area.

Study area

Siliguri, the gate way of North Eastern India is the most striking Urban Centre of the Northern part of Bengal. Siliguri, for some it is the main commercial city of North Bengal and for some its importance comes from its strategic placement near international and state borders. Geographically Siliguri is situated at the latitude of 26°72'N and the longitude of 88°41'E. The city of Siliguri is situated at the foothill of the Himalayan mountain range in the plain. This city connects the hill towns (Gangtok, Rangpo, Kalimpong, Kurseong, Mirik and Darjeeling) with the rest part of the India.

CHRONOLOGICAL EVOLUTION OF SILIGURI MUNICIPAL CORPORATION

From a small village, Siliguri became a sub-division in Darjeeling district exactly a hundred years ago (Saha, 1998). It was in the year 1907 that Siliguri was declared a sub-division (Mahakuma) by the British administration. It is really surprising to note that the rapid growth of the small town into one of the largest cities in short space of times in the entire North East of India. The original village of Siliguri was to the south of where we have the Saktigarh Colony today. The area is under Jalpaiguri District and Rajganj police station. It was a small and little village at that time. Much more important was Phansidawa bandor (Figure 2). The government activity was mostly conducted from the area where the Haskhoa Tea Estate is located now. The Siliguri Municipality was established in 1949. The growth of the town received momentum after the independence of India in 1947. First there were thousands of refugees pouring in from East Pakistan after the country was divided (Chandna, 2005). Then there was the refugees from Assam in the 1960's who lost their home in anti Bengali riot their. During this period there were several wars where Siliguri was in the

centre stage including the 1962 war with China, 1965 war with Pakistan and ultimately 1971 war with Pakistan and creation of Bangladesh. Each of these events contributed major inflow of refugees to the town. There was also major influx of business communicates from other parts of the country such as Bihar and Rajasthan who came here to take advantage of the increasing business opportunity in the town. Not surprisingly, much of the population in Siliguri has its root in other places. Increasing population demanded facilities for higher education. The Siliguri College was established in 1950. Siliguri College of Commerce followed in 1962. Subsequently in 1981 Siliguri Women's college, in 1987, Kalipada Ghosh Terai Mahavidyalaya in Bagdogra and in 1998, and 1962, Surya Sen College and North Bengal University, that is, the only university in the entire region, was established at a place called Shivmandir near Siliguri. The place was officially renamed as Raja Rammohanpur, but the old name still persists. The Medical College and Hospital was established in 1967. The Siliguri Municipal Corporation was incorporated in 1994 with a total area of 26.37 km² under its jurisdiction. The area not only covered the 15.54 km² of the erstwhile Siliguri Municipality but also included a part of the area from Jalpaiguri and Darjeeling districts. Today it is arguably the second most important corporation area in the state after the Calcutta Municipal Corporation.

Factors of growth

Urbanization has been now felt pervasively over the entire world (Davies, 1981). It has now become a prime phenomenon of Siliguri Municipal Corporation now because sizable proportion of the population now lives in the corporation. Several major factors exhibiting in the area are the main impetus to the growth of the Corporation. The factors are as follows.

Self induced process

It has been recorded that self induced processes operating in the area in more intensive manner rather than imposed factor (Garner and Chabot, 1967). Siliguri is arguably the economic hub of the region. The market of Siliguri caters to a large hinterland of Dooars, Darjeeling the entire state of Sikkim, parts of the Kingdom of Bhutan as well as parts of the North East India. It is the point of location from where the cargo must be transferred from one carrier to another. Naturally trading has become the one of traditional mainstay of business in Siliguri. Apart from trading, the three T's that is, Tea, Tourism and Timber have been major economic produce. The town exhibits ebb and flow of daily commuting from outskirts of Corporation Area.

Spreading function from the centre

Since the emergence as an urban centre, sharp increase of population concentration in Corporation has been noticed. As Siliguri, being a centre of trade and commerce in the region, has great prospects for consumer goods industries like bakery and confectionary, biscuits, sports goods, incense sticks, mineral water, soaps, chalk and pencils, digital clocks etc., can have a huge market and even small entrepreneurs can take advantage of this opportunity. There is also a good market for steel utensils, leather shoes, ready-made garments, tin containers, plastic articles, kitchen wares, electrical accessories etc. As a result the surrounding rural milieu is being changed by the urban appendages from the centre.

Market oriented location

The main impetus for economic development of North Bengal is laid in tea, tourism and timber industry. Siliguri accommodate a large number business machineries market and readymade markets for consumer goods mainly consists of retailers, wholesalers, dealers, distributors and small scale entrepreneurs which ultimately has led to an increase in population concentration. In addition, to fulfill the daily commutation requirement of consumers and others lead to the development of transportation communication facilities with the rest of the neighboring area.

Expansion and merging factors

Apart from spreading of town, there are some notable big settlements like Dabgram II, Champasari, Matigara, Shivmandir, Naxalbari and Phansidawa on the outskirts of the town has significant expansion phenomena which would ultimately merge the neighbor's settlement with the town in near future.

Geo strategic importance

The Geo strategic importance of the town Siliguri is unforgettable. Siliguri is described as the gateway to the North East of India, Bhutan, Nepal and Bangladesh as the said town connects three international borders (Bangladesh, China, and Nepal) which is rare evidence on the map of the world. Siliguri is joined with Kalimpong (Kalimpong) and Sikkim by road and there is rail connections with Darjeeling (Darjeeling) and Jalpaiguri. Being so located, Siliguri became a trade hub for the whole West Bengal, an important nerve center of all kinds of activities related to the trade and commerce of the region (Figure 1A and B).

Socio cultural factors

Siliguri have now become as much a centre of socio-cultural activities as the town is a cosmopolitan in nature. It is comprised of Bhutia, Marwari, Bengali, Bihari and Nepali people with substantial portion of Rajbanshi, the original inhabitant of the area. The town with a significant amount of social leisure facilities as cinemas, theatres, art galleries, entertainment parks etc. act as magnets to the surrounding population.

Problems associated with urban expansion

The key problems originated with the expansion process of Siliguri Municipal Corporation are Environmental problem and Political turmoil in the Darjeeling district. There are some kinds of concern regarding environmental issues in Siliguri Municipal Corporation. Those are as follows:

1. The river Mahananda in Siliguri carry raw sewage created by the people (Figure 3).
2. In many cases dumpsites are located indiscriminately and not in the status of proper management.
3. Domestic waste water contains organic and inorganic matter which is in suspension, colloidal and soluble states in varying proportion. Various constituents of wastewater are potentially harmful to the environment or to public health in the Corporation.
4. The river water and sub-surface water are vulnerable to be polluted which is used by the consumer and thereby creating intestinal disease.
5. The data pertaining SJDA regarding land use clearly state that share of Agricultural land, Water bodies, vacant land, are with the expansion of town are going to be shortened. The said concern may lead to the threatening status of biodiversity and ecological components in near future and ultimately would become a triggering impetus of environmental and biodiversity degradation.
6. Gorkhaland issue and other regional issues lead to the political violence in the Corporation area.

Infiltration problems

Siliguri has shown consistently high rate of population growth throughout its 63 years of existence. A population of less than 5,000 in 1931 had multiplied manifold to 32,480 in 1951. In 1991, Siliguri Municipal Corporation area had a population of 3,070,421 whilst the population of the Siliguri Urban Area was 4, 30,464. Siliguri has always been the hub of education in the Terai as well as the Dooars region. Apart from the residents of the town, students from states like Sikkim, Nagaland and Assam

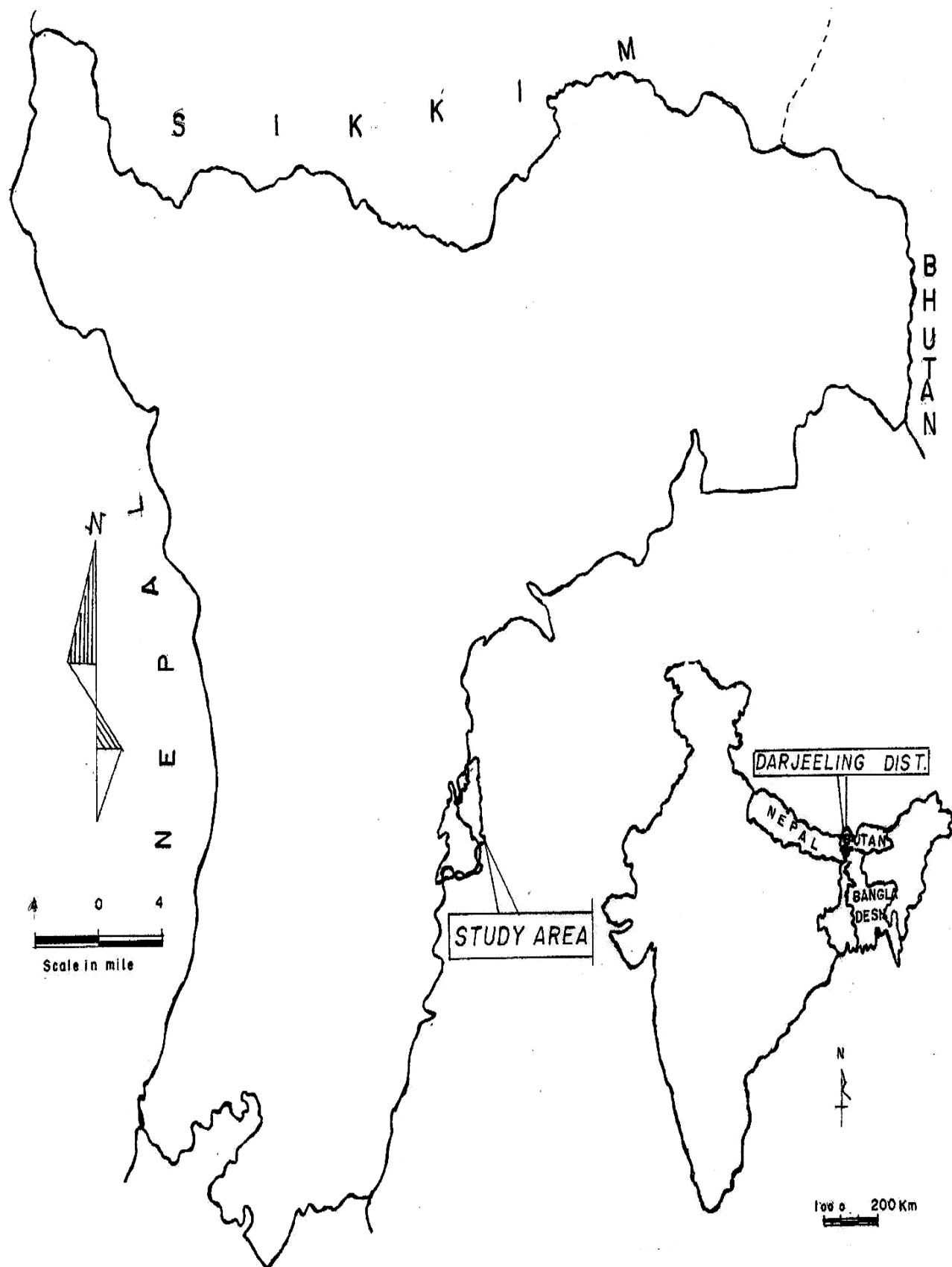


Figure 1a. Location map of study area.

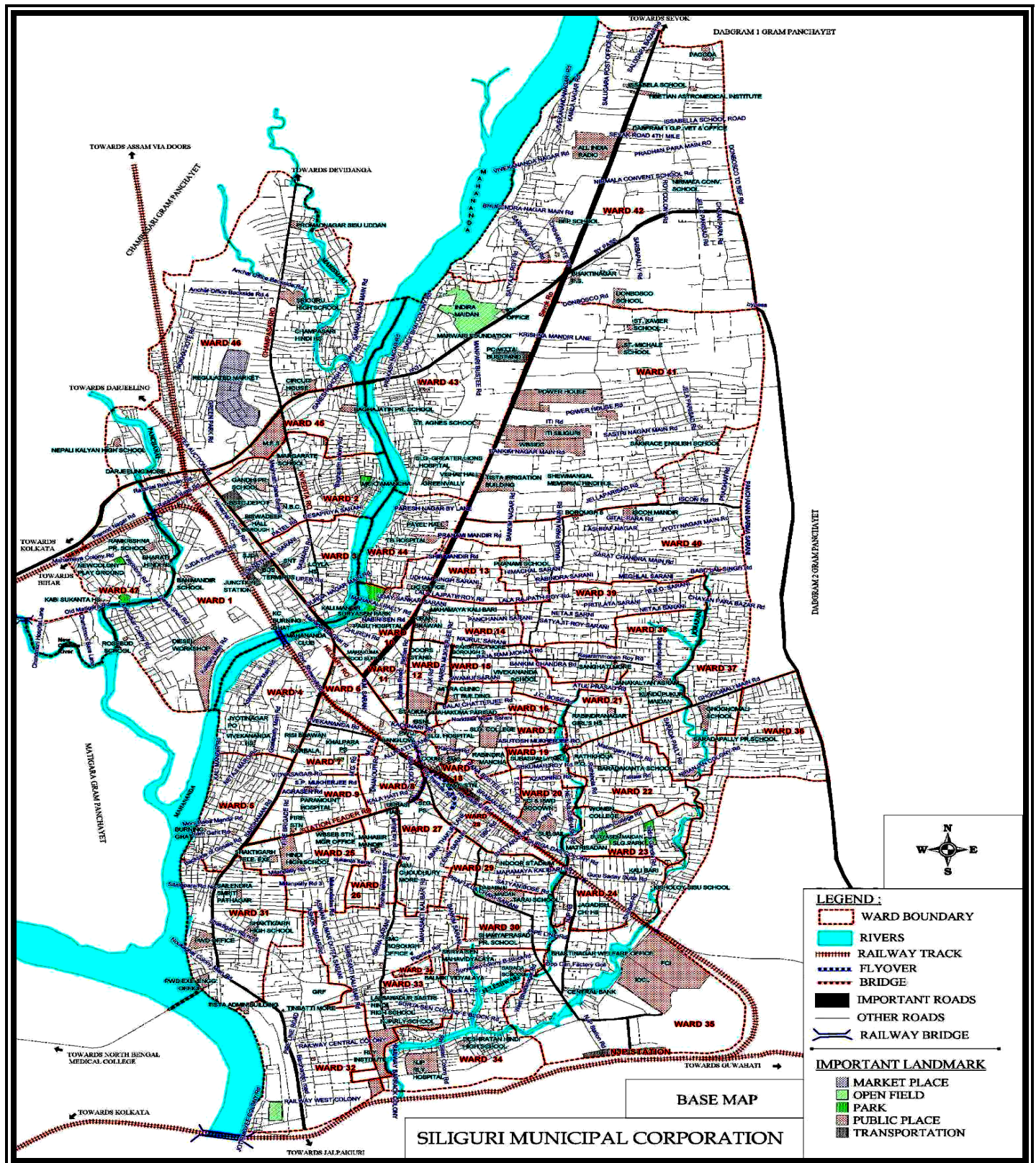


Figure 1b. Location map of study area.

come here to pursue education. The region also sees an influx of students from the neighboring countries of

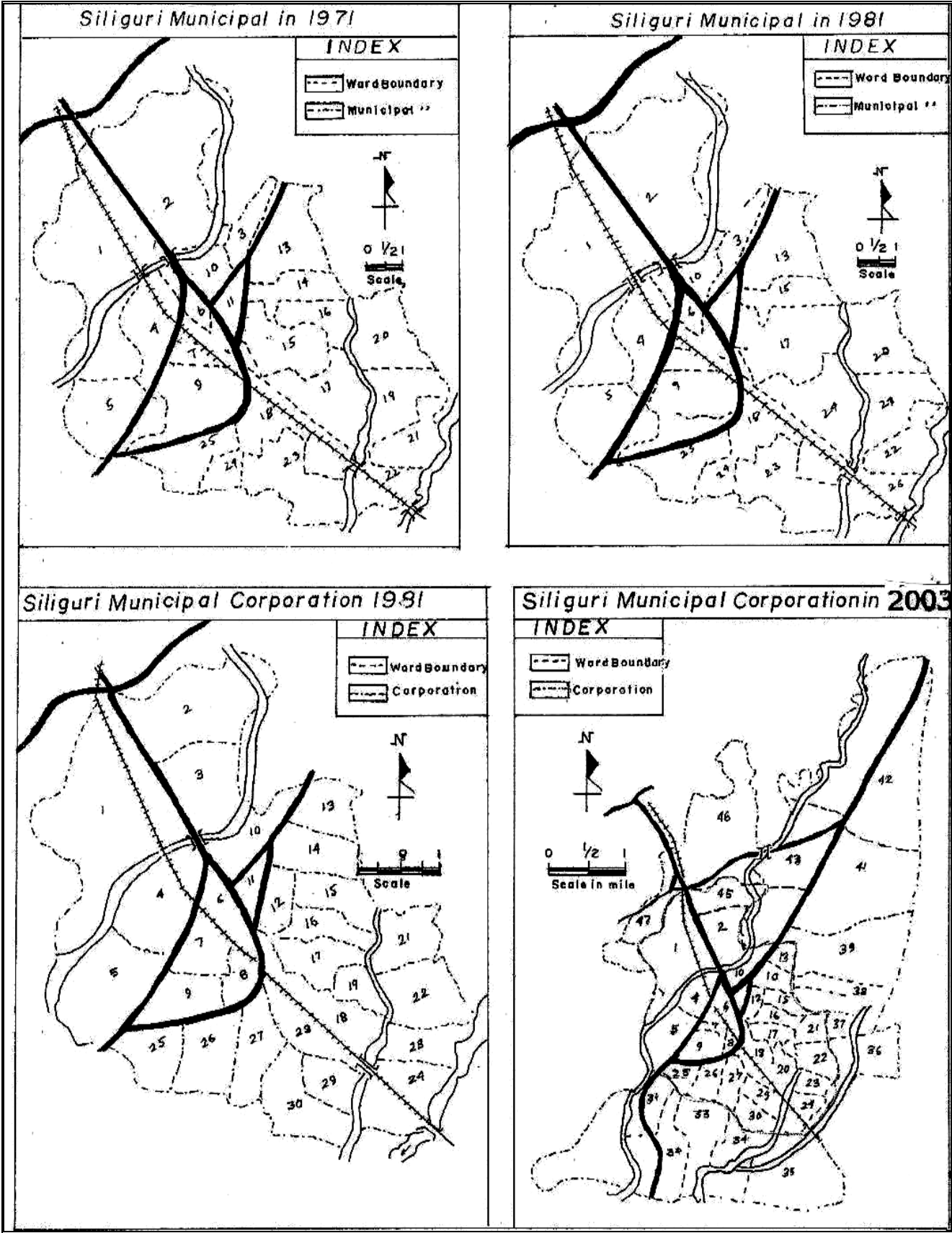


Figure 2. Chronological development of Siliguri municipal corporation. Source: Siliguri Municipal Corporation.

Table 1. Population growth in Siliguri.

Every ten years	The concerned population
1931	6067
1941	10487
1951	32480
1961	65471
1971	97484
1981	153825
1991	338361
2001	472374

Source: Siliguri Municipal Corporation Report (2001).



Figure 3. A satellite view of encroachment of Mahananda River in Siliguri Municipal Corporation. Source: Satellite image.

Bhutan, Nepal and Bangladesh. Siliguri is a cosmopolitan city with Bengali, Bihari, Nepali, Marwari, and Punjabi people living peacefully. The Rajbanshi people, who originally owned most of the land, have decreased in population. Biharis, Gorkhalis, Marwaris, Punjabis and Bengalis are now the most prominent communities here. Bengali, Hindi and Nepali are the commonly spoken regional languages. Siliguri has seen waves of massive immigration over the years. Most prominent occurrence is being the illegal immigrants from Bangladesh, Nepal and

migrants from Assam. In addition, people from Bihar and other parts of India are also coming to the city in search of livelihood. The influx has led to an abnormally high population growth (Govt. of India, 2001) (Table 1).

Land use problems in Siliguri

There are two problems concerned with land use, including, intensive use of land so as to achieve

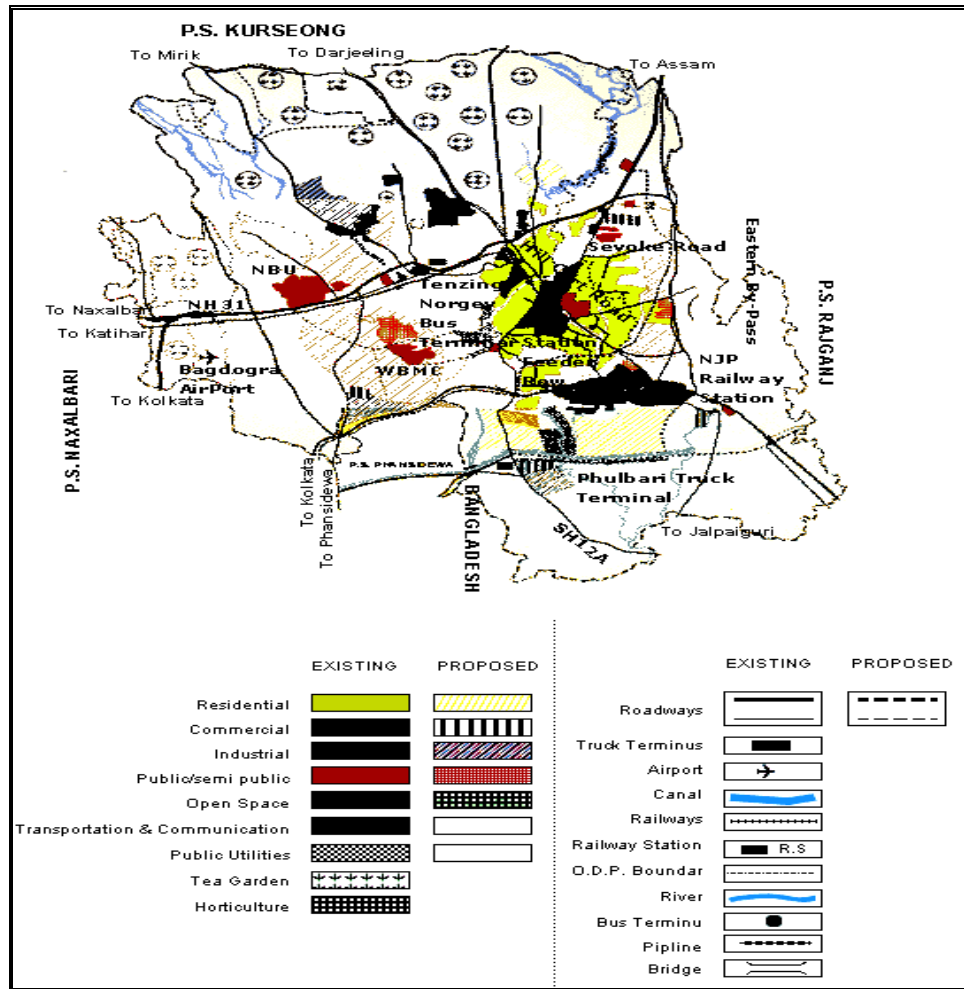


Figure 4. Siliguri Municipal Corporation landuse map. Source: Siliguri Jalpaiguri Development Authority

maximum possible profit, and changes in land use from rural to urban which involves the actual loss of land from a particular land use that should be permissible only after estimating the loss in terms of its production and exploring the possibilities of its compensation (Siddhartha, 2004). Land use problems of Siliguri may be incorporated with different phenomena which include Inter-Relationship of different uses, Incompatible Land uses, Inefficient Land uses, Selection of norms and their Application. Like all other Indian cities; the city centre is main hub of multifarious activities. Many activities have found their places in this hub even though they do not form compatible relationship with commercial, residential and other uses in the areas. A proper place for establishment of industries is needed. A detailed land use survey together with the studies in respect of traffic living conditions etc. have reflected some land uses are incompatible. Some of the Government offices, educational institutions and centers are functioning at places which are not suitable for these activities.

Moreover in some cases the land which is at present utilized by them can be utilized much more efficiently for other uses (Figure 4).

Transport problem

Traffic and transportation problems have become most acute and the greatest concern for every traveler. The most aggravating traffic and transport problems of Siliguri are highlighted as follows:

1. The major roads are connected in the heart of the town only where the commercial activities are restricted.
2. Narrow roads are incapable of both ways heavy traffic and eventually frequent traffic congestion occur.
4. Since the opening up of the new bridge over river Teesta near Jalpaiguri town, the entire traffic to and from North-Eastern India follow this shorter route along Siliguri Jalpaiguri State Highway avoiding the circuitous Sevoke Road route lead to overcrowded Hill Cart Road-

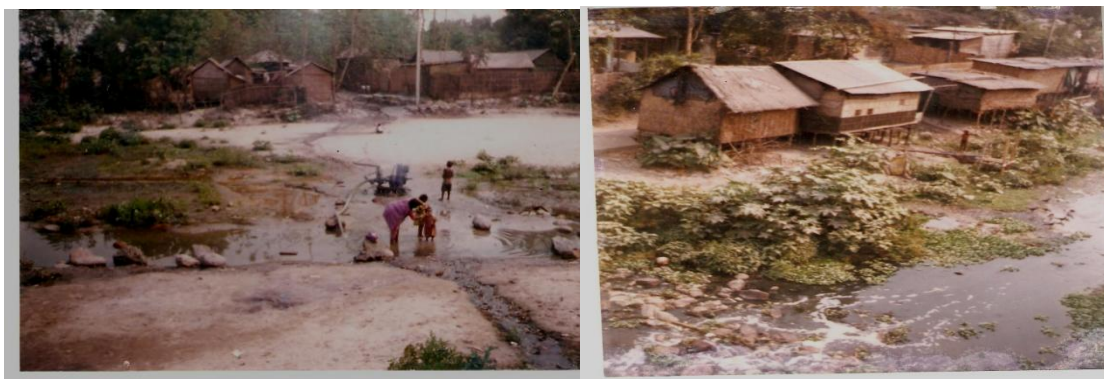


Figure 5. A view of contamination of river water near slum area.

Bardhaman Road access.

Drinking water problem

It is really astonishing that there is no proper organized system of water supply. Recently some steps have been taken by S.M.C. to supply the drinking water. There is cry for purified drinking water and P.H.E with its limited water supply system serves a little percentage of the local need. Only 10% of the areas are provided with protected water supply. Again, the supply of water having proper treatment is not equitably distributed all over the town.

Since available of surface water is less, Underground water is required to be supplied. Due to presence of iron in the water, the underground water is not as clear as one likes it to be.

Social problems

It is necessary to note that town dwellers play an important role in establishing and running the functions which are part and parcel of urban life (Verma, 2008). The city is suffering from several instances of crime and smuggling. This motive inherent among a section of people in Siliguri leads to quick growth of crime. The smuggling is directly or indirectly financed by some section of people and for the operation of smuggling they provide incentives to hoodlums and lumens. In Hongkong Market, large number of unemployed youths is engaged in selling smuggling-goods which are brought from Nepal and Bangladesh.

Problems of slums

Housing shortage and shortage of urban services finally lead to a situation when the settlement degenerates into slums (Turner, 1967). It is the areas of substandard, overcrowded, deteriorated, decaying and dilapidated

housing occupied by the poor, the unemployed, and the unemployable immigrants located on the valuable land adjacent to the river beds of Mahananda, Fuleswari and Jurapani as well as along the railway tract in the town. The total number of slums is 42 who share 36.8% (56828) of the total population and 31.4% (9103) of the total households of the town (Appendix). The number of families dwelling in these slums is 13850. Infiltration from neighboring area and states are the major impetus for the growth of slums in the town. Instead of rapid urbanization and allied improvement housing condition of slum dwellers remain in dilapidated condition. It is found that 94.3% of houses in the slums are kuncha, 2.6% semi pucca and remaining 3.1% are pucca. The occupational pattern of the inhabitants of the slums in Siliguri reveal that 80% of the total working force are daily earners and engaged in very low level of work. As a whole, people bear belong to low income group over 40% of them has a monthly income of less than Rs.200/-. The low earning of working force compel them to earn by illegal sources as liquor making or some others. The over whelming majority children are kept away from school education for various reason. A considerable number of slum dweller suffers acutely from drinking water shortage because of the fall down of water table of sunk well and largely depend on solitary well (Figure 5).

The awareness of slum dwellers about the health preserve on lead to extravagant habits. As such, the slums are affected by diseases that spread in epidemics which also affect the men residing nearby. Unhealthy sanitation system is highly detrimental to the environmental condition of the locality. Due to the inadequate latrine facilities, the people residing in the periphery of the town and adjacent to rivers use open fields as place of latrine and ultimately lead to environmental pollution.

PLAN ADOPTION

Siliguri Jalpaiguri Development Authority originated under the West Bengal Town and Country Planning and Develo-

pment Act of 1979, founded by the Government of West Bengal State, SJDA-Siliguri Jalpaiguri Development Authority, and is responsible for undertaking development projects all over Siliguri and Jalpaiguri (which is 45 km away from Siliguri). SJDA performs various functions like preparing and enforcing outline Development plan, prescribing usage of land under its area, coordinating development activities of various agencies and departments, carryout development plans, etc. Owing to its location and proximity to Bangladesh, Nepal, Bhutan and Tibet, a lot of trading activities take place in the cities of Siliguri and Jalpaiguri, therefore the formation of Siliguri Jalpaiguri Development Authority was necessary impetus to cope up with the increasing demand of homes, flats, apartments, plots, sites etc.

Conclusion

From the precise study of Siliguri Municipal Corporation, it is revealed that although the rate of urbanization is rapid in the developing countries due to lack of proper planning strategy for the development of urban centres, contemporarily, various socio economic and environmental problems are imposed on the concerned area. Modern techniques for the provision of urban amenities are not sufficient to sustain huge population in the urban centers. Management system to sustain the urban amenities and administration is highly affected by the political conspiracy.

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APPENDIX 1

Ward no.	Area in acres	Area in Km ²	Total population	Ward wise 2001 density of population	1991 density of population
1	570.5	2.3	17843	31.27	36.74
2	371.5	1.5	11436	30.78	32.64
3	251.25	1.02	11753	46.78	59.17
4	280.75	1.13	20028	71.34	97.79
5	301.05	1.22	15326	30.9	77.96
6	50.95	0.2	9023	177.09	114.06
7	81	0.32	9889	122.08	131.4
8	49.5	0.2	7843	158.45	215.22
9	70.5	0.28	7306	103.63	65.62
10	191	0.77	4720	24.71	52.33
11	41.05	0.16	2933	71.45	88.93
12	58.95	0.24	3772	63.99	72.64
13	69.25	0.28	5070	73.21	30.79
14	80.75	0.32	6407	79.34	102.12
15	84.05	0.34	8103	96.4	131.37
16	60.05	0.24	5984	99.65	113.31
17	49.95	0.2	5485	109.8	54.2
18	40.65	0.16	8440	207.63	161.09
19	49.35	0.2	3233	65.51	93.31
20	60	0.24	9869	164.48	161.96
21	80.55	0.32	5875	72.94	54.81
22	119.45	0.48	10293	86.17	80.58
23	70	0.28	6205	88.64	68.56
24	120.05	0.48	11165	93	63.33
25	129.95	0.25	8525	65.6	56.42
26	60.85	0.24	4873	60.06	28.61
27	89.15	0.36	5630	63.15	54.71
28	170	0.69	9578	56.34	128.33
29	170	0.69	4783	28.14	34.89
30	108	0.43	6510	60.27	46.02
31	200.05	0.8	13414	67.05	-
32	319.95	1.29	11845	37.02	-
33	280.15	1.13	13543	48.34	-
34	319.85	1.28	16560	31.78	-
35	481	1.94	14945	31.07	-
36	239	0.96	13553	36.7	-
37	160	0.64	14431	90.19	-
38	161.45	0.65	11235	69.59	-
39	194.07	0.78	11237	37.9	-
40	579.03	2.43	18164	31.37	-

Appendix Cont'd

41	800.45	3.24	12951	16.17	-
42	1029.68	4.15	14711	14.29	-
43	439	1.77	9661	22	-
44	182	0.73	11522	63.3	-
45	66.23	0.26	7117	107.45	-
46	900.21	3.63	21222	23.57	-
47	170.22	0.68	8363	49.13	-

Source: Silguri Municipal Corporation