

CHAPTER V

ANALYSIS OF URBAN UTILITY FACILITIES

5.1 Introduction

Urban utility facilities provided by the government to the citizens, either directly through public sector or by financing private provision of services should reach all, regardless of income. The terms infrastructure, amenities and urban utility facilities are often interchangeably used to signify the provisions made to satisfy some basic human needs. These are a key to the regional development and are the physical framework of available existing facilities through which goods and services are provided to the public. In the absence or unequal distribution of these amenities regional disparities may result in economic, social and cultural problems. Majumder (2005) has truly stated that imbalanced availability of regional infrastructure has led to lopsided development in India, which can be mitigated through expansion of infrastructural facility (Patnaik, 2013). An undesirable phenomenon of socio-economic disparities reflecting a spatial variation of quality of life, standard of living as well as well-being and welfare of the inhabitants in an urban area is common not only in class I towns but also in medium towns like Kurseong. The availability of all these socio-economic infrastructures in an urban area does not mean its development until and unless they are adequately distributed corresponding to the size of population and extent of an area. Regional disparities in the distribution of infrastructural facilities are observed in different parts of the town.

As the provision of urban amenities is fundamental to town life, it becomes essential to identify the existing urban facilities of Kurseong town to envisage the level of development in its various wards. The analysis of varying levels of infrastructural facilities provided to the people of a region can efficiently elucidate the regional disparities in socio-economic development of that region (Patra, 2010). The town under study enjoys varying urban utility facilities. However, the inflow of population in search of economic avenues and better life style has gone up. Whatever infrastructural facilities available are mostly concentrated in the central area or a few pockets of the town. This has put a lot of pressure on the infrastructure itself on the one hand and less opportunities for the people residing in the periphery of the town to avail the facilities on the other.

5.2 Status of available infrastructural facilities

5.2.1. Transport and Communication

Transportation infrastructure has been incorporated in the formulation of planning by various models of urban structure since time immemorial (Srinivasan, 2005). At the global level, it is through transport that trade and commerce functions on the one hand and at the individual level, transport enables people to travel, access employment opportunities and services such as healthcare, education, shopping etc. and maintain spatially extended social networks on the other. The transport sector, therefore, has been rightly described as a network of nerves of human life, in the absence of which political, economic and social development of an area is jeopardised. Hailey (1957) observed that no other forms of infrastructure can bring about so rapidly a change in the economic and social conditions of developing countries other than transport (Khan and Shamsad, 2012).

5.2.1.1 Roads

Difficult and rough topography with steep slope does not facilitate good transportation network in Kurseong town which has resulted into highly irregular street pattern. At present the total length of road in Kurseong Municipality is 127 km of which *pucca* road is 65%, Black Top 9%, Concrete 16%, Macadam 4% and *kutchra* road 6% (DDP, 2008-09 to 2012-13). According to 2011 census, 22 km is maintained by the municipality (Surfaced-10.30 km and unsurfaced-11.70 km) and the rest is maintained by PWD and different agencies (Annual Administrative Report, 208-09). Kurseong town is served by three major roads namely Hill Cart Road (NH-55), Pankhabari Road and Rohini Road. Hill Cart Road is the main traffic-way that passes through the heart of the town, extending in the north to Darjeeling and in the south to Siliguri. Pankhabari Road also known as Old Military Road developed by earliest explorers is another major form of transportation that runs through the north-eastern part of the town and meets NH-55 at Jorebunglow and in the south it meets NH-31 C at Matigara near Siliguri.

As NH-55 is hit by frequent landslides during rainy season every year, the need for an alternative road connecting Siliguri and Darjeeling led to the construction of Rohini road that was opened for traffic in 2007. This newly constructed road from Simulbari in the plains joins NH 55 a little away in the eastern outskirts of the town. Burdwan Road serves as the major by-pass road to the Hill Cart Road. J. M. Goenka Road serving the Rajbari-Naya Bazar area; Dowhill Road, Murdahatti Road; Captain Suraj Sharma Road, acting as a north-western municipal boundary; P. H. E. Division Office Road running almost parallel to the Hill Cart Road; Father Wery Road, Chandmari Road and Naya Busty Road are the other important arterial roads of Kurseong town. Besides, there are many walkways serving the town such as P. N. Pradhan Road, D. N. Pradhan Road and Patterson Road.

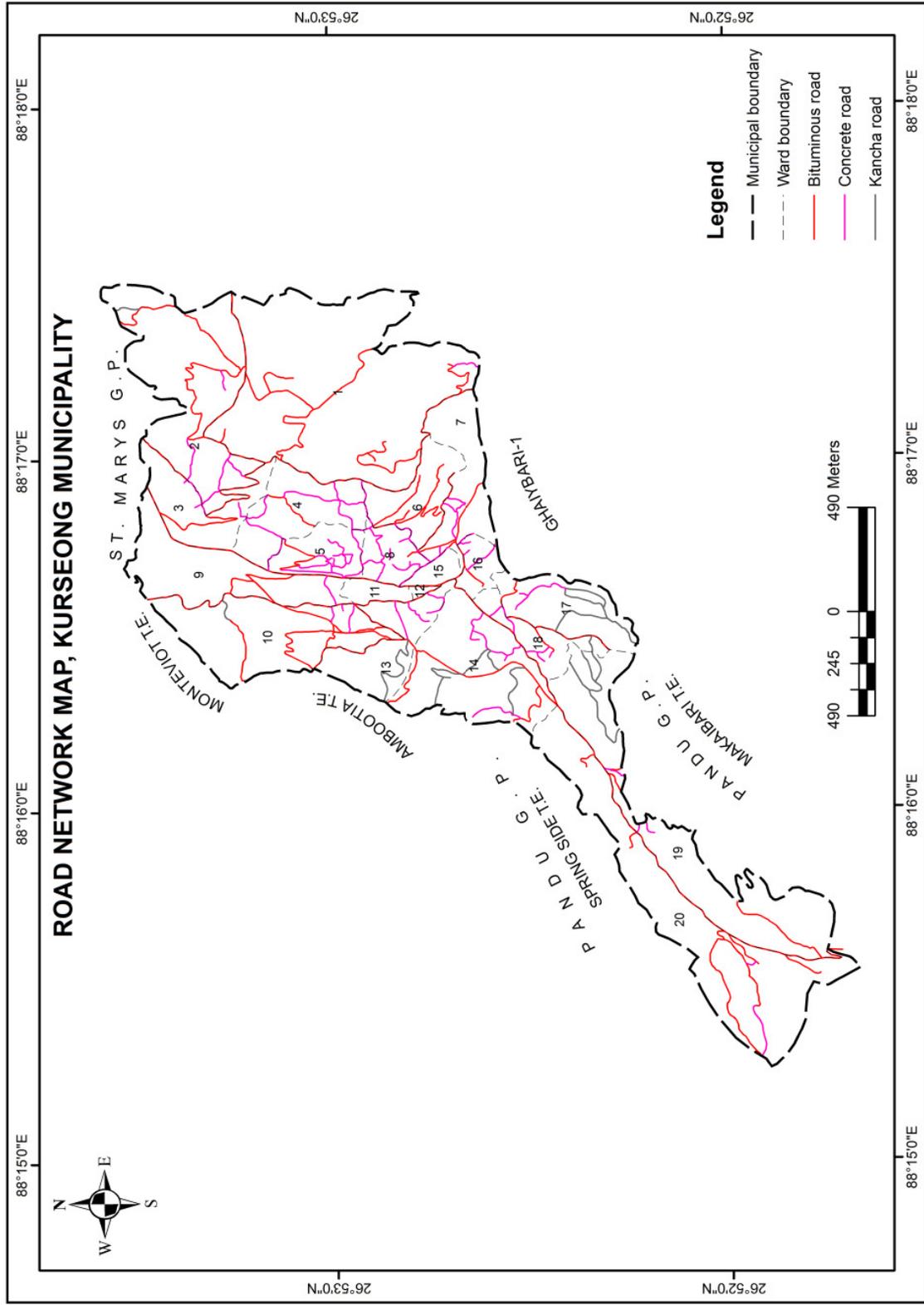


Figure 5.1 Road Network Map, Kurseong Municipality (Source: Kurseong Municipality Office)

Traffic flow

Being located along the Hill Cart Road, the town not only bears the burden of vehicles, both goods and passengers, originating and terminating in the town itself but also of those plying between Siliguri, Darjeeling and the surrounding areas. The field survey of taxi syndicates in Kurseong Municipality conducted in 2015 reveals that the number of trips made by the taxis from different taxi syndicates from Kurseong, which includes to and fro, are as follows : Siliguri -92 , Darjeeling- 56, Mirik- 8, Kalimpong- 4, Gangtok- 2, Mungpoo -2, Sittong-8, Bagora-12, Lapanchor- 10, Panighatta-2, Dudhia-2, Tindharia-24, Ghayabari-24, Mahanadi-60, Giddhapahar-72, Chimney-Deorali-52, Dilaram-Tung-56, Ambootia Tea Estate-48, Singell Tea Estate-48, Coffebari-12 and St. Mary's Hills-92. The taxi syndicates performing intra-traffic to and fro movement in the municipal area make the following number of trips: Dowhill-272, Cutlery-48, Chandmari Fatak- 180 and Naya Busty-40.

5.2.1.2 Railways

The completion of the laying of D. H. R. line was a dream come true for the British. It benefitted the people of the region by facilitating faster transport of varied goods in bulk up and down the hills as well as providing transportation for the people. Due to the direct competition from the advent of modern motor vehicles the DHR was compelled to stop the transportation of goods in 1992 because of a sharp decline in the number of takers for transporting their goods by train. Further, difficulties and costliness of maintaining the rail line hindered its future growth on a commercial basis. Still it continued to play a significant role in carrying goods, people and tourists to and fro in the hills. An account of Dash (1947) reveals that in 1942-43 the number of passengers travelled to and from Kurseong was 44,910 and 54,069 respectively. Thus, efficient Darjeeling Himalayan Railway system, without any financial aid from the government, continued to enhance the development of Kurseong town, attracting more mercantile communities.

Table 5.1 Passengers travelled during different years from Kurseong Railway Station

Year	No of passengers travelled from Kurseong railway station		
	Class I	Class II	Total
2010-2011	175	3949	4124
2011-1012	238	8817	9055
2012-2013	801	3636	4437
2013-2014	1005	5070	6075
2014-2015	1098	6382	7480

Source: D. H. R. Office, Kurseong

Though the DHR lost its significance in transporting goods on a commercial basis, it is evident from the Table 5.1 that the number of passengers travelling in a Toy Train over the years has increased from 175 and 3949 to 1098 and 7480 in class I and II categories respectively from 2010-11 to 2014-15. At present the DHR runs two trains from Kurseong to Darjeeling and vice versa. Though the Toy Train is at its disadvantage to road transport in terms of time and trip frequency, it attracts a large number of tourists, domestic and international every year. The inclusion of Darjeeling Himalayan Railway on the list of World Heritage sites by UNESCO in December 1999 is a very encouraging step on the part of the Ministry of Railways, and associations like D.H.R.H.F. and the 'Friends of DHR'.

5.2.1.3 Postal and Telecom services

Kurseong town has three post offices – the main post office at the heart of the town on the Burdwan Road and the other two at Dowhill and Bungdill. The postal operations in the main post office encompass the entire gamut of basic postal services like sale of stamps, booking of registered articles and speed post, insured articles, value payable articles, booking of parcels etc. Keeping in view the need of the century, the post office has diversified its service into various business and financial activities relevant to people's business and financial needs to ensure its relevance to the society and to deal with the challenges of commercial and competitive environment. Kurseong town has its Sub-divisional Office of the Department of Telecommunication adjacent to the main post office. The department has installed MBM with a total capacity of providing connection to 3,000 subscribers that can be extended according to the requirements with a maximum potential capacity of 80,000 subscribers. There is, however, a decline in the number of subscribers in recent years due to rapid growth in the number of cell phone users. At present the town has only 530 subscribers. The Internet Broadband subscribers increased from 270 in 2011 to 280 in 2015.

5.2.2 Fire service

Kurseong town has a fairly efficient fire fighting system equipped with 4 fire engines and a team of 36 trained personnel. The town got its first Fire Station in 1976. In 1998 its earlier location near the Police Town Out Post was shifted to its present location near INA Bus Terminus. The station has a reservoir with a storage capacity of 26,000 litres and the water is collected from a natural spring in Sepoydhura. The department has two fire hydrants in the market area located on the Burdwan Road having water connection from the municipality pipeline. It has two potable pumps for suction and delivery which can be connected to the hose about 20-30 ft long (Source: Fire Station, Kurseong). Kurseong Fire

Station caters to the needs of the citizens in and around Kurseong during the fire break outs as well as natural calamities.

5.2.3 Educational institutions

The role of educational institutions has undoubtedly been remarkable in the growth and development of Kurseong town. It was a centre of education since its origin in 1879 because of the setting up of English medium schools by the government in the same year. The town has witnessed the incessant growth of educational institutions, both government and private, since then. The earliest schools to be set up in Kurseong were government schools set up by the missionaries. In addition to the missionary enterprises, the native social groups guided by the waves of freedom movement and religious fervour, were also very active in taking up the educational activities in the hills (Dewan, 1991). On its journey of education the town has witnessed the opening up of more schools and even higher educational institutions. With the passage of time, many new schools have come up especially in recent years, most of which are privately run and lack large campuses, spacious buildings and playgrounds as most of them are located in the congested part of the town.

Location and classification of schools

There are 34 schools in Kurseong town and 4 schools in its immediate vicinity (Field Survey, 2015). These four schools are also included in the study as they are closely associated with the socio-economic infrastructure of the town. The schools of pre-1975 period were set up and administered either by the missionaries or by the Government whereas most of the schools of post-1975 period were set up by the private entrepreneurs. Demand for good standard education and English as a medium of instruction has led to rapid growth of schools during the post-1975 period. With the passing of years more number of entrepreneurs and promoters joined the row of this competitive enterprise. As many as 21 schools were set up during this period most of which have boarding facilities. Figure 5.1 shows the distinct three phases of growth of schools in the town – rapid growth during pre 1901 to 1951, steady growth during 1951 to 1971 and very rapid growth during 1971 to 2011. The rapid growth in the first phase is attributed to the pioneering work of the missionaries and the government in the field of education and very rapid growth in the third phase is due to setting up of numerous private English medium schools. However, unfortunately political unrest has led to closure of as many as 5 schools in recent years.

To have a better knowledge about the composition of schools a survey was carried out in 38 schools in the municipal area and its immediate vicinity in the year 2015. The total number of students is 12,687 of which 53.71% are boys and 46.29% are girls. The number of

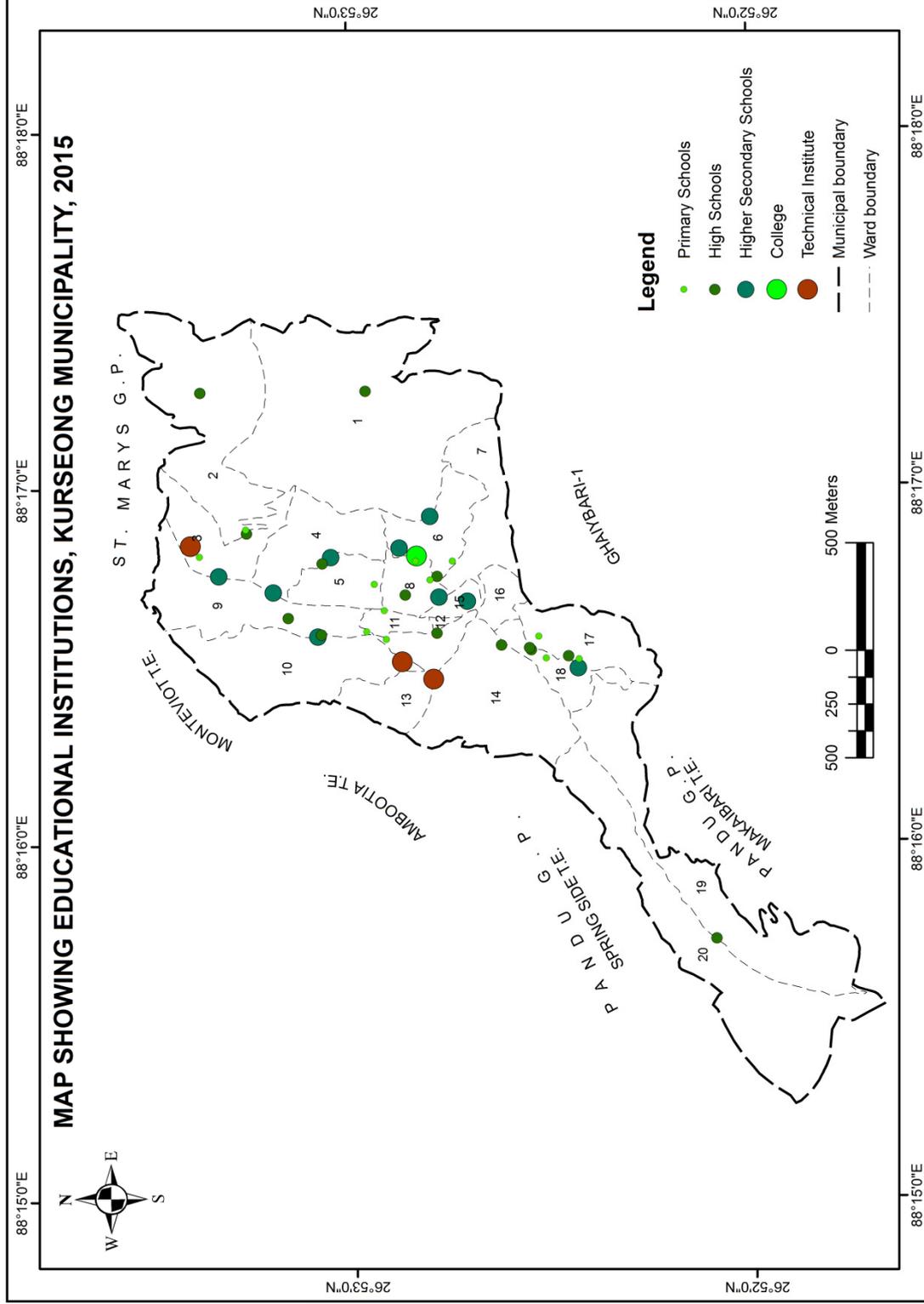


Figure 5.2 Distribution of educational institutions, Kurseong Municipality (Source: Field survey, 2015)

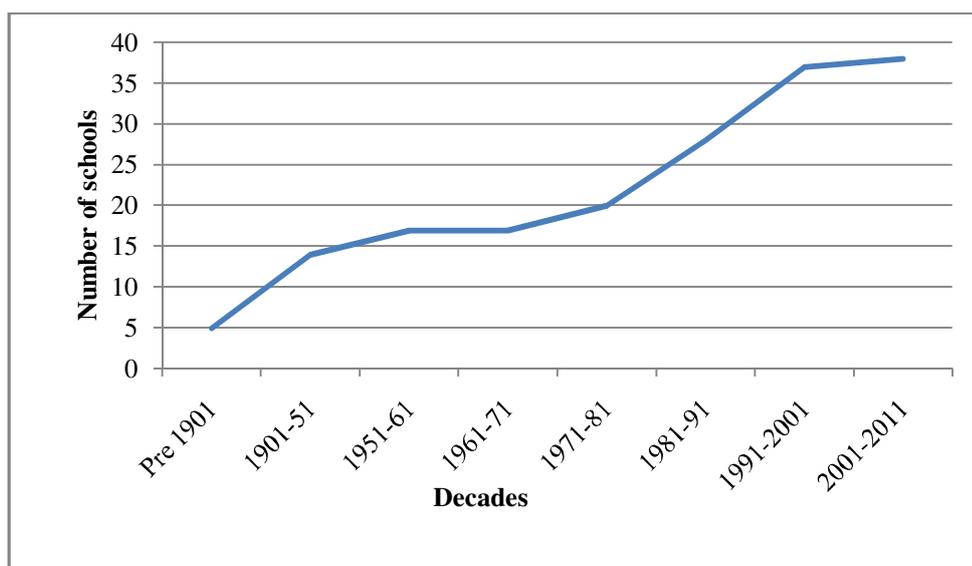


Figure 5.3 Growth of schools in and around Kurseong Municipality (1879 - 2011)
(Source: Field survey, 2015)

day scholars (10072) is higher than the number of boarders (2615). 58% of the total schools surveyed provide boarding facilities. The students in the day schools are mostly from the Kurseong town and nearby areas like Giddha Pahar, Ghayabari, Mahanadi, Ambootia, Kurbia, Makaibari, Majua, Chimney-Deorali, Sonada, Tung, Sepoydhura, Dilaram and Tindharia. In 22 English medium schools with boarding facilities, the total strength of students is 7646 (Field Survey, 2015). Some of these schools are very small in size with less than 100 students. The schools of Kurseong town not only cater to the educational needs of the town but also attract students from the neighbouring districts, states and countries. 40.35% of the total students are from Kurseong municipal area, 29.95% from the three hill sub-divisions of Darjeeling District, 11.61% from West Bengal excluding three hill sub-divisions, 2.14% from the north-eastern states, 9.21% from the other states of India and 6.74% from the neighbouring countries of India. Various factors have contributed to the

Table 5.2 Total strength of the staff in residential and non-residential schools in Kurseong Municipality, 2015

		Residential schools	Non-residential schools	Percentage to total	
				Residential schools	Non-residential schools
Teaching staff	Male	237	74	44.63	34.58
	Female	294	140	55.37	65.42
	Total	531	214	71.28	28.72
Non-teaching staff	Male	211	27	57.97	67.50
	Female	153	13	42.03	32.50
	Total	364	40	90.10	9.90

Source: Field survey, 2015

establishment of privately run English medium residential schools in Kurseong town, rightly nicknamed as 'school town'. Some of the important factors include the emergence of affluent class, literate parents and demand for education through English as a medium of instruction. The total strength of the staff, teaching and non teaching in these schools is 895 out of which 50.06% are male and 49.94% are female (Field Survey, 2015). Out of the total teaching staff of 745, 58.57% are from the town, 22.03% from the three hill sub-divisions of Darjeeling District, 18.46% from West Bengal excluding three hill sub-divisions and 0.94% from the other parts of India. Out of the total non-teaching staff of 404, 53.02% are from the town, 34.62% from the three hill sub-divisions of Darjeeling District and 12.36% from West Bengal excluding three hill sub-divisions.

5.2.4 Trade and Commerce

The level of development and the standard of living of the people are linked to the state of commerce in a particular area. Business in the form of main stay of town life is chiefly responsible for prosperity and economic development of urban people. From the time immemorial, trade and commerce has contributed to the growth and development of Kurseong town to a large extent.

Shops

The shopping areas form a distinct feature of the urban landscape where urban activity is at its highest. A small town has a fewer business areas and the CBD is located close to the geographic and population centres (Singh and Dharmajog, 1998). The principal business area of Kurseong town comprises the combined retail and wholesale business structures in the central part of the town and along the main thoroughfares. The main concentration of commercial activities is found in Wards 12 and 15 and also in some parts of Wards 11 and 13. There are two areas of commercial structures noticeable in the town – (i) The Central Business District and (ii) The Principal Business Thoroughfare.

The general aspect of both the Central Business District and the Principal Business Thoroughfare is changing fast as much of the one storey frontage has been transformed into two or more storeys and houses a greater proportion of the retail business of the town and government offices and banks. Unlike large cities having specialised markets with specific locations, Kurseong town being a small hill town possesses diversified commercial activities without a specified location except for few shops in the Haat Bazar.

In 2015, the total number of shops dealing in different types of commodities in the town is 1139 of which Wards 11, 12, 13 and 15 account for 61.63% of the total shops.

Table 5.3 Categories of shops in Kurseong Municipality

Sl.no.	Categories of shops	Number of shops	Percentage to total shops
1	Perishable items	96	8.43
2	Personal services	37	3.25
3	Clothiers	95	8.34
4	Wholesale and retail/General stores	492	43.20
5	Hotels & restaurants	142	12.47
6	Books and stationeries	17	1.49
7	Workshops & manufacturing	81	7.11
8	Handicrafts	5	0.44
9	Medical stores	37	3.25
10	Jewellery	24	2.11
11	Banks and ATMs	25	2.19
12	Mobiles & computers	35	3.07
13	Foreign & country liquor off shops	3	0.26
14	Others	50	4.39
Total		1139	100

Source: Kurseong Municipality Office

Another 15.19% of the shops are concentrated in Wards 7, 8, 9 and 14. Wholesale and retail shops including grocery, betel leaves, general merchants etc. account for 43.20% of the total number of shops followed by shops dealing in perishable goods (8.43%) and clothiers (8.34%). However, the shops in the town cannot be separately categorised into wholesale and retail because many shops perform the dual role of wholesalers and retailers. All these categories of shops both wholesale and retail attract the town clientele for their needs - daily and occasional and cater to the needs of the surrounding rural areas as well.

The availability of banking facilities in a region activates the process of concentration of modern economic activities including industry and commerce and consequently contributes to the development of the region. At present there are seven nationalised and four non-nationalised banks in Kurseong town. Among these, the State Bank of India, Pankhabari Road Branch, has the highest number of customers, employees and annual transaction followed by the Central Bank of India and Allahabad Bank. A new branch of SBI has also been opened at Hill Cart Road in the market area in 2016. In recent years ICICI Bank, Syndicate Bank, Axis Bank, Bank of Baroda, Bandhan Bank and HDFC Bank have also opened their branch in the town. The State Bank of India has three ATM counters with one e-corner facility, Axis Bank with two ATM counters whereas Central Bank of India, Darjeeling District Co-operative Bank, ICICI Bank, Syndicate Bank, Bank of Baroda, and HDFC Bank has one ATM counter each. Apart from the above mentioned counters there are four ATM counters belonging to other financial institutions. Out of these fifteen ATM counters twelve are located in the CBD area.

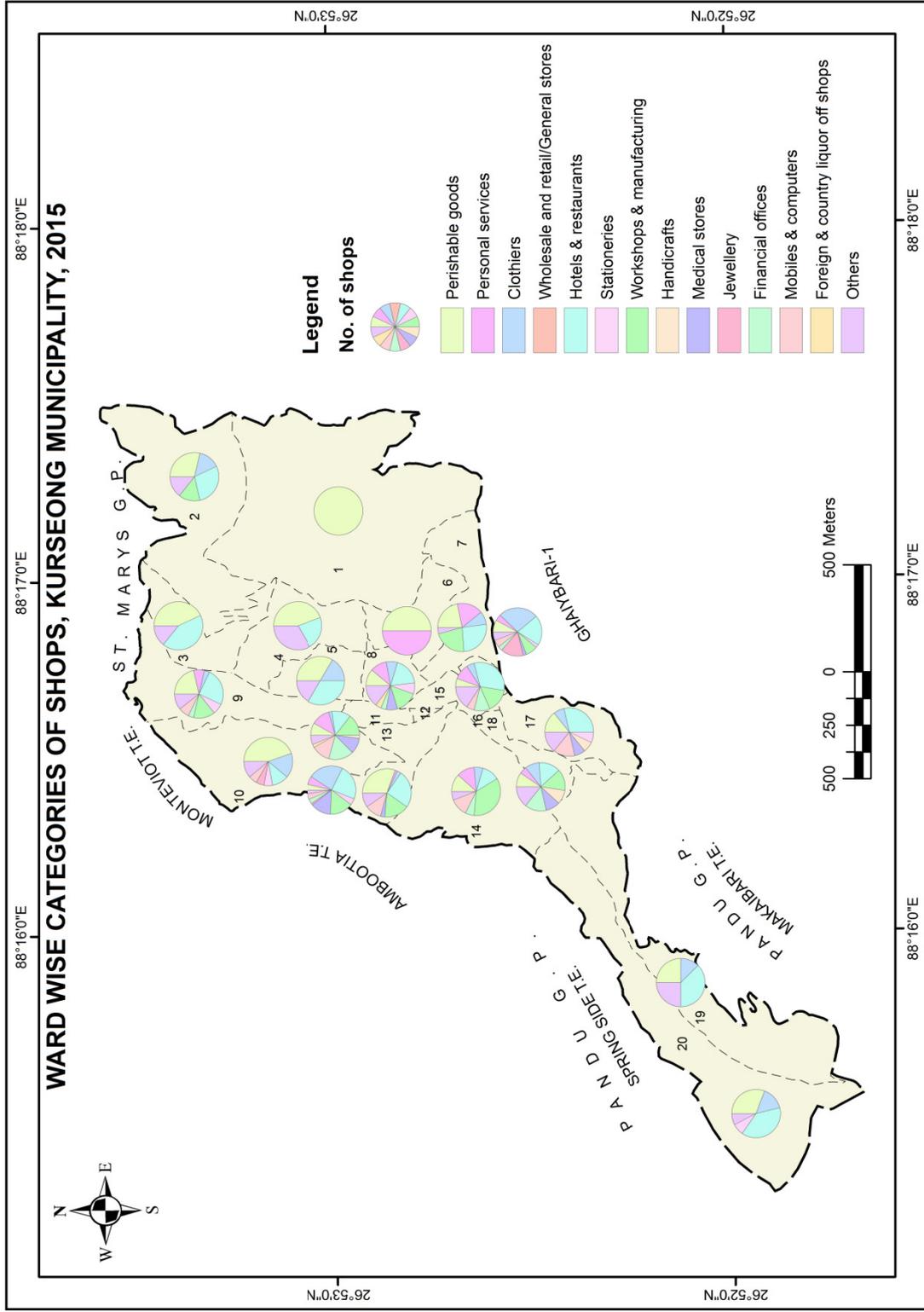


Figure 5.4 Ward wise categories of shops, Kurseong Municipality, 2015 (Source: Kurseong Municipality Office)

Table 5.4 Number of hotels & lodges and restaurants, Kurseong Municipality, 2015

Wards	Number of restaurants	% to total	Number of restaurants	% to total	Number of hotels & lodges	% to total	Number of hotels & lodges	% to total
1	0	0.00	11	4	0	0.00	3	23.08
2	0	0.00	12	22	0	0.00	2	15.38
3	3	4.23	13	8	0	0.00	0	0.00
4	2	2.82	14	0	0	0.00	0	0.00
5	2	2.82	15	8	0	0.00	3	23.08
6	0	0.00	16	4	0	0.00	2	15.38
7	4	5.63	17	1	0	0.00	0	0.00
8	4	5.63	18	1	0	0.00	0	0.00
9	3	4.23	19	2	1	7.69	0	0.00
10	0	0.00	20	3	0	0.00	2	15.38
Total number	71				13			

Source: Field survey, 2015

5.2.5 Recreational facilities

Parks, open spaces and play-grounds serve as the lungs of the city, providing solace to the urban dwellers from pollution, congestion, mental stress and social tension. Unfortunately, Kurseong town has very less number of parks and playgrounds and is deprived of major urban recreational facilities like movie halls, theatres, clubs etc. There are two parks in Kurseong town, Deer Park located at Dowhill and Eagle's Crag at Naya Bazar. Deer Park renamed as Dowhill Eco Park, under the Kurseong forest division is located at 5.5 km from the Railway Station. Eagle's Crag, located 1 km uphill from Kurseong Railway Station, has an observatory tower from where one can have a magnificent view of the plains in the south, the mighty Kanchenjunga in the north and the lush green slopes around Kurseong. There are two playgrounds in the town at Monte-viot and Chandmari. Monte-viot ground located on the Monte-viot Road has a pavilion as well as sitting facilities along its slope.

Kurseong has three public auditoriums, Raj Rajeswari Hall, G.D.N.S. Hall and Gorkha Community Hall. Established in 1930, Raj Rajeswari Hall, located on Dowhill Road is the oldest auditorium with a total capacity of 350 seats. Besides these auditoriums, there are nine ward community halls and five private banquet halls. There are four public libraries in Kurseong town. Gorkha Public Library established in 1913 and located in the heart of the town at Haat Bazar is the oldest one affiliated to the Sahitya Academy, New Delhi. Muslim Library Institute, located at Haat Bazar, Bloomfield Library, a sub-divisional library located at Burdwan Road and Unit Library of WBNVF are the other libraries existing in the town.

5.2.6 Industries

The sole industry that has succeeded to survive and has contributed to the development of town is tea industry. The Castleton Tea factory manufactures bio-organic tea of international standard. The Railway Printing Press established in 1919 provides printed materials to the different railway offices under North East Frontier Railways and Eastern Railways. Apart from this, there are numerous small cottage industries managed by self help groups on a smaller scale (Field Survey, 2016). There are two such groups under the management of Handloom Development Office cum Handloom Training Centre, G.T.A. established in 2013 viz. Srishti Weavers' Development Samity presently operating in Cutlery Servicing Station and Pragati Weavers' Development Samity operating in Municipality Boys' Primary School. The handloom products manufactured are shawls, towels, table cloth, curtains, bags, dining table mats, aprons, sofa covers, mobile covers, wrappers, cushion covers, coats, decorative items and woollen products. There are other self help groups under the management of the municipality viz. Kurseong Mahila Khada Udyog established in 2008 and Community Development Society Unit II established in 2013. The products manufactured in both the centres are sweater, bags, apron, kitchen mat, kitchen towel, pillow covers and cushion covers, bags, jute bags, soft toys, *khada* (traditional scarf), curtain holder etc. (Field survey, 2016).

5.2.7 Medical and health facilities

There are two government hospitals namely S. B. Dey T. B. Sanatorium in Ward 2 and Kurseong Sub-divisional Hospital in Ward 8. Apart from these, there are health care units and dispensaries maintained by the Railways, Castleton Tea Estate and Kurseong Municipality.

The existing total staff strength of the Sanatorium, spread over 32 acres, is 75 of which 3 are doctors, 18 nursing staff, 4 office staff, 35 support staff and 15 sweepers. The Sanatorium The total number of beds has decreased from 349 to 301 as the departments of North Eastern Railway, Post and Telegraph Department and Tea board do not possess their separate respective beds like earlier in 1975. The sanatorium has one ambulance on hire (Source: S. B. Dey Sanatorium, 2016). However, in recent years there has been a tremendous decrease in the number of patients owing to the trend of changing pattern of treating the tuberculosis patients and due to the existing sub-standard conditions of the sanatorium. Kurseong Sub-divisional Hospital has 100 beds and there are 11 beds in paying cabins. The number of beds available in different disciplines is: General (Male ward) – 17, Surgical (Male ward) – 17, General (Female ward) – 20, Surgical (Female ward) – 17, Maternity – 6,

Paediatrics – 14 and Gynaecology – 9 (Source: Kurseong Sub-divisional Hospital, 2016). Laboratory facilities along with radiology facilities exist in the hospital for the OPD patients. Biochemical and Pathological tests, X-rays and ECG facilities are available for the needy patients at minimal rate. The total number of patients treated in 2017 was 1,17,260 of which 8,077 were indoor and 1,09,183 were outdoor patients. There were 16,522 emergency cases. Operation facilities are also available for the patients who need surgical and gynaecological attention. The total number of surgeries conducted in 2017 was 1261 of which 235 were major and 1026 were minor surgeries (Kurseong Sub-divisional Hospital). The hospital has a blood bank, four ambulances, a hearse and a morgue. The present strength of the hospital comprises of 22 doctors, 74 nursing staff, 7 office staff, 3 technical staff, 14 *safaikarmis* (sweepers), 59 GDA (General Duty Attendant), 5 security guards and 1 driver (Source: Kurseong Sub-divisional Hospital, 2016).

5.2.8 Government establishments

Kurseong Forest Division was formed in 1878 with the reorganization of the divisions by Schlich, the Conservator of Forest (Basu, 2006). In 1879 Kurseong was declared a municipality and in the same year the Darjeeling Himalayan Railway set up its headquarter. In 1891, it was made the administrative headquarter of Kurseong subdivision including the Tarai and a portion of the hills. The setting up of more number of government offices under central and state departments occurred during the pre and post independence period. At

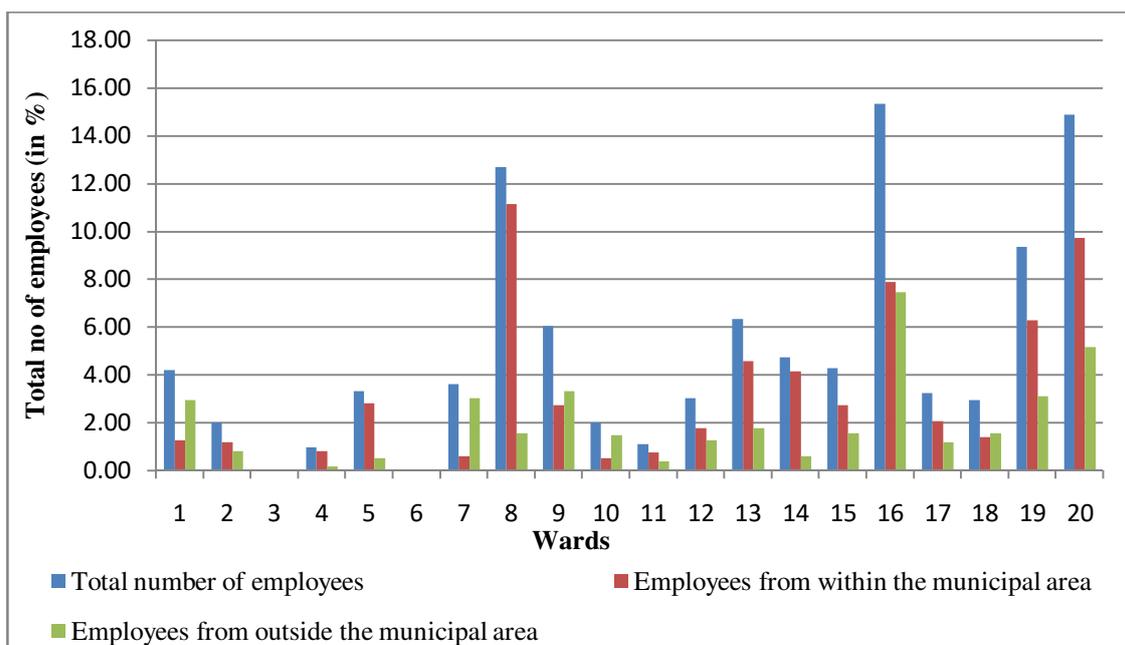


Figure 5.5 Category wise distributions of government employees in different wards
(Source: Field survey, 2017)

present there are 58 government offices where the total number of employees is 1349 of which 75% is male and 25% is female. The percentage of employees from within the municipal area (62.27%) is higher than those from outside the municipal area (37.73%). The offices are scattered all over the town in different wards except in Ward 20 where maximum number of offices are located forming a major administrative functional zone of the town.

5.3 Status of available basic amenities

5.3.1 Housing

Housing is one of the basic needs of human life, the other two being food and clothing. Constrained by difficult terrain and steep gradient, the development of houses in Kurseong town has taken place in a cluster manner lacking in distinct character. Most of the houses constructed during the British rule are in pathetic conditions and some are in ruins except some educational institutional buildings and few cottages with great structural designs, favourable locations and periodic maintenance. The census record shows that the total number of households in Kurseong town increased from 2,419 in 1951 to 6,616 in 2011 thus with an increase of 174% during this period. The negative growth in household density during the decades 1951-1961 (-57.95%) and 2001-2011 (-30.04%) is attributed to an increase in the area under municipality during the respective decades.

A survey of housing quality, the most visible dimension of liveability of urban environment in physical terms in Kurseong town conducted in 2015 reveals that 38.64% of the surveyed houses are completely *pucca*, 50.91% are semi-*pucca* and 10.45% are *kutcha* houses. 33.79% of the total surveyed houses have cemented roofs and 66.21% have slanting tinned roofs. Out of total surveyed houses 50.91% have cemented wall, 22.73% have

Table 5.5 Household density, Kurseong Municipality (1961 – 2011)

Year	Area	No. of households	Household density per km ² *	Growth in %
1951	3.88	2419	623	-
1961	5.05	1325	262	- 57.95
1971	5.05	3087	611	133.21
1981	5.05	3479	689	12.77
1991	5.05	4535	898	30.33
2001	5.05	6083	1205	34.19
2011	7.85	6616	843	- 30.04

Source: Census of India
*Computed by the researcher

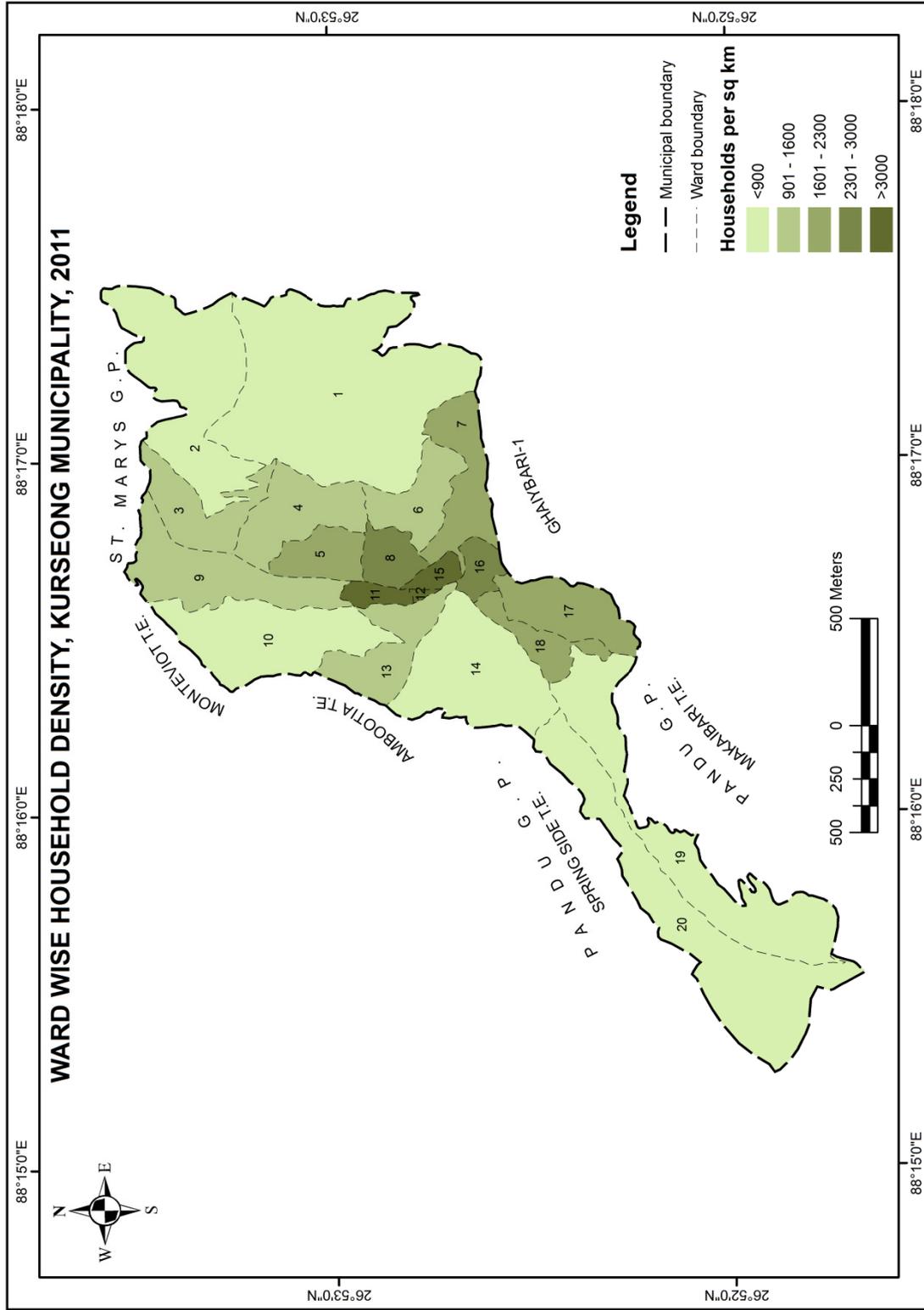


Figure 5.6 Ward wise household density, Kurseong Municipality, 2011 (Source: Computed by the researcher)

Table 5.6 Spatial variation of Household Density, Kurseong Municipality, 2011

Household density (2011)	Wards	% to Total wards
< 900	1, 2, 10, 14, 19,20	30
900 – 1600	3, 4, 6, 9, 13	25
1600 – 2300	5, 7, 17, 18	20
2300 – 3000	8, 16	10
> 3000	11, 12, 15	15

Source: Computed by the researcher

cemented and wooden wall, 16.21% have cemented and tin wall, 2.73% have wooden wall and 7.42% have wooden and tin wall. Only 0.76% of the total surveyed houses have earthen floors, 97.27% have cemented floor and only 2% have wooden floor.

Ward-wise concentration of household

The spatial structure of the town is the result of three forces of attraction and integration, of dispersion and disintegration, and of spatial differentiation (Dickinson, 1964). Vertical growth and horizontal expansion are the outcome of first two forces while the segregation of buildings, persons and activities are the outcome of third force. Owing to the nature of terrain, presence of limited flat land and rapid growth of population the first force is effectively operative in Kurseong town. The greater inflow of people from the surrounding rural areas in search of better amenities and the increasing consciousness to own a house and the process of intensive utilisation of available land for residential purposes has resulted into the construction of multi-storied buildings accommodating multiple families. Barring a few wards positive change in household density has been noticed in most of the wards in recent decade.

According to 2011 census household density is highest in Ward 12 followed by 11 and 15. High household density is also noticed in Wards 8 and 16. All these wards are located either in the CBD or very close to it. As accessibility plays an instrumental role for human settlements in any mountainous terrain, the low income groups unable to afford personal means of transport are compelled to concentrate in and around the town centre which is one of the major contributing factors for congestion of housing in the urban core. Most of the houses in the CBD area have no backyard and courtyard for gardening, growing vegetables etc. The area for these purposes is directly proportional to the distance from the commercial CBD as is evident from the low household density in the wards located in the peripheral part of the town.

5.3.2 Electricity

Regular supply of electricity in any town is important for the development of infrastructure. At present the power is transmitted to Kurseong town from Ksg 132 kV located at Rinchingtong under WBSETC which gets its supply from NHPC Rangit and Siliguri power grid via tie-line (LiLo circuit). The Rinchingtong sub-station converts 132kV into 33kV and transmits that to Pankhabari 33kV Sub-station which transforms 33kV into 11kV which is further stepped down to 415V at different pole mounted outdoor sub-stations and then ultimately to 230V for consumers in different parts of the town. At present there are approximately 6,000 domestic and 900 commercial consumers. Kurseong town being a small hill town has a very less number of industrial consumers. The monthly consumption of electricity by bulk consumers like AIR, Doordarshan and other industrial consumers is around 0.55 million unit. The demand during the peak hour is around 9.12 MW which is from 6.00 – 9.00 p.m. and the demand during the non-peak hour is around 5.5 MW. The WBSEDCL also supplies electricity to street lamps in the municipal area.

5.3.3 Solid Waste

Improving living standards and changing consumption pattern in urban areas, have led to increase in the quantity and complexity of waste generated. Kurseong, the sub-divisional headquarter, generates about 6 metric ton of wastes per day. Being centrally located on the highway between Darjeeling and Siliguri, it receives quite a significant number of floating populations in the form of workers in various government offices, students and people from the surrounding areas for various purposes travelling to and fro to this town through different means of transport (Annual Administrative Report, Kurseong Municipality, 2008 – 09). At present the solid waste collection system of Kurseong Municipality operates in two ways – i) collection of wastes from vats and ii) collection of sludge from drains. House to house collection is not practiced in the town. The residents dispose daily refuse on the nearby municipal vats which are collected by the sanitary workers on the trolley and handcart. These are then loaded into the *pick-up* van and taken to the dumping site which is located at about 6 km from the town in a plot named China O. G. belonging to the Spring Side Tea Garden with an area of 4.5 acres. The medical waste generated by Kurseong Sub-divisional Hospital and S. B. Dey Sanatorium is collected, transported and disposed off separately in a scientific method in collaboration with Greengen Agency in Siliguri. The municipality has forty six regular and twenty three contractual conservancy staff who are directly involved in field operation. The municipal vats are forty two in number out of which more than 50% are located along the main roads.

Table 5.7 Total quantity of waste generated per day from various sources in Kurseong Municipality, 2011

Source of waste	Quantity (in metric tonnes)	% to total waste
Households	1.80	30
Market	2.82	47
Hotels	0.36	6
Agriculture/garden	0.06	1
Trade and commerce	0.36	6
Other sources (residential schools)	0.39	6.5
Hospital and pathological laboratories	0.21	3.5
	6	100

Source: Kurseong Municipality Office

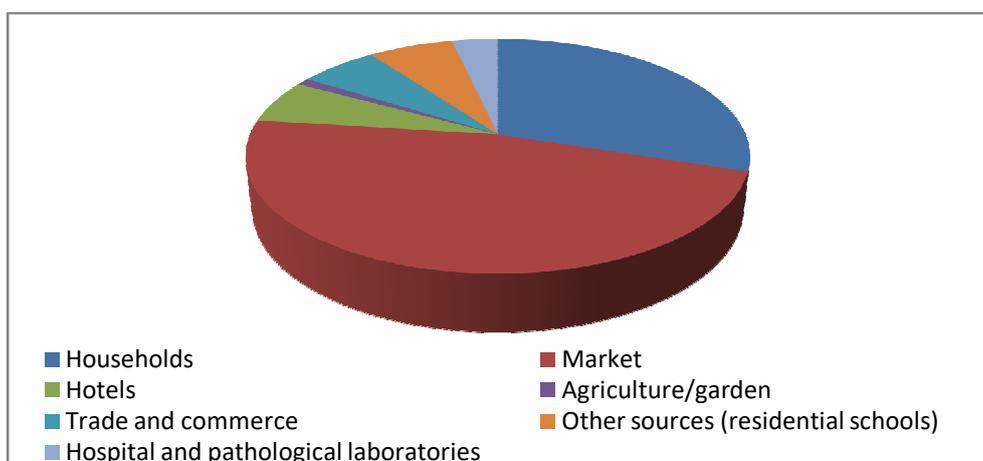


Figure 5.7 Contribution of various sources in solid waste generation in Kurseong Municipality, 2011 (Source: Kurseong Municipality Office)

The highest contributor as a source of waste is market which alone comprises 47% of the total waste generated in Kurseong Municipality followed by household wastes (30%). The field observation reveals that discarded packaging materials such as carton boxes and polythene bags and rotten fruits and vegetable wastes, feathers and bones resulting from dressing of the poultry and meat shops, fish scales from the fish market are the major source of market waste. Further, various wastes from restaurants, government offices and banks which are concentrated in the market area add to the market wastes. On the other hand, the percentage of wastes from agriculture/garden and hospital is low i.e. 1% and 3.5% respectively. The reason behind this is Kurseong town, being an urban area has an insignificant agricultural waste and the waste generated from the tea gardens is disposed off scientifically in their own area. The magnitude of production of wastes, however, greatly varies within the town as well as in different seasons.

The knowledge of characteristics of waste is important in effective planning and designing of the collection, processing and disposal of solid waste management system. Out

Table 5.8 Characteristics of solid waste in Kurseong Municipality, 2011

Category	Generation points	Total (in %)	Quantity of waste (in %)	
			Waste type	
			Biodegradable	Non-biodegradable
A	Domestic	14.29	16.29	6.79
	Daily & wholesale	57.14	54.30	67.80
	Hotels	8.57	9.95	3.39
	Agricultural/garden	1.43	1.81	-
	Sub-total	81.43	82.35	77.98
B	Commercial centres	2.86	2.71	3.39
	Railway station	1.43	1.36	1.69
	Bus stand	1.43	1.36	1.69
	Sub-total	5.72	5.43	6.77
C	Street sweepings	2.86	2.72	3.39
	Drain cleanings	4.28	4.52	3.39
	Sub-total	7.14	7.24	6.78
D	Cess pool	1.43	1.36	1.69
	Clinical	4.28	3.62	6.78
	Sub-total	5.71	4.98	8.47
	Total	100	100	100

Source: Kurseong Municipality Office

Table 5.9 Estimation of solid waste generated in Kurseong Municipality, 2011

		Average waste generation/cap/day*	Waste generation in kg
Total population	42446	0.45	19100.70
No. of boarders in residential schools	2001	0.125	250.13
Floating population	2400	0.125	300.00
Total			19650.83

*Manual on Solid Waste management of CPHEEO, 2000 (URDPFI Guidelines)

*Source: Computed by the researcher

Table 5.10 Ward wise estimated waste generation in Kurseong Municipality, 2011

Wards	Estimated domestic waste generated (in kg/day)*	Wards	Estimated domestic waste generated (in kg/day)*
1	605	11	502
2	871	12	748
3	1110	13	833
4	1905	14	1008
5	900	15	417
6	729	16	767
7	1040	17	1377
8	973	18	1021
9	1308	19	1134
10	957	20	900
Total		19101	

Source: Census of India

* Computed by the researcher based on URDPFI Guidelines

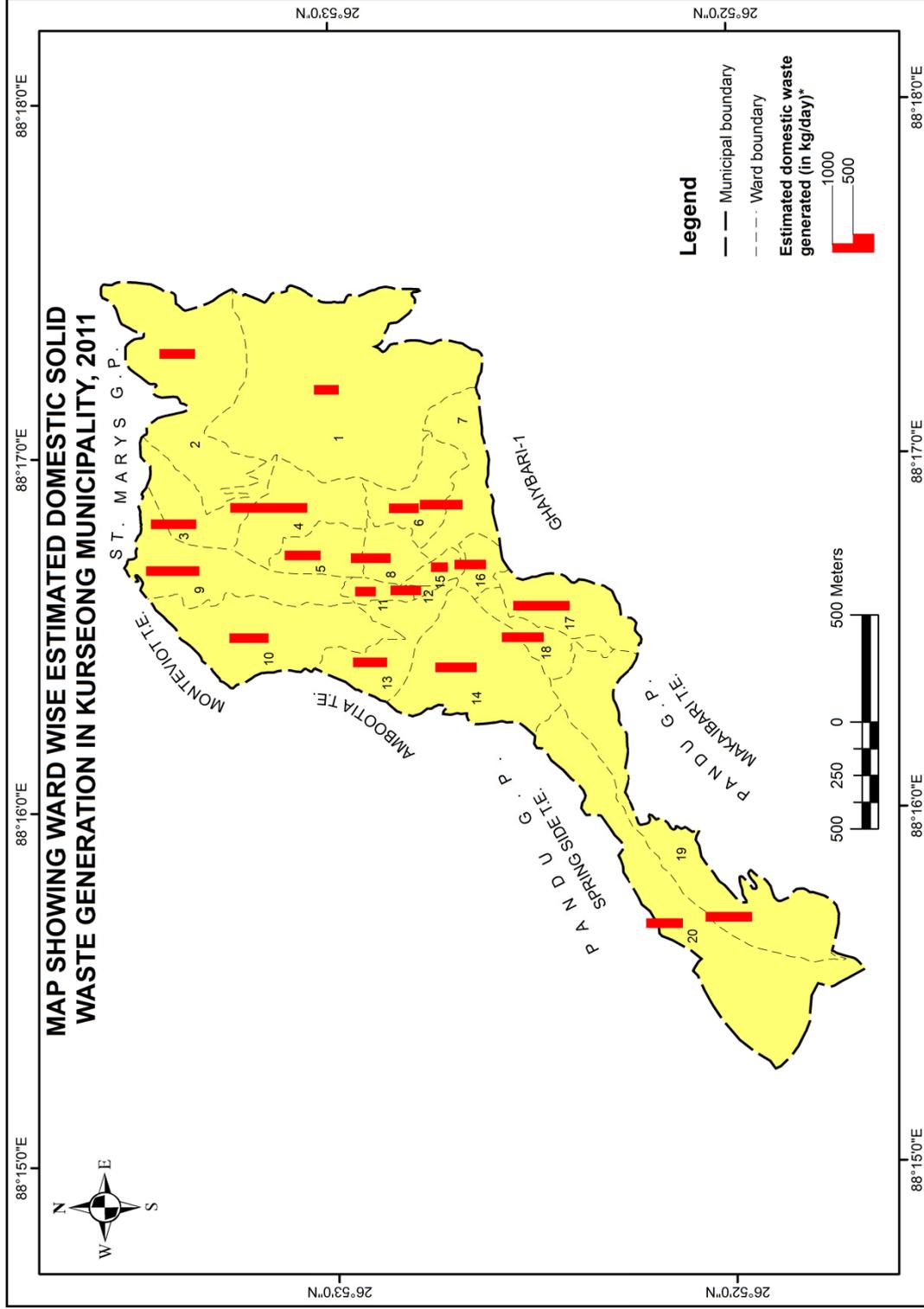


Figure 5.8 Ward wise estimated domestic solid waste generation in Kurseong Municipality, 2011 (Source: Computed by the researcher)

Table 5.11 Ward wise categories of estimated domestic solid waste generation in Kurseong Municipality, 2011

Estimated waste (2011)	Wards	% to Total wards
< 700	1, 11, 15	10
700 – 980	2, 5, 6, 8, 10,12, 13, 16, 20	20
980 – 1260	3, 7, 14, 18, 19	30
1260 – 1540	9, 17	25
> 1540	4	15

Source: Computed by the researcher

of total waste generated in the town 79% is biodegradable and 21% is non-biodegradable. 82% and 78% of the wastes generated from domestic, daily and wholesale markets, hotels and agricultural and garden sources are biodegradable and non-biodegradable respectively. From generation points like commercial centres, railway station and bus stand the proportion of biodegradable and non-biodegradable waste generated is lowest i.e. 5.43% and 6.77% respectively.

Table 5.10 gives an account of estimated average solid waste generated in each ward of the municipality. The total waste generated per day in Kurseong town according to the Annual Administrative Report is 6 metric ton but the estimation of wastes following the URDPFI guidelines reveals a different scenario. The total domestic waste estimated in the town (taking the average quantity of generation as 0.45 kilograms per capita per day) alone amounts to 19.10 metric ton and if the boarders in different residential schools and floating population is taken into account, the total waste generated per day amounts to 19.65 tonnes. If wastes from the institutional and commercial establishments, social gatherings in different community halls of the CBD area and tourist population are considered, then the total waste generated every day will be enormous. In order to have a clear picture, wards have been classified into five groups on the basis of their estimated domestic waste. Wards 4, 9 and 17 are the principal domestic waste generating wards (≥ 1260 kg per day). These three wards account for 24% of the total domestic waste generated in the town. The reasons behind high domestic waste generation include high population, moderate to high population density, higher than the town average and they fall under very high category with regard to number of households. Five wards (3, 7, 14, 18 and 19) generate domestic wastes ranging from 980 to 1,260 kg per day. These wards have moderate size of population and moderate density. Wards 14 and 19, fall under moderate category with regard to ward area. Wards 14 and 18 have moderate number of households. On the other hand, twelve wards generate comparatively low domestic wastes ranging from 417 to 980 kg per day. Most of these wards

have low population and low population density and low to moderate number of households. However, it is very important to point out here that these wards account for 53% of educational institutions, both government and private, 77% of shops, 80% each of banks and ATM counters, 73% of restaurants, 92% of hotels and lodges and 64% of government offices. These wards are also characterized by certain contrasting features. Ward 1, located at the periphery of the municipal area is the largest ward with regard to area and has the lowest population density (873persons/km²). This ward has a significant percentage of land under forest and thus has low estimated domestic waste. In contrast, Wards 11, 12, 13 and 15, located in the heart of the town has high population density due to smaller areal extent. These wards though with comparatively low population have a significant commercial area. It is clear, therefore, that population, number of households and the functions performed by a particular area play a vital role in solid waste generation.

Collection efficiency depends on the availability and capacity of vehicles and the number of trips made by them daily from collection points to the disposal site. Collection efficiency has been analysed by applying the following formula:

$$CE = \frac{\text{Number of vehicles} \times \text{Number of trips} \times \text{Vehicle capacity}}{\text{Total waste generated}} \times 100\%, \text{ where CE} = \text{Collection efficiency}$$

Two *pik-up* vans each with a carrying capacity of 900 kg, (Based on field survey, 2016 and consultation with the Sanitary Inspector, Kurseong Municipality) are used to collect garbage from different parts of the town which make three trips a day to the disposal site. Hence the collection efficiency for the total waste (6 metric tons as per Annual Administrative Report, 2008-09) is 90%. However, if the estimated total waste generated (19.65 metric ton) is taken into consideration the percentage drastically decreases to 26%. The municipal authorities have thus partially succeeded in collection and disposal of the municipal solid waste as more than half of the waste is either burnt or disposed off by the individuals in the nearby *jhoras*.

Table 5.12 Resources available for solid waste system, Kurseong Municipality

Particulars	Numbers available	Remarks
Pik-up van	2	-
Hydraulic dumper (truck)	1	Not in use
Hydraulic dumper (small)	1	Not in use
Tractor	1	Not in use
Wheel barrow	10	-
Community bins	-	-
Cess pool	-	-

Source: DDP, 2008-09 to 2012-13, Kurseong Municipality Office

Presently, the waste is not segregated at the household level and is kept open at the collection points. There are two *pik-up* vans, two hydraulic dumpers, a tractor and ten wheel barrows but hydraulic dumpers and the tractor are not in a working condition. In the management of solid waste, the strength of sanitary workers is an indicator of collection efficiency and sweeper-population ratio plays an important role in assessing the efficacy of waste collection system. As per the guidelines of CPCB the best sweeper-population ratio should be between 1:25 and 1:500 (Siddiqui and Siddiqui, 2010). There are only 69 sweepers to serve a population of 42446 which has resulted into 1: 615 sweeper-population ratio.

5.3.4 Drainage

Like in any other hill urban environment Kurseong town consists of two inter linked water circulation systems: i) natural drains and ii) man-made water supply and waste water disposal system. There are numerous big and small streams that flow through the different parts of the town and channelize water during rainy season. Hussain Khola flowing along the north western boundary and Dhobi Khola flowing westward along the southern boundary of the municipal area are the only two major perennial streams. On the other hand there are numerous streams like Bunglow *Jhora*, Eghara Number *Jhora*, Debisthan *Jhora*, Bhagat Beer *Jhora*, Kanti *Jhora*, Ramlal *Jhora*, Cutlery *Jhora*, Captain Kaziman *Jhora*, Himali *Jhora*, Tiwari *Jhora* and Sherpa *Jhora* which are non-perennial and swell up becoming torrents only during rainy season. They are the big natural drains formed over the ages which form a vital part of the water flow system in the town. According to DDP, 2008-09 to 2012-13, Kurseong Municipality, the man-made open drains serving the municipality are 57.28 km in length and are mainly of two types - *Pucca* (36.50 km) and *Kutcha* (20.77 km). The surface drains serving Kurseong Municipality area are connected with various drainage canals and streams passing through the municipality area.

5.3.5 Sewerage

With increase in population, urbanization, improved living conditions and economic development, the volume of wastewater generated by sources of domestic, industrial and commercial has increased too. A partial sewerage network was laid in Kurseong town in 1918 by providing the facility to a limited area, 10 public latrines and a few houses in the *bazar* area. The practice of carrying night soil from service privies by head load continued till 1979 after which during 1979 – 1980 more than 736 low cost sanitary latrines were constructed to eliminate this old and obnoxious practice (Annual Administrative Report, Kurseong Municipality, 2008-09). Between 1986 and 1994 new sewer lines, 300 mm in

diameter and 1.50 km in length were laid down and after 1994, sewer lines, 225 mm in diameter and 1.00 km in length were added (Kurseong Municipality Office). At present the total length of the sewerage line is 4.50 km with 508 sewer connections (Annual Administrative Report, Kurseong Municipality, 2008-09) and a central septic tank located below the Captain Suraj Sharma Road with a capacity of 0.60 MLD. In 2016 there were 32 community latrines and 18 public latrines with altogether 200 seats.

5.3.6 Water supply

Water is an essential source to life. A reliable supply of potable water is imperative for the health, safe environment, vitality, potentiality and sustainable development of a town. The storage, augmentation and supply of water to the Central and Service Reservoirs from the catchments situated at various locations is the responsibility of the P.H.E. Department whereas the distribution from the service reservoir to the different parts of the town is maintained by the municipality. Kurseong town has numerous perennial and semi - perennial sources of water in the form of hilly rivulets. The water supply system of the town involves tapping of 10 natural spring sources in the catchment region located in the dense forest area of distances ranging from 1.5 km to 16.10 km. These streams are impounded with small setting tanks for storing water from where water is directed first to the Central Reservoirs through G.I. pipe lines of various sizes after preliminary sedimentation and filtration

Table 5.13 Sources of water for feeding Central Water Reservoir

Sl. No.	Name of the perennial source	Diameter of feeder lines	Name of the feeding reservoirs	Distance from reservoirs
1	Dharay Khola (near Bagora)	80 mm/100 mm	Dow Hill Central Reservoir (at Durpin)	12 km
2	Babu Khola (near Khundrukay)	150 mm	Dow Hill Central Reservoir (at Durpin)	12 km
3	Panigaira Khola (near Khundrukay)	150 mm	Dow Hill Central Reservoir (at Durpin)	12 km
4	Pahwa Khola (near Deorali)	100 mm/150 mm	Central Water Service Reservoir (at Victoria)	7.50 km
5	Chitray Khola (near Chitray Busty)	50 mm	Central Water Reservoir (at Victoria)	5 km
6	Aringalay Khola (near Dilaram)	80 mm	St. Helen's Service Reservoir	6.50 km
7	Sepouydura Khola (near Sepouydura)	100 mm/150 mm	St. Helen's Service Reservoir	4.50 km
8	Baluwakhani Khola (8 th Mile near Sonada)	80 mm /100 mm	Eagle's Crag Service Reservoir	16.10 km
9	Thothay Khola (near Tung)	80 mm	Eagle's Crag Service Reservoir	10.40 km
10	Whistle Khola (near St. Mary's Hill)	50 mm	Service Reservoir above Church	1.50 km

Source: Kurseong Municipality Office

Table 5.14 Storage facilities and capacities of the storage tanks

Sl. No	Reservoir	Capacity
1.	R.C. Storage Tank at Dow Hill Forest Area (Durpin) – Reserved for emergencies	45,00,000 gallons
2.	Central Water Reservoir near Victoria School (With Filter and Chlorination Devices)	R.C.C. Tank a) 45,000 gallons b) 20,000 gallons
3.	Central Water Reservoir near St. Helen’s Convent (with Filter and Chlorination Devices)	R.C.C. Tank a) 88,000 gallons b) 20,000 gallons
4.	Central Water Reservoir at Eagle’s Crag(With Filter and Chlorination Devices)	R.C.C. Tank a) 45,000 gallons b) 50,000 gallons
5.	Central Reservoir near Municipality Office for tapping unfiltered water, water from various springs	R.C.C. Tank a) 20,000 gallons (Springs raw water for use in washing) b) 20,000 gallons (for toilets and fire hydrants) c) 20,000 gallons
6.	Central Water Reservoir at Dowhill near Post Office (without filter and Chlorination devices)	R.C.C. Tank 10,000 gallons

Source: Kurseong Municipality Office

and then to the Service Reservoirs located at different convenient places of the municipality through the feeder conduit lines. The distribution is then made to the residents of various wards with a network of connection pipes of approximately 2" diameter (Lepcha, 2013).

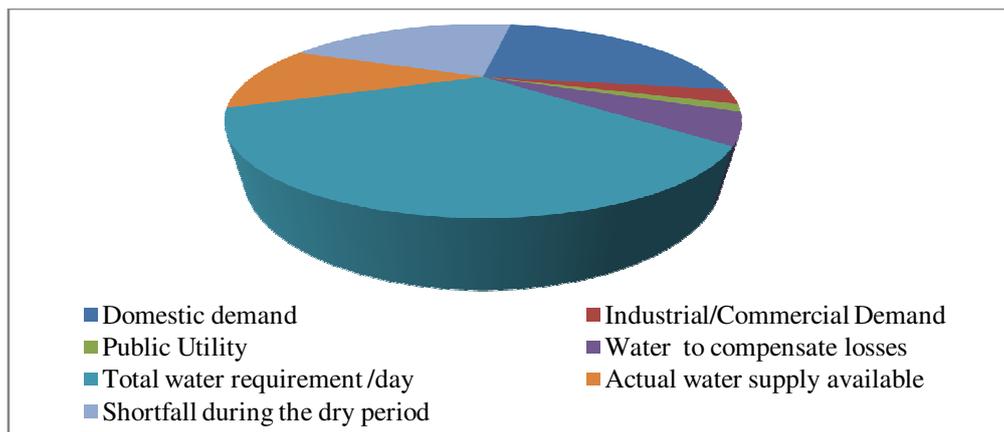


Figure 5.9 Actual water requirements for Kurseong Municipality, 2011
(Source: Computed by the researcher)

According to 2011 census the total population of Kurseong town is 42446 with another 10,000 as average floating population in the form of students in different schools and colleges and workers in different government offices per year (Annual Administrative

Report, Kurseong Municipality, 2008 – 09). As a result, apart from the town dwellers, the external population also exerts a lot of pressure on the existing water supply system as water has to be provided for this number of population even during the four dry months i.e. from February to May. The approximate estimate of demand, for the present population is as follows (Table 5.15):

Table 5.15 Actual water requirements per day, Kurseong Municipality, 2011

Sl. No.	Demand for water	Estimated water requirements (litres)
1	Domestic demand (70 lpcd as per URDPFI/CPHEEO guidelines) for a population of 42446	2971220
2	Industrial/Commercial Demand (10% of total domestic demand)	297122
3	Public Utility (5% of total domestic demand)	148561
4	Fire Demand	-
5	Water required to compensate losses in leakage, water theft etc. (20% of total domestic demand)	594244
6	Total water requirement per day	40,11,147
7	Total storage facility	14,54,908
8	Less 5% due to water loss	72745
9	Net available/Actual water supply available	13,82,163
10	Shortfall during the dry period	26,28,984

Source: Computed by the researcher

The situation somehow remains manageable as people can face the problem of water scarcity during the monsoons by harvesting rain water but it becomes worse during the lean months. The average shortage of water per day is 26,28,984 litres which means that only 34% of the actual water requirements is being met by the municipal water supply system during the lean months. Therefore, a huge gap exists between the demand and supply of water in Kurseong town. Distribution of water by the municipality to the public through tankers and trucks is a common scene during the dry seasons owing to acute shortage of water. Further owing to practices such as illegal tapping, irregular maintenance and improper distribution system the problem of water supply persists in the town. If the present trend continues the scenario will become even more acute, leading to an interminable water crisis in Kurseong in future. The water supply to the town is also adversely affected due to illicit felling of trees in and around the catchment areas (Table5.16). The State Forestry Department though

Table 5.16 Legal status of forest land, Kurseong Forest Division, 2015 – 2017

Name of Division		Reserved Forest (in ha)	Unclassed State Forest (in ha)	Total Recorded/Mutated Forest land (in ha)	No of trees illicitly felled	Area under Encroachment in ha
Kurseong	2015-16	16108.600	264.300	16372.90	119	2.82
	2016-17	16218.78	133.99	16352.77	140	2.82

Source: Annual Administrative Report, Department of Forests, West Bengal

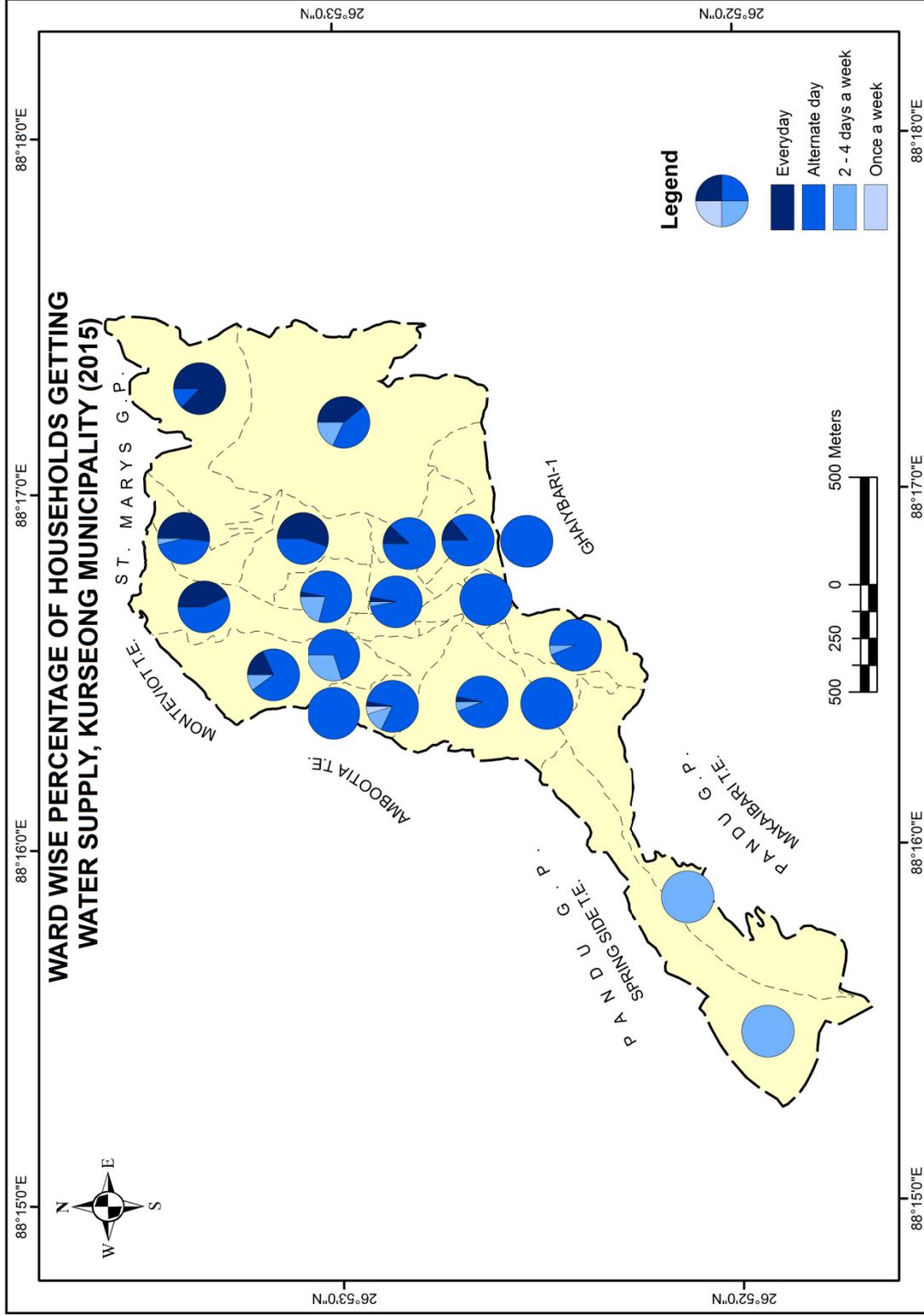


Figure 5.10 Ward wise percentage of households getting water supply, Kurseong Municipality, 2015 (Source: Field Survey, 2015)

controls, monitors and enforces the issues pertaining to deforestation sometimes is in compulsion and is unable to execute its duty effectively in the process of avoiding any conflicts with the local inhabitants.

The field survey reveals that only 18% of the total surveyed households receive water from the municipality every day, 67% on alternate days and 14% two to four days a week. Even worse is Ward 13 where 5% of the households receive water once a week. A glance at the duration of water supply from the municipality reveals more dreadful condition. More than 90% of the total surveyed households in Wards 5, 6, 8, 14, 16, 17, 18 and 20 receive water for less than an hour.

Estimated water requirements

The present scenario with respect to the water management in Kurseong town is already appalling. The future population projection and the estimation of water requirements of Kurseong Municipality reveals that the existing gap between the demand and supply of water is going to further deteriorate sharply thereby resulting in interminable water crisis in future if the situation on the availability of water does not improve. Figure 5.17 predicts a very grave future with regard to water management in Kurseong town.

Table 5.17 Population growth and water demand projection, Kurseong Municipality

Sl. No.	Year	Projected population		
		2011	2021	2031
1	Year			
2	Total population	42,446	45,020	47,750
Future water requirements (in litres)				
1	Domestic demand (taking a minimum of 70 lpcd as per URDPFI/CPHEEO guidelines)	2971220	3151400	3342500
2	Industrial/Commercial demand (10% of domestic demand)	297122	315140	334250
3	Public utility (5% of total)	148561	157570	167125
4	Fire demand	-	-	-
5	Water required to compensate losses in leakage, water theft etc. (20% of total)	594244	630280	668500
Total water demand per day (in litres)		40,11,147	42,54,390	45,12,375

Source: Computed by the researcher

5.4 Conclusion

Transport and communication has played a vital role in the growth and development of Kurseong town. The Darjeeling Cart Road facilitated uninterrupted communication between the hills and the plains and the laying down of Darjeeling Himalayan Railway made faster transport of diverse goods in bulk and people up and down the hills possible. The Darjeeling Himalayan Railway has been included in the list of World Heritage sites by UNESCO in 1999. Kurseong town is well connected to Siliguri by Hill Cart Road, Pankhabari Road and Rohini Road and to Darjeeling by Hill Cart Road. The different parts of

the town are connected by metalled roads and walkways. There are three post offices offering basic postal services as well as diversified services associated with various business and financial activities. There has been a sharp decline in the number of telephone subscribers in recent years due to rapid growth in the number of cell phone users. The town has a fairly efficient fire fighting system equipped with fire engines and a team of trained personnel.

The role of educational institutions has been remarkable in the growth and development of Kurseong town. The schools of Kurseong town not only cater to the educational needs of the town but also attract students from the neighbouring districts, states and countries. The important factors that have contributed to the establishment of privately run English medium residential schools in Kurseong town include the emergence of affluent class, literate parents and demand for education through English as a medium of instruction. The establishment of these schools have aided in the generation of employment and economic upliftment of the local citizens. The principal business area of the town comprises the combined retail and wholesale business structures in the central part of the town and along the main thoroughfares. Unlike large cities having specialised markets with specific locations, Kurseong town being a small hill town possesses diversified commercial activities without a specified location except for few shops. There are seven nationalised and four non-nationalised banks in Kurseong town out of which the State Bank of India, Pankhabari Road Branch, has the highest number of customers, employees and annual transaction.

Kurseong town is deprived of major urban recreational facilities like movie halls, theatres and clubs. The age old Raj Rajeswai Hall was destroyed in a fire set by the miscreants in July 2017. The sole industry of Kurseong town to survive is the tea industry which has contributed to the development of the town. There are two government hospitals in the town of which one deals with the tuberculosis patients and the other with the general patients. Kurseong town being a sub-divisional headquarter houses a number of government offices under different departments. At present there are 58 government offices scattered all over the town where majority of the employees are from within the town. Owing to difficult terrain and steep gradient, the development of houses in Kurseong town has taken place in a cluster manner lacking in distinct character. The intensive utilisation of available land for residential and commercial purposes has resulted into vertical expansion especially in the town centre. Kurseong town gets its electricity supply from the 11kV Pankhabari Sub-station. The highest contributor as a source of solid waste is market followed by household wastes. The drainage system of the town consists of natural and man-made waste water disposal drains. A large number of town dwellers still depend on public toilets. Only 25% of the total

municipal area is covered under central sewage system. The existing gap between the demand and supply of water in Kurseong town is going to further deteriorate with the increase in future population.

The growth and development of Kurseong town with respect to its various functions and socio-economic infrastructures have thus brought with them its economic prosperity but at the same time it cannot be denied that it has resulted in distorted urban development with uncontrolled exploitation of resources creating various problems associated with very high population and overburdening of infrastructures. The rational, systematic and quantitative assessment of spatial concentration of different urban amenities of Kurseong town, therefore, becomes essential to understand the level of development in its different wards.

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