

CHAPTER-II

GEOGRAPHICAL BACKGROUND OF COOCH BEHAR TOWN

2.1 Introduction:

This chapter concerns with providing a detailed profile of Cooch Behar town on all of its physical, social and demographic characteristics. The main aim of this chapter is to study the physical and cultural background of the study area. In effect, the physical and human environments of the study area are described using both the primary and secondary data.

The Cooch Behar town is located on the left bank of river Torsa and has a triangular shape having bounded by river Mora-Torsa on the west and river Bura-Torsa flowing from North-West to South-East. The historical evidence of Cooch Behar town can be traced way back in 1661, during the rule of King Prana Narayan when Mir Jumla, the Mughal appointed Subedar of Bengal had marched up to the Capital Town in Cooch Behar and seized part of the town. Later, King Rupa Narayan transferred his Capital to Guriahati which occupied a large portion of modern-day Cooch Behar town. Since then the Capital of the kingdom has remained in Cooch Behar town and the Kingdom of Koch Bihar was ruled from the town (Chaudhuri, 1903).

By the end of Nineteenth Century, the town took its modern shape and was declared a Municipality in 1885. A Municipal Police force was recruited for maintaining law and order, structured well-lit roads were erected, residences of senior Officers were built beside the princely palaces, schools and hospitals were established (Chaudhuri, 1903). Cooch Behar town is the largest unit of trade and commerce in the district and it retained the status to date. The district administration in Cooch Behar is governed from Cooch Behar (Town) and acts as the head quarter of Administration, Judiciary and Civil authorities in the district (District Statistical Handbook, Cooch Behar, 2008).

2.2 Physical set up of the study area:

Cooch Behar town formed in 6th June 1944 by the Cooch Behar municipal act 1944. Cooch Behar town is situated at Cooch Behar block 1 in Cooch Behar district in the foothill zone of eastern Himalaya beside the left bank of river Torsa ranges from 89°26'E to 89°28'E and 26°18'N to 26°20'N. Geographically it is part of the northern plains region. Cooch Behar town is the largest town and district headquarters in Cooch Behar district. Cooch Behar town has cover-up area 8.29 sq.km having 20 numbers of wards.

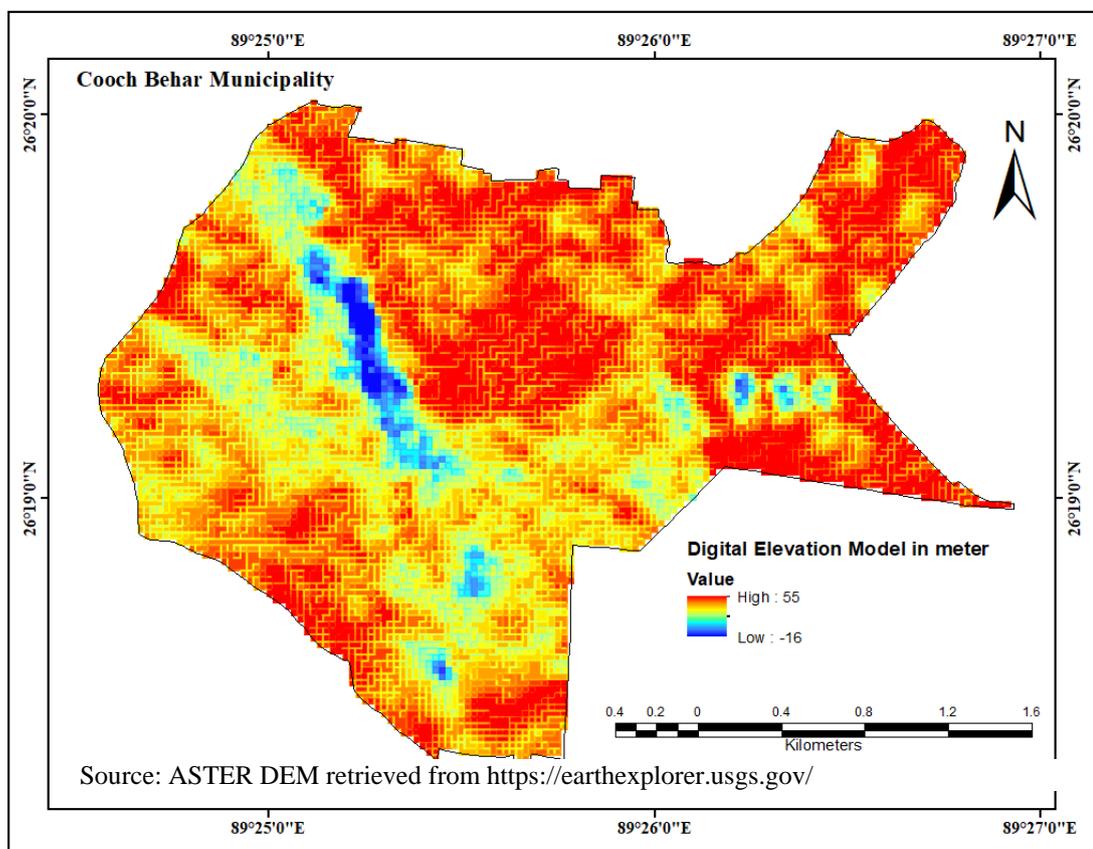


Figure 2.1: Digital elevation model of Cooch Behar town.

2.2.1 Topography:

Cooch Behar District and town regard under the geographical region of plain. So physiographical all the characteristics of the plain region are found (Figure 2.1). The Alluviums of river the Torsha and the Mora-Torsha developed the plain through the geologic time. The elevation in Cooch Behar town from mean sea level BM is 41.9m (Cooch Behar town railway station). Cooch Behar town is a flat region with the slight

south-eastern slope along which the main rivers of the district flow. Cooch Behar town basically is a flat land having altitude ranging 50 to 55m.

2.2.2. Water body:

In Cooch Behar town no river flows through the town. River the Torsa flows beside Cooch Behar town like a curvature from south west to north east direction and the Mara Torsa bordering the north-eastern portion in Cooch Behar town. Cooch Behar town has the lot of Pucca drains and Kutchha drains which flow out to river the Torsa beside this Cooch Behar town has the lot of famous ponds (Table 2.1 and Figure 2.2) like Sagardighi, Bairagi Dighi, Rrajmata Dighi, laldighi, Narasimha Dighi, Mali Dighi (SDLRO, 2014).

Table 2.1: Percentage of water body in different wards

| Ward number | Total area(sq km) | The water body in percentage | Ward number | Total area(sq km) | The water body in percentage |
|-------------|-------------------|------------------------------|-------------|-------------------|------------------------------|
| 1 | 0.40 | 4.86 | 11 | 0.31 | 3.72 |
| 2 | 0.13 | 1.52 | 12 | 0.30 | 3.63 |
| 3 | 0.25 | 3.01 | 13 | 0.26 | 3.15 |
| 4 | 1.29 | 15.57 | 14 | 0.16 | 1.98 |
| 5 | 0.21 | 2.53 | 15 | 0.23 | 2.81 |
| 6 | 0.19 | 2.28 | 16 | 0.31 | 3.79 |
| 7 | 0.16 | 1.92 | 17 | 0.46 | 5.60 |
| 8 | 0.50 | 6.04 | 18 | 0.45 | 5.47 |
| 9 | 0.40 | 4.82 | 19 | 0.88 | 10.57 |
| 10 | 0.90 | 10.85 | 20 | 0.49 | 5.87 |

Source: Draft development plan of Cooch Behar municipality 2009-13.

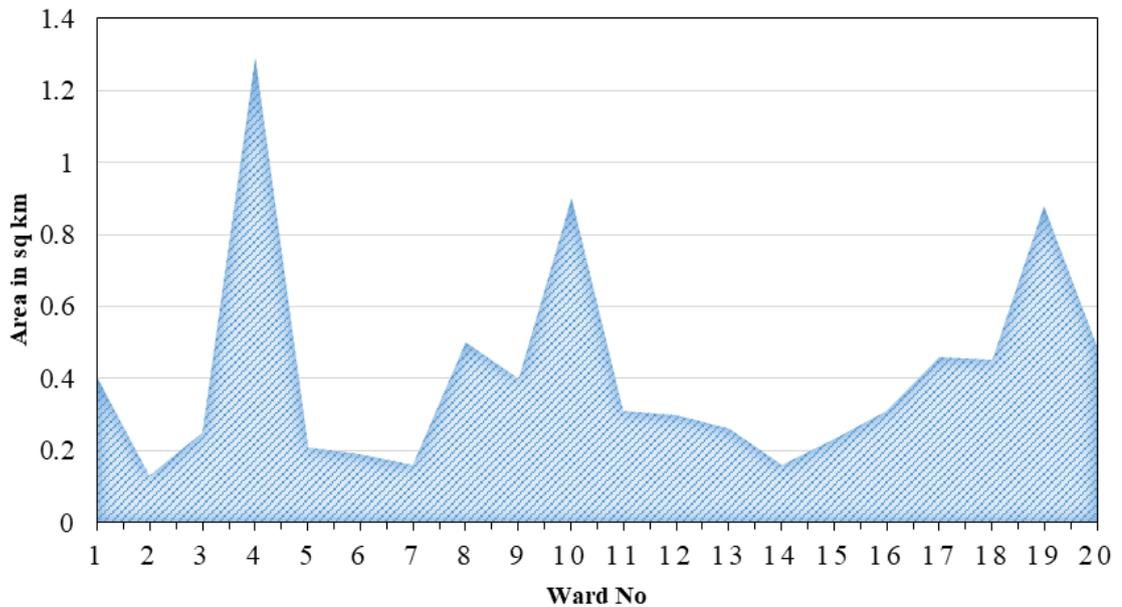


Figure 2.2: Ward-wise distribution of water bodies of Cooch Behar town.

2.2.3. Soil:

Being the area in Cooch Behar district nearer to the Himalayan foothills, after rains in the catchment area of the Torsa River carried sand silt clay pebbles and nutrient content minerals and in flood times it carries Alluvium and makes rich the soil condition. The soil is formed by alluvial deposits and it is acidic in nature. It is friable loam to sandy loam in depth from 0.15m to 1m. the soil has a low level of nitrogen while potassium and phosphorus levels are media. Deficiency of Zn, Mg, Ca, and sulphur is quite high. A gentle slope from North West to South East is characteristic of this district. The geological formation is the alluvium of recent times deposited by the Tista and the Mahananda rivers.

2.2.4. Climate:

The district Cooch Behar has a moderate type of climate characterised by heavy rainfall during monsoon and little rainfall in the month of October to mid-November (Table 2.2). Five distinct seasons (summer, monsoon, autumn, winter and spring) can be observed in Cooch Behar district from which summer winter monsoon is prominent. From the data 2010, it can be observed that the maximum temperature was 31.7⁰c in April and minimum temperature was 9.6⁰c in January. The maximum mean temperature 28.35⁰c was recorded in August. The atmosphere is highly humid between throughout the year except during February to May when relative humidity is around

50 to 70% the rainy season lasts from June to September (Figure 2.3); average annual rainfall is 3201 mm. The highest rainfall recorded is 800 mm in the month of July where the month of December gets the very small amount of rainfall amounting to 5mm. However the climate has undergone a drastic change in past few years (Karmakar, 2011).

Table: 2.2 Temperature and rainfall of Cooch Behar town, 2017

| Months | Maximum temp(⁰ c) | Minimum temp(⁰ c) | Mean temp(⁰ c) | Mean rainfall |
|-----------|-------------------------------|-------------------------------|----------------------------|---------------|
| January | 22.6 | 11 | 28.1 | 5.8 |
| February | 26.5 | 13.6 | 33.3 | 0 |
| March | 30.3 | 17.9 | 39.25 | 57.6 |
| April | 31.3 | 22.1 | 42.35 | 133.4 |
| May | 31.3 | 22.7 | 42.65 | 299.8 |
| June | 31.8 | 25 | 44.3 | 981.2 |
| July | 30.7 | 25 | 43.2 | 891.4 |
| August | 33.7 | 25.5 | 46.45 | 357.4 |
| September | 31.3 | 26.6 | 44.6 | 403 |
| October | 31.7 | 25.1 | 44.25 | 118 |
| November | 29.1 | 17.1 | 37.65 | 0 |
| December | 27.1 | 13.4 | 33.8 | 0 |

Source: Agricultural office, Cooch Behar.

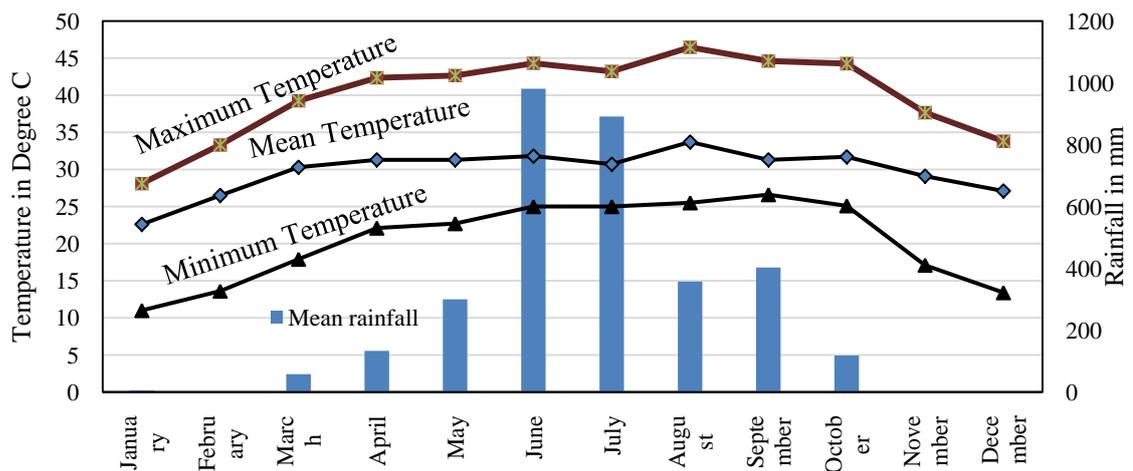


Figure 2.3: Monthly rainfalls and temperature.

2.2.5. Green cover:

Day by day increasing of the new building is the main cause of lack of vegetation in town. But the keen relationship between soil and climate has given birth to diverse vegetation in town. There is no permanent forest area in the town. Cooch Behar town and its surrounding urban agglomeration region are faced deforestation due to urbanisation, making buildings, malls, increasing demand for fuel; construction works (Table 2.3). Cooch Behar town planted trees in different wards beside every road, the highest percentage of green cover found in ward number 9 having 61.54% of total green cover followed by 25.29% in ward number 19 and 20.22% in the ward number 10.

Table 2.3: Green cover in Cooch Behar town

| Ward number | Area of green cover (sq km) | Green cover in percentage | Ward number | Area of green cover (sq km) | Green cover in percentage |
|-------------|-----------------------------|---------------------------|-------------|-----------------------------|---------------------------|
| 1 | 0.06 | 15 | 11 | 0.01 | 3.33 |
| 2 | 0 | 0 | 12 | 0.01 | 3.33 |
| 3 | 0.02 | 8.33 | 13 | 0 | 0 |
| 4 | 0.03 | 2.33 | 14 | 0 | 0 |
| 5 | 0 | 0 | 15 | 0 | 0 |
| 6 | 0 | 0 | 16 | 0 | 0 |
| 7 | 0 | 0 | 17 | 0.07 | 15.22 |
| 8 | 0.03 | 6 | 18 | 0.02 | 4.44 |
| 9 | 0.24 | 61.54 | 19 | 0.22 | 25.29 |
| 10 | 0.18 | 20.22 | 20 | 0.04 | 8.33 |

Source: Cooch Behar Municipality, 2017.

2.2.6. Land use types of municipal area:

The town area is used for various purposes. Highest 50 percentage of land used for residential purposes, and then 14.78% land uses for public and semi-public uses. Due to deforestation, for urbanisation, only 0.36% of the land of the total land area remains under green coverage (Table 2.4 and Figure 2.4).

Table 2.4: Land use and land cover of Cooch Behar town

| SL number | Land use type | Area(sq km) | Percentage of Total Area |
|-----------|--------------------------------|-------------|--------------------------|
| 1 | Commercial | 0.07 | 0.84 |
| 2 | Institutional | 0.13 | 1.57 |
| 3 | Mixed | 0.46 | 5.56 |
| 4 | Open unused land | 0.39 | 4.7 |
| 5 | Underdeveloped land | 0.3 | 3.61 |
| 6 | Public and semi-public | 1.23 | 14.78 |
| 7 | Residential | 4.12 | 50 |
| 8 | Transportation & Communication | 0.47 | 5.61 |
| 9 | Water body | 0.34 | 4.1 |
| 10 | Agriculture | 0.41 | 4.95 |
| 11 | Greenbelt | 0.03 | 0.36 |

Source: Draft Development plan of Cooch Behar Municipality, 2013.

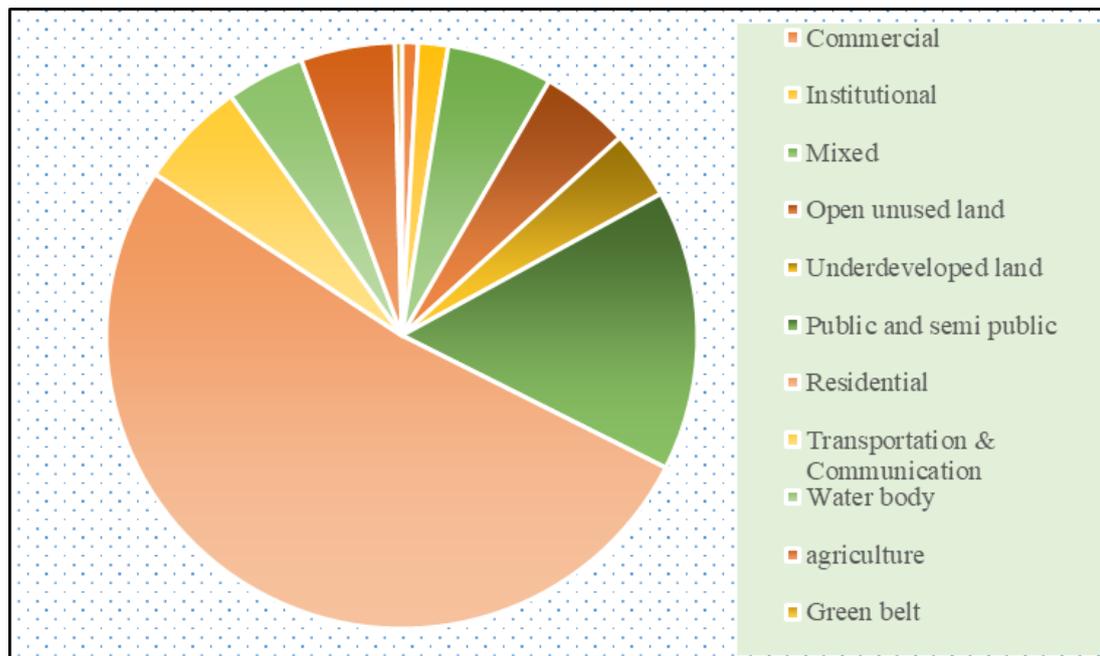


Figure 2.4: Land use of Cooch Behar town.

2.3 Cultural setup of the study area:

Cooch Behar was mainly the capital city centre of Koch state. Now it becomes in a district headquarters and deals mainly with the administrative organization. In Cooch Behar town there are some certain public building and other government offices. Finding this following feature it can say Cooch Behar is an Administrative town.

2.3.1 Historical background:

The name Cooch Behar is derived from the name of the Koch Rajbonshi tribe that is indigenous to this area. The word Bihar is the Sanskrit word Bihar (Travel) which means the land through which the Koch Rajbonshi kings used to travel or roam about. The greatest Koch Rajbanshi king ruled in the kingdom of Kamtapur. Historic Kamtapur comprised a large area of north Bengal, large parts of Assam, parts of Bangladesh and few areas of Bhutan. According to Cooch Behar municipal act 1944, the Cooch Behar town was established according to this law the Cooch Behar town should have highest 15 and lowest 10 commissioners in different wards. The first municipal election held on 23rd June 1949 and elected 9 commissioners and others 6 are selected by Cooch Behar Raj Durbar and these 15 members constituted the municipal board of Cooch Behar town (Chakraborty, 1988).

2.3.2 Administrative division:

The Cooch Behar district has five subdivisions, Cooch Behar Sadar, Dinhata, Matha Bhanga, Mekhliganj and Tufanganj. Cooch Behar Sadar has two subdivisions Cooch Behar- I and Cooch Behar -II. Cooch Behar town is subdivided into 20 wards having 8.29 sq km area, largest area is ward number 4 (1.291 sq km area) the smallest ward is ward number 2 with 0.1263 sq km area (District Statistical Handbook, Cooch Behar, 2008).

2.3.3. Economic establishment:

Most of the Government offices situate beside the Sagar Dighi area. The state and central govt. employs are the highest in numbers in Cooch Behar town. The commercial and business mainly retail goods are situated ward number 8, 6 and 7 beside B.S Road, N.N Road, R.N Road, where Bhabaniganj bazar is situated. Farming is one of the main lively hood of nearby villages, Bhabaniganj bazaar, Deshbandhu market, Natun bazar are the daily market of local people where sellers came from the

different rural area, Chakir bazar, Ghugumari bazar, Khagrabari bazar are the other markets bordering the municipal area in Cooch Behar town. This gives a large semi-permanent resident who brings revenue to the local economy. The Cooch Behar is declared a heritage town recently, the state tourism department trying to promote the Cooch Behar as a tourist destination. Rajbari, Madan Mohan temple, Victor palace, Debi Bari, Sagardighi, Raj Matadighi, Bairagidighi etc. are the tourist spot of Cooch Behar town.

The existing industrial activities of the town are bare minimum. Special attention may be paid for modernized pisciculture in this town as there are so many small & big ponds and dighis. A proposed industrial growth centre would be at Chakchaka not so far from town.

2.3.4 Utility service:

Cooch Behar was a well-planned town and the town is responsible for providing basic services, such as drinkable water and town sanitation. The water is supplied by the town using underground water resources and almost all the houses are connected through the system, solid waste is collected every day by the town van from every individual house. The surface drains, mostly un-cemented, drain into the Torsa River. Electricity is supplied by the West Bengal State Electricity Distribution Company Limited and the West Bengal fire service provides emergency services like fire tenders (Plate 2.1). All the wards are truly connected with metalled roads, the public works department is responsible for road maintenance the town and on the roads connecting Cooch Behar with others towns in the region. Health services in Cooch Behar town include a government-owned district hospital in the ward number 17 and a regional cancer hospital in the outside of Cooch Behar town besides ward number 4 and six private nursing home are in the Cooch Behar town.

The Municipal Authority with its existing capacity has managed to construct pucca drain of about 55.25 km only and 94.75 km kutchha, and the town has its own Trenching Ground but no underground sewerage system. At present, there are some sanitary latrine in all over the town which is very low on requirements. So requires up gradation for the betterment of Municipal services.



Plate 2.1: Heritage centres of Cooch Behar town: a. Fire brigade b. Cooch Behar stadium c. Vola ashram d. Cooch Behar town office e. Rajbanshi bhasha academy f. Sagardighi.



(a)



(b)



(c)



(d)

Plate 2.2: Some shopping centre in the town: a. Radha madhab shoppers world b. Rai kitchen building c. Ramsha cloth shop d. City life mall.

2.3.5. Culture:

Popular festivals in Cooch Behar include Durga Puja in October, along with Raspujima and Rash Mela, when a big Rashmela held at Rashmela Maidan near Madan Mohan Mandir for 15 to 17 days, Rashmela is the oldest festival in Cooch Behar which completed its 200 years in November 2012. Others festivals like Pohela Baisakh (Bengali New Year), Rathayatra, Dolyatra or Basanta utsab, Diwali, Poushparbon, Christmass, Eid-ul-Fitr, during Rathayatra a small fair held at near Gunjabari (Ward number 1).

Bengali women commonly wear the sari and shallower kames which are distinctly designed as per local custom. However in recent times in town and even rural area are captured by western style especially by the younger. Men wear pant, shirt, traditional dhoti, and Panjabi and trouser, especially religious occasions.

The Cooch Behar palace is one of the important parts of the culture in Cooch Behar and prides in Cooch Behar it has a museum full of photos of historical events, articles, many architectural statues etc. The town having many heritage buildings like Rabindra Bhaban, Victor palace, Debibari, Raj Bari. Rabindra Bhaban is an auditorium venue for cultural events like drama, meeting and dance programme. Temple exist throughout the municipal region like Madan Mohan temple, Debibari, Durgabari, Rajmata temple and Baro Maszid, Choto Maszid (Mosque) and two churches. There are two stadiums and one indoor stadium are in the Cooch Behar town which used for sports centre by the local people and the outsiders of town areas. Telegraph, Hindustan Times, The States Man, Times of India, is the popular English newspapers of the municipal area, Uttarbanga Sambad, Anandabazar, Ganasakti, Patidin, Bartaman are the Bengali newspapers used by the local people. The public radio station, All India Radio, FM rainbow is available to the radio station in Cooch Behar town. Cooch Behar received almost the all T.V. channels available in the country. There are two cinema halls are located in the municipal area, featuring Hindi, Bengali and English movies. Internet cafes are available here with broadband services by BSNL, Airtel, Reliance, Vodafone etc.

2.3.6 Transport:

Cooch Behar town is well connected by networks of roads and railways with other regions. Toto rickshaws are the most widely available public transport within Cooch

Behar town. Most of the residents who live away from CBD area (Bhabaniganj bazar) have their personal transport system bikes, cars, bicycles. The Cooch Behar railway station is situated in the ward number 10 with few local trains. New Cooch Behar railway station is 3 km away from Cooch Behar town it is well connected to all major cities of India like Kolkata, Mumbai, Chennai, Guwahati, Bangalore etc. (Haldar, 1987) The rail service is under the North-Eastern Frontier Railway service. Cooch Behar town is the headquarters of North Bengal state Transport Corporation from where buses run in the different direction in Cooch Behar districts as well as different districts and states, there are 3 bus terminuses in Cooch Behar town, one is private but rest of two are under state government. There is also a taxi and autos stand in ward number 8 and 20, and one for hiring taxis and auto. There is an Air Port in town area in the ward number 4 but it is not running now due to some unavailability of infrastructural facilities.

2.3.7 Market facilities:

Within the town peripheries, there are four Daily markets, two wholesale Markets & eight commercial complexes (Plate 2.2). The Main Trading centre of the urbanities is Bhabaniganj Market which was founded by 'The Maharaja'. Recently Cooch Behar town reconstructed the market in a planned wise with the provisions of having stalls in order to accommodate traders of different categories (Mitra, 1953).

2.3.8 Education Facility:

The educational aspect of Cooch Behar town is prolific from the social and cultural part. Now the educational facility of this town consists of 36 Primary Schools, 1 High Schools, 14 Higher Secondary schools, 19 professional and technical schools and 4 general colleges and one polytechnic and one ITI College. In Cooch Behar town there are 42 non formal schools run by the private and religious organizations. The schools usually use English, Bengali and Hindi as their medium of instructions. The schools are affiliated West Bengal Board of Secondary Education or the ICSE or to the CBSE. Jenkins, Sunity Academy, Indira Devi, Sadar govt. high school are the 4 Govt. schools situated in the municipal area. A.B.N seal college famous college, others are Cooch Behar College, Mahila College, BT University and Evening college, Polytechnic college and an Engineering college. Very recently a University has been established in ward No. 9 of this town with the name Cooch Behar Panchanan Barma University (Plate 2.3).



(a)



(b)



(c)



(d)



(e)



(f)

Plate 2.3: Educational Institutions: a. University B.T. & Evening College b. Jenkins School c. Cooch Behar Panchanan Barma University d. M.N.N High School e. ABN Seal College f. Cooch Behar Polytechnic College.

2.3.9 Health services:

Cooch Behar town having two government hospitals- MJN hospital and police hospital, seven nursing homes-Poddar nursing home, Shubham hospital, Jeevandweep nursing home, Shila nursing home, Jailakshmi nursing home, Ritari nursing home, Metropolitan nursing home and two blood banks are there one is MJN hospital others beside municipal office. With the existing infrastructure of 400, no's beds in Sadar Hospital this town is performing status of district headquarter towards providing health facilities to the inhabitants of town and district besides that the existence of seven nursing homes and Municipality Blood Bank & Medicine Bank has also increased the health services potentially of this town (Anonymous, 2008).

2.3.10 Tourism facilities:

Though Cooch Behar is not well-reputed tourist centre as compared to the famous tourist location Like Simla, Darjeeling or Goa, district of Cooch Behar as a tourist seat enjoys a unique character of its own. This is not only best with gushing rivulets, fascinating landscape, luxuriant forest growth, but also bears the memories of bygone days through the relics of the medieval age. The enchanting murmuring of streams, charming songs of sweet-voiced birds, hearty silence, fresh air and its peculiar culture appeal tourist here (Plate 2.4). This Cooch Behar simultaneously owns the natural, cultural and historical elements of tourism. The township in Cooch Behar still retains its distinct character for its unique planning and beautiful landscape by the maharajas of Cooch Behar (Chaudhuri, 2008).

Cooch Behar Town is capable of attracting to a large extent only for its finding towards the maintenance of the ancient structures and histories still lying widespread throughout the town and the District also. The Cooch Behar palace of king Nripendra Narayan has already been taken up by the Archaeological Department of the Govt. of India and it is being maintained by the Department. With historical reputation and as a result good numbers of tourists visit the palace every year. 'Rsash Mela' is also the other ancient festival being maintained by the local authority every year, invites a good number of outsiders yearly and special emphasis may be given towards establishment of better infrastructure for tourists attraction. The famous Madan Mohan, Bara Devi Bari Temple, Palace, Sagar Dighi, Bairagi Dighi, Brahma Samaj are historical spots of this town (Majumder, 1977).



(a)



(b)



(c)



(d)

Plate 2.4: Tourism facility in the town: a. Atithi Niwas b. Anandamaye Dharmashala c. New hotel central d. Madan Mohan temple.

2.4 Demographic characteristics of the study area:

According to the provisional census, 2011 Cooch Behar town has 77935 populations out of which 39014 are male and 38921 are females. The 0-6 year population was 7910. The effective literacy rate for the 7+ population was 91.75%. The sex ratio for the 7+ was very high 1003 females /1000 males. The total decadal growth rate of population was -0.16%. Males constitute 49.92% of the total population and females constitute 50.08%, the average literacy rate was 86.75% which is higher than total district literacy rate which is 75.49%. The female literacy rate was 89% and male literacy was 90%. About 7% of the total population comes under 0-6 year age. The major religion of Cooch Behar town has Hindu (84%), followed by Muslim (9%), others (7%). Communities that inhabit Cooch Behar include Bengalis, Gorkha, Marwaries, Biharies, Rajbanshies commonly spoken language is Bengali (Hunter, 2012).

Out of many problems relating to last decade low population growth, the effects of high density without industrialization in the urban areas are more important as they affect the socio-economic life of the people. Problems like slum area, polluted air and water, crime, addiction to alcohol, juvenile delinquency and prostitution are also important subjects to study demography. Here if the population is increasing at a faster rate and if the available civic amenities are number sufficient, the development of urban centre will be slow. Rapid population growth reduces per capita income, lowers the standard of living, shortage of basic services like water, electricity, transport and communication, public health, education etc. Along with this problem of migration and urbanization are associated with growing population which leads to the coming up of contaminated town, pollution, unhealthy sanitation etc. (Jhingan et al., 2016)

The spatial variations in the distribution, density, composition, sex-ratio, literacy rate, and the growth of population have a direct bearing on the utilisation of resources and the development of a region or country. It is, therefore, an important concern of geographers. The distribution, density, composition, growth and migration of population are directly controlled by the physical, socio-economic and political factors.

2.4.1 Growth of population:

According to the provisional census, 2011 Cooch Behar town has 77935 populations which were 76874 in 2001 census. From 1961 to 2011 in every decade's population growth is decreasing (Table 2.5).

Table 2.5: Population growth of Cooch Behar town (1961-2011)

| Year | Population | The decadal growth rate in percentage |
|------|------------|---------------------------------------|
| 1961 | 41922 | - |
| 1971 | 53684 | 28.06 |
| 1981 | 62112 | 15.60 |
| 1991 | 71215 | 14.66 |
| 2001 | 76874 | 7.95 |
| 2011 | 77935 | 1.38 |

Source: Census of India, 1961 to 2011.

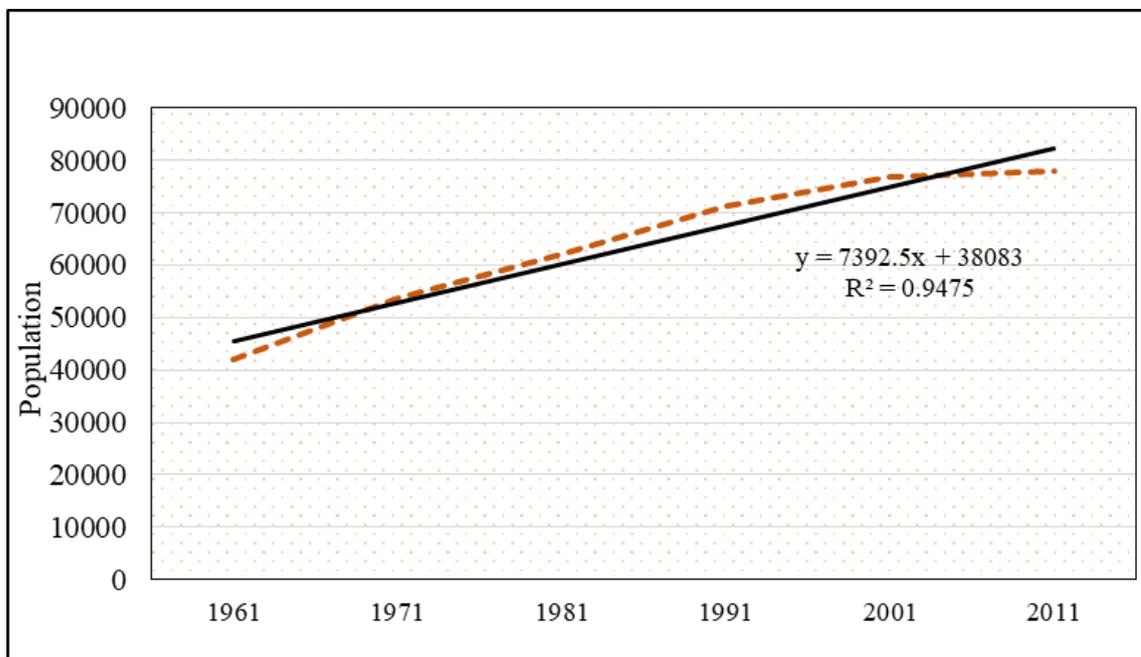


Figure 2.5: the Decadal growth of the population of Cooch Behar town.

The decadal growth rate in Cooch Behar town is shown in figure 2.5. It shows that in 2011 decadal growth rate is very low. Different census year it will found a declining trend of decadal growth rate from every census year, in 1961 to 1971 it was 28.06%, it declines next census year and reaches 15.60% then 14.66%, then 7.95% in the 2001 census and in 2011 it reaches 1.38%.

Table 2.6: Ward wise decadal growth rate of Cooch Behar town 2001 – 2011

| Ward number | Population in 2001 | Population in 2011 | The decadal growth rate in percentage | Ward number | Population in 2001 | Population in 2011 | The decadal growth rate in percentage |
|-------------|--------------------|--------------------|---------------------------------------|-------------|--------------------|--------------------|---------------------------------------|
| 1 | 4655 | 4684 | 0.62 | 11 | 3885 | 4291 | 10.45 |
| 2 | 1800 | 1833 | 1.83 | 12 | 4454 | 4501 | 1.12 |
| 3 | 3788 | 3799 | 0.29 | 13 | 3220 | 3336 | 3.60 |
| 4 | 3487 | 3553 | 1.89 | 14 | 2508 | 2580 | 2.87 |
| 5 | 3592 | 3705 | 3.15 | 15 | 3732 | 3962 | 6.16 |
| 6 | 3469 | 3216 | -7.29 | 16 | 4339 | 4512 | 3.99 |
| 7 | 1807 | 3693 | 104.37 | 17 | 2419 | 2009 | -16.95 |
| 8 | 5643 | 3781 | -33.00 | 18 | 4655 | 5890 | 26.53 |
| 9 | 4775 | 3416 | -28.46 | 19 | 5232 | 4346 | -16.93 |
| 10 | 4407 | 5261 | 18.36 | 20 | 5007 | 5567 | 11.18 |

Source: Census of India, 2001, 2011.

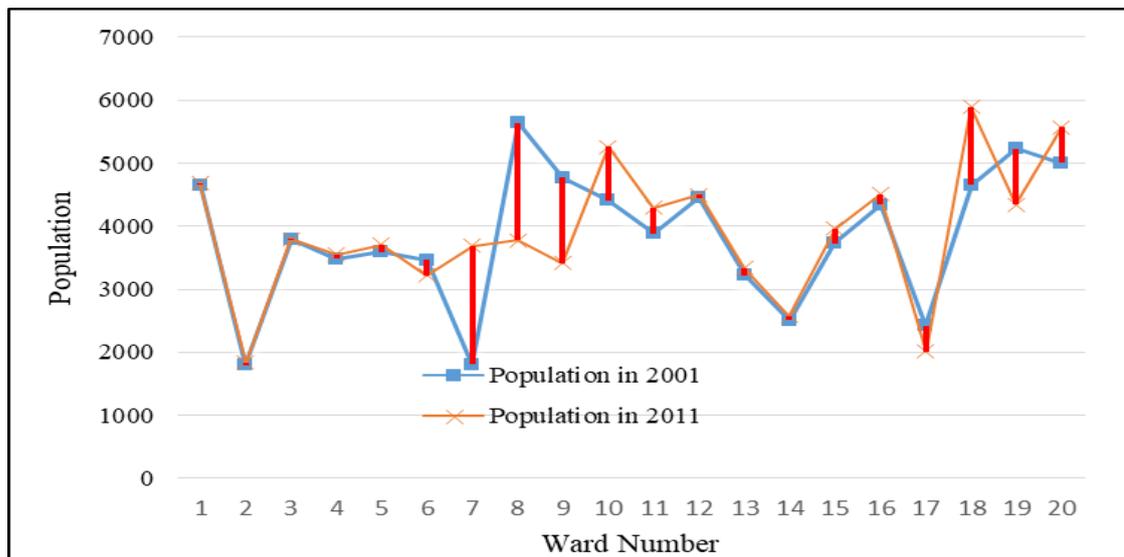


Figure 2.6: Showing decadal growth rate.

There has a decadal variation of population growth inward wise in Cooch Behar town (Figure 2.6). Table No. 2.6 showing the ward wise decadal growth rate in Cooch

Behar town that, ward number 6,8,9,17,19 has negative growth rate, ward number 8 had highest negative growth rate -33.00%, then ward number 09 (-28.46%), 17 (-16.95), 19 (-16.93%), 06 (-7.29%). Highest positive decadal growth rate found at the ward number 7 which is 104.37% (Census of India, 2011).

2.4.2 Distribution of Population:

In 2001 there were 76874 populations in Cooch Behar town (Table 2.7), 37866 populations were females and 39008 populations were males. Highest population found in ward number 8 (5643 populations) and lowest population found in ward number 2 (1800populations), highest male population found in ward number 8 (2913 populations), lowest male found in ward number 2 (912 populations) and also lowest number of female 888 person (Figure 2.7), highest number of female found in ward number 8 (2730 person). In 2011 there were 77935 populations in Cooch Behar town (Table 2.8), highest number of population found in ward number 18 (5890 person) and lowest population found inward number 2 (1800 person), highest number of male population found in ward number 20 with 3018 person and lowest male population found in ward number 2 (921 person), and also lowest number of female person 921, highest female population found in ward number 18 (2910 persons).

Table 2.7: Ward wise male and female population in 2001

| Ward number | Total population In 2001 | Male | Female | Ward number | Total population in 2001 | Male | Female |
|-------------|--------------------------|------|--------|-------------|--------------------------|------|--------|
| 1 | 4655 | 2436 | 2219 | 11 | 3885 | 1893 | 1992 |
| 2 | 1800 | 912 | 888 | 12 | 4454 | 2176 | 2278 |
| 3 | 3788 | 1900 | 1888 | 13 | 3220 | 1565 | 1655 |
| 4 | 3487 | 1758 | 1729 | 14 | 2508 | 1220 | 1288 |
| 5 | 3592 | 1897 | 1695 | 15 | 3732 | 1880 | 1852 |
| 6 | 3469 | 1668 | 1801 | 16 | 4339 | 2198 | 2141 |
| 7 | 1807 | 890 | 917 | 17 | 2419 | 1378 | 1041 |
| 8 | 5643 | 2913 | 2730 | 18 | 4655 | 2292 | 2363 |
| 9 | 4775 | 2448 | 2327 | 19 | 5232 | 2633 | 2599 |
| 10 | 4407 | 2224 | 2183 | 20 | 5007 | 2727 | 2280 |

Source: Census of India, 2001.

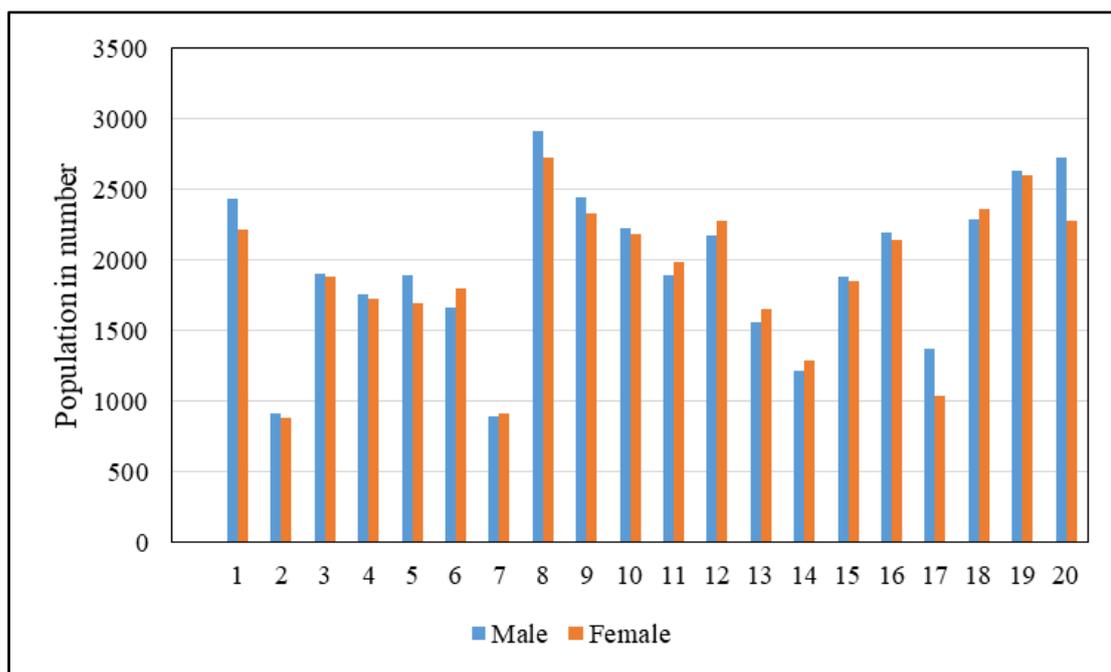


Figure 2.7: Represent ward wise male-female of 2001

Table 2.8: Ward wise percentage of the male population in 2011

| Ward number | Total population in 2011 | Male | Percentage of Male | Ward number | Total population in 2011 | Male | Percentage of Male |
|-------------|--------------------------|------|--------------------|-------------|--------------------------|------|--------------------|
| 1 | 4684 | 2390 | 51.02 | 11 | 4291 | 2060 | 48.01 |
| 2 | 1833 | 921 | 50.25 | 12 | 4501 | 2214 | 49.19 |
| 3 | 3797 | 1904 | 50.12 | 13 | 3336 | 1586 | 47.54 |
| 4 | 3553 | 1824 | 51.34 | 14 | 2580 | 1274 | 49.38 |
| 5 | 3705 | 1909 | 51.52 | 15 | 3962 | 1978 | 44.92 |
| 6 | 3216 | 1537 | 47.79 | 16 | 4512 | 2191 | 48.56 |
| 7 | 3693 | 1819 | 49.25 | 17 | 2009 | 1086 | 54.06 |
| 8 | 3781 | 1971 | 52.13 | 18 | 5890 | 2910 | 49.41 |
| 9 | 3416 | 1728 | 50.59 | 19 | 4346 | 2144 | 49.33 |
| 10 | 5261 | 2550 | 48.47 | 20 | 5567 | 3018 | 54.21 |

Source: Census of India, 2001 & 2011.

According to Table 2.8, the male population of ward number 20 has the highest percentage of male that is 54.21% and ward number 15 has the least percentage of the male which is 44.92%, there are nine wards has the male population above 50% and eleven wards have below 50%.

Table 2.9: Ward wise percentage of the female population in 2011

| Ward Number | Total Population | Female | Percentage of female | Ward number | Total population | Female | Percentage of Female |
|-------------|------------------|--------|----------------------|-------------|------------------|--------|----------------------|
| 1 | 4684 | 2294 | 48.98 | 11 | 4291 | 2231 | 51.99 |
| 2 | 1833 | 912 | 49.75 | 12 | 4501 | 2287 | 50.81 |
| 3 | 3799 | 1895 | 49.88 | 13 | 3336 | 1750 | 52.46 |
| 4 | 3553 | 1729 | 48.66 | 14 | 2580 | 1306 | 50.62 |
| 5 | 3705 | 1796 | 48.48 | 15 | 3962 | 1984 | 50.08 |
| 6 | 3216 | 1679 | 52.21 | 16 | 4512 | 2321 | 51.44 |
| 7 | 3693 | 1874 | 50.75 | 17 | 2009 | 923 | 45.94 |
| 8 | 3781 | 1810 | 47.87 | 18 | 5890 | 2980 | 50.59 |
| 9 | 3416 | 1688 | 49.41 | 19 | 4346 | 2202 | 50.67 |
| 10 | 5261 | 2711 | 51.53 | 20 | 5567 | 2549 | 45.79 |

Source: Census of India, 2011.

The highest percentage of female persons found at ward number 11 which accounted 51.99%, ward number 20 has least percentage of the female population which is 45.79%, eleven wards have the female population above 50% and remaining nine wards have below 50% of female population (Table 2.9).

2.4.3 Density of population:

According to 2001 census the population density in Cooch Behar town was 9273 person /sq km and in 2011 provisional census showed that the density was 9446 which is only 203 people /sq km, number of people more than the previous decade (Table 2.10). Though all the wards are very highly dense for discussion the municipal area is divided into 5 density zones, it will be very high-density zone, high-density zone, moderate density zone, low-density zone, very low-density zone.

Table 2.10: Ward wise density of Cooch Behar town 2001 & 2011

| Ward number | The area in Sq Km | Population in 2001 | Density/sq km | Population in 2011 | Density/sq km |
|-------------|-------------------|--------------------|---------------|--------------------|---------------|
| 1 | 0.4026 | 4655 | 11562 | 4669 | 11597 |
| 2 | 0.1263 | 1800 | 14252 | 2084 | 16500 |
| 3 | 0.2429 | 3788 | 15201 | 3532 | 14173 |
| 4 | 1.291 | 3487 | 2694 | 3304 | 2559 |
| 5 | 0.2100 | 3592 | 17105 | 3735 | 17786 |
| 6 | 0.1893 | 3469 | 18325 | 3535 | 18674 |
| 7 | 0.1593 | 1807 | 11343 | 3575 | 22442 |
| 8 | 0.5005 | 5643 | 11272 | 3392 | 6777 |
| 9 | 0.3996 | 4775 | 11949 | 3831 | 9587 |
| 10 | 0.8997 | 4407 | 11029 | 5134 | 5706 |
| 11 | 0.3088 | 3885 | 12581 | 4247 | 13753 |
| 12 | 0.3009 | 4454 | 14802 | 4675 | 15537 |
| 13 | 0.2615 | 3220 | 12314 | 3078 | 11771 |
| 14 | 0.1643 | 2508 | 15265 | 2842 | 17297 |
| 15 | 0.2327 | 3732 | 16038 | 3979 | 17099 |
| 16 | 0.3143 | 4339 | 13805 | 4650 | 14794 |
| 17 | 0.4639 | 2419 | 5215 | 2391 | 5154 |
| 18 | 0.4532 | 4655 | 10271 | 5697 | 12571 |
| 19 | 0.8761 | 5232 | 5972 | 4173 | 4763 |
| 20 | 0.4868 | 5007 | 10286 | 4227 | 8683 |

Source: Census Report of Cooch Behar Municipality, 2001&2011.

Density distribution in 2001:

According to census data in 2001 it can divide the wards into 5 categories followed by natural Jenks method. These are very high density, high density, moderate density, low density, very low density (Figure 2.8).

Very high-density zone (16038-18325 person/ sq km): In 2001, two wards come under this category the wards were 5 and 6. Highest density found in the ward number 6 which was 18325.

High-density zone (12581-16038 person /sq km): Total six wards which were in this category- 2, 3, 12, 14, 15 and 16. These are the fully residential area, beside the urban fringe area.

Moderate density zone (11343-12581 person/ sq km): The wards number 1, 9 and 11, 13 are moderately dense. In ward number 9 it had 4775 no of people and 955 households. But due to the huge area which is used for airport, so it comes under the moderately dense category.

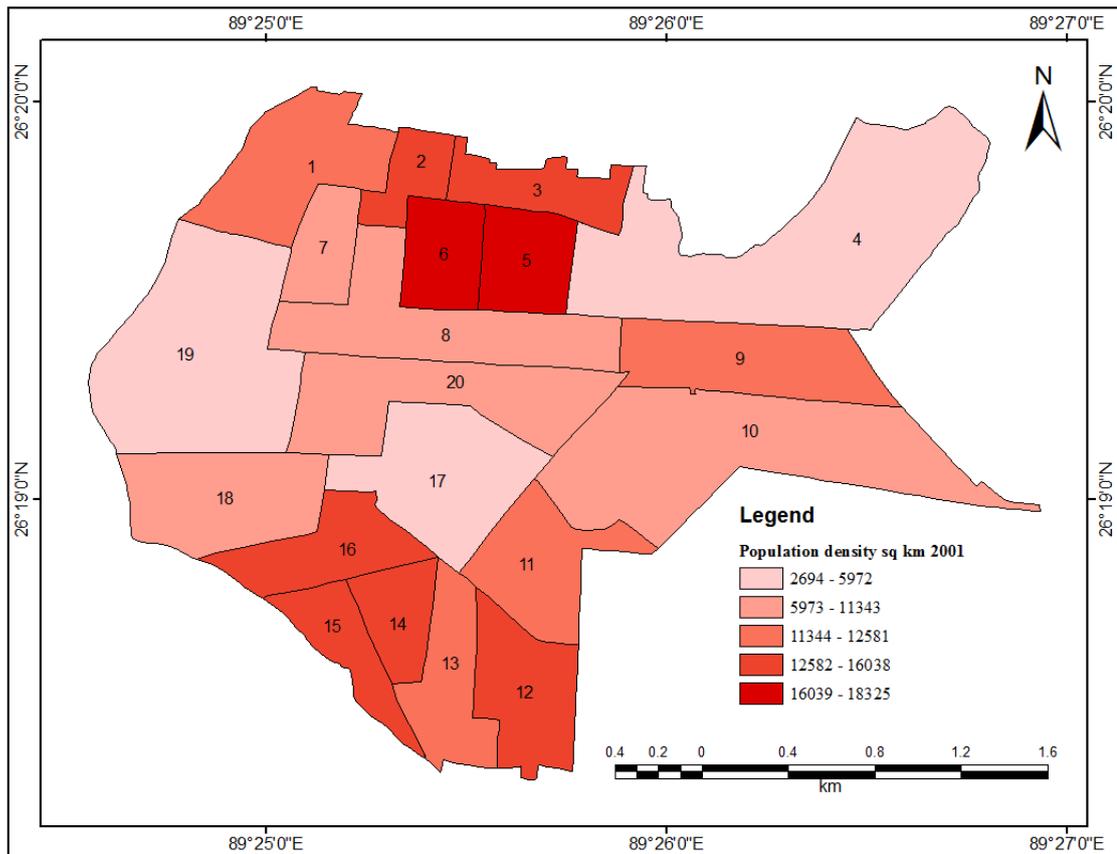


Figure 2.8: Ward-wise density of population of Cooch Behar town-2001

Low-density zone (5972-11343 person/sq km): Only four wards will come under this category. They are 7, 8, 10, 18 and 20.

Very low-density zone (2694-5972 person /sq km): Three wards come under this category. They were 4, 17 and 19. Lowest density found in ward number 4 which was 2694.

Density distribution in 2011:

According to census data in 2011 we can divide the wards into 5 categories followed by natural Jenks method. These are very high density, high density, moderate density, low density, very low density (Figure 2.9).

Very high density (18674-22442 person /sq km): In 2011 only one ward comes under this category, the ward number 7 having highest density 23183 person/sq km.

High density (14794-18674 person /sq km): Six wards belongs to this category these are ward number 2 (14830 person /sq km), ward number 5 (17786 person /sq km), ward number 6 (16989 person/sq km) ward number 12 (14958 person /sq km), wardnumber14 (15702 person /sq km) and ward number 15 (16038 person/sq km).

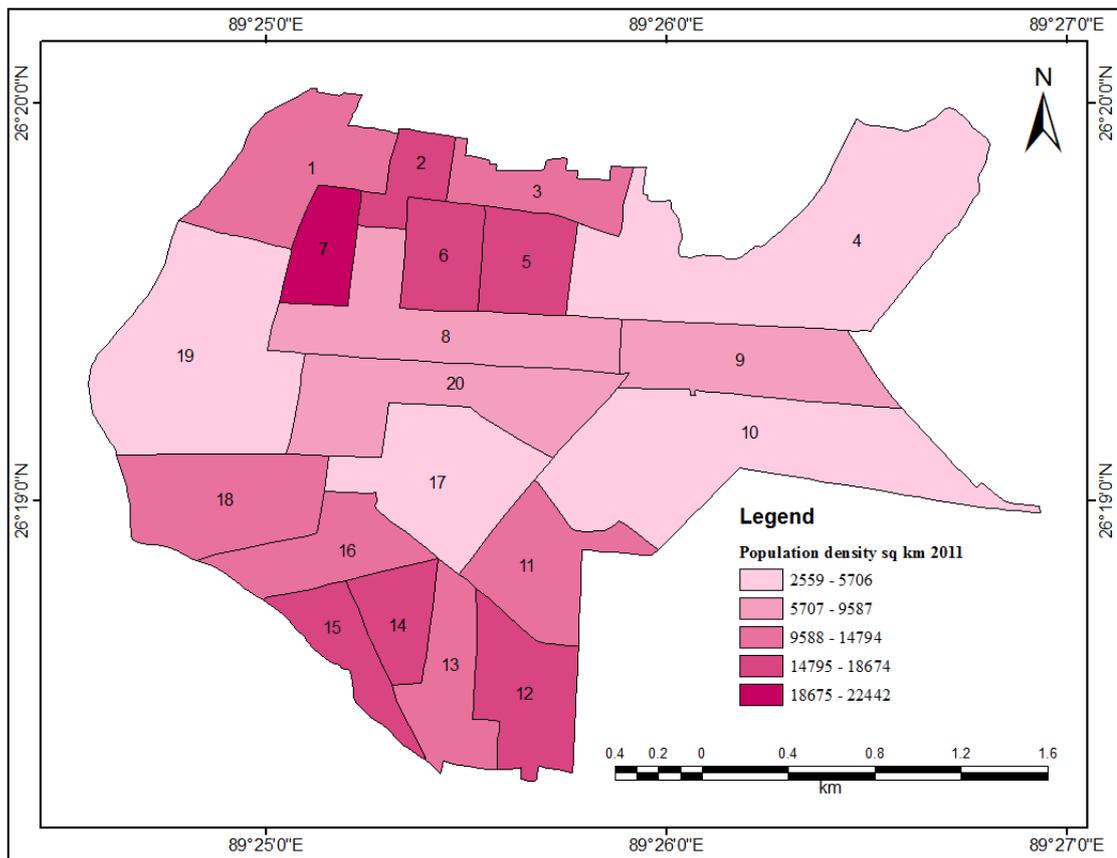


Figure 2.9: Ward-wise density of population of Cooch Behar town-2011.

Moderate density (9587-14794 person /sq km): Most of the wards have moderate density, like 1, 3, 10, 13, 16 and 18. Among these ward number 11 (13896 person /sq km), ward number 13 (12757 person/sq km), ward number 16 (13805 person /sq km).

Low density (5706-9587 person /sq km): In this category three wards are involved these are ward number 8 (7554 person/sq km), ward number 9 (8549 person/sq km), ward number 18 (10271 person /sq km) and ward number 20 (10286 person/sq km).

Very low density (2559-5706 person /sq km): Four wards fall in this category. These are ward number 4 (2752 person /sq km), ward number 10 (5848 person /sq km), ward number 17 (5214 person/sq km), ward number 19 (5972 person/sq km). Ward number 4 has the lowest density among the 20 wards.

2.4.4 Reasons of density variation:

2001 and 2011 population census data it divides the whole town into 5 density zones. In 2001 there were two wards (5 and 6) in the very high-density category zone ranges from 16038-18325 person /sq km and in 2011 there were only one (ward 7) in this category ranges from 18674-22442 person /sq km, due to changes in population between two decades ward number 5 and 6 falls down from this category.

Ward number 3 (New S.P. unit area), 7 (Old post office area), 6 (Subhas Pally area) are very high dense because this area is situated in the border of C.B.D area in Cooch Behar town, Bhabaniganj Bazaar. Government & Private Transport, Medical Facility, Schools, are most accessible from these places. In ward number 7 newly formed multi-storied buildings where many people migrate from outside of the municipal area and also different wards from Cooch Behar town. Here the population is under the compact settlement.

Ward number 2 (South Khagra Bari area), some parts of Gunja Bari area, ward number 14 (Bakshi Bari area), 15 (Asrampara) ward number 12 (Newtown area) are the highly dense area in 2011. In 2001 ward number 2, 3, 11, 16 were in this category. Here in ward number 2, 14, 15, 12 settlements are compact, transport, hospital, medical, school, college facilities are very well and those areas are purely residential, population growth rate is also increased from previous decades.

Ward No. 18 (Venus Square area, Chautala), 11 (Mariposa area, Tallitala, Gandhinagar area) 16 (Hazrapara area, Kadamtala area) 3 (Kameswari road area, S.P. unit area) have come under moderate density area ranges from 11343-12581 person /sq km. In 2001 only ward number 9 (Krishi Bagan area) comes under this category. These areas are residential and 2 to 3 km away from C.B.D area, transportation is less accessible from higher density areas and beside this ward number 3 shows 6.76%

decadal growth rates from the previous decade. These areas are residential to middle-class people.

Ward No. 1 (Rajbari Housing), 20 (Hospital area), 9 (Krisi bagan area), 13 (Magazine road extension area) come under low-density area, ranges from 6800 to 11800 person /sq km. In the ward number 1 area is mainly housing area and in the ward number 9 major portions covered by agricultural department, Ward No. 20 full of retail shops, Madan Mohan Mandir. Local markets and M.J.N hospital are occupying most of the area. Density is low compared to the other areas; besides of others land use, 2 schools, colleges, and police housing are present there.

Ward No. 19 (Debi Bari area), ward number 17 (Rash Mela Maidan area), 10 (Vivekananda street), 8 (Bhaniganj Bazaar area), 4 (Kalabagan area) were very low density in 2011 ranges from 2500 to 6800 person /sq km. In 2001 ward number 19, 20, 18, 17 and 4 were in this category ranges from 2600 to 11000 person /sq km.

In ward No.19 negative growth rate– 16.93% is found in 2011. Beside this Cooch Behar Rajbari, Cooch Behar station, park, Netaji indoor stadium, Debi Bari and some ponds covering a huge area of the ward number 19. So here population density is very low.

Inward number 17 Rashmela maidans, Stadium, Jenkins school, M.N.N High School, Cooch Behar jail, Mahila College, Irrigation office cover the most area of this ward and settlement is separately spread all over the area.

In ward number 4 there is an army area which covers a large number of about 40% of total area, so here population density is very low. In ward number 8 most lands are used for commercial purpose here residential land use is low, Bhabaniganj Bazaar is situated here. It is the main market of Cooch Behar town. Here hotels, shops, vegetable market, the powerhouse is situated. So, most of the land use of this ward is commercial, not residential.

Ward number 10 Vivekananda street area and Cooch Behar college area are very low density because of their most the places occupied by the station, empty lands, army barracks. So from the above, we can see that here some areas are residential and some are commercial.

2.4.5 Sex-ratio:

Sex ratio indicates the number of female per thousand male. In 2001 the highest sex ratio found at ward number 13 which was 1058 (male 1565, female 1655) and it keeps

its position in 2011 with sex ratio 1103 (male 1586, female 1750). In 2001 lowest sex ratio found at ward number 17, that is 755 and in 2011 ward number 17 keeps its position having sex ratio is 850 (Table 2.11). In 2001 sex ratio of Cooch Behar town was 937 and it reaches 998 in 2011, which is a good indication from the perspective of the demographic balance of town (Saha, 2012). In 2001 above 1000 sex ratio found at 7 numbers of wards which were ward number 6, 7, 11, 12, 13, 14 and 18. In 2011 above 1000 sex ratio found in 11 wards which were 6, 7, 10, 11, 12, 13, 14, 15, 16, 18, and 19, ward number 10, 15, 16 and 19 are those wards which had sex ratio below 1000 in 2001. There are only three wards showing the decline in sex ratio from previous census year 2001, these are 4, 8 and 18 (Figure 2.10).

Table 2.11: Ward wise sex ratio of Cooch Behar town

| Ward number | Sex ratio in 2001 | Sex ratio in 2011 | Ward number | Sex ratio in 2001 | Sex ratio in 2011 |
|-------------|-------------------|-------------------|-------------|-------------------|-------------------|
| 1 | 911 | 960 | 11 | 1052 | 1083 |
| 2 | 974 | 990 | 12 | 1047 | 1033 |
| 3 | 994 | 995 | 13 | 1058 | 1103 |
| 4 | 984 | 948 | 14 | 1026 | 1025 |
| 5 | 894 | 941 | 15 | 985 | 1003 |
| 6 | 1080 | 1092 | 16 | 940 | 1059 |
| 7 | 1030 | 1030 | 17 | 755 | 850 |
| 8 | 937 | 918 | 18 | 1031 | 1024 |
| 9 | 951 | 977 | 19 | 987 | 1027 |
| 10 | 982 | 1063 | 20 | 836 | 845 |

Source: Census of India, 2001 and 2011.

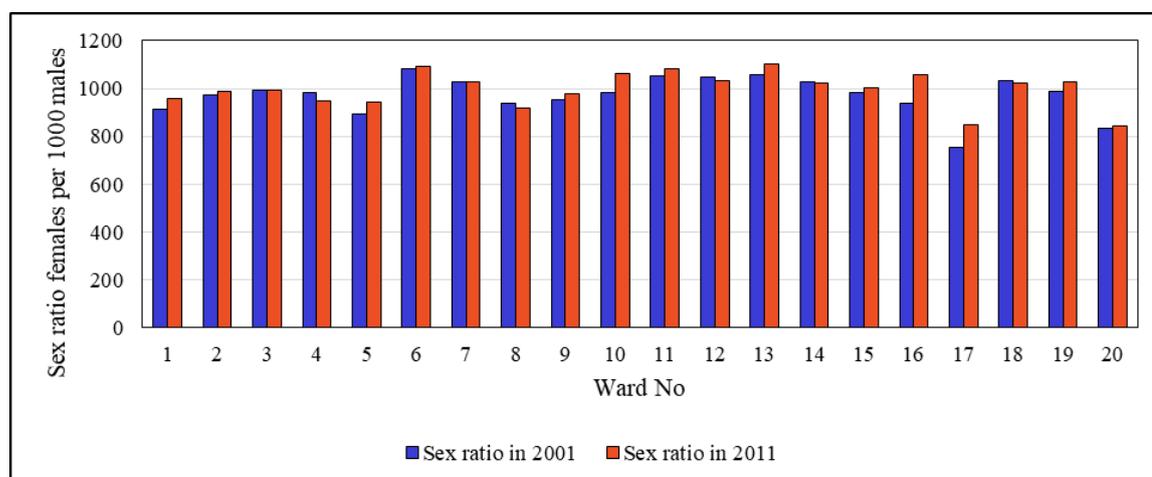


Figure 2.10: Ward wise Comparison of Sex ratio between 2001 and 2011.

Table 2.12: Distribution of sex ration in 2011

| Sex ratio (Females/1000 males) | Number of wards | Percentage of wards |
|---------------------------------------|------------------------|----------------------------|
| < 950 | 5 | 25 |
| 950-1000 | 4 | 20 |
| 1000-1050 | 6 | 30 |
| 1050-1100 | 4 | 20 |
| >1100 | 1 | 5 |
| Total | 20 | 100 |

Source: Compiled by author.

Table 2.12 reveals the distribution of sex ratio of Cooch Behar town in 2011, it will find that there are five wards having sex ratio <950, four wards having sex ratio 950-1000, six wards having sex ration 1000-1050, four wards having sex ratio 1050-1100 and only one ward have sex ratio above 1100. Most of the wards (30%) having sex ratio 1000-1050 per thousand male population.

2.4.6. Child population (0 – 6 years):

In 2001 Cooch Behar town were 6787 child population (0-6year) which occupy 8.83% of total population (Table 2.13), male child were 3469 and female child were 3318, highest child 538 found in ward number 8 and lowest child 158 found in ward number 2 and highest male child 274 found in ward number 20 and lowest male child 64 found in ward number 7, ward number 1 were highest female child 268 and ward number 2 and 17 were lowest number 73 of female child, the overall child population scenario changes in 2011 (Table 2.14).

Table 2.13: Ward wise 0-6year total child and sex ratio of Cooch Behar town in 2001

| Ward number | Total 0-6 year age children in 2001 | Total male children | Total female children | Child sex ratio |
|--------------------|--------------------------------------------|----------------------------|------------------------------|------------------------|
| 1 | 521 | 253 | 268 | 1059 |
| 2 | 158 | 85 | 73 | 859 |
| 3 | 384 | 189 | 195 | 1032 |
| 4 | 370 | 172 | 198 | 1151 |
| 5 | 324 | 166 | 158 | 952 |
| 6 | 358 | 181 | 177 | 978 |
| 7 | 144 | 64 | 80 | 1250 |
| 8 | 538 | 272 | 266 | 978 |
| 9 | 395 | 213 | 182 | 854 |
| 10 | 441 | 220 | 221 | 1005 |
| 11 | 266 | 130 | 136 | 1046 |
| 12 | 320 | 173 | 147 | 850 |
| 13 | 226 | 111 | 115 | 1036 |
| 14 | 164 | 83 | 81 | 976 |
| 15 | 333 | 166 | 167 | 1006 |
| 16 | 361 | 189 | 172 | 910 |
| 17 | 166 | 93 | 73 | 785 |
| 18 | 366 | 184 | 182 | 989 |
| 19 | 512 | 251 | 261 | 1040 |
| 20 | 530 | 274 | 256 | 934 |

Source: Census of India, 2001.

Table 2.14: Ward wise 0-6year total child and sex ratio of Cooch Behar town in 2011

| Ward number | Total 0-6 year age children in 2011 | Total male children | Total female children | Child sex ratio |
|--------------------|--------------------------------------------|----------------------------|------------------------------|------------------------|
| 1 | 354 | 180 | 174 | 967 |
| 2 | 136 | 77 | 59 | 766 |
| 3 | 335 | 161 | 174 | 1081 |
| 4 | 323 | 188 | 135 | 718 |
| 5 | 322 | 149 | 173 | 1161 |
| 6 | 240 | 124 | 116 | 935 |
| 7 | 231 | 124 | 107 | 863 |
| 8 | 302 | 150 | 152 | 1013 |
| 9 | 314 | 164 | 150 | 915 |
| 10 | 415 | 202 | 213 | 1054 |
| 11 | 273 | 131 | 142 | 1084 |
| 12 | 294 | 141 | 153 | 1085 |
| 13 | 234 | 122 | 112 | 918 |
| 14 | 153 | 81 | 72 | 889 |
| 15 | 285 | 137 | 148 | 1080 |
| 16 | 355 | 164 | 191 | 1165 |
| 17 | 127 | 70 | 57 | 814 |
| 18 | 450 | 243 | 207 | 852 |
| 19 | 364 | 180 | 184 | 1022 |
| 20 | 410 | 209 | 201 | 962 |

Source: Census of India, 2011.

2.4.7. Child sex ratio:

The population between 0-6 years are considered as a child in India. Child sex ratio plays an important role of a demographic structure. Child sex ratio indicate the future trend of the sex ratio of area or a country, child sex ratio shows number of girl child to per 1000 male child of an area or a country. If child sex ratio is healthy then it can expect the future balance between male and female will be maintained and age sex composition will be ideal. In 2001 ward number 7 had highest child sex ratio 1250

followed by 1151 in ward number 4, 1059 ward number 1, 1046 in ward number 2, 1040 ward number 19. There were 9 wards had child sex ratio more than 1000 these were 1, 3, 4, 7, 10, 11, 13, 15, 19. Lowest child sex ratio found in ward number 17 which was 785 followed by ward number 12 (850), ward number 9 (854), ward number 2 (859), ward number 16 (910). In 2001 there were 6877 number of child, in them 3469 were male and 3408 were female and overall municipal child sex ratio was 982, there were 9 wards were child sex ratio more than 1000 and also municipal child sex ratio. So there were 11 numbers of wards which had less than sex ratio compare to overall municipal area. In 2001 highest number of male child found in ward number 20 which was 274 and highest number of female child found in ward number 1 was 268 and beside this lowest number of male child found in ward number 7 which were 64 and also female child were 80 but ward number 7 had the highest sex ratio (Figure 2.11).

In 2011 according to the census, Cooch Behar town has 5917 children where 2997 are male and 2920 are female, 2011 census data shows (- 12.81%) negative decadal growth rate of the child population. Highest child sex ratio 1165 found at ward number 16. Lowest sex ratio 718 found at ward number 4. There are nine wards where child sex ratio is above 1000.

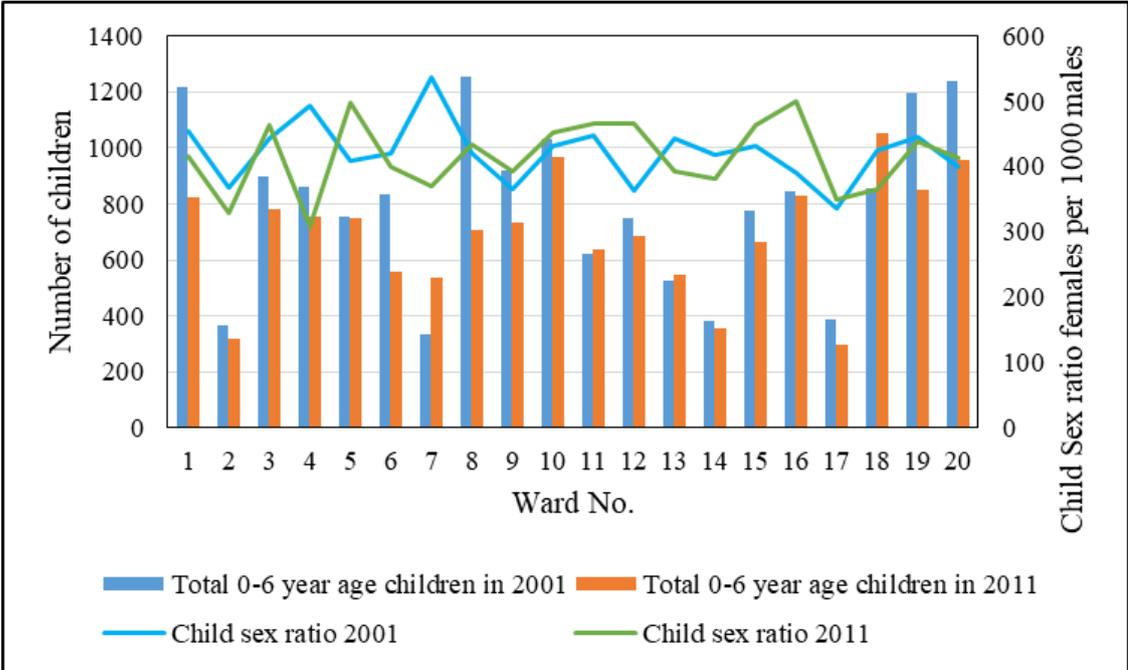


Figure 2.11: Comparison of Child sex ratio between 2001 and 2011.

Table 2.15: Distribution of child sex ratio of Cooch Behar town-2011

| Group | Total number of wards | Percentage of wards |
|-----------------|------------------------------|----------------------------|
| >1000 | 9 | 45 |
| 950-1000 | 2 | 10 |
| 900-950 | 3 | 15 |
| <900 | 6 | 30 |
| Total | 20 | 100 |

Source: Census of India, 2011.

The distribution of child sex ratio is shown in table 2.15, which indicate that 45% of wards have child sex ratio above 1000 and 30% wards have child sex ratio <900 and 10% between 950-1000, 15% between 900-950.

2.4.8 Literacy rate:

According to the provisional census, 2011 literacy rate in Cooch Behar town was 86.75%, where male literacy 88.82% and also female literacy 84.70%. From the table 2.14 it is found that male and female literacy rate is varying, the highest male literacy found in ward No. 12 that is 93.87% and female literacy 93.68% in the same ward. Where lowest male literacy rate 68.96% found in ward No. 20 and female literacy rate 54.11% found in the same ward (Table 2.16). There are nine wards where male literacy was above 90% these were ward No. 12, 7, 13, 11, 6, 1, 19 17, 16, and rest of the wards had male literacy rate less than 90%. In the female literacy rate, it will found that there are six wards where literacy rate above 90% these were ward number 12, 7,14,13,16 and 17 and rest of the wards have literacy rate <90%.The overall town literacy rate is quite different from ward wise male-female literacy picture ward number 11 has highest literacy rate 93.84% and ward number 20 has lowest literacy rate 61.60%. there are seven wards where literacy rate more than 90%, these are ward number 11,12,7,14,17,13,16 and rest of the wards have <80% literacy rate. The highest number of male literate 2500 found in ward number 18 and lowest 937 found in ward number 2, the highest number of female literate 2449 found in ward number18 with the highest number of literate person 4949 and lowest literate person 1828 found in ward number 2 and also the lowest female literate person (Table 2.17). In ward number 20 it is seen 1623 person was illiterate which was highest and lowest 197 found in ward number14 (Saha, 2012).

Table 2.16: Ward wise literacy of Cooch Behar town-2011

| Ward number | Number of literates | Number of male literate | percentage Of male literacy | Number of female literate | Percentage of female literacy | Number of Illiterate |
|--------------------|----------------------------|--------------------------------|------------------------------------|----------------------------------|--------------------------------------|-----------------------------|
| 1 | 4094 | 2135 | 91.32 | 1959 | 85.70 | 575 |
| 2 | 1828 | 937 | 88.06 | 891 | 87.35 | 256 |
| 3 | 3061 | 1576 | 89.95 | 1485 | 83.47 | 471 |
| 4 | 2723 | 1440 | 84.36 | 1283 | 80.34 | 581 |
| 5 | 3172 | 1725 | 88.78 | 1447 | 80.75 | 563 |
| 6 | 3032 | 1530 | 90.59 | 1502 | 81.37 | 503 |
| 7 | 3326 | 1666 | 93.18 | 1660 | 92.89 | 249 |
| 8 | 2739 | 1510 | 85.17 | 1229 | 75.91 | 653 |
| 9 | 3399 | 1742 | 90.45 | 1657 | 86.98 | 432 |
| 10 | 4390 | 2267 | 88.21 | 2123 | 82.80 | 744 |
| 11 | 3858 | 1872 | 91.76 | 1986 | 89.99 | 389 |
| 12 | 4384 | 2160 | 93.87 | 2224 | 93.68 | 291 |
| 13 | 2827 | 1346 | 92.13 | 1481 | 91.59 | 251 |
| 14 | 2645 | 1216 | 86.67 | 1329 | 92.36 | 197 |
| 15 | 3459 | 1785 | 89.43 | 1674 | 84.42 | 520 |
| 16 | 4207 | 2161 | 90.15 | 2046 | 90.81 | 443 |
| 17 | 2180 | 1066 | 91.58 | 1114 | 90.79 | 211 |
| 18 | 4949 | 2500 | 89.06 | 2449 | 84.74 | 748 |
| 19 | 3706 | 1825 | 90.44 | 1881 | 87.29 | 467 |
| 20 | 2604 | 1471 | 68.96 | 1133 | 54.11 | 1623 |

Source: Census of India, 2011.

Table 2.17: Ward wise effective literacy of Cooch Behar town-2011

| Ward number | No of population above 7 year age | No of literates above 7 year age | percentage of effective literacy |
|-------------|-----------------------------------|----------------------------------|----------------------------------|
| 1 | 4365 | 4094 | 93.79 |
| 2 | 1940 | 1828 | 94.23 |
| 3 | 3224 | 3061 | 94.94 |
| 4 | 3039 | 2723 | 89.60 |
| 5 | 3442 | 3172 | 92.16 |
| 6 | 3313 | 3032 | 91.52 |
| 7 | 3362 | 3326 | 98.93 |
| 8 | 3133 | 2739 | 87.42 |
| 9 | 3545 | 3399 | 95.98 |
| 10 | 4752 | 4390 | 92.48 |
| 11 | 4002 | 3858 | 96.40 |
| 12 | 4434 | 4384 | 98.87 |
| 13 | 2862 | 2827 | 98.78 |
| 14 | 2683 | 2645 | 98.58 |
| 15 | 3737 | 3459 | 92.56 |
| 16 | 4390 | 4207 | 95.83 |
| 17 | 2246 | 2180 | 97.11 |
| 18 | 5309 | 4949 | 93.22 |
| 19 | 3918 | 3706 | 94.59 |
| 20 | 3822 | 2604 | 68.13 |

Source: Census of India, 2011.

2.4.9 SC and ST population:

According to 2001 census, Cooch Behar town area was 14.59% SC population of the total population and 0.57% ST population. In 2001, 11215 SC populations are found in Cooch Behar town. The highest percentage of SC population showed by ward number 1 (8.66%) followed by ward number 20, 19, 8.61% and 8.10%. Lowest number of SC population shared by ward number 2 (0.71%) and then ward number 7 (0.73%). In 2001, 440 person ST population found in ward No. 20 was 27.05% (119 persons)

followed by ward number 17 (10.23 %), 19 (10.23%). Lowest percentage of ST Population found in ward number 12 (0.23%), followed by ward No. 3 (10.45%), 7 (0.917%), 11 (0.91%). Only ward number 2 was no ST Population (Table 2.18).

Table 2.18: Ward wise SC & ST population of Cooch Behar town- 2001

| Ward number | SC population | Percentage of SC population | ST population | Percentage of ST population |
|--------------------|----------------------|------------------------------------|----------------------|------------------------------------|
| 1 | 971 | 8.66 | 31 | 7.05 |
| 2 | 80 | 0.71 | 0 | 0 |
| 3 | 252 | 2.45 | 2 | 0.45 |
| 4 | 548 | 4.89 | 12 | 2.73 |
| 5 | 515 | 4.59 | 10 | 2.27 |
| 6 | 528 | 4.71 | 6 | 1.36 |
| 7 | 82 | 0.73 | 4 | 0.91 |
| 8 | 334 | 2.98 | 15 | 3.41 |
| 9 | 661 | 5.89 | 31 | 7.05 |
| 10 | 703 | 6.29 | 34 | 7.73 |
| 11 | 741 | 6.61 | 4 | 0.91 |
| 12 | 450 | 4.01 | 1 | 0.23 |
| 13 | 357 | 3.18 | 13 | 2.95 |
| 14 | 414 | 3.69 | 13 | 2.95 |
| 15 | 818 | 8.19 | 7 | 1.59 |
| 16 | 718 | 6.40 | 23 | 5.23 |
| 17 | 517 | 4.61 | 46 | 10.45 |
| 18 | 551 | 4.91 | 24 | 5.45 |
| 19 | 909 | 8.10 | 45 | 10.23 |
| 20 | 966 | 8.61 | 119 | 27.05 |

Source: Census Report of Cooch Behar Municipality, 2001.

Table 2.19: Ward wise percentage of SC & ST population of Cooch Behar town in- 2011

| Ward number | Total SC | Percentage of SC | Total ST | Percentage of ST |
|-------------|----------|------------------|----------|------------------|
| 1 | 860 | 18.36 | 13 | 0.28 |
| 2 | 65 | 3.55 | 0 | 0.00 |
| 3 | 264 | 6.95 | 4 | 0.11 |
| 4 | 563 | 15.85 | 70 | 1.97 |
| 5 | 421 | 11.36 | 11 | 0.30 |
| 6 | 416 | 12.94 | 7 | 0.22 |
| 7 | 146 | 3.95 | 4 | 0.11 |
| 8 | 279 | 7.38 | 4 | 0.11 |
| 9 | 380 | 11.12 | 14 | 0.41 |
| 10 | 1149 | 21.84 | 68 | 1.29 |
| 11 | 807 | 18.81 | 08 | 0.19 |
| 12 | 475 | 10.56 | 02 | 0.04 |
| 13 | 409 | 12.26 | 20 | 0.60 |
| 14 | 455 | 17.64 | 09 | 0.35 |
| 15 | 868 | 21.91 | 13 | 0.33 |
| 16 | 549 | 12.17 | 5 | 0.11 |
| 17 | 305 | 15.18 | 16 | 0.80 |
| 18 | 666 | 11.31 | 40 | 0.68 |
| 19 | 791 | 18.20 | 49 | 1.13 |
| 20 | 650 | 11.68 | 51 | 0.92 |

Source: Census of India, 2011.

In 2011 Cooch Behar town area were 10518 SC populations which are 13.50 percentage of the total town population (Table 2.19); there were 5260 male SC and 5258 female SC population which were 13.48 percentages of total male population and 13.51% of the total female population. Ward number 15 were 21.91% of SC population which is the highest percentage among the 20 wards and ward number 2 were 3.55% of SC population which lowest among the wards.

Table 2.20: Distribution of SC population of Cooch Behar town-2011

| Group | Number of Wards | Percentage of Wards |
|---------|-----------------|---------------------|
| <5 % | 2 | 10 |
| 5-10 % | 2 | 10 |
| 10-15 % | 8 | 40 |
| >15 % | 8 | 40 |

Source: Compiled by the author.

According to the table No. 2.20, eight wards were SC population between >15% of SC population and again eight wards were SC population between 10-15%, two wards were SC population between 5-10% and two also <5%.

There was 408 ST Population at Cooch Behar town which was 0.52% of total population, among 408 people 219 were male and 189 were female.

Table 2.21: Distribution of ST population of Cooch Behar town-2011

| ST population (%) | Number of Wards | Percentage of Wards |
|-------------------|-----------------|---------------------|
| <0.5 | 12 | 60 |
| 0.5-1 | 4 | 20 |
| >1 | 3 | 15 |
| Total | 20 | 100 |

Source: Compiled by the author.

Ward number 4 was the highest percentage of ST population (1.97percentage) and ward number 12 was least percentage of ST population (0.04%), among 20 wards, ward number 2 was no ST population. According to the distribution of ST population at Cooch Behar town, 60% of wards were ST population below 0.5% and 20% between 0.5-1% only 15% of wards were more than 1% ST Population (Table 2.21).

2.4.10 SC and ST sex ratio:

Sex ratio plays an important role in the study of demography, by the study of sex ratio we can able to identify the number of female exist per thousand male populations. If sex ratio is not properly maintained there must be a misbalance will create in near future among the population (Table 2.22).

Table 2.22: Ward wise sex ratio of SC population in 2011

| Ward number | SC male | SC female | Sex ratio | Ward number | SC male | SC female | Sex ratio |
|-------------|---------|-----------|-----------|-------------|---------|-----------|-----------|
| 1 | 455 | 405 | 890 | 11 | 397 | 410 | 1032 |
| 2 | 32 | 33 | 1031 | 12 | 250 | 225 | 900 |
| 3 | 132 | 132 | 1000 | 13 | 188 | 221 | 1175 |
| 4 | 292 | 271 | 928 | 14 | 238 | 217 | 911 |
| 5 | 230 | 191 | 830 | 15 | 447 | 421 | 941 |
| 6 | 185 | 231 | 1248 | 16 | 259 | 290 | 1119 |
| 7 | 67 | 79 | 1179 | 17 | 181 | 124 | 685 |
| 8 | 142 | 137 | 964 | 18 | 334 | 332 | 994 |
| 9 | 197 | 183 | 928 | 19 | 364 | 427 | 1173 |
| 10 | 574 | 575 | 1001 | 20 | 296 | 354 | 1195 |

Source: Census of India, 2011.

Table 2.23: Distribution of sex ratio of SC population of Cooch Behar town-2011

| Sex ratio (Females/ 1000 males) | Number of wards | Percentage of wards |
|---------------------------------|-----------------|---------------------|
| <900 | 4 | 20 |
| 900-1000 | 7 | 35 |
| 1000-1100 | 3 | 15 |
| >1100 | 6 | 30 |
| Total | 20 | 100 |

Source: Cooch Behar Municipality.

From the above table 2.23 for distribution of sex ratio of SC population of Cooch Behar town-2011, the distribution we found that 35% of wards have SC sex ratio between 900-1000, which is maximum in above distribution, 30% of wards has sex ratio above 1100, 20% below 900 and 15% between 1000-1100.

Table 2.24: Ward wise ST sex ratio of Cooch Behar town-2011

| Ward number | St male | ST female | Sex ratio | Ward number | ST male | ST female | Sex Ratio |
|-------------|---------|-----------|-----------|-------------|---------|-----------|-----------|
| 1 | 09 | 04 | 444 | 11 | 04 | 04 | 1000 |
| 2 | 00 | 00 | 000 | 12 | 01 | 01 | 1000 |
| 3 | 02 | 02 | 1000 | 13 | 10 | 10 | 1000 |
| 4 | 42 | 28 | 666 | 14 | 05 | 04 | 800 |
| 5 | 05 | 06 | 1200 | 15 | 08 | 05 | 625 |
| 6 | 01 | 06 | 6000 | 16 | 03 | 02 | 666 |
| 7 | 03 | 01 | 333 | 17 | 10 | 06 | 600 |
| 8 | 03 | 01 | 333 | 18 | 20 | 20 | 1000 |
| 9 | 09 | 05 | 555 | 19 | 32 | 32 | 1882 |
| 10 | 46 | 22 | 478 | 20 | 31 | 31 | 1550 |

Source: Census of India, 2011.

Table: 2.25: Distribution of ST sex ratio of Cooch Behar town-2011

| Sex ratio (Females/ 1000 males) | Number of wards | Percentage of Wards |
|---------------------------------|-----------------|---------------------|
| <500 | 05 | 25 |
| 500-1000 | 11 | 55 |
| 1000-1500 | 01 | 5 |
| >1500 | 03 | 15 |
| Total | 20 | 100 |

Source: Cooch Behar Municipality.

From table 2.24 and table 2.25, it is that 55% of wards have sex ratio between 500-1000 which is maximum percentage among the distribution, 25% has sex ratio <500, 5% between 1000-1500 and only 15% has sex ratio more than 1500.

2.4.11 Live birth by age of mother: Live birth by age of the mother is an important indicator of the demographic issue of a residence.

Table 2.26: Live birth by age of mother & birth order

| Age of mother | Birth order | | | | Total Births |
|---------------|-------------|------|-----|----|--------------|
| | 1 | 2 | 3 | 4 | |
| <19 | 1573 | 627 | 12 | - | 2212 |
| 20-24 | 459 | 769 | 133 | 09 | 1370 |
| 25-29 | 4949 | 1152 | 307 | - | 6418 |
| 30-34 | 3450 | 1152 | 307 | - | 4909 |
| 35-39 | 752 | 420 | 103 | 05 | 1280 |
| >40 | 113 | 135 | 25 | 08 | 281 |

Source: Monthly & Annual Report on Birth & Death Register of Cooch Behar Municipality 2005-2011.

From the above data (Table 2.26) it is found that total live birth in the Cooch Behar town were 16470, between-2005 to 2011. Highest birth 6418 found in the mothers age group of 25-29 and lowest birth 281 found in the age group of 40-44 years, which is a normal scenario in demographic study. There was no birth registered in the age group of <15 & >45. The data about the birth order of child in different age group that 1st order birth 4959 was highest in the age group of 25-29, there was no 3rd order birth in that age group, 2nd order & 3rd order birth was 1152 & 307 respectively, highest 2nd order birth 1152 found in the age group of 25-29 & 30-34 years, highest 3rd order birth 307 were also in these same two groups. Besides 4th order birth is found very few, highest 9 found in the age group of 20-24 then 8, 5 in the age group of 35-39 & 40 to 44 years. So it can say from the above table that fertility rate is high in the age group of 25-29 years age group of mothers & then 30-34 years age of mothers. Here is no registered birth in the age group of <15 years which is a good indicator of social awareness.

2.4.12 Death by age and sex: The number of death by age and sex helps to identify the population characteristics of a settlement area.

Table 2.27: Death by age & sex of Cooch Behar town during 2005-2011

| Age group | Institutional | | | Domiciliary | | | Total | | |
|-----------|---------------|--------|-------|-------------|--------|-------|-------|--------|-------|
| | Male | female | total | Male | Female | Total | male | Female | Total |
| <01 | 0 | 0 | 0 | 000 | 0 | 0 | 0 | 0 | 0 |
| 1-4 | 349 | 179 | 528 | 183 | 129 | 312 | 532 | 308 | 840 |
| 5-14 | 335 | 148 | 483 | 160 | 93 | 253 | 495 | 241 | 736 |
| 15-24 | 283 | 146 | 429 | 169 | 103 | 272 | 452 | 249 | 701 |
| 25-34 | 334 | 159 | 493 | 173 | 88 | 261 | 507 | 247 | 754 |
| 35-44 | 533 | 281 | 814 | 139 | 83 | 222 | 672 | 364 | 1036 |
| 45-54 | 565 | 237 | 802 | 129 | 71 | 200 | 694 | 308 | 1002 |
| 55-64 | 585 | 215 | 800 | 115 | 65 | 180 | 700 | 280 | 980 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: Monthly & Annual Report on Birth & Death register 2005-2011, Cooch Behar town.

From the monthly and annual report in Cooch Behar town 2005 to 2011 it found that highest death 1036 takes place in the age group of 35 to 44 & lowest 701 takes place in the age group of 15 -24, there is no death registered in the age group of <01 year, 65-69 year, >70 year (Table 2.27). Deaths were registered in two categories one is Institutional & another is Domiciliary, 814 was highest institutional death found in the 35-44 year age group & lowest 429 found in the age group of 15 to 24, highest domiciliary death 312 found in the age group of 1-4 and lowest 180 found in the age group of 55-64. The total registered death from 2005 to 2011 was 6049, male were 3924 and female were 2115. Highest institutional male death 585 found in the age group of 55-64 and also highest 700 total male death, 183 was the highest domiciliary male death found in the age group of 1-4 year, highest female death 364 found in the age group of 35-44 & also highest institutional female death 281 and highest domiciliary female death 129 found in the age group of 35-44 and 1-4 years age group. Lowest female death 241 found in the age group of 5-14 lowest institutional female death 146 and lowest domiciliary female death found in the age group of 15-24 and 55-64 year. From the above discussion, it found that overall mortality is high in the age group of 35-44 year, male mortality is high in the age group of 55-64 years, female mortality is high in the age group of 35-44 years and life expectancy is low only 69 years.

2.4.13 Religion structure:

From a primary draft plan in Cooch Behar town it is found that overall 84 percentage population in Cooch Behar town is Hindu, 9% Muslim, 2% Christian, 2% Buddhist, 2% Janis, 1% others (Figure 2.12). Hindus are spread over the whole area of Cooch Behar town, the major portion of Muslims reside in the Masjid Para area and ward number 15 in the Cooch Behar town, Buddhists, Nepalese are mainly found in the Khalasi Patty area in the ward number 20. Janis found mainly the Bara Bazar area in Cooch Behar town.

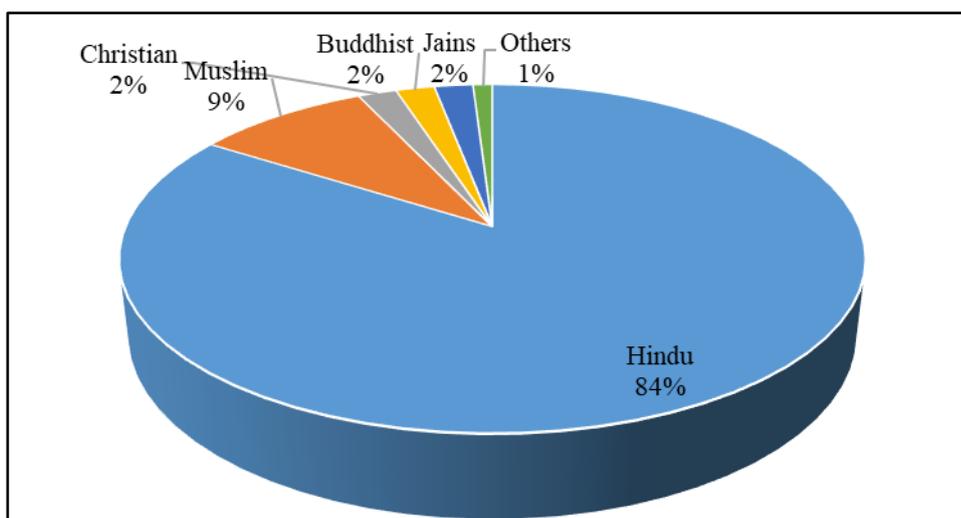


Figure 2.12: Religious structure of Cooch Behar town.

Table 2.28: Slum population of Cooch Behar town- 2011

| Ward number | Population | Ward number | Population |
|-------------|------------|-------------|------------|
| 1 | 1860 | 11 | 2040 |
| 2 | 143 | 12 | 1213 |
| 3 | 1445 | 13 | 224 |
| 4 | 1686 | 14 | 0 |
| 5 | 2300 | 15 | 1774 |
| 6 | 801 | 16 | 181 |
| 7 | 0 | 17 | 236 |
| 8 | 2000 | 18 | 326 |
| 9 | 694 | 19 | 2652 |
| 10 | 1889 | 20 | 2806 |

Source: Census Report of Cooch Behar Municipality, 2011.

2.4.14 Slum population:

The slum has become a part of urbanization from megacities like Mumbai to small town like Cooch Behar. In 2001 Cooch Behar town was 24240 person slum Population which was 31.53 % of total population (Table 2.28). Highest slum population 2806 found in the ward number 20 followed by ward number 19, 2652 person, ward number 5, 2300 person, ward number 11, 2040 person. Ward number 7 and 14 was no slum population, lowest slum population 124 found in the ward number 2, then 224 in the ward number 13 the biggest slum formed in Khalashi Patti area of ward number 20, then Natun Pally area in Cooch Behar Debi Bari ward number 19, Gowalapatti area of ward number 5, Harijan Patti area of ward number 11 and these big slum areas exists from 2013. These slum areas are the home of rickshaw pullers, cobbler, drivers and sweepers, with the unhygienic living condition, poor drainage system, unavailability of drinking water.

Table 2.29: Total workers & non-workers of Cooch Behar town-2011

| Type | Total | Male | Female |
|--------------|-------|-------|--------|
| Total worker | 24689 | 20378 | 4311 |
| Non-worker | 52185 | 18630 | 33555 |

Source: Census Report of Cooch Behar Municipality, 2011.

Table 2.30: Distribution of workers of Cooch Behar town-2011

| Type of workers | Total | Male | Female |
|----------------------------|-------|-------|--------|
| Main workers | 23870 | 19834 | 4036 |
| Cultivators | 62 | 37 | 25 |
| Agricultural labours | 33 | 28 | 5 |
| Household industry workers | 401 | 248 | 153 |
| Other workers | 23374 | 19521 | 3853 |
| Marginal workers | 819 | 544 | 275 |
| Cultivators | 10 | 3 | 1 |

Source: Primary Census Abstract of Cooch Behar District, 2011.

2.4.15 Occupational structure:

According to District Primary Census Abstract of Cooch Behar town 2001, it is found that there were 24689 workers in the Cooch Behar town, male 2038 persons, female 4311 persons and 52185 persons were the non-worker. These things are shown in the table No. 2.29 and 2.30. The main worker was 23870, male 1983 and female 4036. The main worker was categorised into the four categories these were cultivators, agricultural labours, household industry workers, others workers. Cultivators were 62 persons, agricultural labours were 33 persons and household industry workers were 401 people, others workers were 23374 people. In marginal worker category, there were 819 people and this category was subdivided into three category cultivators, agricultural labours and household industry workers, there were 4 cultivators, 2 agricultural labours and 123 household industry workers. Most of the people are engaged in state or central government work in Cooch Behar town like school teachers, bank officers, different clerical jobs, engineer etc. and business.

2.5 Problems of the study area:

Once upon a time Cooch Behar was a princely state but after independence it become district of West Bengal, besides all the problems there is solution also, the town area need new industry region, better water supply and water treatment plant, rail service is going to available from here and if the airport runs successfully the area will change very much in terms of development. Child sex ratio is good enough and increasing number of female child and female population portray a well-educated and rich cultural society. There is need to improve the medical facilities overall this town area has the capability to grow with high economic and human resource development and make a mark on the map of West Bengal.

Peoples are migrated from Assam and Bangladesh and came here permanently for residence so the land value is getting higher and higher day by day and for a good price local poor people sell their property to others and migrate to another place, here is no good engineering and medical colleges or institutions. So people are forced to migrate to higher education. medical facilities are also not good enough for the local people so for better medical facilities people forced to go other places for treatment, male population is showing less than female population it is not a good sign for the area, due to unplanned urbanisation the town area is growing very scattered way and drainage

system fail to drain out the waters from municipal area, though this municipal area has an airport it is not running because of the negligence of government. Slums are growing rapidly here and there day by day and one of the main problem is that flats are growing rapidly filling up the ponds and water body and deforestation take place (Hassan, 2005).

2.6 Conclusion:

The geographical study indicating that overall Cooch Behar town is suitable for settlement, but the town is bounded by the river in a triangular way. It is an important problem of the town for further expansion in every direction from the main part of the town. The area has enough human resources for economic and industrial growth, but it did not find any industrial activities in this area, most of the people are engaged in governmental services and private businesses, unorganised activities. Thus the economic condition of some people is strong but lower section of the society suffers from poverty, but there is lack of private jobs for people because there is no renowned private company for giving jobs to the people so people often migrate from this place.

The overall study reveals that the population of the town is increasing day by day, which is responsible for the continuous pressure of population to the urban fabric of the town. The composition of the population shows that the female sex ratio is increasing in the town, which is higher than the district average. It indicates that most of the people live in the town with their families. Because, Cooch Behar is a district headquarter, which has more service opportunities.

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