Chapter-2

PHYSICAL AND CULTURAL BACKGROUND OF THE STUDY AREA

2.1 Introduction

The study area, Mal subdivision of Jalpaiguri district is geographically spread over along the foothill of the Himalayas. Historically, once it was the part of the Western Dooars during the British rule. The area bears the diversity in geology, soil, topography, climate, society, language and all other aspects. There are many rivers, terraces, alluvial fans, geological formations and forests. Immigration from the neighbouring countries and in-migration from the Chhotonagpur region causes mixture of different ethnic and socio-cultural groups within same administrative set up over the years.

2.2 Physical Background

From the geographical point of view, the region belongs to the Himalayan foothill. There are slight ups and downs; some areas are low and inundated by rivers during the monsoon period; others are slightly higher and remain always above water even when the rivers are in flood. The GP of Indong Matiali in Matiali block; Champaguri and Looksan in Nagrakata block are in higher locations. The GPs of Chapadanga, Lataguri and Moulani are even plain.

2.2.1 Geology

The foot hill area of Dooars is formed of comparatively recent rock formations. Hard rock is exposed along the northern border of Mal subdivision. Gneiss is exposed in Jiti-Bhutan boundary area. The steep lower Himalayan slopes composed of Daling series represented by phylite, slate, schist and quartzite (Godwin-Austen, 1868). Near Nagrakata tea garden, red soil covers one metre thick black humus beds, develops extensively overlying the younger fluvial deposits of 5-6 meter thick composed of quartzite and gneiss boulder gravels. Sudden change of slope in this area, there formed alluvial fans and terraces. An anticlinal ridge at Chalsa and a synclinal valley at Matiali have a geological phenomenon in the Matiali block (Heim & Ganesser, 1939). The interfluves area between the rivers Mal and Murti is an alluvial fan composed of quaternary sediments characterised by clay, sand, pebble and boulders beds. There are four major terrace surfaces. Two East west scarps named Matiali and Chalsa that cut across the fan represent traces of the Main Boundary Thrust (MBT) and the Himalayan Frontal Thrust (HFT). There are two other NNW-SSE and NNE-SSW lineaments which partially guided the course of the Neora and Murti rivers (Goswami et al., 2013). The

Rangamati surface is covered with huge gneissic boulders which form a large fan-shaped surface around Samsing to the north of Matiali. These boulders were derived from the outlets of the Neora and Murti rivers from the mountains. This is known as 'Samsing Surface'. The entire area can be grouped into five geological formation units, namely: Shaugaon and Baikanthapur formations of un-oxidised weathered zone. Chalsa formations have yellow coloured sediments, Matiali formations have orange coloured sediments and the Samsing formation has red coloured sediments (Das & Chattopadhyay, 1979). The present Mal river course was fixed only after the formation of the higher terraces of the Neora and old Mal rivers, for while the higher river terrace was being formed. The Mal River joined the Neora river near Nakhati tea garden. In Bagrakot area the boundary between the mountain and foot-hill zone is well marked by the Main Boundary Fault which is clearly exposed along the banks of the Chel and Patharjhora rivers. Due to overridden the old and higher surfaces are not recognizable in this area (Nakata, 1972).

2.2.2 Relief

The relief characteristics of Mal subdivisions are undulating to even plain. There are tilted plains at the base of the Himalaya and is bounded in the north and south by 300 meter and 66 meter contour lines respectively (Bagchi & Mukherjee, 1983). Pronounced development of conjugal alluvial fans, produced by diverging drainage systems in the catchment areas of Tista and jaldhaka is very much conspicuous in this section. Between the Neora and Murti rivers, there is a row of small mounds with steep escarpments to the south in the E-W direction around Matiali. These mounds are considered to have been initially a narrow strip of upheaval zone which was disintegrated by stream dissection into small mounds rising 60-90 meter above the surrounding surface to the south and 30-60 meter to the north. There is a tendency that the relative height of the surface from the river beds increases downstream from the outlets of rivers at mountain front ((Nakata, 1972). The Nagrakata upward block occupies between 200 meter and 400 meter in the Jiti Tea estate to the north between the river Diana and Jaldhaka. Asymmetrical topographic and geological features around Matiali and Chalsa have taken place as flexure cliffs. The Chalsa cliffs become steeper in the west than the east. Towards the south of the Mal block the area is homogeneous plain.

2.2.3 Soil

Soil of the region is mainly the product of the weathering materials in the upper area and fluvial deposits in the lower reaches. They have developed in the quaternary period. The Shaugaon formation is without soil cover, the Baikunthapur formation is black soil cover, the

Matiali is reddish brown, Chalsa is brown and the Samsing formation is Chocolate soil cover. The soil is mainly sandy-loam to loam and as such considered to have low water holding capacity. They are characterised by low fertility as are evidenced from their low nitrogen and potash contents.

Table 2.1 Classification of Soil Types in Mal Subdivision

Block	Cultivable area in hectare	Predominant Type		Other type(s)	
		Type	% of Area	Type	% of Area
Mal	18,340.0	Sandy-Loam	68.18	Sandy	31.82
Matiali	3852.8	Sandy	59.50	Sandy-Loam	40.50
Nagrakata	3478.0	Sandy	58.11	Sandy-Loam	41.89

Source: Annual Plan on Agriculture, 1984-85, Jalpaiguri.

2.2.4 Drainage

There are many rivers, streams and channels flowing through the region. The main rivers are the Tista and the Jaldhaka, The Tista is in west of Mal subdivision while the Jaldhaka divides the Nagrakata block in the east from the Mal and Matiali blocks on the West. From west to east the Gish, Lish and Chel rivers have joined the Tista. Mal, Neora, Juranti, Kurti, Diana and Murti are other rivers. The Mal and the Nor have joined to form the Neora which with the Chel, later on, has continued as the Dharta (Bagchi & Mukherjee, 1983).The rivers are flowing south eastward. The streams which are coming out from the lesser Himalaya are entirely rain fed and are generally non perennial. The area between the Mal and the Murti rivers is defined as a distinct alluvial fan with a radial drainage pattern and convex upward transverse profile (Goswami, Mukhopadhyay & Das, 2013). There are parallel drainage patterns in the foothills. There are some anomalies in the drainage pattern in the area, such as the E-W directed stream which interrupts the N-S directed parallel stream courses at Jiti, Baradighi areas etc (Nakata, 1972).This area is drained by the Mal, Neora, Juranti, Kurti and Murtirivers. The Neora and Murti rivers originate in the lesser Himalayas while the other rivers originate within the piedmont itself. Terraces are found along the banks of the rivers Neora, Murti, Kurti and Juranti. Some seasonal jhoras are there like Jiti, Patharjhora, Ghatia, Kuji Diana, Sukhani, Balujhora, Rangati, Tanatani etc.

2.2.5 Climate

The climate of the region is almost similar to the other parts of the state. But rainfall is higher due to proximity to the hills. There is a notable extremity in temperature and rainfall. The climate of the district as a whole is characterized by tropical monsoon. The cold season is from mid-November to February. This is followed by the hot season from March to May. The

period from June to September is the south west monsoon season. October to the mid-November is the post monsoon season. There is only one meteorological observatory in the district, located in the district headquarter. So the statistical records are related to the district headquarter.

2.2.5.1 Rainfall

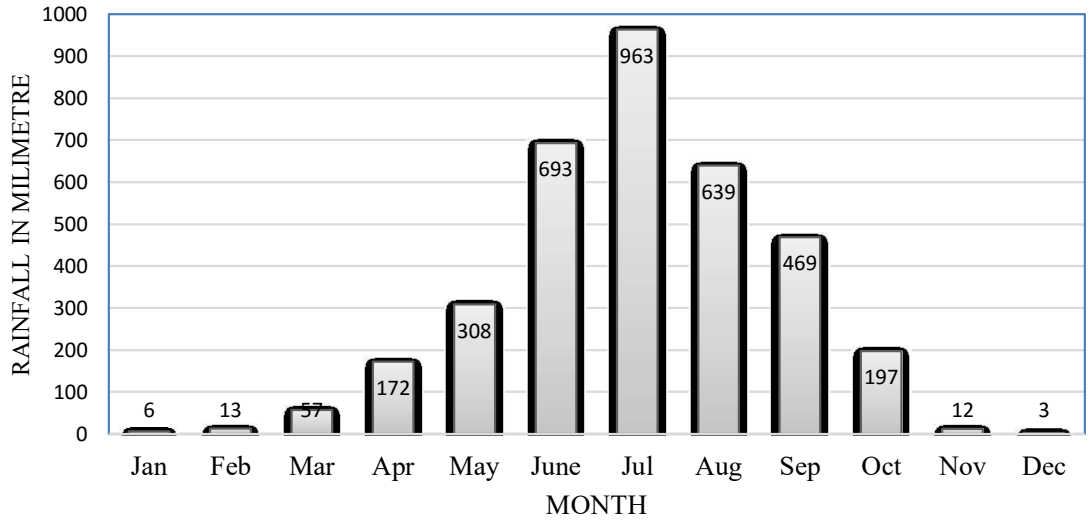
Long term rainfall data identify Jalpaiguri as one of the rainiest district in West Bengal with mean annual rainfall reaching more than 3500 millimetre of which 85% descends during the monsoon months between May and October. Most of the rainfall occurs at June to September. July is generally the rainiest month. Average annual rainfall is above 3500 mm. The variation of rainfall from year to year is not large. During the fifty year period, 1901-1950, the highest annual rainfall amounting to 147% of the normal occurred in 1921 while 1947 was the year with the lowest rainfall which was 58% of the normal. More than 25% rainfall occurs in the month of July. November to February is the driest season. Rainfalls in these four months are very little. December is the driest month in the year. The atmosphere is highly humid throughout the year. During the months from December to March, the relative humidity is less, being only between 50 percent and 70 percent. During the period from February to April, the afternoon relative humidity is comparatively lower, being only between 40 and 50%. During October to April, the sky is generally clear or slightly cloudy. The cloudiness increases from the month of May. On an average there are 116 rainy days in a year.

Table 2.2 Monthly Rainfalls in Jalpaiguri (1998-2012)

Year	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Total
1998	0	8	112	153	205	1042	1169	1296	538	160	15	0	4698
1999	2	0	8	167	394	590	1060	948	250	313	4	0	3736
2000	3	17	15	152	400	1021	818	694	414	141	58	0	3733
2001	2	0	42	112	385	529	473	626	523	473	35	5	3205
2002	26	0	94	244	167	471	1319	145	343	117	2	5	2932
2003	8	61	103	202	260	630	1234	432	550	314	24	24	3842
2004	15	8	35	208	416	647	1307	436	668	171	9	4	3924
2005	17	5	132	207	230	438	782	648	254	353	7	0	3073
2006	0	7	17	98	404	625	760	242	637	201	15	11	3017
2007	0	63	45	201	222	511	946	717	701	2	0	0	3488
2008	15	06	64	173	251	678	967	987	291	99	0	0	3531
2009	0	0	27	163	254	670	715	738	250	336	0	2	3155
2010	0	2	74	159	396	900	1044	688	539	70	10	**0**	3882
2011	3	8	78	184	321	552	889	562	508	39	2	0	3146
2012	5	6	5	150	310	1096	1043	429	575	168	0	0	3787
Mean	**6**	**13**	**57**	**172**	**308**	**693**	**963**	**639**	**469**	**197**	**12**	**3**	**3543**

Source: IMD, Govt. of India

Figure 2.1 Monthly Average Rainfall (1998-2012)



2.2.5.2 Temperature

The cold season starts by the November when temperature begins to drop. January is the coldest month with the mean daily minimum temperature at 10.7° C and the mean daily maximum temperature at 22°C. In association with cold spells in the wake of western disturbances moving eastwards, during January and February, night temperature may drop to a couple of degrees above the freezing point of water and frosts may occur. Temperature begins to rise by about the beginning of March; April and May are the hottest months. The mean daily maximum temperature in these months is 32°C and the mean daily minimum temperature is 21°C. The maximum temperature in summer months may sometimes reach 40°C or above.

Table 2.3 Mean Maximum and Mean Minimum Temperature (Degree Celsius)

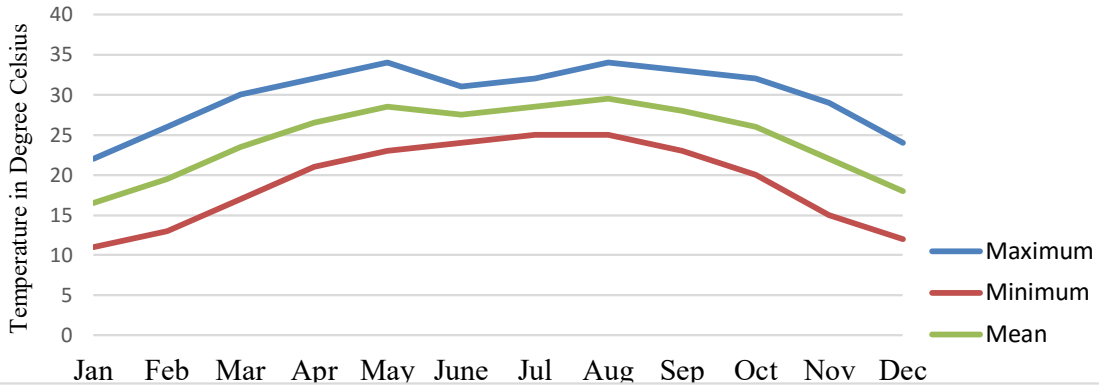
	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
Max	22	26	30	32	34	31	32	34	33	32	29	24
Min	11	13	17	21	23	24	25	25	23	20	15	12
Mean	**16.5**	**19.5**	**23.5**	**26.5**	**28.5**	**27.5**	**28.5**	**29.5**	**28.0**	**26.0**	**22.0**	**18.0**

Source: IMD, Govt. of India

Winds are generallylight, except for short spells during thunder storms in the period from March to May, when they are stronger. During the post monsoons and winter months the direction of winds is variable. In the pre-monsoon months from March to May, winds blow mainly from north-easterly to easterly directions. In the monsoon months, the winds are

mainly from directions between north-east and south. Some of the cyclonic storms and depressions which originate in the Bay of Bengal in the south-west monsoon and post-monsoon seasons move in a northern direction and affect the area causing widespread heavy rain. Thunderstorms during the months from April to May are occasionally associated with squall and hail (District Gazetteer, 1981-82). These are actually the nor'westers. Fog occurs in winter months.

Figure 2.2 Mean Maximum and Mean Minimum Temperature



2.2.6 Natural Vegetation

The climatic condition has influenced the vegetation. The forests are mainly of three types, namely, tropical evergreen, mixed deciduous riverine scrub and sub tropical deciduous. Heavy rains and hot summer days have made the climate damp and warm, favouring the growth of wet and evergreen forest. Such forests are there in the region. Tropical semi-evergreen, moist sal, riverine khair-sissoo and the savannah are the different types met within the area. The silt deposits on the river beds nurture tall grasses followed by a few herbaceous and shrubby plants and scattered trees. These plants cover the waste land with savannah type vegetation. In riverine forests, as the trees increased in number the grasses got eliminated and other deciduous species of trees grew up, e.g. *Wrightia tomentosa*, *Dillenia pentagyna*, *Terminalia crenulata, Shorea robusta* (Sal) etc. The Sal here is one of the best qualities in India. In the south of Mal block mixed deciduous riverine scrub has been developed with trees like *Teak, Siris, Sal, Palash* etc. But now the forests have degraded because of settlement and agricultural expansion.

The Gorumara and Chapramari wild life sanctuary are two important forests in the study area. The Gorumara Wild Life Sanctuary covers an area of 5.32 sq. Km., abounding rhinoceros, elephant, tiger, bison, leopard, sambar, barking deer, wild buffalo etc. It was declared as wild life sanctuary in 1949 and spreads over lower Tandu, upper Tandu and Diana

forest ranges. The Chapramari Wild Life Sanctuary covering an area of 9.60 sq. Km., is declared as Sanctuary in 1941.

2.3 Socio-Cultural Background

The geographical boundaries of the district of the present day had been under the administrative control of various dynasties or countries either in fragments or as a whole during the different phases of history. This land, commonly known as Dooars had often been included in the kingdoms of Bhutan and Cooch Behar. The present Mal subdivision is the part of western Dooars of the Britishers earlier. The name Dooars may have evolved from the word 'Doors' or passages used by the Bhutanese to communicate with the riverine peoples of the south for trade and barters. It had seen the arrival of various Indo-Mongoloid tribes, who came to settle in this fertile land. Most of them continued to live on even today. The majority of the Indo-Mongoloid class are the Rajbanshis. Apart from them there are the Meches, the Rabhas and the Limbuswho had immigrated crossing Mech river. Then the Britishers came. Many forest areas got cleared for tea plantation and agricultural lands. The planters were brought by the Britishers from Chhotonagpur plateau area. They are the Oraons, the Nageshias, the Mahalis, the Santals, the Malpaharias, and the Mundas etc. After Independence the Bengalese from present Bangladesh immigrated to this region. A considerable number of Namasudra people along with different Hindu caste groups have entered in this area from Bangladesh in order to defend themselves from Muslim dominance there (Dasgupta, 2013).

2.3.1 Population

Dooars area was sparsely populated before the introduction of tea plantation. The Koch-Rajbanshi, Mech or Bodo, Rabha and the Lepchas were the indigenous people in this region. After the introduction of tea plantation, the number of people has increased significantly by immigration from Nepal and Bhutan as well as from the Chhotonagpur areas. Thus the region grew into a new hub of multi-racial and multi-lingual people (Roy, 2002). In the plain areas infiltration of Bangladeshi people took shelter after independence.

As per 2011 census, Mal subdivision has a total population of 5, 69,711 distributing in three blocks of Mal, Matiali and Nagrakata and in a single town namely Mal. The rural area composed of 5, 44,493 populations. Average density of population is 474 per sq km. Among the three blocks highest density of rural population is found in Matiali block while the least density is in Nagrakata block. Among the GPs, highest density is in Lataguri (985/sq.km) followed by Moulani and Kranti. Minimum density is found in Sulkapara (157/sq.km). In Sulkapara, the upper Tendu forest is the largest Mouza where most of the area is uninhabited.

Table 2.4 GP-wise Density of Population of Mal Subdivision, 2011

Sl.	Name of GP	Population	Area (in Sq. Km.)	Density /Sq.Km
1	Bagrakot	35318	72.81	485
2	Odlabari	40294	65.55	615
3	Rangamatee	34072	56.78	600
4	Rajadanga	35374	91.94	385
5	Damdim	28037	48.27	581
6	Tesimla	14078	18.52	760
7	Kumlai	24252	40.26	602
8	Changmari	19020	43.12	441
9	Kranti	23826	31.31	761
10	Chapadanga	14583	41.58	351
11	Moulani	14857	19.13	777
12	Lataguri	15845	16.08	985
Mal block total		**299556**	**545.35**	**549**
1	Matiali Batabari-I	27211	39.41	690
2	Matiali Batabari-II	19848	67.13	296
3	Bidhannagar	23758	32.86	723
4	Matiali Hat	24407	31.68	770
5	Indong Matiali	22316	34.15	653
Matiali block total		**117540**	**205.23**	**573**
1	Angrabhasa-I	9335	22.85	409
2	Angrabhasa-II	16974	28.49	596
3	Sulkapara	25169	160.37	157
4	Champaguri	39391	63.83	617
5	Looksan	36528	121.94	300
Nagrakata Block total		**127397**	**397.48**	**321**
Mal subdivision (Rural)		**544493**	**1148.06**	**474**

Source: Computed by the Researcherbased on Census 2011 data

The share of Scheduled Tribesto total population of this subdivision is 40% with a varying degree of concentration across the blocks. The maximum concentration is found in Nagrakata block (49.16%) followed by Matiali (44.06%) and Mal (34.50%) blocks. Maximum concentrations of scheduled tribe population are found in Damdim (66.79%), Rangamatee (66.17%) and Indong Matiali (58.95%) gram panchayat areas. The areas of tea gardens are mostly crowded by tribal people. Very little amount of Scheduled Tribes population are noticed in Chapadanga (1.45%), Moulani (1.89%), Lataguri (6.6%) and Kranti (8.26%) gram panchayat areas. Following table will highlight the population figure as per 2011 census.

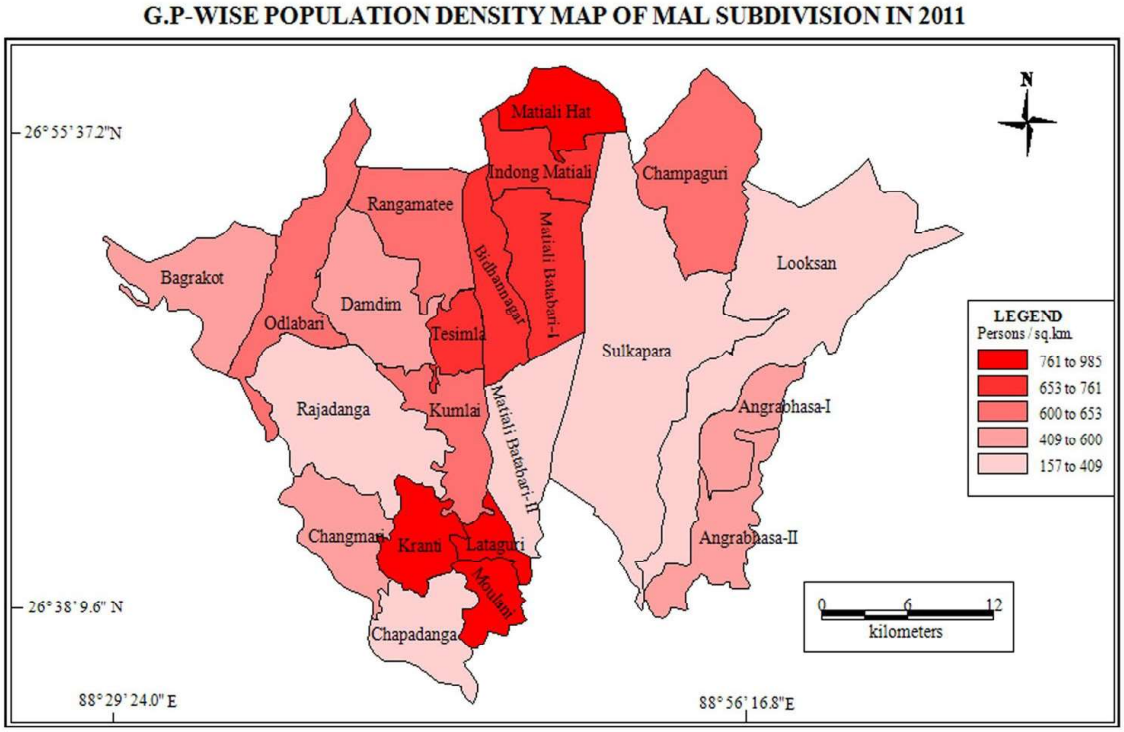


Figure 2.3 GP-wise Density of Population

Table 2.5 Block-wise Growth of Population, Mal Subdivision

Block	Population				Growth rate (%)			
	1981	1991	2001	2011	1981-91	1991-01	2001-11	Annual
Mal	183766	220093	265392	299556	19.8	20.6	12.9	2.1
Matiali	74649	93253	105906	117540	24.9	13.6	11.0	1.9
Nagrakata	70148	101782	115907	127397	45.1	13.9	9.9	2.7
Total	328563	215128	487205	544493	26.3	17.4	11.8	2.2

Source: Computed by the Researcher based on Census 2011 data

Over the years population has been increased in different blocks of Mal subdivision. Overall decadal growth in the subdivision was 26.3% in the decade 1981-1991, 17.4% in 1991-2001 and 11.8% in 2001-2011. So, the growth rate is gradually decreasing. Highest decadal growth was found in 45.1% in 1981-1991 at Nagrakata block and same has been declined to 13.9% in the next decade 1991-2001. Annual growth rate of the population is 2.2% in 30 years span period of 1981-2001 in rural areas of the subdivision.

Figure 2.4 Trends of Population Growth

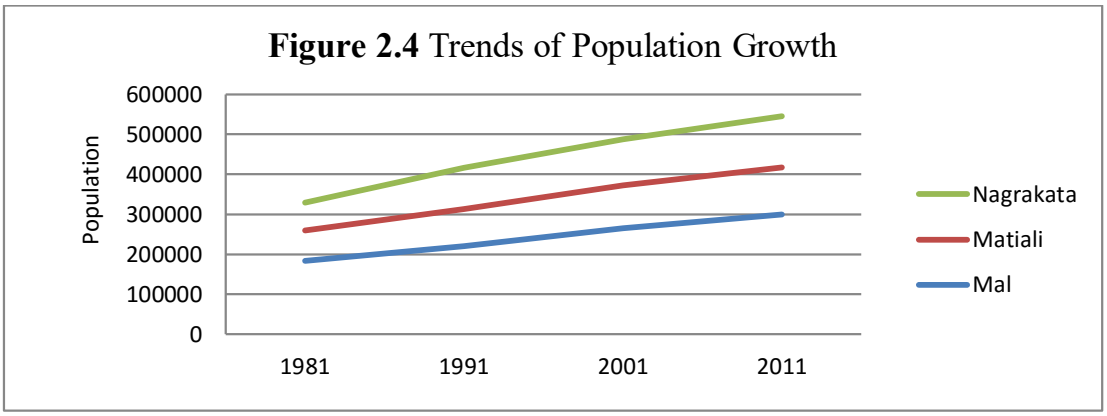


Figure 2.5 Block-wise Decadal Growth of Population

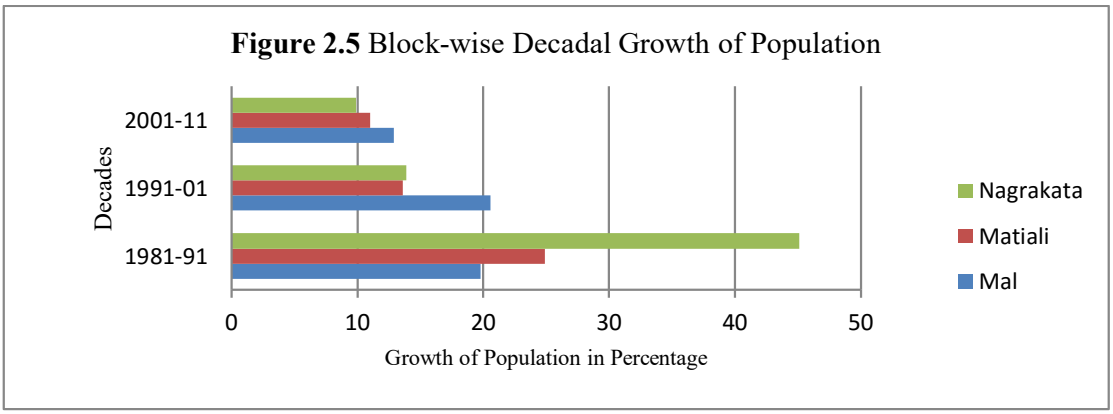


Table 2.6 Gram Panchayat-wise Distribution of Population in Mal subdivision, 2011

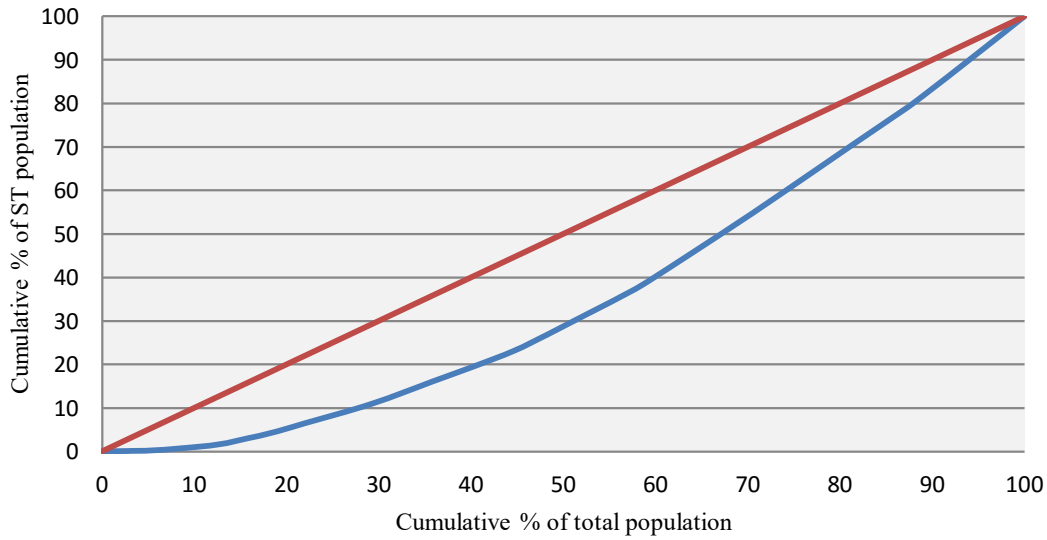
Sl No	Name of Gram Panchayat	Total Population	Scheduled Tribe (S.T) Population	Others (Non-tribal) Population	% of S T. Population to total Population
Mal Block					
1	Bagrakot	35318	19694	15624	55.76
2	Odlabari	40294	9973	30321	24.75
3	Rangamatee	34072	22546	11526	66.17
4	Rajadanga	35374	11028	24346	31.18
5	Damdim	28037	18727	9310	66.79
6	Tesimla,	14078	2765	11313	19.64
7	Kumlai	24252	10497	13755	43.28
8	Changmari	19020	4620	14400	24.29
9	Kranti	23826	1967	21859	8.26
10	Chapadanga	14583	212	14371	1.45
11	Moulani	14857	281	14576	1.89
12	Lataguri	15845	1046	14799	6.60
Mal block total		**299556**	**103356**	196200	34.50

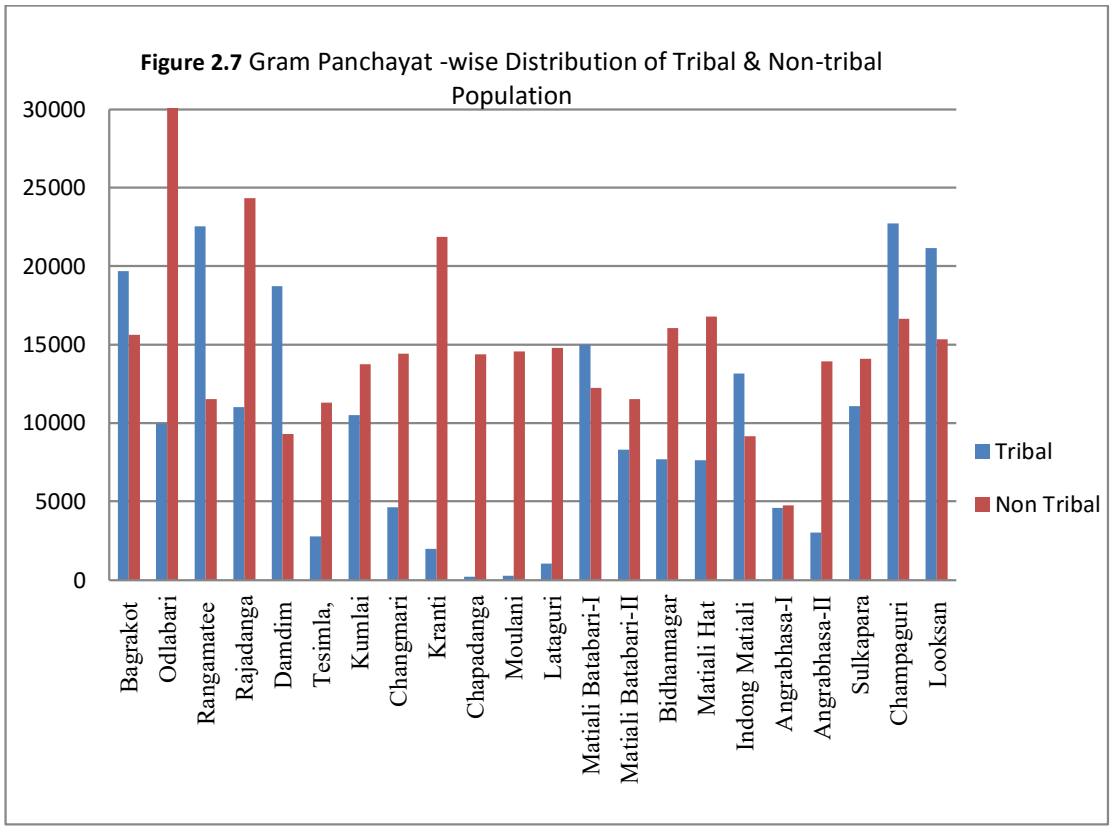
Matiali Block					
1	Matiali Batabari-I	27211	14984	12227	55.07
2	Matiali Batabari-II	19848	8316	11532	41.90
3	Bidhannagar	23758	7704	16054	32.43
4	Matiali Hat	24407	7630	16777	31.26
5	Indong Matiali	22316	13155	9161	58.95
Matiali block total		**117540**	**51789**	**65751**	**44.06**
Nagrakata Block					
1	Angrabhasa-I	9335	4583	4752	49.09
2	Angrabhasa-II	16974	3039	13935	17.90
3	Sulkapara	25169	11081	14088	44.03
4	Champaguri	39391	22742	16649	57.73
5	Looksan	36528	21179	15349	57.98
Nagrakata Block total		**127397**	**62624**	**64773**	**49.16**
Mal subdivision total		544493	217769	326724	39.99

Source: Census of India, 2011

The inequality in distribution of Tribal population to total population has been shown by Lorenz curve below. However, the degree of inequality is mathematically measured by Gini co-efficient. A Gini co-efficient is a measure of inequality of a distribution. It is defined as a ratio with values between 0 (perfect equality) and 1(complete inequality): the numerator is the area between the Lorenz curve of the distribution and the uniform distribution line; the denominator is the area under the uniform distribution line. The calculated value for the distribution is 0.28; that is there are 28% inequalities in the distribution of tribal population.

Figure 2.6 Lorenz Curve to Show Unequal Distribution of Tribal Population Mal Subdivision, 2011





Following are the five tribal density zones in the subdivision based on percentage share of total population in each GP.

a) Very high tribal concentrated GPs (≥ 50%): There are three GP areas in Mal block namely Damdim, Rangamatee and Bagrakot; two GPs in Matiali i.e. Matiali Batabari-I, Indong Matiali and two GPs in Nagrakata i.e. Champaguri and Looksan belong to this category. So out of 22 GPs in the subdivision 7 have a concentration of more than 50% population share of tribal people. Most of such GPs are located in the maximum tea garden concentrated areas.

b) High tribal concentrated GPs (35%- 49%): Kumlai, Matiali Batabari-II, Angrabhasa-I, Sulkapara- these four GPs are belonging to this group.

c) Moderate tribal concentrated GPs (20%- 34%): Odlabari, Rajadanga, Changmari, Tesimla, Bidhannagar and Matiali Hat are belonging to the moderately tribal concentrated zone.

d) Low tribal concentrated GPs (5%- 19%): Kranti and Lataguri have low tribal concentration of population.

e) Very low tribal concentrated GPs (< 5%): Tribal concentration is very low in two GP areas namely Chapadanga and Moulani.

2.3.2 Social Structure

Different social groups and religious groups can be termed as the base of social structure. In Mal subdivision, on an average 21.2% people belong to scheduled caste, 40% people belong to scheduled tribe and 38.8% people are belonging to general category as per 2011 census. Scheduled caste proportion is high in Mal (26.8%) block and lowest in Nagrakata block (13.8%). There are 21.2% people in rural areas of Mal subdivision who are belonging to scheduled caste. There are 49.2% people of Nagrakata block who belong to scheduled tribe category. Share of scheduled tribe population is lowest in Mal block (34.5%). Average ratio of scheduled tribe is 40% in the subdivision.

Table 2.7 Block-wise Distribution of Social Groups of Population

Block	General		SC		ST		Total	
	Population	%	Population	%	Population	%	Population	%
Mal	115800	38.7	80400	26.8	103356	34.5	299556	100
Matiali	48129	40.9	17622	15.0	51789	44.1	117540	100
Nagrakata	47147	37.0	17626	13.8	62624	49.2	127397	100
Total	211076	38.8	115648	21.2	217769	40.0	544493	100

Source: Computed by the Researcher based on Census data

Figure 2.8 Social Category of Population

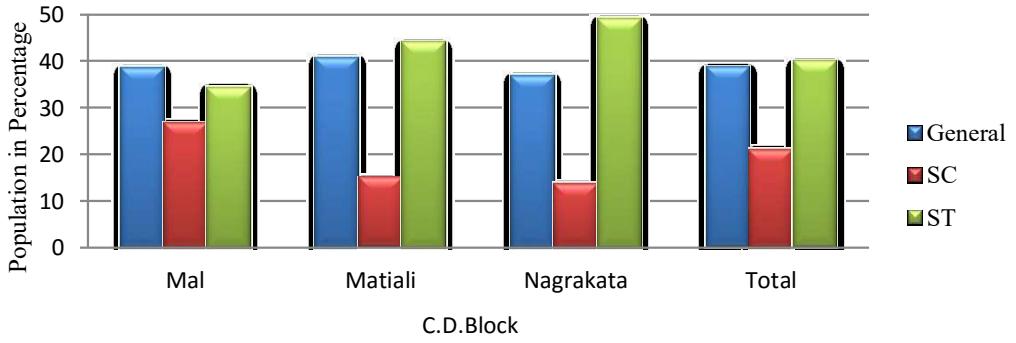


Table 2.8 Block-wise Distribution Religious Groups of Population in Mal Subdivision

Block	Hindu		Muslim		Christian		Buddhist		Others		Total
	Popn.	%	Popn.	%	Popn	%	Popn	%	Popn	%	
Mal	193471	64.6	48337	16.1	18811	6.3	3182	1.1	35755	12	299556
Matiali	85651	72.9	10797	9.2	7575	6.4	1736	1.5	11781	10	117540
Nagrakata	96828	76.0	8881	7.0	6944	5.5	2567	2.0	12177	10	127397
Total	375950	69.0	68015	12.5	3330	6.1	7485	1.4	59713	11	544493

Source: Census 2011 data Computed

Hindus are majority in number among the religious groups of people. 69% people of the subdivision are belong to Hindu, 12.5% are Muslims, 6.1% are Christian, 1.4% are Buddhist and 11% are others or have not any specific religious believes. Hindu share is highest in Nagrakata block; Muslim share is highest in Mal block among the three community development blocks. Christianity is gradually increasing among the tribal people by influence of missionary activities.

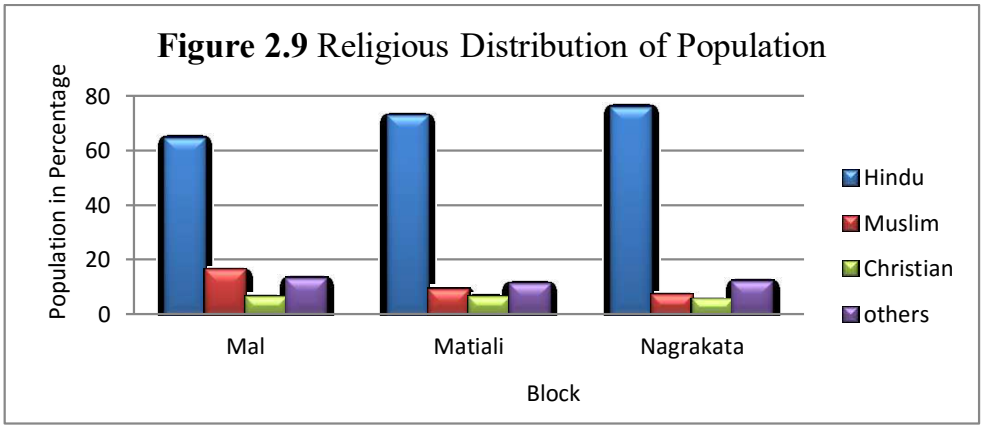


Figure 2.9 Religious Distribution of Population

2.3.3 Culture

Though different varieties of races and their cultures got intermingled in the same land; each individual race retained their individual culture and heritage over the ages. Thus the phenomenon of 'Combined Culture' never got a chance to bloom here. In the serenity of the forests, beyond the misty curtain of the hills or by the gushing streams here and there developed and prospered various culture like - the Bhotia Culture, the Rajbangsi Culture, the Nepali Culture, the tribal culture, the Bengali culture together. Majority of Tribal Cultures are Folk Cultures. Folk Dances, Folk songs and Folk Lore forms are integral part of these cultures. And then comes the variety of festivals. Apart from the major festivals like the 'Durga Puja' and the 'Kali Puja', there is the *'Teesta Burir Puja'* epitomising the Life Line of this region the Teesta River; an occasion observed by the local Rajbanshis. *'Manosha Puja*' or the worship of the Serpent Goddess is another important festival of this region. *'Bhawaiya'* the folk song of the Rajbanshis, depict the love of both God and Man. It depicts the confrontation of Man and God. *Karom, Bishua, Jitia, Bandna* and *Gaburdeb* are some of the festivals of other tribes. Moreover, the rich tribal culture of Dooars associated with marriages are very notable.

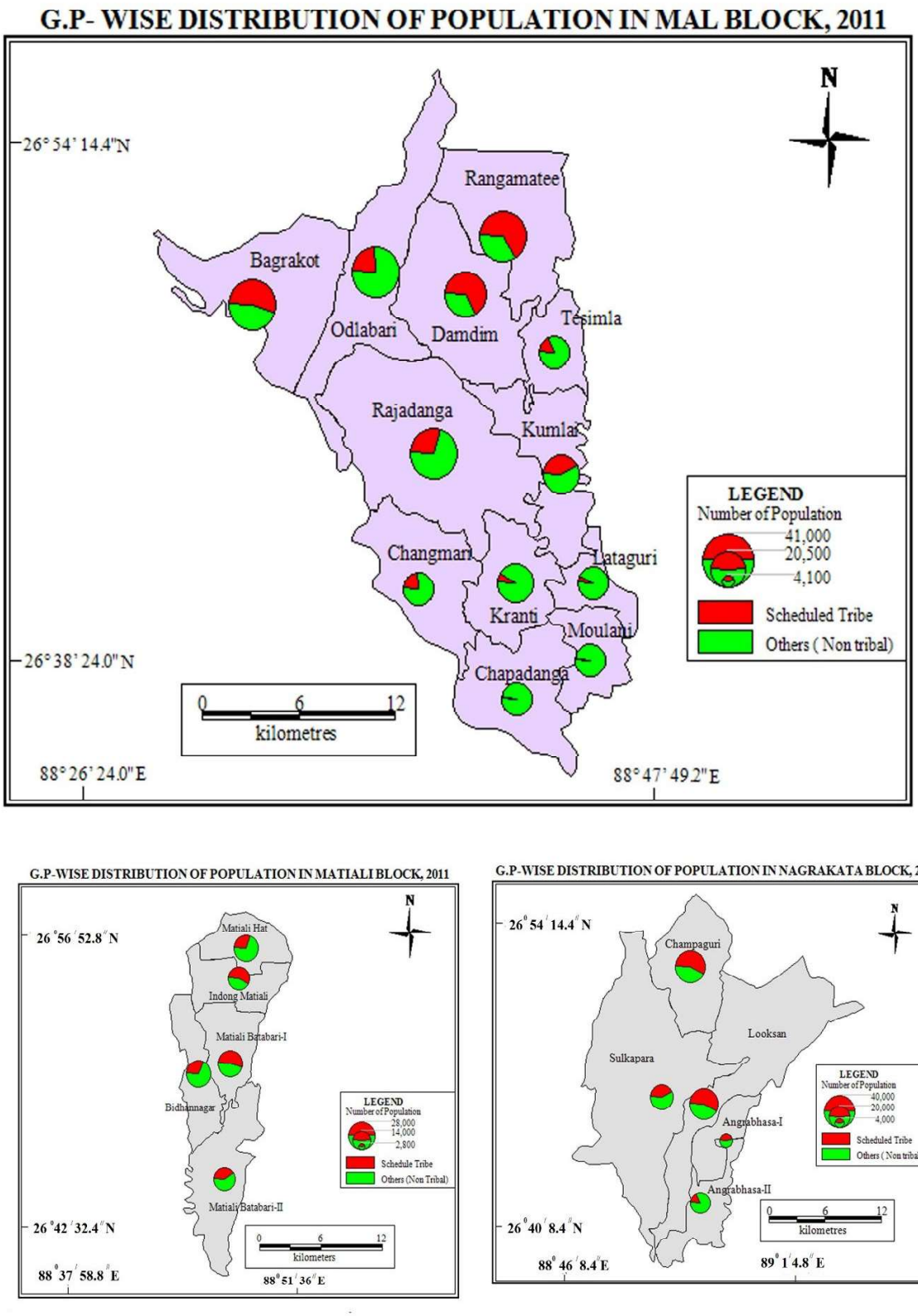


Figure 2.10 GP-wise Distribution of Population in Mal, Matiali & Nagrakata Block

2.4. Economic Background

Economy of the area largely depends on agriculture and tea garden. Tribal people are basically dependent on tea garden while the others are on agriculture. The traditional agricultural practices gain importance as the status of farming. A considerable amount of people depend on livestock farming, i.e. cattle and buffalo rearing, sheep, goat and pig rearing, poultry and allied activities etc.

2.4.1 Occupational Structure

As per census 2011 data, 39.02% people are in the category of workers in the subdivision. Matiali has the highest workers (42.71%) and Mal block has lowest workers ratio (37.94%). Among the workers, cultivators are 9.15%, agricultural labourers are 16.18%, household industrial workers are 1.65% and other workers are 73.02% in the subdivision. Agricultural labourers are more in Mal among the three blocks. In Matiali block maximum workers (83.04%) are engaged other than the three specific activities followed by Nagrakata (75.82%). The shares of other workers are lowest in Mal block (65.33%). This difference is due to maximum tea garden based economic activities in Matiali and Nagrakata block. Again, the non workers' shares are low in Matiali and Nagrakata as maximum tribal people are economically active in these two blocks. Among the workers, 28.65% are main workers and 10.37% are marginal workers.

Table 2.9 Block-wise Distribution of Population over different categories of workers

Block/Sub division	Total Workers (%)	Class of Total Workers (%)				Type of Workers (%)		
		Cultivators	Agricultural Labourers	Household Ind.workers	Other workers	Main workers	Marginal workers	Non Workers
Mal	37.94	12.09	20.88	1.70	65.33	27.94	10.00	62.06
Matiali	42.71	4.77	10.76	1.43	83.04	30.74	11.96	57.29
Nagrakata	38.12	8.50	13.99	1.68	75.82	27.09	11.03	61.88
Mal Subd.	39.02	9.15	16.18	1.65	73.02	28.65	10.37	60.98

Source: Census of India, 2011

2.4.2 Tea Plantation

Economy of this region is deeply much influenced by the tea garden based economic activities. Tea cultivation became possible and the tea gardens grew up in Dooars on account of appropriate soil, favourable climatic conditions and above all availability of land since the areas were declared non-regulated and the Government can acquire land for its purpose. In Terai, James White established the first tea garden in 1862 near Khaprail More of Matigara in Darjeeling district. The first tea garden in Jalpaiguri district was planted in Gazoldoba in the

year 1874 by Dr. Brougham (Grunning, 1911). Dr. Brougham appointed R. Hagauhton as manager who was a pioneer of tea plantation in Dooars region. First tea garden of Mal subdivision was established in Bagrakot in the year 1875.

The British Government declared the Dooars as non-regulated area for the purpose of using the land for colonial economy. In 1871 under the supervision of Mr. Becket the lands were divided in three categories viz. (1) Land for agricultural purpose, (2) Land for reserve forest and (3) Land for tea cultivation. As lands for tea estates were demarcated and acquisition of land were being continued the indigenous people of the study area, the Mech, the Rabhas and the Koch-Rajbanshis faced problems as they were dependent on their traditional village economy of subsistence agriculture, weaving, fishing and often hunting and were accustomed in living in the community-clusters of houses together. The tea planters then were forced to depend on outside labours. The majority of people in the southern and eastern Nepal were very poor. The British planters' eyes fell on the half-fed and famished people of Nepal. The British Government encouraged the immigration of the Nepalese in order to populate the sparsely inhabited zones of Dooars. But this was not enough supply for the the demand of labourers in Dooars, the tea planters in collusion with the Government decided to bring labourers from the Santal Parganas and Chhotonagpur plateau areas of the then Bihar (now Jharkhand) where large number of tribal as well as poor people namely Santals and Oraons lived without fixed and settled economy. These people for generations were dependent on jungles but the new forest policy of the British Government whereby felling of trees in reserved forests were prohibited and declared punishable by law, deprived them of their traditional ways of living in the forest enclaves. It was for that reasons, thousands of labourers emigrated from Chhotonagpur to the tea gardens of Dooars (Sunders, 1895).

There are many age old tea gardens in Dooars occupied by merchants, traders and rich businessman or multinational groups. In this context some important tea estate owners' name may be mentioned: Goodricke group, Duncan's group, Diana group, Bijoynagar tea Company, Ellenbari tea company etc. Besides, there are many small tea gardens planted by small farmers and local people in their own land. Some small grower gardens were similarly established in Dooars area. According to the Tea Board of India, small growers are those whose plantation area is having 20 acres of land. They took tea cultivation because of assurance of better income over what they used to get from traditional agricultural practices (Sharma & Das, 2009). There are 84 big tea gardens in Mal subdivision. Among these, Chengmari tea garden is the largest tea garden having an area of 4577.53 acre of land located in Nagrakata block.

Table 2.10 List of Tea Gardens in Mal subdivision

Sl. No.	Name of the Tea Garden	Area (in acre)	Sl. No.	Name of the Tea Garden	Area (in acre)
1	Anandapur	1550.34	44	Toonbari	641.45
2	Bagrakot/ III & IV	1407.50	45	Upper Neora	318.41
3	Bagrakot/I	308.49	46	Washabarie	1131.15
4	Bagrakot/II	287.30	47	Aibheel	1596.40
5	Baintbari	879.54	48	Baradighi	2128.73
6	Baintgoorie	2628.72	49	Chalauni	1917.38
7	Balabari/Ranichera	1113.67	50	Chalsa/I	1456.14
8	Barron/I	754.44	51	Chalsa/III	88.29
9	Barron/II & III	1310.45	52	Engo	397.91
10	Barron/IV	474.87	53	Indong	1829.52
11	Chaity (Ranichera)	198.18	54	Batabari	29.22
12	Chel(Ranichera)	391.10		Batabari	1175.64
13	Dalimkot	986.04	55	Killcott	1572.06
14	Damdim/I	766.45	56	Nagaisuree	2324.60
15	Damdim/II	58.16	57	Matiali -I	2436.07
16	Ellenbarie	946.26		Matiali -II	148.69
17	Gendavil	768.90	58	Nakhati	1063.92
18	Gurjanjhora	805.43	59	Samsing	1861.09
19	Haihaipathar-I/	505.12	60	Satkhaya/I & II	1743.04
20	Haihaipathar-II & III	977.07	61	Satkhaya/IV	290.81
21	Kalagaiti	592.99	62	Satkhaya/V	94.77
22	Kumlai	1195.69	63	Soongachi	1535.82
23	Malhati/Jogeshchandra	1383.43	64	Yong Tong	1244.03
24	Malnuddy	327.75	65	Zurantee	1925.86
25	Manabari	1329.07	66	Bamandanga	1228.65
26	Meenglass	1308.44	67	Bhagatpur	2413.19
27	Moneyhope / Leesh River	399.65	68	Carron	1435.60
28	Needam	881.95	69	Chengmari	4577.53
29	Neoranuddy	1365.99	70	Dharanipur)	1140.59
30	Nepuchapur	914.46	71	Ghatia	1868.35
31	Newglenco	1358.97	72	Grassmore	1893.45
32	Oodlabari	1539.83	73	Hilla	1640.29
33	Patharjhora	1398.05	74	Hope/ Thaljhora	1680.25
34	Patibari	509.10	75	Jiti	2308.12
35	Phulbari-I /Leesh River	615.97	76	Kurti	1647.16
36	Phulbari-II/Leesh River	250.17	77	Looksan	1846.48
37	Rangamatee	3526.59	78	Nagrakata	2281.50
38	Ranichera-I	774.63	79	Naya Sylee	1915.28
39	Ranichera-II & III /	548.15	80	Tondoo	584.85
40	Saogaon/Sonali	1054.92	81	Kalabari/I	767.90
41	Sishubari /Goodhope	1560.47	82	Kalabari/II	225.36
42	Sylee	1674.58	83	Kalabari/III	221.35
43	Kailashpur	705.57	84	Kalabari/IV	134.15

Source: www.jalpaiguri.gov.in

2.5 Infrastructural facilities

Infrastructures are the backbone of any development. Transport- communication, educational institutes, health facilities are the basic components of infrastructure. Without these facilities, socio-economic development is impossible. Mal subdivision provides the following infrastructure for the people living there.

2.5.1 Transport and Communication

Throughout the subdivision in rural areas of Mal, Matiali and Nagrakata, there are different govt. agencies to maintain the roads. These are P.W.D, Zilla Parishad, Panchayat Samity, Gram Panchayat and central sponsored Pradhan Mantri Gram Sadak Yojana. The state PWD maintained 116.03 kilometre road in the subdivision, of which there are only 8 km road in Matiali block. Zilla Parishad has a total surface and un-surface roads of 287.63 kilometres and 170.42 kilometres respectively. Gram panchayat and Panchayat samity has 488.88 kilometre and 144.28 kilometres of surface and un-surfaced roads respectively. In the recent years Pradhan Mantri Gram Sadak Yojana scheme has cvered 144.28 km surfaced road in the subdivision. Besides, National Highway No. 31 has crossed Mal, Matiali and Nagrakataconnecting places like Jalpaiguri, Maynaguri, Siliguri, Dhupguri, Coochbehar and Alipurduar etc. nearer destinations.

Table 2.11 Length of Roads maintained by different agencies, 2011-12 (in Km)

Name of Block	P.W.D.	Zilla Parishad		Gram Panchayat & Panchayat Samity		Pradhan Mantri Gram Sadak Yojana
		Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced
Mal	45.40	165.87	78.14	109.90	276.66	73.62
Matiali	8.00	53.44	40.08	108.55	156.80	53.18
Nagrakata	62.63	68.32	52.20	36.35	55.42	17.48
Total	116.03	287.63	170.42	254.8	488.88	144.28

District Statistical Handbook, Jalpaiguri, 2012

Due to high concentration of forests and tea gardens in some GP areas of Mal, Matiali and Nagrakata block, road connectivity is relatively poor than other parts of the subdivision. A large railway tract of North-east Frontier railway connecting New Jalpaiguri-Guahati is within the dense forest area. Important railway stations are New Mal, Chalsa, Nagrakata, Bagrakot etc. A new railway route has presently been activated between Changrabandha and New Jalpaiguri connecting the places of Maynaguri, Lataguri, Moulani, Chalsa, and New Mal.

2.5.2 Education

Educational institutes in the subdivision are fewer than the sadar subdivision of Jalpaiguri district. There are 281 primary schools, 22 middle schools, 17 high schools and 16 Higher Secondary schools in the rural area. The Matiali block has 3 higher secondary schools. Matiali and Nagrakata block has no general degree college. The only degree college of the subdivision is Mal Parimal Mitra Smriti Mahavidyalaya situated in the Mal block. There is no professional or technical institution in the subdivision. So the educational infrastructures in these blocks are poorer than the other blocks of Jalpaiguri district.

Table 2.12 Educational Institutes by Number in Mal Subdivision

	Primary School	Middle School	High	H.S. School	General College	Technical School/College
Mal	156	13	10	8	1	-
Matiali	69	6	4	3	-	-
Nagrakata	56	3	3	5	-	-
Total	**281**	**22**	**17**	**16**	**1**	**0**

District Statistical Handbook, Jalpaiguri, 2012

It is one of the important concerns to determine the ratio of educational institutes to the total population of an area. The ratio of primary school to total population in Mal block is 1:1920, Matiali 1:1703, Nagrakata 1:2275. The average ratio of Primary school to total population is 1:1938 in Mal subdivision. In case of number of High schools to total population in the blocks are 1:9663 in Mal, 1:9042 in Matiali, 1:11582 in Nagrakata. Average ratio of three combined block is 1:9900 in Mal subdivision.

2.5.3 Health

Health is one of the important keys of infrastructure. There are 95 sub-centres throughout the subdivision of Mal. In Mal and Matiali there is no any rural hospital. There is only one rural hospital in Nagrakata block. In Mal and Matiali block there are block primary health centres. There are seven primary health centres. So, the govt health centres are limited in the blocks of the Mal subdivision. There are 19 non-governmental hospitals in the subdivision. A few of them are run by the Christian missionaries.

Table 2.13 Medical facilities available in Mal Subdivision

Block	Sub-Centres	Rural Hospitals	Block Health Centres	Primary Health Centres	NGO/ Nursing Home	Total no. of beds	Total no. of doctors
Mal	51	-	1	3	10	214	14
Matiali	22	-	1	2	3	87	07
Nagrakata	22	1	-	2	6	140	12
Total	**95**	**1**	**2**	**7**	**19**	**541**	**33**

Source: District Statistical Handbook, Jalpaiguri, 2012

Number of health centres in a region not always speak about the health status rather there are considerations of number of hospital beds and number of doctors. There are 33 doctors and 541 beds in the hospitals of the subdivision. Considering the ratio of doctor and population, it is found that in Mal block the ratio is 1:21397, Matiali 1:16791, Nagrakata 1: 10616. Average ratio of doctors and population is 1:16500 in Mal subdivision. It means that a doctor is deployed for more than 16500 population. The ratio of hospital beds to population in the Mal block is 1: 1400, in Matiali 1: 1351, in Nagrakata 1:910. The average ratio of hospital beds to total population in the subdivision is 1:1006. District health condition is better in Sadar subdivision than that of Mal subdivision in respect of above two ratios. Doctor to population ratio is 1: 941 and hospital bed to total population is 1:7050 in Sadar subdivision.

2.5.4 Drinking water

Clean drinking water is a basic human need. Unfortunately, more than one in six people still lack reliable access to this precious resource. The problem is particularly acute in the developing world. Water is a fundamental human need. Each person on Earth requires at least 20 to 50 litters of clean, safe water a day for drinking, cooking and simply keeping themselves clean. Polluted water is not just dirty, it's deadly. The United Nations considers universal access to clean water as a basic human right, and an essential step towards improving living standards worldwide (Global Health and Education Programme).

Table 2.14 Sources of Drinking Water in Mal Subdivision (Households in %)

	Tap Water	Well	Hand pump	Tube well	Spring/canal	others
Mal	18.7	59.6	3.9	4.6	0.2	13.0
Matiali	16.1	58.6	8.6	4.9	1.9	9.9
Nagrakata	26.6	45.4	7.1	3.9	2.9	14.1

Source: Census of India, 2011

2.5.5 Electricity

As per census data, kerosene is the main source of lightning in the rooms in two blocks of Mal (61.46%) and Nagrakata (61.11%). Electricity is the main source for Matiali block (63.17%). Solar source of lighting is very limited in the area. The tea gardens are mostly electrified but the people use kerosene for low cost and rationing of kerosene.

Table 2.15 Households having sources of Lightning in Mal Subdivision (in %)

Block	Electricity	Kerosene	Solar	Other Oil	Any other	No lighting
Mal	37.42	61.46	0.58	0.05	0.01	0.47
Matiali	63.17	35.77	0.66	0.15	0.03	0.21
Nagrakata	38.02	61.11	0.29	0.09	0.03	0.46

Census of India, 2011

2.6 Conclusion

The Mal subdivision shows variation in all three aspects of physical, socio-economic and infrastructural facilities. Physical characteristics are quite diverse in respect of topography, drainage, geology, natural vegetation etc. The social behaviours are diverse in respect of ethnicity, language, culture and religion. The infrastructural facilities i.e. health, education, electricity, transport-communication and source of drinking water are limited in the area. In conclusion it can be said that the diversity of these three aspects deserve more studies to understand the region properly as well as for the development of the living standard of the people of the region.

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