

Chapter 4

Research Settings

4.1 Research Settings

In any social science research, it is hardly possible to conceptualize and perceive the data and interpret the data more accurately until and unless a clear understanding of the characteristics in the area and attitude or behaviour of people is at command of the interpreter who intends to unveil an understanding of the implications and behavioural complexes of the individuals who live in the area under reference and from a representative part of the larger community. The socio demographic background of the local people in a rural setting has been critically administered in this chapter. A research setting is a surrounding in which inputs and elements of research are contextually imbibed, interactive and mutually contributive to the system performance. Research setting is immensely important in the sense because it is characterizing and influencing the interplays of different factors and components. Thus, a study on Perception of Farmer about the issues of Persuasive certainly demands a local unique with natural set up, demography, crop ecology, institutional set up and other socio cultural milieus. It comprises of two types of research setting viz. Macro research setting and Micro research setting.

Macro research setting encompasses the state as a whole, whereas micro research setting starts off from the boundaries of the chosen districts to the block or village periphery. The notion behind this form of presentation is to internalize the study environment in terms of broader perspectives with state as reference frame and district, block profile as units for in-depth study.

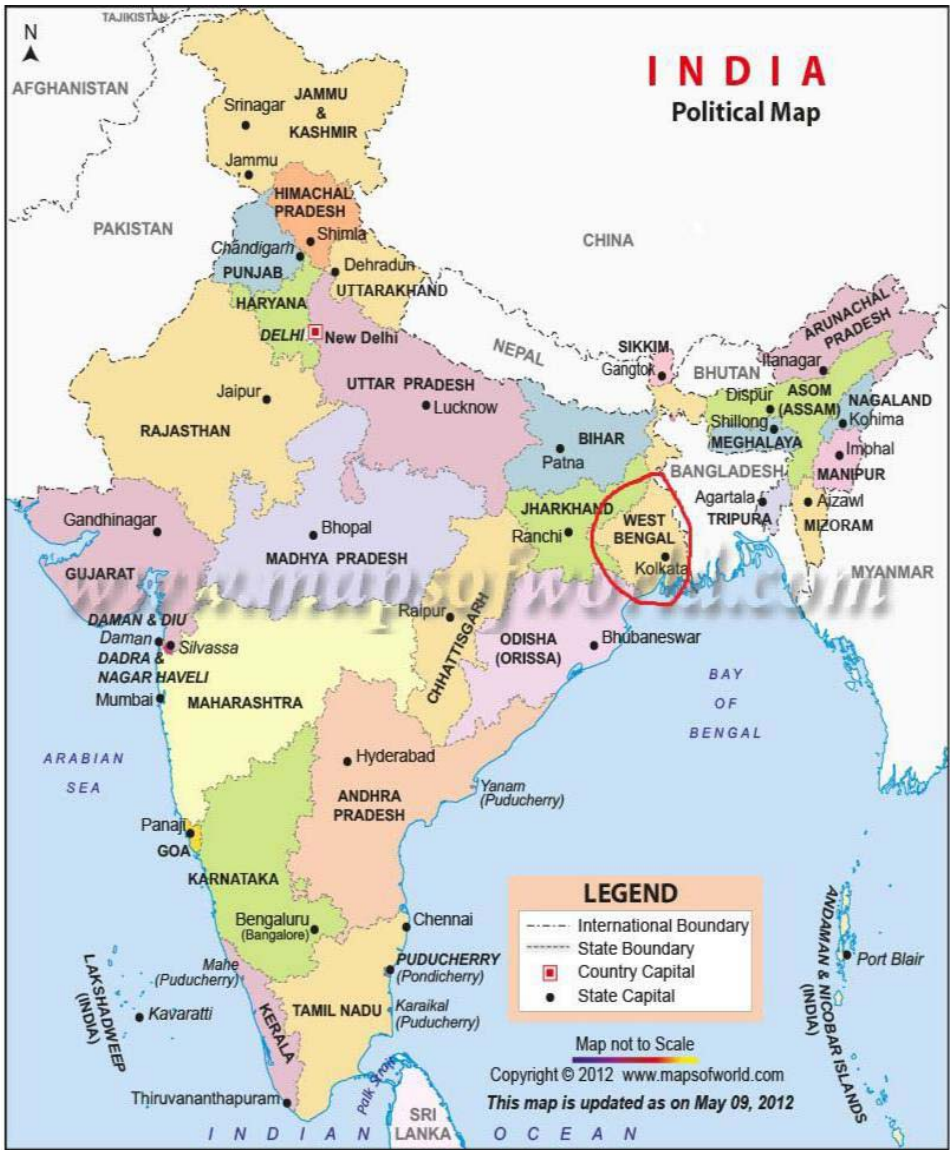
The present study was taken up at two different locations i.e. at the Ghoshalia village, at Balagarh Block in Hooghly district of West Bengal and at the Maheswarpur village, at Chakdaha block in Nadia District of West Bengal. A brief description of Hooghly and Nadia district in general and the block and village in particular are given below.

4.2 Area of study

The area of investigation of this study is situated in the state of West Bengal located in the eastern part of India. The state of West Bengal has a unique social, cultural and ecological background, which influences the living standard and behavioural patterns of the people in many ways. The area of investigation belongs to Dumurdaha Panchayat of Balagarh block in Hooghly district and to Rautari Panchayat of Chakdaha block in Nadia district. The study was conducted in Ghoshalia and Maheswarpur villages respectively.

4.3 Brief Information on India

India is a country in south Asia that lies entirely on the Indian Plate in the Northern portion of Indo-Australian plate. The country lies to the north of equator between $8^{\circ}4'$ and $37^{\circ}6'$ North latitude and $68^{\circ}7'$ and $97^{\circ}25'$ east longitude. It is the seventh largest country in the world with a total land area 3287263 square kilometer. India measures 3214 kilometer from north to south and 2993 kilometer from east to west. It has a land frontier of 15200 Kilometer and a coastline of 7517 kilometer. For the present study, two states namely West Bengal and Bihar has been taken purposively.



4.1 Political Map of India

4.4 Profile of the State West Bengal

West Bengal was created as a one of the constituent state of the Indian union among the 29th states in India on 15th August, 1947 as the result of

partition of the undivided British Indian province of Bengal into West Bengal. West Bengal is situated in the northeastern part of India and lies between 21°37'-27°10' north latitude and 85°51'- 89°53' east longitude.

It is flanked by the Bay of Bengal on the South, Sikkim on the north, Assam on the east and Bihar, Jharkhand and Orissa on the west. It also has common borders with the three neighbouring countries viz. Nepal and Bhutan in the north and Bangladesh in the east. The tropic of cancer runs across the middle of the state and passes through four districts viz. Bankura, Burdwan, Nadia and Purulia. The state has a total geographical area of 88,752 sq. km. representing only 2.7% of the total area of India. It is territorially divided into 19 districts like Coochbehar, Darjeeling, Jalpaiguri, Uttar Dinajpur, Dakshin Dinajpur, Malda, Murshidabad, Hoogly, Howrah, Nadia, Birbhum, Burdwan, Bankura, Purulia, 24 Pargana(N), 24 Pargana(S), Purba Midnapur, Pashim Midnapur and Kolkata. There are more than 341 Community Development blocks in West Bengal. There are 3354 Gram Panchayats and more than 42000 villages in West Bengal.

In 1947, when India became independent Bengal was partitioned between India and Pakistan. India's share came to be known as West Bengal and Pakistan's share was called East Pakistan. Later, the state of Cooch Behar, French enclave of Chandranagore and some parts of Bihar were added to West Bengal. Bengal represents the lands that possess a distinct culture with its indigenous art and crafts and make it an important part of the Indian Union.

4.5 Climate of West Bengal

West Bengal's climate varies from tropical savanna in the southern portions to humid subtropical in the north. The main seasons are summer, rainy season, a short autumn, and winter. While the summer in the delta region is noted for excessive humidity, the western highlands experience a dry summer like northern India, with the highest day temperature ranging from 38 °C (100 °F) to 45 °C (113 °F). At nights, a cool southerly breeze carries moisture from the Bay of Bengal. In early summer brief squalls and thunderstorms known as *Kalbaisakhi*, or Nor'westers, often occur. West Bengal receives the Bay of Bengal branch of the Indian ocean monsoon that moves in a northwest direction. Monsoons bring rain to the whole state from June to September. Heavy rainfall of above 250 cm is observed in the

Darjeeling, Jalpaiguri and Cooch Behar district. During the arrival of the monsoons, low pressure in the Bay of Bengal region often leads to the occurrence of storms in the coastal areas. Winter (December–January) is mild over the plains with average minimum temperatures of 15 °C (59 °F). A cold and dry northern wind blows in the winter, substantially lowering the humidity level. However, the Darjeeling Himalayan Hill region experiences a harsh winter, with occasional snowfall at places.

Table 4.1 General Information of West Bengal

Total population	91,347,736
Male	46,927,389
Female	44,420,347
Population growth	13.93%
Sex ratio	947
Population density	1029/ km ²
Literacy rate	77.08%
Male	82.67%
Female	71.16%
No. of Sub divisions	66
No of Blocks	341
No of Gram Panchayats	3354
Inhabited Villages	37945

Area (Sq. Km.)	88752
% of Electrified Villages	83.6

4.6 L and holding status in West Bengal

According to 1991 census the total number of farmers is 65.47 lakh, out of which 76.42 per cent is marginal former, 16.81 per cent is small former and 0.02 per cent is big former. The per capita land is 0.13 ha and average holding size is 0.90 ha.

Table 4.2 L and use pattern in West Bengal

Geographical area (million hectare)	8.86
Net cropped area (million hectare)	5.46
Gross cropped area (million hectare)	9.23
Cropping, intensity (%)	165.34
Forest area (%)	13.72
Non agricultural use (%)	18.66
Barren and Uncultivable (%)	0.35
Fallow land (%)	0.3

4.2 Map of West Bengal



4.7 Profile of Hooghly District

Hooghly is a district of the state of West Bengal, in the north east of India. The district lies on the bank of the Hooghly River and about 15 kms away from Kolkata. It borders with Nadia, North 24 Parganas to the east and Howrah districts to the south, East Medinipur district to the west, and Burdwan district to the north. The people here are engaged in both agricultural and industrial activities.

- Location

Hooghly is situated in between 23°01'53" and 22°39'11" north latitude and 88°30'09" and 87°30'48" east longitude and about 3,149 km² (1,216 sq mi.) in area. This District is linear in shape with orientation of East- West. The District is Approximately 46 ft. above the mean sea level.

- Geographical & Physical features

The soil of the district is composed of recent alluvial and the surface consists of sandy clay and sand along the course of the rivers and fine silt consolidating into clay in the flatter portions of the plains, such as in Kalantar tract between the Bhagirathi and the Jalangi.

Table 4.3: Soil of Hooghly District

Major Soils	Area ('000 ha)	Percent (%) of total
1. Clayey	64.84	29
2. Clayey Loam	80.50	36
3. Loamy	76.26	35

4.8 Climate of Hooghly

Hooghly has a tropical savanna climate. The annual mean temperature is 26.8°C, although monthly mean temperatures range from 16°C to 33°C and maximum temperatures in Hooghly often exceed 38°C. The main seasonal influence upon the climate is the monsoon. Maximum rainfall occurs during the monsoon in August and the average annual total is above 1,500mm. Moderate northwesterly to northeasterly winds prevails for most of the year with a high frequency of calms. Summer is dominated by strong southwesterly monsoon winds. Winters are comfortable with temperatures lying between 11 to 17°C.

Based on Climate, Soil and Physiographic the South Asia Project Department, World Bank (1997) reported six agro climatic Zones of West Bengal. Among them New Alluvial Zone is the biggest Zone with highest cropping intensity and crop diversity covering the western parts of Malda and Dakshin Dinajpur, Southern parts of Uttar Dinajpur, eastern part of Murshidabad, Hoogly, Burdwan, Howrah, entire Nadia and northern part of North and South 24 Parganas Climate of this zone is tropical moist sub-humid with rainfall 1427.4 mm, air temperature maximum 35.0 ° C and minimum 15.6 ° (annual normal). Soils of this zone are derived from recent

alluvial deposits brought down by the river Ganga, and its tributaries hence called inceptisol. Soils are deep, well drained, texturally fine loamy, neutral in reaction, with high base saturation and CEC and medium to medium low NPK. Rice is the main crop cultivated in this zone over different land terrains and seasons.

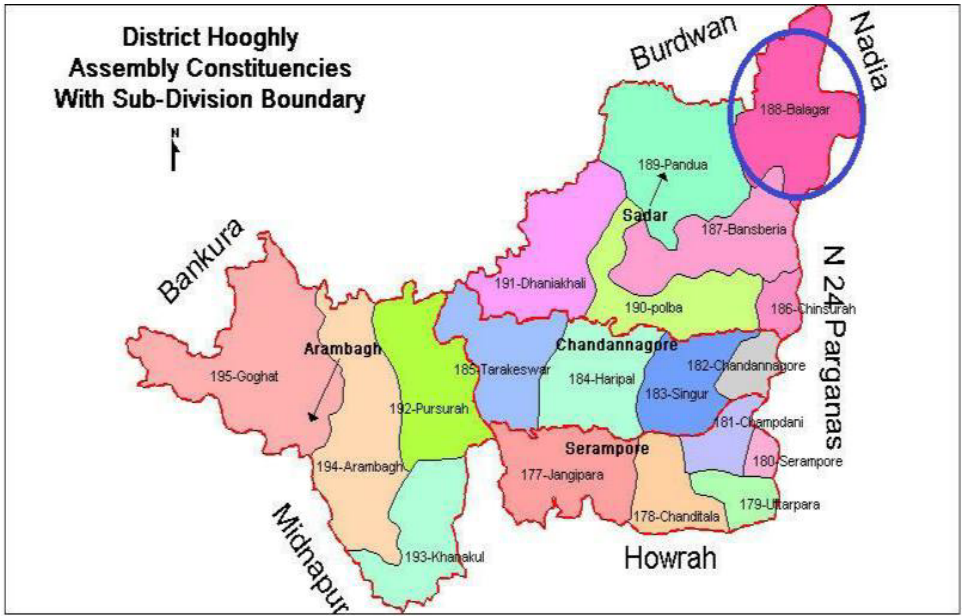
Table 4.4: District profile of Hooghly (General)

Area	3149 Sq .Km.
Head Quarter	Chinsurah
District Language	Bengali
No. of Sub-Division	4
No. of Blocks	18
No. of Municipality	12
No. of Municipal Corporation	1
No. of Police Stations	23
No. of Village	1886
No. of Gram Panchayat	207
No. of Mouza	1999
No. of Gram Sansad	2364
No. of Municipality ward	292

Table 4.5 Hooghly District: Census 2011 data

Description	2011
Actual Population	5,519,145
Male	2,814,653
Female	2,704,492
Population Growth	9.46%
Area Sq. Km	3,149
Density/km ²	1,753
Proportion to West Bengal Population	6.05%
Sex Ratio (Per 1000)	961
Child Sex Ratio (0-6 Age)	952
Average Literacy	81.80
Male Literacy	87.03
Female Literacy	76.36
Total Child Population (0-6 Age)	533,210
Male Population (0-6 Age)	273,116
Female Population (0-6 Age)	260,094
Literates	4,078,388
Male Literates	2,211,777
Female Literates	1,866,611
Child Proportion (0-6 Age)	9.66%
Boys Proportion (0-6 Age)	9.70%
Girls Proportion (0-6 Age)	9.62%

4.3 Map of Hooghly District (Block wise)



4.9 Profile of Balagar h block

Balagarh is a town in Chinsurah subdivision of Hooghly District in the Indian state of West Bengal.

- Geography

Balagarh is located at 23°06'34"N 88°27'37"E. Balagarh community development block has an area of 204.34 km².

- Gram Panchayats

Gram panchayats of Balagarh block/ panchayat samiti are: **Jirat** (Sadar), Charkrishnabati, Dumrdaha-Nityanandapur-I, Dumurdaha Nityanandapur-II, Ektarpur, Guptipara-I , Guptipara-II , Bakulia-Dhobapara , Mohipalpur , Siza-Kamalpur , Somra-I , Somra-II and Sripur-Balagarh.

- Economy

Balagarh was selected the site for power station by Calcutta Electric Supply Corporation but the project was shelved. According to C.E.S.C.Web Journal

of 16th April, 2010 it will be revived by them. Balagarh's economy specially depends on building of country boats and manufacture of tiles which is famous all over India.

Table 4.6 General information of Balagarh Block

Block area	204.34 sq km
No. of Gram Panchayats	13
No. of Gram Sansads	183
No. of Mouza	183
No of police station	1
Population	214,784
Male	110,242
Female	104,542
% of literacy	74.92%
% of male literacy	79.50%
% of female literacy	70.08%

Table 4.7 Educational Facilities and Health Facilities

No. of Primary School	120
No. of Secondary School	8
No. of Higher Secondary School	10

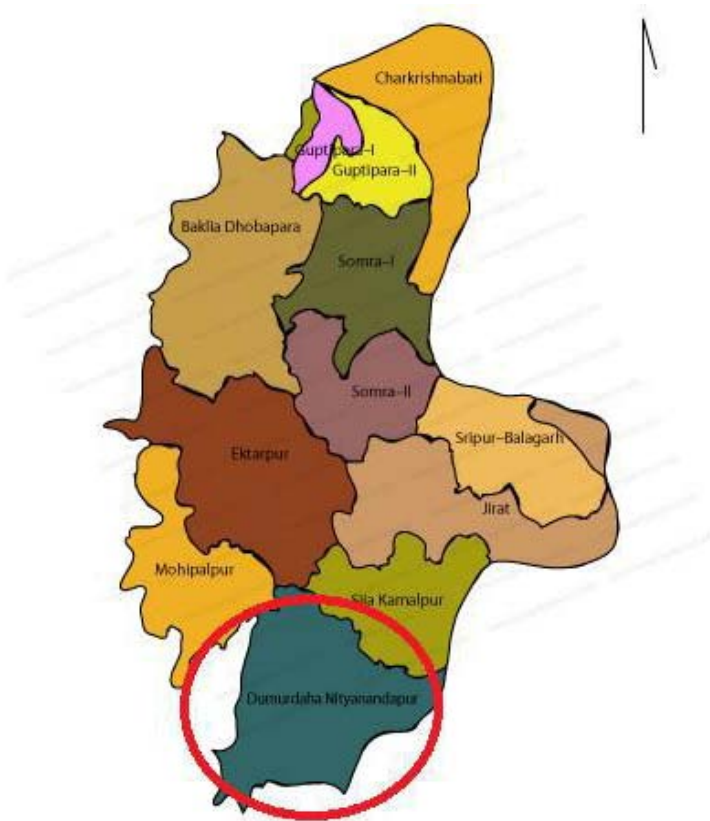
Research Settings

No. of Colleges	1
No. of Child Education Centre	34
No. of Library	2
Govt. Hospital	1
Govt. Health Centre	3
Govt. Clinic	30

Table 4.8 Rural and Urban Population

Sl. No	Total / Rural / Urban	No of Households	Persons	Males	Females
1.	Total	46,022	214,784	110,242	104,542
2.	Rural	45,019	210,065	107,828	102,237
3.	Urban	1,003	4,719	2,414	2,305

4.4 Map of Balagarh Block



4.10 Dumurdaha- Nityanandapur I gram panchayat at a glance

Dumurdaha- Nityanandapur I is the one of the gram panchayat of Balagarh block/ panchayat samiti. The gram panchayat is bounded on the north by Sija- Kamalpur GP and in the south by the Chinsurah- Mogra block and the east by the Hooghly River and Chinsurah- Mogra block in west.

Table 4.9: General information of Dumurdaha- Nityanandapur I Gram Panchayat

Total area	27.685km ²
Total population	28895
Total male	14960
Total female	13935
Total Mouza	11
Total Gram Samsad	12
High School	3
Primary school	19
Health Subcentre	4
Shishu shiksha Kendra	3

Table 4.10 G hoshalia village at a glance

Total Population	350
Male	183
Female	167
Total agricultural area	624 ha
Sishu Siksha Kendra	1

Primary School	1
Health Centre	1

4.11 Profile of Nadia District

Nadia district is a district of the state of West Bengal, in the north east of India. It borders with Bangladesh to the east, North 24 Parganas and Hooghly districts to the south, Bardhaman district to the west, and Murshidabad district to the north.

Most districts in West Bengal take their name from the headquarters station of the district, but Nadia district takes its name not from Krishnagar, the headquarter but from Nadia or Nabadwip hallowed by the memory of Lord Shri Chaitanya Mahaprabhu who was born here on 18th February, 1486.

- Location

Nadia is situated between 22°53" and 24°11" North latitude and 88°09" and 88°48" East longitude and about 3927 Sq. Km. in Area, this District is linear in shape with orientation of North-South. The District is Approximately 46 ft. above the mean sea level. The Tropic of cancer divides the district in two parts.

- Geographical and Physical features

The soil of the district is composed of recent alluvium and the surface consists of sandy clay and sand along the course of the rivers and fine silt consolidating into clay in the flatter portions of the plains, such as in Kalantar tract between the Bhagirathi and the Jalangi. The soil varies but little over the district except in this tract and a portion of Ranaghat sub-division. It is almost universally a light sandy loam with low fertility status and incapable of retaining adequate moisture.

- Climate

Based on Climate, Soil and Physiographic the South Asia Project Department, World Bank(1997) reported six agro climatic Zones of West Bengal Among them New Alluvium Zone is the biggest Zone with highest

cropping intensity and crop diversity covering the western parts of Malda and Dakshin Dinajpur, Southern parts of Uttar Dinajpur, eastern part of Murshidabad, Hoogly, Burdwan and Howrah, entire Nadia and northern part of North and South 24 Parganas. Climate of this zone was tropical moist sub-humid with rainfall 1427.4 mm, air temperature maximum 35.0 ° C and minimum 15.6 ° (annual normal). Soils of this zone are derived from recent alluvial deposits brought down by the river Ganga, and its tributaries hence called inceptisols. Soils are deep, well drained, texturally fine foamy, neutral in reaction, with high base saturation and CEC and medium to medium to NPK. Rice is the main crop cultivated in this zone over different land terrains and seasons. Aus, Sesame and Moong in pre-kharif or early wet season; jute and aman rice in kharif or wet season and wheat, different oilseeds & pulses, potato etc. are mainly grown in this zone. Boro or summer rice and sugarcane are also important crops commonly cultivated by the farmers. Zonal adaptive Research Station (New Alluvium Zone) (ZARS) started functioning in the month of October 1978 with its headquarter at Krishnagar (88°3' N 23°24' E and 15 AMSL) to look after the agricultural problems and to adopt new agro techniques in this zone.

Table 4.11 General Information of Nadia District

Total Area	3,927 km ²
Total population	5,168,488
Male	2,655,056
Female	2,513,432
Sex Ratio	947
Population density	1,316/km ²
Population growth rate	12.24%
Average literacy rate	75.58%

Male literacy	79.58%
Female literacy	71.35%
Geographical Area	3927 Km2
Sub-Divisions	4
Police Stations	21
CD. Blocks	17
Panchayat Samities	17
Gram Panchayats	187
Gram Samsads	2639
Municipalities	8

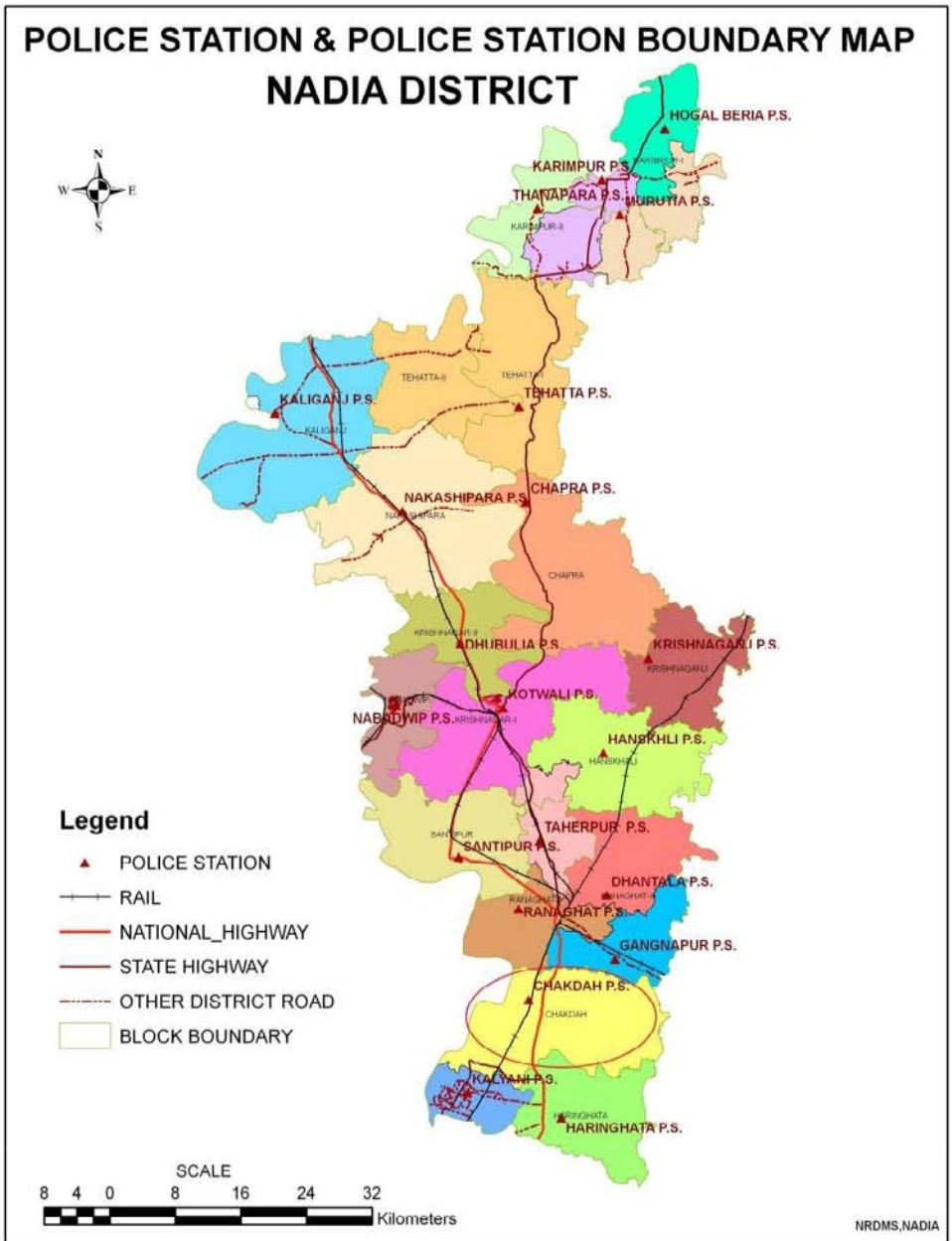
Table 4.12 Educational Facilities

No. of Primary School	2515
No. of High Madrasah	231
Junior High & Madrasah	98
No. of Higher Secondary School	135
No. of Degree College	15(1 Women + 14 Co-ed)
Professional & Technical College	12

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No. of University	2
No. of Agriculture University	1
Public Library	110
Rural Library	113
Child Education centre	117

4.5 Map of Nadia District (Block wise)



4.12 Profile of Chakdaha Block

Chakdaha (community development block) is an administrative division in Kalyani subdivision of Nadia district in the Indian state of West Bengal. Chakdaha and Kalyani police stations serve this block. Headquarters of this block is at Chakdaha. There are two census towns in this block: Darappur and Madanpur

- Geography

Chakdaha is located at 23°05'N 88°31'E. Chakdaha community development block has an area of 234.86 km².

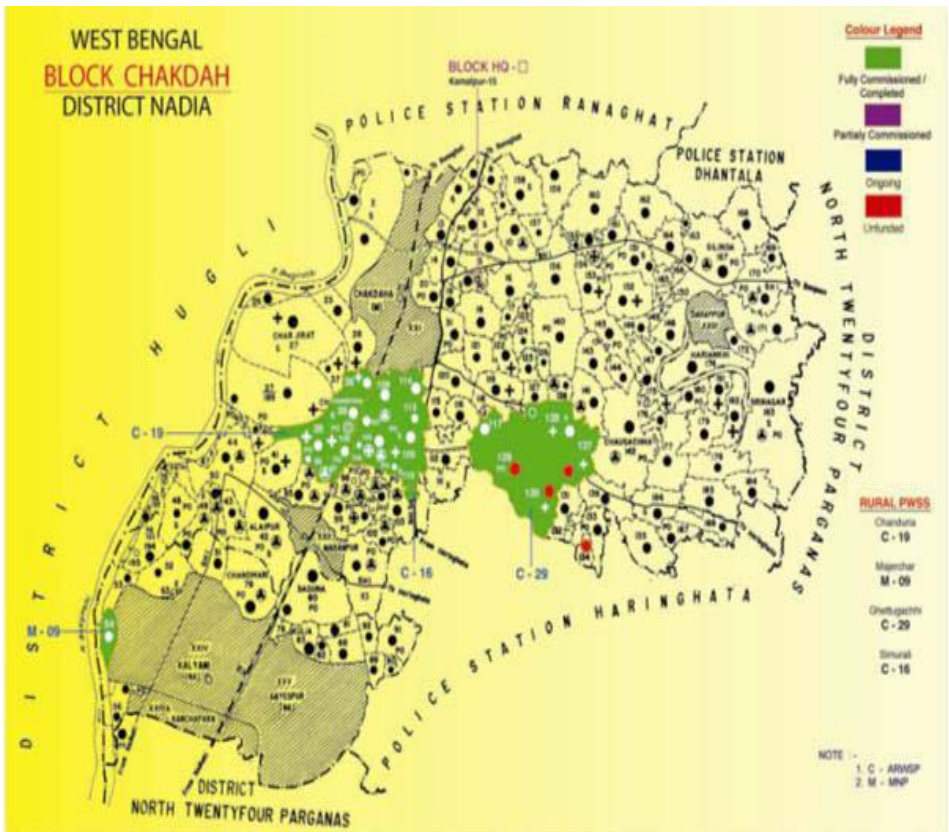
- Gram Panchayats

Gram panchayats of Chakdaha block/ panchayat samiti are: Chanduria I, Chanduria II, Dewli, Dubra, Ghetugachhi, Hingnara, Kanchrapara, Madanpur I, Madanpur II, Saguna, Sarati, Silinda I, Silinda II, Simurali, Tatla I, Tatla II and **Rautari**.

Table 4.13 General information of Chakdaha Block

Total area	234.86 km ²
No. of Gram Panchayats	17
No. of Police station	1
Total Population	362,983
Male	187,025
Female	175,714

4.6 Map of Chakdah Block



4.13 Rautari Gram Panchayat at a Glance

Rautari is a Gram Panchayat in Chakdah Block in Nadia District of West Bengal State, India. It belongs to Presidency Division. It is located 47 KM towards South from District head quarters Krishnanagar, Nadia. 5 KM from Chakdah. 63 KM from State capital Kolkata.

Chakdah (5 KM) , Ghetugachhi (6 KM) , Kamalpur (7 KM) , Sarati (10 KM) , Haringhata (12 KM) and Shimurali (2 KM) are the nearby Villages to Rautari. Rautari is surrounded by Haringhata Block towards South , Balagarh Block towards North , Ranaghat-Ii Block towards North , Chinsurah-Magrah Block towards west . Ranaghat , Gopalpur , Naihati , Chinsura are the nearby Cities to Rautari. This Place is in the border of the

Nadia District and Hooghly District. Hooghly District *Balagarh* is North towards this place.

Table 4.14 General information of Rautari Gram Panchayat

Total area	27.685km ²
Total population	4460
Total male	2294
Total female	2166
Total Mouza	9
Total Gram Samsad	12
High School	2
Primary school	1
Health Subcentre	1
Shishu shiksha Kendra	1

Table 4.15 Maheswarpur village at a glance

Total Population	1182
Male	612
Female	570
Total agricultural area	624 ha
Sishu Siksha Kendra	1
Primary School	1
Health Centre	1