

Chapter III

A BRIEF SKETCH OF COOCH BEHAR DISTRICT OF WEST BENGAL

3.1 Area, Location, Boundary and General Characteristics of Population

Cooch Behar is the north-eastern district of the Jalpaiguri Division as well as of the State of West Bengal. The name of Cooch Behar is a compound of two words: Cooch and Behar. The term "Cooch" is a corrupt form of Coch or Koch, being the name of a race of people, inhabiting a large tract of the north-east of West Bengal. "Behar" or more properly Vihara denotes abode or sport. So, "Cooch Behar" means the land of the Koches¹. The present area of the district is 3387.0 sq. kms.²

The district of Cooch Behar geographically forming a part of the Himalayan Terai of West Bengal lies between the parallels 25°27'40" and 26°32'20" north latitude in the northern hemisphere. The eastern-most extremity of the district is marked by 89°54'35" east longitude and its western-most extremity by 88°47'40" east longitude.

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1. Mitra, A. (1953) District Handbook - Census 1951, Cooch Behar District, West Bengal (Published by S.N. Guha Ray, Saraswati Press Ltd., Cal-9), p. v.
 2. Ghosh, S.N., District Census Handbook-Census of 1981, Cooch Behar District, Series 23, Part - XIII-B, West Bengal (Published by Government Printing Press, West Bengal), p. XIII.

The district is bounded on the north by the Duars of the Jalpaiguri district. Its northern frontier is about 20 miles south of the Bhutan ranges of the Himalayas. On the east, it is bounded by the Guma Duars and Pargana Ghurla of the Goalpara district of Assam and Parganas Gaibari and Bhitambar of Rangpur district in Bangladesh. The Brahmaputra at the point where it turns out from its west-ward course, a short way below Dhubri, is about 20 miles from the eastern border of the district. The rivers Gadadhar, Sankos, Bagmuni and Marududkumar formed one time or other the eastern line for a considerable distance. The southern limit of the district's territory is determined by the international boundary between India and Bangladesh. The district is bounded on the south by Chakla Purbabag and Parganas Kakina and Kazirghat in the district of Rangpur of Bangladesh and pargana Patgram in the district of Jalpaiguri. The western boundary is marked by the Pargana Kazirghat in Rangpur and Chakla Boda in Bangladesh³.

The general characteristics of population i.e., the number of total population, total male and female population, rural and urban population, density of population etc. are manifested in Table 3.1 for this district.

3. Ray, B., District Census Handbook — Census of 1961, Cooch Behar District, West Bengal (Published by the Superintendent, Government Printing, West Bengal), p. 11.

3.2 Geographical Features

3.2.1. Topography

Cooch Behar is essentially a flat country with a slight south-eastern slope along which the main rivers of the district flow. There are slight ups and downs and while some areas may be so low as to be inundated by the rivers during the monsoon, others are slightly higher and remain always above water even when the rivers are in spate. Most of the high lands appertain to Pargana Lalbazar and most of the low lands lie in Pargana Dinhata, presently a sub-division. There are no mountain peaks or any hills within the district. The greater part of the district is cultivated and is composed of green fields studded with timber trees and an inferior variety of orange trees. There is no forest worth the name, but tracts of land consisting mostly of heavy grass and reed are seen at places mostly in the oscillation areas of the rivers⁴.

3.2.2. Soil

The soil of Cooch Behar district is alluvial of rather recent formation and has a large admixture of sand

4. Majumdar, D. (1977) West Bengal District Gazetteers, Koch Bihar (Printed by the Superintendent, West Bengal Government Press), p. 7.

and what in common parlance is known as sandy loam. It is mostly sandy and loose. The greater portion of it is light loam. There is hardly any good stiff clay found in the district. The surface soil is loamy in most parts to a depth of about three feet and in some places even less than that and below is all bare sand. For the most part the soil of the district is of ash colour. Black loam is found only in the eastern part of the district bordering on Assam to the east of Kaljani. Some black loam is also found in the region between the Jaldhaka and the Tista in the old valley of the Dharla⁵.

3.2.3. Climate

The climate of Cooch Behar district is damp and not so hot as in other parts of West Bengal. The climate in this district is characterised by a highly humid atmosphere and abundant rains, with the temperature being seldom excessive. The wind sets much from the east. Fogs are common in the early morning during the cold weather, but the days are clear, cool and pleasant. Winter sets in mid-November and summer in April. The period from June to about the beginning of October is the south-west monsoon season. October to mid-November constitutes the post-monsoon season. Of the twelve

5. Ibid., p. 15.

months of the year, four mark the cold weather and six the hot weather, the remaining two indicating a mild form. The climate of Cooch Behar district cannot be said to be mild and is certainly of a severe form than that of the greater portion of lower Bengal⁶.

3.2.4. Rainfall

The rains of Cooch Behar district are long and persistent though most recently some changes are taking place in this regard. In June and July and sometimes even in August it rains almost continuously day and night for days and sometimes for weeks together. The average rainfall in the district is 3201.3 mm (126'.03"). Monthly normal rainfall in the district varies from 3 millimetres in the month of December to 741 millimetres in the month of June. The rainfall generally increases during the south-west monsoon season. The variation in the rainfall from year to year is not large. On an average there are about 102 rainy days (i.e., days with rainfall of 2.5 mm or more) in a year. The number varies from 96 at Dinhata to 107 at Cooch Behar and Tufanganj⁷.

6. Ray, B. District Census Handbook — Census of 1961, Cooch Behar District, West Bengal (Published by the Superintendent, Government Printing, West Bengal), pp. 31-32.

7. Majumdar, D. (1977) West Bengal District Gazetteers, Koch Bihar, (Printed by the Superintendent, West Bengal Government Press), p. 19.

3.2.5. Temperature

The meteorological condition in the district as a whole shows that the temperature here is not excessive. It generally reaches a maximum in June or July and minimum in the month of January. Although the temperature by itself is not excessive, the dampness of the air makes the weather rather unpleasant. Even in the south-west monsoon period the day temperatures are not appreciably below those in summer, while the night temperatures are higher than those during summer. So even in this season, the weather is a little trying in between spells of rain. In the post-monsoon season temperatures decrease progressively⁸.

3.2.6. Humidity

The atmosphere is highly humid throughout the year. During the months of February to May the relative humidities are less, being only between 50 and 70 per cent. During the period October to April the sky is generally clear or lightly clouded. In May, cloudiness increases. In the south-west monsoon season, the sky is heavily clouded or overcast⁹.

8. Ibid., pp. 19-20.

9. Ibid., p. 20.

For having an idea about the most recent state of rainfall, temperature and humidity of Cooch Behar district Table 3.2 is presented.

3.2.7. The River System

Cooch Behar district is a network of rivers and small streams. The principal river systems of this district to begin from the north-west are the Tista, Dharla, Jaldhaka, Torsa, Kaljani, Raidak or Sankos and the Gadadhar.

The rivers of Cooch Behar district flow from a north-westerly to a south-easterly direction. The majority of them take their rise in the Himalayas and enter the district from the western Duars, and after passing through it, flow into the district of Rangpur of Bangladesh on their way to join the Brahmaputra, sometimes branching out in different channels, but often flowing into each other in their downward course.

The banks of the rivers of Cooch Behar district are generally abrupt, giving proof of the wily nature of the stream, and the beds sandy, mostly with a beach on one side of the stream. Boulders, rock and gravel are common in the beds of rivers, as they are washed down from the hills. Generally tame and shallow in the dry season, the rivers become very turbulent and fierce during the monsoon.

The rivers are subject to floods of sudden rushes of water due to heavy rain in the hill-slopes. A little more than ordinary rainfall in the hills is followed by a sudden rise of the waters, which overflow the banks and drown the lands for miles around. Crops and cattle are often destroyed. Changes in the course of the rivers occur during heavy floods, when the loose sandy soil easily gives way to the force of the current.

Generally, however, the banks being steep and the beds deep, the stream keeps within the banks and swifts along with great velocity. It has been estimated that during high floods the velocity of a stream often becomes more than double the mean velocity. The water level falls as suddenly as it rises. In the monsoon navigation becomes risky owing to the treacherous sands that lie concealed under the water level. The soil being loose, alluvion and diluvion, land-making and land destroying go on constantly on a large-scale and sand-banks are numerous near big rivers. Towards the end of October the rivers begin to dwindle and by March, even the mightiest of them, except the Tista, are nothing but tame, narrow, shallow, and limpid streams, meandering through innumerable sand-banks. The water, sweet and refreshing in summer, becomes muddy and unwholesome during the monsoon. Large market villages are

situated on the river banks¹⁰.

3.3. Agro-Economic Features

3.3.1. Land Use Pattern

One of the important aspects of agriculture concerned with any area is the pattern of land utilisation. It actually means the use and distribution of available land for different purposes. The present land use pattern of Cooch Behar district is shown in Table 3.3.

3.3.2. Distribution of Land Holding

The present size-wise distribution of land holding is shown in Table 3.4. From this table it is observed that the distribution of land holding over different sizes is still more or less uneven.

3.3.3. The Crops

The majority of the people of Cooch Behar district depend on agriculture as their principal source of livelihood. The names of the principal crops of the district are:

10. Ray, B. District Census Handbook — Census of 1961, Cooch Behar District, West Bengal (Published by the Superintendent, Government Printing, West Bengal), pp. 12-13.

- (i) Paddy of two kinds, the aus and the aman. Boro paddy is hardly cultivated.
- (ii) Jute of two varieties, the capsularis and the oliotaris.
- (iii) Tobacco.
- (iv) Rape and mustard seeds
- (v) Pulses - mug, masur, khesari, thakri, kulti, arahar.
- (vi) Wheat and barley.
- (vii) Millets, china and kaon.
- (viii) Indian corn (makai)
- (ix) Roots and bulbs - mainly arum and potato, but also onion, garlic, ginger and turmeric.
- (x) Other fibre plants, hemp or san, and Reah or Kunkura.
- (xi) Sugar-cane
- (xii) Mutha or matting grass¹¹.

11. Majumdar, D. (1977) West Bengal District Gazetteers, Koch Bihar (Printed by the Superintendent, West Bengal Government Press), p. 67.

3.3.4. Acreage Allocation under Principal Crops.

The acreage allocation under principal crops is manifested in Table 3.5. This table shows that the major share of total area under principal crops is devoted to the cultivation of paddy followed by jute and wheat.

3.3.5. Production and Yield Rate of Principal Crops

The present statistics about production and yield rate of principal crops in this district are presented in Table 3.6.

3.3.6. Gross Cropped Area and Cropping Intensity

In the face of growing population the cultivators of this district has been at present very much aware of the growing need of agricultural commodities. For this, they are observed to practice intensive cultivation of land. The degree of this intensive cultivation may be understood clearly from the statistics related to the net cropped area, gross cropped area and cropping intensity shown in Table 3.7.

3.3.7. Irrigation Facilities

Irrigation facilities in Cooch Behar district till to-day is very much poor. The percentage of area under irrigation in net cropped and gross cropped areas are

observed respectively as 21.97 and 12.79 in the year 1990-91. The names of the major sources of irrigation, net irrigated area and gross irrigated area along with other related information for the year 1990-91 are displayed in Table 3.8. From this table it is observed that the sources of irrigation in this district are at present the following: deep tube wells, river lift irrigation, shallow tube wells, dug wells, tanks and some types of small irrigation schemes. Moreover, among these sources dug wells contribute the highest share in the net irrigated area followed by shallow tube wells while shallow tube wells contribute the highest share in the gross irrigated area followed by dug wells.

3.3.8. Fertilizer Use

Fertilizer consumption in this district is not very much remarkable in relation to its cultivable area. But at present intensity to use fertilizers among the farmers of Cooch Behar district is going on increasing. Table 3.9 is presented here to make the fact explicit.

Table 3.1 General Characteristics of Population of Cooch Behar District According to the Census 1991

Items	Numbers
Total population	2158169 (100.00)
Males	1115997 (51.71)
Females	1042172 (48.29)
Rural	2016809 (93.45)
Urban	141360 (6.55)
Rural male population	1043582 (48.35)
Rural female population	973227 (45.10)
Urban male population	72415 (3.36)
Urban female population	68945 (3.19)
Scheduled Caste	1123719 (52.07)
Scheduled Tribe	13275 (0.62)
Sex ratio *	934
Density of population **	637
Literate population	811456 (37.60)
Males	522619 (24.22)
Females	288837 (13.38)

Note : * Females per 1000 males

** Persons per sq. km.

Figures in the parentheses are the respective percentages to total population.

Compiled from the sources:

- i) Bose, A., Demographic Diversity of India 1991 Census, State and District Level Data : A Reference Book, B.R. Publishing Corporation, Delhi-7.
- ii) Annual Plan on Agriculture, 1991-92, Cooch Behar.
- iii) District Credit Plan 1993-94, Cooch Behar District, Central Bank of India (Lead Bank).

Table 3.2 Monthly Average Rainfall, Temperature and Humidity of Cooch Behar District in the Year 1990.

Months	Rainfall in mm.	Temperature, °C		Humidity %	
		Mean of Daily Max.	Daily Min.	07.00 LMT	14.00 LMT
January	00.0	24.0	11.5	96	51
February	104.8	34.5	13.3	91	52
March	40.2	30.0	18.6	89	58
April	175.6	28.0	19.0	90	62
May	395.8	32.5	23.5	93	73
June	555.0	30.9	22.3	95	78
July	562.8	31.2	25.5	95	74
August	868.8	31.4	22.2	91	76
September	438.2	30.7	21.7	90	76
October	221.6	29.0	20.5	88	68
November	00.0	29.2	15.7	82	46
December	00.0	25.7	11.0	92	38

Source : Annual Review of Cooch Behar District on Agricultural Marketing, 1990-91, Cooch Behar.

Table 3.3 Land Use Pattern in Cooch Behar District
for the Year 1991-92.

Items	Area (in ha)
Area under non-agricultural use	69137 (20.67)
Forests	5268 (1.58)
Barren and unculturable land	14277 (4.27)
Permanent pastures and other grazing land	181 (0.05)
Area under orchards, plantation and miscellaneous trees	10340 (3.09)
Culturable waste land	3332 (1.00)
Fallow land other than current fallow	1587 (0.47)
Current fallow	-
Net area available for cultivation	230391 (68.87)
Gross area in ha.	334513 (100.00)

Note : Figures in the parentheses are the respective percentages of gross area.

Source : Annual Plan on Agriculture, 1991-92, Cooch Behar.

Table 3.4 Ownership Distribution of Land Holdings of
Cooch Behar District for the Year 1990-91.

Size of holdings	Number of holdings ('000 Nos.)	% to total holdings	Area in ha.	% to total area
Upto 1 ha	138.5	51.99	95386	41.40
Above 1 to 2 ha	70.3	26.39	73036	31.70
Above 2 to 4 ha	32.5	12.20	49536	21.50
Above 4 ha	25.1	9.42	12442	5.40
Total	266.4	100.00	230400	100.00

Source: Report on Evaluation Study of Special Jute Development Programme (SJDP) in the Districts of Nadia, Jalpaiguri and Cooch Behar, West Bengal, Year 1990-91 (Sponsored by Ministry of Agriculture, Government of India), Directorate of Jute Development, Department of Agricultural Extension, Bidhan Chandra Krishi Viswavidyalaya, Nadia, West Bengal.

Table 3.5 Area under Principal Crops in Cooch Behar District for the Year 1990-91

Name of the crop	Area (in '000 ha)
Aus paddy	89.14 (20.80)
Aman paddy	208.83 (48.73)
Boro paddy	9.50 (2.22)
Total paddy	307.47 (71.75)
Wheat	35.00 (8.17)
Jute	61.80 (14.42)
Potato	8.50 (1.98)
Tobacco	8.80 (2.05)
Mustard	7.00 (1.63)
Total	428.57 (100.00)

Note : Figures in the parentheses are the percentages of total area.

Source : Annual Review of Cooch Behar District on Agricultural Marketing, 1990-91, Cooch Behar.

Table 3.6 Production and Yield Rate of Principal Crops in Cooch Behar District for the Year 1990-91

Name of the crop	Production (in '000 M.T)	Yield rate (1000 kg/ha)
Aus paddy	105.42	1.183
Aman paddy	277.95	1.331
Boro paddy	22.56	2.40
Wheat	59.05	1.70
Jute	478.71	7.74*
Potato	89.25	10.50
Tobacco	9.85	1.12
Mustard	3.50	0.50

* Jute yield rate shown in bales of 180 kg

Source : Annual Review of Cooch Behar District on Agricultural Marketing, 1990-91, Cooch Behar.

Table 3.7 Net Cropped Area, Gross Cropped Area and Cropping Intensity in Cooch Behar District in the Year 1991-92

Name of the items	Magnitudes
Net cropped area (in ha.)	230391
Gross cropped area (in ha.)	459184
Cropping intensity	199.3%

Note : Cropping intensity = $\frac{\text{Gross cropped area}}{\text{Net cropped area}} \times 100$

Source : Annual Plan on Agriculture, 1991-92,
Cooch Behar.

Table 3.8 Sourcewise Net and Gross Area Irrigated
in Cooch Behar District in the Year 1990-91

Sl. No.	Source	No. of installations	Net irrigated area (ha.)	Gross irrigated area (ha.)
1.	Deep tube well			
	a) State owned	26	109 (0.22)	132 (0.23)
	b) M. I. C.	33	324 (0.64)	373 (0.64)
	c) Others	-	-	-
2.	River lift irrigation			
	a) State owned	88	987 (1.95)	1226 (2.11)
	b) M. I. C.	8	48 (0.09)	60 (0.10)
	c) Others	2	-	-
3.	Shallow tube wells			
	a) State owned	90	39 (0.08)	42 (0.07)
	b) Private	5500	16500 (32.60)	24000 (41.23)
	c) Others	1500	4650 (9.19)	6000 (10.31)
4.	Dug wells	-	17600 (34.77)	16020 (27.52)
5.	Tanks	-	1200 (2.37)	1200 (2.06)
6.	S. I. schemes	-	2500 (4.94)	2500 (4.30)
7.	Others	-	6655 (13.15)	6655 (11.43)
	Total		50612 (100.00)	58208 (100.00)

Note : Figures in the parentheses are the percentages of the respective totals.

Source : Report on Evaluation Study of Special Jute Development Programme (SJDP) in the Districts of Nadia, Jalpaiguri and Cooch Behar, West Bengal, Year 1990-91 (Sponsored by Ministry of Agriculture, Government of India), Directorate of Jute Development, Department of Agricultural Extension, Bidhan Chandra Krishi Viswavidyalaya, Nadia, West Bengal.

Table 3.9 Consumption of Fertilizers in Cooch Behar
District during 1985-86 to 1990-91

(in tonnes)

years	Name of the fertilizer			Total (N+P+K)
	N	P	K	
1985-86	7770	3772	2863	14405
1986-87	9567	5037	3583	18187
1987-88	12755	5519	3893	22167
1988-89	14335	7714	5535	27584
1989-90	15500	8500	5400	29400
1990-91	17400	9600	6000	33000

Compiled from the sources:

- i) Key Statistics of Cooch Behar, Bureau of Applied Economics and Statistics, Government of West Bengal.
- ii) Economic Review (different years), Government of West Bengal.