

APPENDIX I

## APPENDIX I

### SELECT INFORMATION ON JALPAIGURI DISTRICT\*

#### A<sub>1</sub>.1 Introduction

The district of Jalpaiguri extends over an area of 6,234 square kilo metres in the shape of an irregular rectangle lying lengthwise east and west. 24.4 percent of this area i.e. 3,71,642 acres is under forests at various stages of the commercial exploitation. 19.5 percent i.e. an area of 3,96,769 acres is under tea gardens, 36.9 percent or about 5,64,192 acres is under the cultivation and rest 19.2 percent includes river beds, roads, towns and others.

Of the total population of 17,50,159\*\* (1971 Census), 31.12 percent i.e. 5,44,636 is workers of whom 50.01 percent is cultivators and agricultural labourers, 49.99 percent is engaged in plantations and other allied occupations. The density of population is not high which is 280 per square kilo metre.

It may appear that tea is an important industry which contributes substantially to betterment of economic life of this district and that in forest there is a vast exploitable resources which can be expected to contribute towards the general development of the district. Unfortunately, these two sectors

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\* The Appendix I is mainly based on data and information obtained from the Office of the District Agriculture Office, Jalpaiguri.

\*\*In the map the figure is 17,52,173 which is obtained from District Family Planning Office.

remain almost as enclaves and do not have either inter-dependence or complementary with the agricultural and agro-industrial sector which is the primary field of economic activity of the major part of the population. It can therefore, be possibly stated without much error that economic life in the district depends on agriculture which is its primary and almost sole source of activity.

#### A1.2 Location and Boundaries

The district of Jalpaiguri lies between Latitudes  $26^{\circ}16'$  to  $27^{\circ}0'$  in the Northern Hemisphere. The Eastern most extremity of the district is marked by  $89^{\circ}.53'$  East Longitude and its Western most extremity by  $83^{\circ}.25'$ .

The district is bounded in the North by Bhutan and the district of Darjeeling, on the south by Bangladesh and the district of Cooch-Behar, on the West, by the district of Darjeeling and Bangladesh and on the East by the Eastern Duars of Assam.

#### A1.3 Climate and Rainfall

The district is placed on a distinct ecological setting and is different in its climate and rainfall from those obtained in the plains of West Bengal. Maximum humidity during rainy season ( May to October ) is about 100 percent ranging with a minimum between 75 - 80 percent with the advent of winter,

the humidity in early winter month of November varies between 30 - 60 percent. With rise in temperature during months of March and April, average maximum and minimum moves between 70 - 80 percent. Therefore, at no time of the year atmospheric humidity goes below 50 percent.

As regards temperature, April to August are the hotter months. The mean maximum temperature occurs in August is  $83.1^{\circ}\text{F}$  and the mean maximum temperature is lowest in January i.e.  $51.7^{\circ}\text{F}$ . Temperature is rarely excessive. From March, the mean temperature starts rising and after that, it gradually increases till it reaches highest in August. Dews are also common during the nights of summer months.

Average rainfall of the district is 3160 mm which is mainly ( 90 percent ) received between the month of April and September only and remaining 10 percent being received during October to March. Pre monsoon showers received between February and April, gradually go on increasing from March till regular monsoon appears. In contrast, total of average of rainfall in pre-rabi period, namely, October and November is less and this is followed by dry months in December and January, when rains are not received. Therefore, over the district, rains in varying intensities are received almost in every month except in December and January.

However, in this district high humid conditions throughout the year, milder summer, heavy precipitations and spreading of rains over different months of the year, provide

a distinct ecological environment wherein inter-relationship of soil, water and plant is highly unbalanced bringing instabilities to agricultural production.

#### A1.4 Rivers and Streams

The principal rivers in the Jalpaiguri district proceeding from west to east are : (1) the Mahananda which forms the Western boundary ; (2) the Teesta ; in the permanently settled area of the district ; (3) the Jaldhaka ; (4) the Torsha ; (5) the Kaljani ; (6) the Raidak ; and (7) the Sonkos which forms the eastern boundary. These are normally all navigable by boats during July and September.

The Mahananda from Siliguri alters its course slightly towards the west and enters the Jalpaiguri district. From this point it forms a boundary between Jalpaiguri and Darjeeling and then between Bangladesh and Jalpaiguri. The Teesta enters Jalpaiguri at its North Western corner and flows in a south - easterly direction until it passes into Rangpur district of Bangladesh.

Between the Mahananda and the Teesta there are such small rivers as the Saun, the Kartoa, the Chaol, the Talma, the Jamuna, the Panga, the Karala running through Jalpaiguri town, the Chukchuka and the Rukruka and the Gadadhar between the Teesta and the Jaldhaka, the Dharala river is a medium sized stream. Principal tributaries are the Murtee and the Jiti.

Between the Jaladhaka and the Torsha are several small streams which, from west to east, are called the Galandi, the Duduya, the Dandina, the Tasati, the Mujnai and the Buritorsa.

#### A1.5 Soil

Groups of soils which mainly grow paddy, jute and tea are the Tarai soils. They are derived from mountainous region of the Himalayas.

The soils are brought down by Hilly rivers like the Teesta, the Mahananda, the Torsha and the Jaladhaka and their tributaries which bring materials from a height of about 10,000' and have deposited layer by layer to form the soil of this district.

The greater part of this district is covered with land alluvial/ranging from pure sand to clay but it is mainly sandyloam. But in basin between the Jaladhaka and the Teesta, it is hard black and clays. In the upland to the North of the Duars, the soil is ferruginous clay and is particularly well suited to the growth of the Tea plants. The Western Duars contains numerous old river beds which have been deserted by the stream which used to flow along them, they contain gravel and in the plains they contain sand. Presence of these elements brings problem in cultivation.

The low land called "Dahala" contains clay with admixture of sand. The high land known as "Danga" mostly

consists of sand. The medium land known as "Sahari" lies in between the above two classes.

Torrential rains falling during the season, lead to high surface, inward as well as lateral run-off and deplete soil of its natural minerals and salts and lead to acidity and deficiency of major and minor plant nutrients.

Continuous rains also interfere with biological decomposition of organic matters, and hamper natural processes in building up soil fertility and improving soil structure.

Further, these soils are dominantly sandyloam with variations to loam and have a low water holding capacity. They are deficient in organic matter and are characterised by low fertility, as are evidenced from their low nitrogen and potash contents. Available phosphate is also medium in some pockets.

#### A1.6 Geology

With the exception of Northern hilly fringe, the whole of the district is covered by alluvial deposits. The land alluvial/consists of coarse gravel near the hill and sandy clay and sandy loam further south. A patch of black clay occurs in the area between the Teesta and the Jaladhaka.

The Buxa - Jainti hills area composed of series of rocks known as Buxa series which consist of variegated slates quartzites and dolomites and are fringed on the south

of lower hills of upper tertiary strata.

A thin zone of gandewana sand stone with anthracites coal beds intervengs between the tertiaries and the Buxa series.

North of the 2-3 miles wide band of Buxa series lies a series of phyllites, schists and quartzites known as Dalling series.

#### A1.7 Land Utilisation

1.	Total Geographical Area	:	15,25,056	Acres
2.	Area under Forest	:	3,71,642	"
3.	Area under Tea	:	2,96,769	"
4.	Area available for cultivation	:	5,64,192	"
5.	Irrigated area (Net)	:	61,440	"