

**GEOGRAPHY OF CRIME IN THE BRAHMAPUTRA
VALLEY, ASSAM (1975-2001)**

Submitted By

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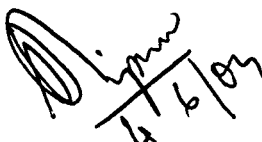
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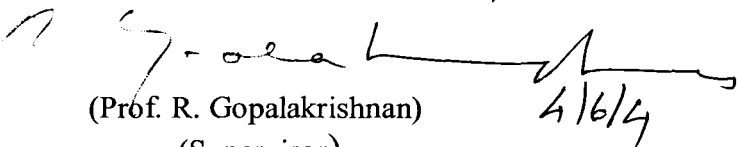
I, Kalidas Sarma, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of my previous degree to me or to the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/ Institute.

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ABBREVIATION

SCRB	- State Crime Record Bureau
CID	- Central Intelligence Department
NCR	- Non-Cognizable Register
NIC	- National Informatic Centre
IPC	- Indian Penal Code
AASU	- All Assam Student Union
AGSP	- Assam Ganasangram Parishad
ABSU	- All Bodo Student Union
PS	- Police Station
POP	- Police Out-Post
GRPS	- General Railway Police Station
RPS	- River Police Station
CF	- Counter Feighting
CBT	- Criminal Breach of Trust
LH/HB	- Lurking House Trespass and House Breaking
Kid/Obd	- Kidnapping and Abduction
BLT	- Boro Liberation Tigers
MLTA	- Muslim Liberation Tigers Army
DAC	- Dacoity
Robb	- Robbery
Burg	- Burglary
Cheat	- Cheating
Juvn	- Juvenile
Gamb	- Gambling
Alco	- Alcoholism
Khatian Register	- Daily Case Diary

EXPLANATORY NOTES ON CERTAIN TERMINOLOGY

Char –

Sandy riverine island situated along the river bank in flood plain zone.

Immigrant –

This terminology used in Assam especially for those people who came from East Pakistan (presently Bangladesh) in a large form in the post-Independent period. The migrant from East Bengal (Bangladesh) during the British Rule in India were also termed immigrant by the Census reports of the British period.

Central North Bank Plain –

Central part of the Brahmaputra Valley, north of river Brahmaputra which comprises the present district of Darrang, Sonitpur, Kamrup and Nagaon.

South Bank Plain –

It is an area of the Brahmaputra Valley which covered south of the river Brahmaputra and it includes present districts of Goalpara, Kamrup (excluding the Rangia Sub-Division), i.e., Morigaon, Nagaon, Golaghat, Jorhat, Sibsagar, Dibrugarh, Tinsukia of the state of Assam.

North Bank Plain –

The part of the Brahmaputra Valley, situated north of the river Brahmaputra which comprised present districts of Kokrajhar, Bongaigaon, Barpeta, Dhubri, Nalbari, Kamrup (only Rangia Sub-Division), Darrang, Sonitpur, Lakhimpur and Dhemaji of the state of Assam.

Lower North Bank Plain –

It is a north western part of the plain – north of the river Brahmaputra, which comprised the present districts of Kokrajhar, Bongaigaon, Barpeta, Dhubri, Nalbari, Rangia Sub-Division of Kamrup district, of the state of Assam.

Scheduled Caste –

Socio-economically backward caste or groups of people as defined and classified by the Indian Constitution.

Scheduled Tribe –

A socio-economically backward community as compared to the modern developed society but united by the ties of decent forms common ancestor, custom and culture. In the present work the term tribal is used as per the Indian Constitutional definition and classification of the Scheduled Tribe.

Upper North Bank Plain –

Eastern part of the plain situated north of the river Brahmaputra and is composed of the present district of the Lakhimpur and Dhemaji.

Upper Brahmaputra Valley –

Eastern part of the plain which includes north side of the river Brahmaputra which composed of the present district of Lakhimpur, Dhemaji, Dibrugarh, Tinsukia, Sibsagar, Jorhat and Golaghat districts.

Lower Brahmaputra Valley –

Western part of the plain which include both side of the river Brahmaputra and consist of present districts of Dhubri, Kokrajhar, Goalpara, Bongaigaon, Barpeta and Nalbari.

Central Brahmaputra Valley –

Central part of the plain which includes both side of the river Brahmaputra and consist of present districts of Darrang, Sonitpur, Kamrup and Nagaon.

Boro –

Plain tribals of Assam

CHAPTER – I

INTRODUCTION

1.1 Introduction

Crime is as old as human society. It is a social and economic phenomenon. This suggests that with favourable socio-economic and political relations, crime situation can be brought to a manageable level, and vice versa. Thus, the study of spatio- temporal changes in the incidence of crime is an indicator of social and economic health of a society. Crime, acquires a complex pattern of interrelationships in a society having diverse racial and ethnic structure, as is the case in the Brahmaputra Valley of Assam.

Today, Human Geographers study wide ranging social problem that have significant spatio-temporal variation, such as crime. Geography of Crime traces its development from the French writer Guerry¹ (1830) to the English writer Herbert² (1982). The sharp regional variation in crime rates disclosed by early mapmakers, provides systematic evidence that criminality is space-specific. In mid nineteenth century, Britain provided evidences on occurrence of crime on an inter – regional scale

For the geographer, the fascination with the Shaw and McKay's³ work stemmed from their evidence that space is an active variable that is capable of asserting considerable influence on criminal and deviant behaviour. Besides, other aspects such as higher

regionalism, communalism, disparity in income and wealth, society's conflict, disparities in the level of education, unemployment, groupism, etc. affect the pattern and incidence of crime.

The current trend in Geography of crime is directed towards the study of topology of crime in space-time parameters. Crime can also be said mean succession of event, action or operation that a man used to establish and maintain to change the crime occurrence. These changes in spatio-temporal variation of crime indicate and influence the socio-economic relations in the area. It also influences political philosophy that either encourages or discourages crime related behaviour. With this reasoning in mind the present study entitled, "Geography of Crime in the Brahmaputra valley, Assam for (1975-2001) has been carried out.

1.2 Review of Literature

In international level, references of work on crime and crime pattern are found to some extent. It is found that as early as in 1920, a study was directed towards the crime pattern of Chicago city. In another attempt, crime pattern of the city of London was also examined around the year of 1930, and it was found that crime has decreased away from the centre of the city. Although it was only in the 1970s that geographers themselves began to develop a serious interest in the field (Scott⁴, 1972, Herbert⁵, 1976b), spatial scholars had pursued analysis from other backgrounds. Moreover it had been pursued for a very long time. The study of the geographical incidence of crime delinquency is generally thought to have begun a century and a half ago with the work of the "Cartographic School"

pioneered in the 1830s by the French writer Guerry and imitated by other in Britain and elsewhere (Herbert, 1982). The sharp regional variation in offences rates disclosed by these early mapmakers, supplied the first systematic evidence that criminality is space-specific. In mid nineteenth-century Britain, this was evident both at the inter-regional scale, where law breaking was strongly concentrated in the most urbanized and industrialized areas and at the intra-urban scale, where offenders tended to be heavily concentrated in small pockets within the poorest working class neighbourhoods (Mayhew⁶ 1862; Herbert, 1982 for a useful summary). Clarks⁷ (1984) provides vividly of the gap between image and reality of the study of London underground system (Nettler⁸, 1984). Although it has long been recognized that crime is seriously under reported, criminal behaviour involves only a small fraction of the population. Vulnerable portion of inhabited space is overwhelmingly urban and record higher crime rates than rural areas; most forms of law violation are also positively correlated with city size and hierarchical ranks (Harries⁹, 1974, 1976). At the micro-level, it is the inner city (Zone in transition, twilight area). This can be cited with the work of Mayhew¹⁰ (1862), Herbert¹¹ (1982). Mayhew identified the localities of specific urban neighbourhood within large cities whose operands and victims are highly localise. Another study has been done by Shaw and Mckay¹² (1942), Schmid¹³ (1960), Brantingham and Brantingham¹⁴ (1981) at the micro-level in which inner city (zone in transition, twilight areas) that has shown to bear the burnt of urban crime. Chicago school carries this study. Durkheim an ecologist has studied the essence of the zone-in-transition areas the social disorganisation, a concept clearly related to demonic. Both Durkheim and Wirth develop a theory where linear relationship between increasing urbanisation and crime is

studied. There are many studies in this field so far been carried out by scholars like Baldwin and Botton¹⁵ (1976) and Baldwin¹⁶ (1979).

A lot of work has been done on the factors responsible for the occurrence of various crimes. Such studies vary from topical to regional and from micro levels. Such investigations have shown that family structures and relationships, peer group relations, density of population, education, ethnic groups, pattern of residential houses, residential density etc. are related to crime. Education or literacy is directly related to the occurrence of crime. An individual's ability and potentiality for learning social rules, values and normal can check the deviation or criminal acts. It is, when an individual fails to learn appropriate societal rules of behaviour (Trasler¹⁷, 1962). An individual may learn rules of behaviour that are appropriate in her or his immediate surroundings but inappropriate at a more general social level (Shaw and Mckay¹⁸, 1969; Reiss and Rhodes¹⁹, 1961; Hirschi²⁰, 1969). An individual is likely to engage in deviant activities if the contacts teach attitudes that push in non-deviant directions (Sutherland²¹, 1947). Not only individual but institutions (schools, colleges and prisons) also teach an individual to be delinquent or in other words, they fail to teach an individual not to be delinquent. To some extent literacy and education may teach individual how to adjust in the society and not to adopt the deviant behaviour. It is the school, which may teach someone that he or she is a failure or outcast (Cohen²², 1955; Hirschi, 1969; Polk and Schafer²³, 1972). Prisons are not only the places of containment, but schools of learning also. But Letkemann²⁴ (1973) argued that prisons are not only the places of containment but schools for crime.

The changes from rural to urban wages of living are closely associated with changes in the family's composition and economic structure. As the city size increases, family size decreases; divorce rates go up; and income goes up. Cities are generally considered bad places, places built with crime, and disease and strife are inevitable consequences of cities. Urbanisation is the process by which the population of an area shifts from rural surrounding to urban surroundings. The degree of urbanisation is an important variable in the analysis of crime rates. Violent crime and property crime are higher in the city than in a small town or rural areas. Therefore, increasing urbanisation should lead to a natural increase in the volume of crime in the cities (Boggs²⁵, 1966). This was supported by Ferdinand²⁶ (1967), he analysed the criminality (burglary) in Boston, Massachusetts. Prior to that he analysed the patterns of crime and trend in Boston between 1849 and 1851 and pointed out that the pattern was not absolute.

Quinney²⁷ (1965) compared homicide rates, level of urbanisation and industrialisation for 48 countries for the period 1953 to 1960. He found a strong inverse pattern between both urbanisation and industrialisation levels and homicide rates; as the proportion of a nation's people living in cities of more than 1 lakh population increase, homicide rates went down, Smith²⁸ (1977), who suggests that the configuration of buildings and spaces creates a 'syntax' of images and symbolism to which people respond through a synthesis of 'gut reactions' and intellectual reactions.

The density of population is positively associated with crime and consequently, high-density areas (Gerry²⁹, 1831), Gerry was the first to explore this problem in France and rejected the relationship between density and crime. He examined the distribution of

criminal changes in France and explored the differential distribution of property and personal crimes in terms of variations in wealth, literacy and population density across the 86 departments. On the other hand McCarthy³⁰ et al. (1975) found various measures of density such as number of persons per square mile, room per dwelling unit, percentage of cities population living in dwelling with more than 1.51 persons per room and population size more positively related to homicide assault. However, Skogan³¹ (1977a) found density to be negatively correlated with crime in 1951 but positively in 1961. It has also been tried to establish the characteristics of urban departments that are created by interaction of the size, the density and the heterogeneity of an area. Cities are large and densely settled areas with a variety of people.

Much criminological theory has concentrated on determining what social factors influence crime. Generally, studies of social factors and crime have shown that family structures and relationships, peer-group relationships, education and occupation status are related to crime. Cohen (1955), Hirschi (1969), Polk and Schafer (1972) emphasised upon the institutional rule learning. Cloward and Ohlin³² (1960) argued that social structures, as they now exist, block the opportunity of many individuals to achieve 'success'. Herbert³³ (1977 b) analysed the pattern of delinquency residence in the census enumeration district of Cardiff (Wales) for 1966 and 1971. The basic pattern that emerged for 1971 is the non-familiar distribution of criminal areas throughout the cities. He tried to explain the pattern of delinquency in terms of the social and economic characteristics of the various enumeration districts. The areas were principally related to the effect of local government, slum clearance and public housing activities.

Population's communal structure has also been found related to the crime rates. The studies that explore the relationship between race and crime have primarily been done in the United States and, within that cultural context, overwhelmingly show different pattern for blacks and whites.

The economic conditions are also one of the most important reasons of high rate of crime. The empirical studies show mixed results when crime and economic factors were correlated and found that the relationship between crime and the economy is not evident but is instead complex. Guerry (1831) had concluded in his study that the wealthiest departments have the highest rates of property crime. Two well-known studies linking economic conditions and crime were done by Vold³⁴ (1958) and Fleisher³⁵ (1966). In examining the relationship between crime and unemployment in the United States in the first part of the twentieth century, Vold found no strong and consistent relationship between unemployment and the rate of crime. However, a study on the similar theme for a more recent period by Fleisher, found a positive correlation between rates of juvenile arrests and unemployment in the United States (Fleischer, 1966). Avio and Clarke³⁶ (1976) found a significant relationship between mean income and property crime.

Pyle³⁷ (1974) found a general association between the occurrence of crime and poverty; and the nature of relationship has been further elaborated in recent studies of Akron (Pyle³⁸, 1976) and Cleveland (Corsi and Harvey³⁹, 1975; where detailed ecological analysis revealed a distinct association in both cities between low income neighbourhoods and crimes of violence, murder, rape, and assault. Another important relationship emerged from these studies of Akron and Cleveland is the correlation between property crimes –

burglary, larceny, car theft and stable, middle and upper income sub-urban neighbourhoods. Crohn⁴⁰ (1976), in an inter nation analysis, and Kvalseth⁴¹ (1977) and Ehrlich⁴² (1973), within a much broader model building effort, found support for the idea that economic factors influence crime. Schmid⁴³ (1960a, b) concluded that crime areas in Seattle are generally characterised by all or most of the following factors: low social cohesion, weak family life, low economic status, physical deterioration, high rates of population mobility and personal disorganisation.

The occupation of individual and the dominant in the area has been observed that it is positively correlated with crime. It has been found that unemployed and non-workers are more prone to crime. Moreover, commercial areas attract the criminals as well (Guerry, 1831). Rawson⁴⁴ (1839) has analysed the judicial statistics for 1835-39 in terms of the principal occupational characteristics of the counties in England and Wales. Plint⁴⁵ (1851) also analysed crime pattern in the counties of England for the period during 1801-1850 and arrived at more or less the similar results. Linds found that the criminals move from home to crime site. Lander⁴⁶ analysed the spatial patterns of delinquency residence in Baltimore and found that socio-economic variables are closely related to the variance of delinquent area. Morris studied that the spatial patterns of crime and criminal residence in Croydon who followed the tradition of Mayhew (1862) in mapping the patterns of criminal residence and crime and found out that there was no exact correspondence between the areas of criminal residence and areas in which most offenders committed their crimes. Wallis and Maliphant⁴⁷ (1967) analysed the patterns of delinquency residence in London

and found out that the pattern of delinquent residence does not correspond to the zonal model of the Chicago School.

Studies on the intra-city crime and its areas were started in Paris in 19th century by Chevalier⁴⁸ (1858). The scope of these studies was expanded by Inciardi⁴⁹ (1978) when he traced the spatial pattern of crime and criminal areas in New York City. He proposed that neither the criminal nor the crime areas were as stable over time as the rookeries and target areas of London.

The geographic patterns of crime in Philadelphia between 1840 and 1870 have recently been investigated and analysed by Johnson⁵⁰ (1980) as part of larger study on how the patterns of crime affected the development of policing in that city. He found that the patterns of violent crime and property crime were distinctively different. Violent crime areas remained spatially stable over three decades, whereas property crime patterns changed.

The analysis of the spatial patterns of crime within the city did not become important in criminologists until the second quarter of the 20th Century. The criminologists associated to the Chicago School of Sociology used a detailed theoretical scheme, social ecology for the analysis of spatial patterns in the social structures and events of cities. The Chicago Model of Social Ecology was used by Reckless⁵¹ (1933) on vice pattern. Faris and Dunham⁵² (1939) on mental illness to explain these problems but the most important work on the spatial patterning of crime within American city was done by Shaw and Mckay (1931, 1942, 1969). They published a long series of massive studies between 1929 and 1969 in which they used the Chicago Model as guide to the mapping and analysis of

delinquent neighbourhoods in Chicago and many other American cities, including Boston, Philadelphia, Baltimore, Richmond, Birmingham, Little Rock, Minneapolis and St. Paul Omaha, Denver, Cleveland, Cincinnati and Seattle.

Recently, the ecological patterns of crime within urban areas have also been studied by taking sophisticated small area and mobility analysis. Curtis⁵³ (1974) analysed cities (Boston, Philadelphia, Atlanta, Chicago and San Francisco) on the cause of prevention and violence.

Very few attempts have been made by Indian Scholars to examine the spatio-temporal patterns of crimes. Venugopal Rao⁵⁴ (1967) examined the socio-economic factors and their effects of crime. A geographer studied the patterns of dacoity, in Madhya Pradesh, especially of the Chambal Valley. Butt⁵⁵ (1979) worked on regional variation of crime. They correlated crime with socio-economic indicators for 1971 and concluded that north-central region of India has the principal concentration of violent crimes. This result was based on the difference between Aryan and Dravidian cultural values, historical, frontier, Indo-Gangetic Plains the capital region of the Kingdoms, seasonal effect and social structure of settlements in India. Shivamurthy⁵⁶ (1981) assessed the ecological aspects of crimes patterns of occurrence of crime and residents of criminals in Madras city. In another paper, Shivamurthy⁵⁷ (1982) studied the spatio-temporal variation in the incidence of theft in Madras city and concluded that high crime prone areas of increasing trend with regard to theft are found in the peripheral parts of Adayar, Anna Nagar, Sembium and Agaram owing to the increase in the environmental opportunity while the

localities of north Madras show a decreasing trend in the incidence of theft because they are congested and occupied by low income people.

An analysis of the inter-city patterns of crime in India using data for 14 different types of crime was made by Dutt and Venugopal⁵⁸ (1983). They recognised the crime groups by using factor analysis and concluded that patterns of crime in Indian cities conform to the general regional occurrences of crime.

1.3 Statement of the Problem

Crime is a social problem increasing day by day in the study area (the Brahmaputra valley of Assam). This is true in the urban and rural areas. Crime is an important indicator of socio-economic health. The present society is confronted with a big question whether the valley society is either moving forward to a more advance cultural stage or backward only for materialistic short-term gains. Of late, the Brahmaputra valley has become more crime prone.

In spite of its natural endowments, the Brahmaputra valley like other regions of the state has shown that large scale socio-economic discrimination, have directly and indirectly encouraged growth and spread of social tensions such as youth unrest, social tension, degradation, corruption in public life, poverty, unemployment labour problem, group tension, tribal problem, juvenile delinquency, etc. These are categorized as social tensions. These encourage the incidence of crime.

Number and type of crime is not uniform to a substantial extent, it is a product of socio-economic, cultural and political dimension. It varies from place to place and society

to society. Any area experiencing high rate of urban growth along with improving infrastructural set up like road and communication network, medical facilities, education, health, sanitation accommodation etc. becomes an important area of higher crime rates. With the increase in natural and floating population in each census has indicated over crowding, development of slum. Consequently, these have brought about a change in the social and economic set-up over a period of time and such situation encourage the rise of other symptoms like discrimination in income and wealth, rising unemployment ultimately lead to an increasing tendency of the social problems such as crime. The people coming from the rural area to the cities for better job opportunity frequently remain jobless. In fact there are more people then the availability of economic opportunity and facility. The people coming from rural area are unable to keep pace with the urban situation contingently moves towards crime for survival. This also reflects the impact of economic and administrative policies of past and present, both the rural and urban situation.

1.4 The Study Area

Brahmaputra Valley incorporates all the 18 plain districts of the state and extends from 25°44' North to 27°55' North parallels at the altitude and from 89°4' East to 96°02' East meridian of longitude. It has an area of 55,694 Sq. Km and total population of 2,26,51,096 persons in 2001. It has an average density of 403 persons per Square Kilometre. The valley stretches for about 720 Km. in the length from East to West and its width varies from 100 to 130 Km. in the western and central part to about 80 Km. in the eastern extremity. Socio-culturally, the area can also be called miniature replica of the Indian sub-continent. Its natural landscape is abounds with diversity of physical and human

element, each retaining its distinctiveness and individuality. The human component in the study area also consists of diverse racial, linguistic and religious elements. These elements came to the Brahmaputra valley at different points of history and boasted of empire. These followed cyclical pattern of rise and fall, growth and decline and were distributed throughout the length and breadth of the Brahmaputra valley. These present a scenario indicating several layers of assimilation; this provided a framework for a plural society to emerge in the valley.

The Brahmaputra valley occupies 71 percent of the total geographical area of the state. The Brahmaputra valley accommodates 88.03 percent of the population of the state of Assam; 87.11 percent is rural and 12.89 percent as urban population. Decennial growth of population in the Brahmaputra valley in 1971 was 35.70%; it rose to 52.53% in 1991 (this is for 1971-91 period) and to 24.29% in 2001⁵⁹. At present there are 108 urban centre and Guwahati as a cosmopolitan city in the study area. The study area at present has 18 (eighteen) District and 94 (ninety-four) Thanas; each of these administrative regions exhibits different linguistic ethnic groups.

However there is significant variation in the density of population in Valley. The average density of population in the valley was 403 persons per Square Kilometre in 2001, as compared to the 286 per Square Kilometre in 1991. Nagaon district has the highest density of population i.e. 604 persons per Square Kilometre, followed by Kamrup with 579, Barpeta with 506, Dhubri with 576, Nalbari with 504 and Darrang with 432 persons per Square Kilometre in 2001. The valley has 5.62 percent of schedule tribe population. High percentage of schedule caste population found in the District of Nagaon (14.89)

percent, Kamrup (11.83) percent and schedule tribe in the District of Kokrajhar (13.64) percent, Darrang (9.39) percent, Kamrup (8.87) percent, Dhemaji; (8.71) percent. The Brahmaputra valley share has 5.68 percent of the schedule caste and 10.76 percent of the schedule tribe population of the state. Decadal variation of the population (1991-2001) was higher in Dhubri (23.42%), Goalpara (23.67%), and Kamrup (25.57%). In terms of religious composition, Brahmaputra valley has 68 percent Hindus and 27.67 percent Muslim population. Linguistically, Assamese with 67.40 percent is followed by Bengali with 14.49 percent, 3.74 percent Hindi and 1.98 percent Nepali speaking groups⁶⁰. Literacy rate in the Brahmaputra valley increased from 42.96% in 1991 to 53.71% percent in 2001. This indicated a decadal (1991-2001) variation of 10.75% percent.

1.5 Objectives

1. To identify spatio-temporal pattern of crime at district as well as than level.
2. To assess the relationship between socio-economic parameter and crime.
3. To ascertain the important causes for the occurrence of crime in the area and types of crime.
4. To develop a working model and strategies for bringing about a reduction in crime in Brahmaputra valley.

1.6 Research Question

1. Whether pattern of crime vary across space, in terms of rural and urban areas.

2. Whether changing socio-economic conditions have any impact on the frequency and intensity of crime.
3. Whether political stability-instability continuum has any relationship with the frequency of crime.
4. Whether or not, there is spatio-temporal shift in the crime pattern in the study areas.

Does it suggest any significant indicators of development?

1.7 Data Source and Methodology

Data Source

The study is primarily based on both primary and secondary data. The source of data on socio-economic variable is secondary. Crime data for the Valley districts has been collected from, i.e., State Crime Record Bureau, (SCRB) Ulubari, and Guwahati CID Office. Data for Thanas for the selected Districts were collected personally from the *Khatian* Register of Crime, (FIR Book). Data is based on the occurrence of the offence reported in the Thana. The recorded crime has been taken into account.

In short, the Indian Penal Code⁶¹ (under the section of 511 of Indian Penal Code) has classified and defined types of crime, as (i) cognisable and (ii) non-cognisable. Cognisable offence is an offence for which police officer may, in accordance with the first schedule or under any law the time being in force arrest without warrant, but non-cognisable offence is such an offence in which a police officer may not arrest without warrant. This type of offence generally recorded in the NCP (Non cognisable register) and police do not take action in such case non cognisable crime are reported in the District

Magistrate office because of those types of offence are related with civil mater. And cognisable crime offence recorded and reported in the police station.

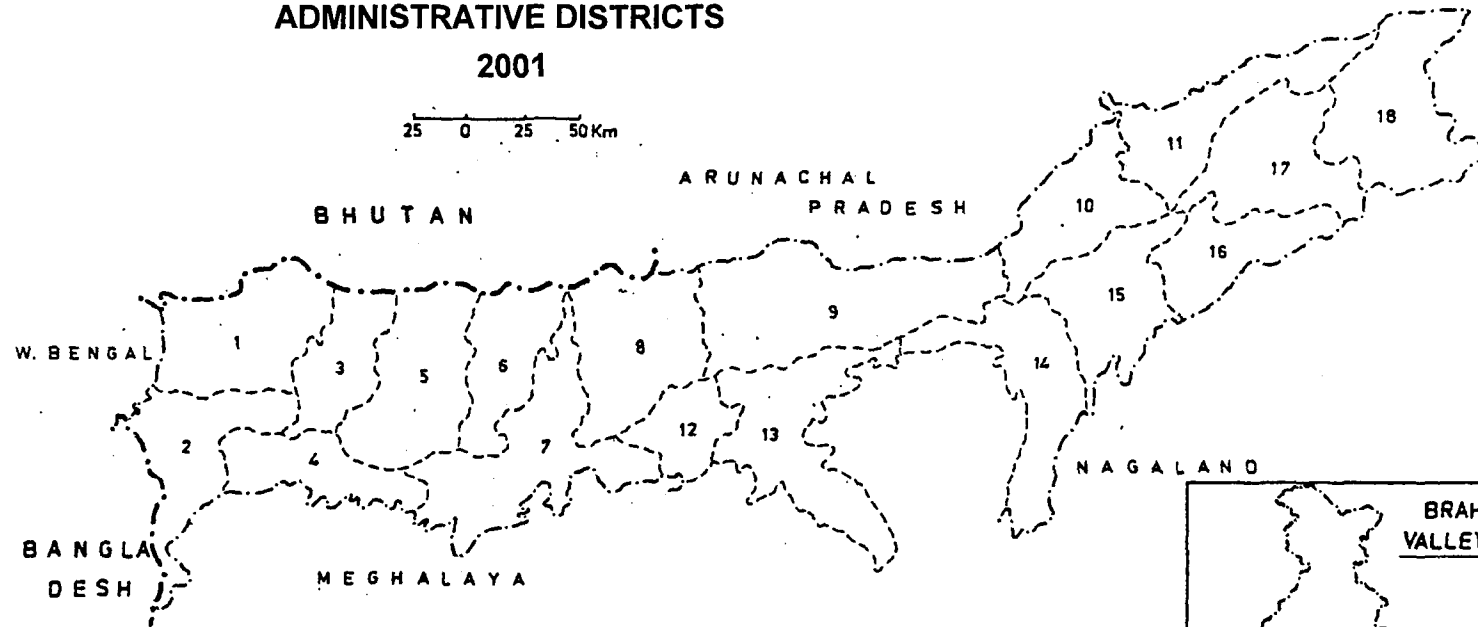
For this present study only the cognisable offences have been considered. The researcher has identified 15 (Fifteen) types of offence or crime, which is, categorised into four groups of violent crime, property crime, social crime and other traditional crimes.

The data on socio-economic variable such as Density of population, literacy rate, proportion Scheduled tribes and scheduled cast population, linguistic group, worker and non-worker, primary, secondary and Tertiary workers, were obtained from census of 1971, 1991 and 2001. Some of the data for the religious group, linguistic group for the years of 2001 has been taken as proportional data calculated by taking proportionate growth of population in the Valley. The data has also been collected from the statistical handbook, published by Directorate of economic and statistics for the year of 1971, 1978-79, 1984, 1985 1991 and 2001 and also from Economic survey, Assam (2002-2003), NIC (National Informatics Centre), Assam Secretariat Dispur. Data for tea Garden has been collected from Udyog Bhaban (Directorate of Tea, Government of Assam 2002-2003). Data for Rice, Oil seed, Jute, Tobacco was collected from Directorate of Agriculture Khanapara for the year of 2001. Data was also collected from the office of the Register General, Census of India and Census office Assam, NIC Assam, Census of India, Census Info India 2001.

Methodology

The present work is based on 18 recognized administrative districts of 1983 and also includes the newly created district of 1989 as the standard spatial unit i.e.

ASSAM **BRAHMAPUTRA VALLEY** **ADMINISTRATIVE DISTRICTS** **2001**



BOUNDARIES

INTERNATIONAL - . . . -
 STATE - - - -
 DISTRICT - - - -

DISTRICTS

- | | |
|--------------|--------------|
| 1 KOKRAJHAR | 10 LAKHIMPUR |
| 2 DHUBRI | 11 DHEMAJI |
| 3 BONGAIGAON | 12 MORIGAON |
| 4 GOALPARA | 13 NAGAON |
| 5 BARPETA | 14 GOLAGHAT |
| 6 NALBARI | 15 JORHAT |
| 7 KAMRUP | 16 SIBSAGAR |
| 8 DARRANG | 17 DIBRUGARH |
| 9 SONITPUR | 18 TINSUKIA |

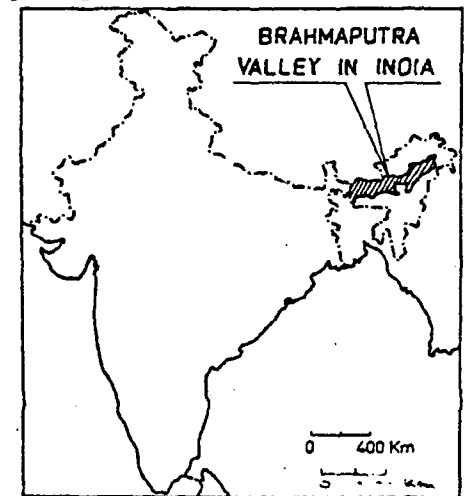


Fig. 1.1

(Brahmaputra valley, Assam). In addition to the toposheet (location maps) (Fig. 1.1) jurisdiction of Thana has been demarcated on the District taken for the study; with the help of ABC's school atlas publish by Assam Book Depot. The territorial jurisdiction of the Thanas for Sonitpur, Sibsagar and Dhemaji districts were demarcated, partially from the information provided by Aitken-Brothers, CE Private Limited, Tezpur and partially with the help of sketch maps provided by district Superintendent of Police. The Government of Assam in addition to the information available in the various notifications related this to the boundary of Thana. The base year for the study have been taken 1975, as crime data began to appear in a systematic manner since 1975 onward.

The raw data of both dependent and independent variables of three decades, i.e., 1971, 1991 and 2001 have been standardised. The value for independent variable for 2001 for which it is not available has been calculated proportionately based on 1991⁶². The data has been analysed by using Mean and Standard Deviation methods as well as correlation techniques (for the dependent (crime) and independent (socio-economic) variables). Quartiles have been calculated from the score average value for the purpose of mapping. From the average values of crime, density maps has also been prepared for pre-agitation, agitation and post-agitation period for the Brahmaputra valley, Assam.

94 Thanas in seven district of the valley were selected for the Thana level study. These represent three sub-unit of the Brahmaputra valley, i.e., upper Brahmaputra valley, middle Brahmaputra valley and lower Brahmaputra valley. These were identified to highlight the pattern of crime spatially in rural and urban areas of the valley. Majority of Thanas in the study area had been bifurcated in the years of 1981, 1983, 1984 and 1989.

BRAHMAPUTRA VALLEY
SHOWING THANA'S OF SELECTED DISTRICT
FOR MICRO-LEVEL STUDY



GOALPARA	KAMRUP	SUNITPUR	NOGOAN	SIVSAGAR	DHEMAJI
1 Lakhipur	1 Rangia	1 Dhekiajuli	1 Dhing	1 Barhat	1 Dhemaji
2 Goalpara	2 Kamalpur	2 Rangapara	2 Nogoan	2 Sonari	2 Junai
3 Dhudnai	3 Plasbari	3 Tezpur	3 Kampur	3 Kakitibari	
KOKRAJHAR	4 Chhaigoan	4 Sotia	4 Raha	4 Maranhat	
1 Gossaigoan	5 Boko	5 Biswanath Charlai	5 Jamunamukh	5 Nazira	
2 Kokrajhar	6 Jhalukbari	6 Bihali	6 Kaliabor	6 Aamguri	
3 Runikhata	7 Panbazar	7 Goahpur	7 Hojai	7 Sivsagar	
				8 Dimo	

Fig. 1.2

So, for better understanding and analysis newly created Thanas were merged with the old Thana (basing on the year of 1975); consequently the number of Thanas came down to 41 (forty one). Crime data for each Thana has been grouped into three phase, (i) pre-agitation period (1975-1978), (ii) agitation period (1979-1985) and (iii) Post agitation period (1986-2001) and for the Thana up to 1995. These grouping have been done according to the four categories of crime and mean of Thana and standard deviation and co-relation has been found out for the better understanding of crime situation of each Thana of these seven districts of the Brahmaputra valley, Assam (Fig. 1.2).

Data on socio-economic variable has been converted into percentage. Here primary worker includes the person engaged in cultivation, livestock, forestry, fishing, hunting, plantation, orchards and allied activities. The secondary workers consist of the persons doing mining, quarrying, manufacturing, processing, repairs and construction. Likewise tertiary workers include trade commerce transport, storage, communication and other service as per criteria mentioned in the district census handbook.

1.8 Organisation of Study

The present study has been divided into seven chapters

Chapter I: it is an introductory part deals with the introduction, extensive review of literature, statement of the problem through highlight of the study area, objective of the study, research question that has been tried to examine, data source and methodology applied for the present study and organisation of the study.

Chapter II deals with the geographical personality of the Brahmaputra Valley. As geographical information thought to be relevant to the present study of crime and through highlight of physical landscape, cultural landscape of the study area has been carried out. This chapter serves as a base for the qualitative and quantitative interpretation of socio-economic, cultural and political aspect that has encouraged in the increase of crime has also been explained.

Chapter III deals with definition of crime and criminology, the relationship between criminology and geography of crimes components and types of crime and its importance and its relevance in the Brahmaputra Valley, Assam has been explained briefly.

Chapter IV contain analysis of urban growth, which includes urbanisation, pattern and dimension in the Brahmaputra Valley. To highlight briefly, an analysis of urban growth, level of urbanisation, definition of towns since 1901, town groups, growth of urban centre since 1901 to 2001 in the valley has been tried to explain. A thorough analysis of history of urbanisation indicts and urbanisation in Assam has been carried out. A brief explanation of urbanisation and its impact on crime has also been explained in this chapter.

Chapter V deals with analysis of correlation of crime with selected eleven sets of independent socio-economic variable. Here correlation of both independent variables to crime has been carried out. An effort has been made to establish the relationship between types of crime and independent socio-economic variable by means of correlation analysis. District level means and standard deviation for pre-agitation (1975-1978), agitation period (1979-1985) and post-agitation (1986-2001) even Thana level mean and standard deviation has been find out to examine the variation of crime in the valley. Correlation of each pairs

of crime variable both district as well as Thana for pre-agitation, agitation period and post-agitation period has also been examined to uncover the potential causal relationship between pairs of variable. This will serve as a basis to find out cause and effect of the phenomena.

Chapter VI examines the district-wise comparative study of spatio-temporal pattern of crime, types of crime for pre-agitation, agitation period and post-agitation period with the help of maps. This will highlight the changes of crime concentration in the Brahmaputra Valley of Assam. This will also highlight the changing pattern of crime in space and time in order to ascertain ground reality in the occurrence of crime in the study area. In this chapter Thana-wise comparative study of spatio-temporal pattern of crime with the help of maps has also been examined for the seven selected districts, which represents Lower Brahmaputra Valley (Goalpara and Kokrajhar), Central Brahmaputra Valley (Sonitpur, Nagaon and Kamrup) and Upper Brahmaputra Valley (Sibsagar and Dhemaji) for pre-agitation, agitation period and post-agitation period. These Thana-wise density maps displays crime pattern that vary across space in terms of rural and urban area and also zone of concentration of crime over the space and time frame in the Brahmaputra Valley.

Chapter VII contains conclusion and suggestion to improve the crime situation, future research and investigation as well as future planning in the valley.

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CHAPTER – II

GEOGRAPHICAL PERSONALITY OF BRAHMAPUTRA VALLEY

2.1 Introduction

The Brahmaputra Valley or the Assam Valley is an important physiographic unit and it constitutes the major portion of the State of Assam. The Meghalaya Plateau and the hills of Karbi Anglong gently slope down to the valley, while the lesser Himalayas on the north drop abruptly to the valley. The valley is dotted with occasional hillocks locally known as *tila*. Though the valley is the eastern continuation of the great plain of India, it is a well demarcated natural region within the griddle formed by the Eastern Himalaya; Patkai, Naga Hills, and Garo-Khasi-Jaintia and Mikir Hills. The Brahmaputra Valley has great geographical significance to the whole of North Eastern India due to its strategic location.

Bhutan and Arunachal Pradesh surround it in the north and east by Nagaland, Meghalaya and Karbi Anglong districts of Assam in the south and West Bengal and Bangladesh in the west. The region extends from 25°44' north to 27°55' North parallels at latitude and from 89°41' east to 96°02' East Meridian of longitude¹. The valley stretches for about 720 Kilometres in the length from East to West and its width varies from 130

Kilometres in the Western and Central parts to about 80 Kilometres in the Eastern extremity. The valley covers an area of 55,694 Sq. Km, with the population of 22,651,096 person including 11,727,402 males and 10,923,694 females in 2001 with a density of 403 persons per Sq. Km. the Brahmaputra Valley comprises of 18 districts, 27 sub-division and 174 Community Development Blocks².

2.2 Physical Landscape

The Brahmaputra valley is a well-defined physiographic unit. It is almost a monotonous level alluvial plain dotted with a few lowly elevated hillocks scattered along the bank of the Brahmaputra River. The hillock are the out linear of the Meghalaya and Shillong plateau and extend from Tezpur and Karbi hills of Central Assam plain as far as Dhubri in the Western extremity. Barring these isolated Hillocks exposing the Archaean gneisses and occasional out crops of Upper Tertiary Sandstone at places along the northern periphery, the entire region is covered by alluvial deposition of recent and sub-recent origins. Bordered by the Eastern Himalayas on the North and East, the Naga Hills and the Meghalaya Plateau on the south and the plain at West Bengal and Bangladesh on the west, the Brahmaputra valley occupies central position of the North East India.

In the south bank of the Brahmaputra River, the plain is of more irregular shape and even discontinued against the Karbi plateau. In comparison to the south bank plain, the North bank has a regular angular shape tapering towards east. Geomorphologically, the deposition of alluvium is some 500m thick, which is place on a geosyncline formed during the Himalayan uplift. The sag is very well defined between the boundary fault on the north

at the valley and the Naga Thrust fault on the south. The Archaean gneiss present a complex group of biotite and Hornblende gneisses with occasional presence of small granite and pegmatite bodies intrusive into them. The Upper tertiary sandstone along the northern boundary of the region consists of fine and medium grained, bluish to greenish grey ferruginous sandstones with dark grey splintery shales with occasional presence of lignite and carbonised wood. Besides there are a few outlying patches of deviated ground composed of sand, clay, loam and rounded shingles and pebbles, apparently resembling the older alluvium.

The Brahmaputra Plain is a post-tertiary alluvial surface. The south-eastern margins of the plain contain occasional platform i.e., the high terraces of old alluvium, such as the Margherita-Lekhapani, the Dimapur-Barpathar, the Dabaka-Lumding terraces and the Rani-Barduar terraces (these have been formed by the tributaries of the Brahmaputra River-Burhi-Dihing, Dhansiri, and Kopili and Tulsi and Kulsi respectively

Alluvial surface of the Brahmaputra valley has its marked topographic variation from North to South. The Bhabar-Tarai belt, a narrow zone of coalescence of the alluvial fans, is situated in the Himalayan foothills. The northern built up zone lies parallel to the Bhabar-Tarai zone, which is relatively high and flood free and, therefore maximum population and urban-cum-business centres of the North bank are confined to this zone. To the south of this built-up zone, there lies the flood plain zone including the levee of the Brahmaputra where most of the waterlogged swamps are found. In the southern bank, there are three distinct physiographic units in the form of the active flood plain belt the built-up belt and the southern foothills belt from north to south.

The Brahmaputra Valley is in a state of perpetual flux. This is largely due to rapid geomorphological changes, annual waves of floods, migratory river channels, erosion of land, disruption of road and rail communication, etc. (Fig. 2.1).

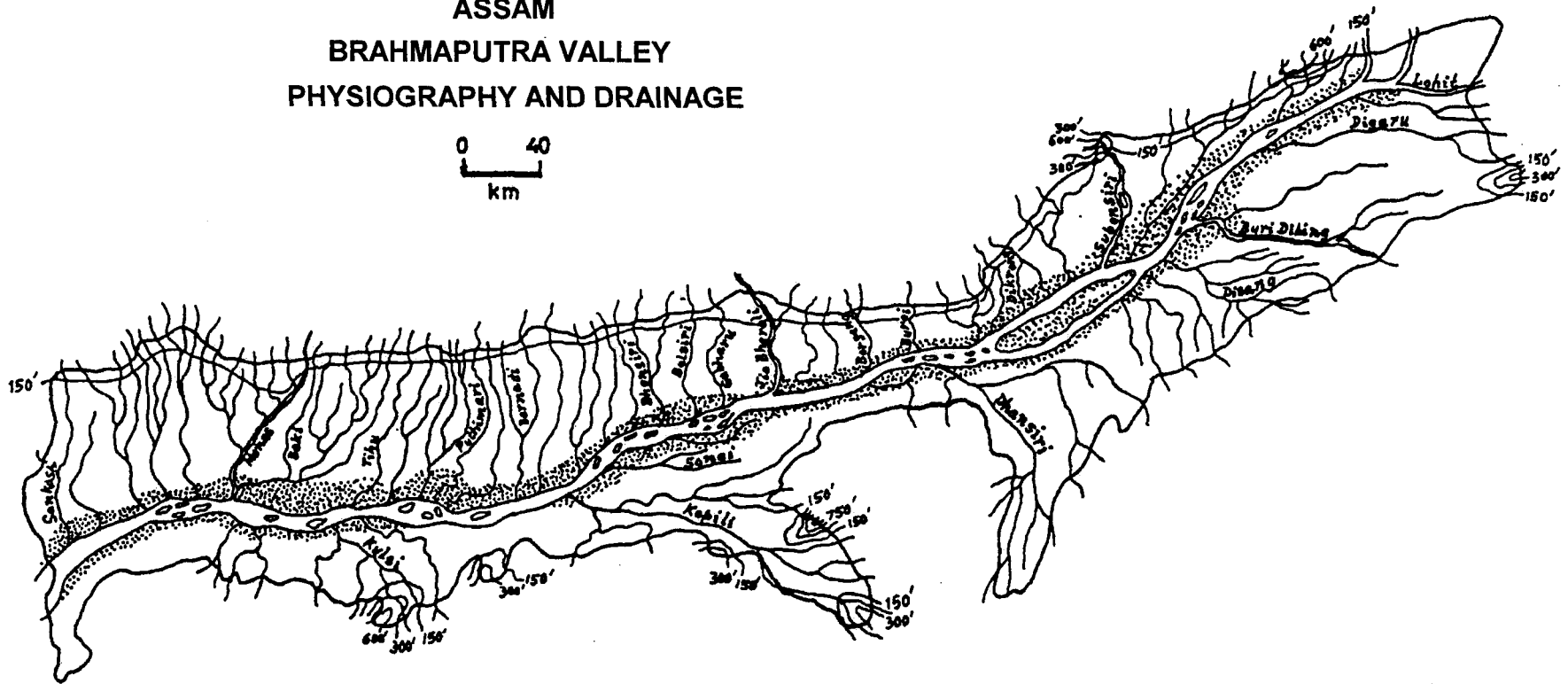
2.3 Relief

Relief plays vital role that influence the nature of Land-use, transportation development and economic activities of man, it has district control on the selection of site for human habitation and on the socio-political behaviour of the people. It is a common fact that the plain tract are densely populated and densely settled as compared to undulating topographical unit, habitation compactness maintains higher scope for the propagation and disseminations of political ideas and thought among the habitant. It is therefore important to examine the relief variation, which indirectly influences the growth and organisation of socio-political activities.

The Brahmaputra valley as a whole has the average gradient of 1:8000 from east to west. Except few minor variations, the Brahmaputra valley is a level plain interspersed with numerous monadnocks and rivers/streams coming down from the Himalayan system in the north and the Meghalaya-Karbi plateau in the south (Fig. 2.1). In the Brahmaputra valley barring the isolated hillock which ranges from 83 to 143m in altitude above the sea level, the whole region is apparently a plain, the general slope of the valley ranges from 134m in the extreme east to 30m in the western extremity which is situated in the extreme eastern part has a altitude of 134.1m above mean sea level, while Tezpur situated in the Central part has altitude of 78m and Dhubri situated in the extreme west has altitude of 30m above mean sea level. The northern boundary of the valley stretches along the base of

**ASSAM
BRAHMAPUTRA VALLEY
PHYSIOGRAPHY AND DRAINAGE**

0 40
km



 Active Flood Plain
 River
 600' Contour

Fig. 2.1

the Eastern Himalayan foothills and roughly touches 150m contour lines. The altitude of the valley varies along the southern boundary from 60m towards Naga hill while it reaches more than 225m in the west, towards Meghalaya plateau. From both northern and southern boundaries the alluvial plain drops down to the Brahmaputra. A marked physiographic difference has been noticed between the north bank plain and south bank plain of the Brahmaputra in regard to the Drainage system. The most important characteristics of the Brahmaputra valley is that the river itself is highly braided due to its low gradient as a result there is innumerable 'chars' and riverine island for example, Majuli with an area of 929 Sq. Km, is the worlds largest river island.

2.4 Drainage

The Drainage network of the region consists of the Brahmaputra (in Indian Territory) and its innumerable tributaries. The major north bank tributaries include the Subansiri, Jia-Bharalu, Dhansiri, Barnadi, Pagladia, Manas and Sankosh. Among south bank tributaries the important ones are the Lohit, Dihang, Noa Dihing, Burhi-Dihing, Disang, Dikhow, Jangi, Dhansiri Kopili, Digaru, Kulsi, Singra, Jingiram, Dudhnoi, and Krishnai. Many of these tributaries are large rivers having a sizeable catchment area. The Brahmaputra has catchment area of 1, 87,110 Sq. Km. with an annual average discharge of 5, 10,450 million cubic metres at Dhubri (4). It has an average width varying between 1.127 at Saraighat Bridge and around 16 Km in Dibrugarh District

There are four tributaries with a large catchment areas are Manas (31,000 Sq. Km), the Sankosh (26, 000 Sq.Km) the Lohit (21000 Sq. Km) the Dihang (13000 Sq. Km) also

carry huge amount of water every year³. The drainage system of the study areas, the Brahmaputra has the most dominant control as compared to other large rivers of India. The upper course of the river lies in the Tibetan Plateau of China, where it is known as Tsangpo. It rises in the Kailas range, at an elevation of about 5150 metres⁴. The Brahmaputra flows about 725 Kilometres down the Assam Valley in vast sheet of water dotted with numerous sandy islands or *Chars*. It runs between sandy banks forming a number of divergent channels, which later rejoin the main stream. The important among such divergent channels are the Kherkatya Suti opposite to Burhi Dihing Mukh, Luit Suti opposite to Dhansiri Mukh and Kalang mukh in Nagaon and Morigaon Districts. Beyond Dhubri in the Western margin of the valley, the river sweeps southwards around the spurs of the Garo Hills and serves as the watershed between the Brahmaputra in Assam and Surma River in Bangladesh. The river then enters the plain of Bangladesh and joins the Padma.

There is a vast difference between the drainage character of the north bank and the south bank tributaries of the Brahmaputra. In the north, formation of alluvial fans and cone and conspicuous meandering course is seen and as a result the development of beels, oxbow lakes and marshy lowland is noticed and this has given rise to tarai or semi tarai condition. Another important character of the north Bank tributaries is that they have migrated considerably eastward leaving away their original course. This shifting nature of the stream is a great problem for the settlement along their eastern bank. In case of southern bank plain of the valley, the tributaries are considerably larger. As a result the number of streams joining the tributaries is less, as compared to north bank. In the eastern

section of the southern bank, extensive headward erosion and meandering course is noticed and resulting the formation of good number of beel and ox-bow lakes. But in the western section, the tributaries rarely follows meandering course. The south bank tributaries exhibit a tendency of shifting westward. Some of the large beel and Marshes of the valley included Dipar beel, Chalchala, Bangalmari, bar beel, Garanga beel, Chata beel and Mahmari beel. The flood prone areas along the Brahmaputra and its tributaries impose natural restriction for the growth of settlement in such area, where causes inundation by this tributaries.

2.5 Climate

The Brahmaputra Valley falls within the regime of monsoon climate. Its climate is characterised by heavy rainfall in summer and draught in winter, very high percentage of relative humidity and a relatively low temperature. There is significant spatial variation in the climate pattern because of varying terrain condition.

Drainage, soil erosion, vegetation, vegetative growth and settlement pattern of a region are to a great extent influenced by climate. Koppen has designed the climate of this region as a Humid Meso-thermal Gangetic types (Cwg). However, its generalised weather phenomena are subjected to a cumulative impact of the local component, viz., its surrounding orography, local winds and evapo-transpiration gain of moisture to the lower atmospheric layers modifying the types of climate of this region on Cwb instead of Cwg⁵. The sub-tropical location as well as its position within the griddle of mountains and plateau within westward opening contributes to the climate character of the region, while the lofty Himalayan Mountain ranges of the north protect the valley from the chilly cold winds

blowing from the Tibetan plateau in winter, they provide conducive orographic condition of relief rain. The natural mountain barrier serves as obstacle to the southwest warm moist monsoonal winds during the summer months of June to September. The climatic condition of the region exhibits a major deviation from those of the Ganga Valley. Rainfall is very high in major portion of the Brahmaputra Valley and is largely associated with storm in the pre-monsoon and monsoon period. In winter occurs of rain is varies from 63 to 119 days.

The climate of the region is sub-tropical monsoon with distinct alteration of wet and dry seasons. The annual average rainfall varies between 1320 mm (at Lumding) and 2850 mm (at Dibrugarh) almost all throughout the region around $\frac{3}{4}$ of the annual rainfall occurs from late June to September. Winter rain less 10 mm and vegetative growth is hereby restricted during the dry winter period particularly in lower Assam, whereas winter rain is up to 128 mm in the Upper Assam valley. On the other hand, excessive summer rain causes luxuriant growth of vegetation and frequent flood occur. Throughout the region, mean January temperature is varies between 12.61°C at Lumding to 14.56°C at Dhubri. Mean maximum temperature in august at Guwahati is 28.11°C , while it is 27.0°C at Dibrugarh. Annual range of temperature varies between 29.0°C to 33.0°C .

The eastern part of the region is cooler than the western part. Pre-monsoon season covers the period of March to May and characterised by rapid rise of temperature thundershower and hailstorms are frequent. The average temperature of the season is 23.0°C while total amount of rainfall is around 250 mm^7 . The monsoon spread over the period from June to September. This season is also known as the period of south-west monsoons and characterised by high humidity weak variable surface wind and cloudy sky. The

average temperature during this season is 27.17° C with an average diurnal range of 6° C rainy days during each of June, July and August and about 14 rainy days in September. Retreating monsoon, which covers the month of December and November monsoon, weakens with speedy retreat followed by fair weather.

In spite of broad climatic homogeneity throughout the Brahmaputra Valley but here lies considerable local variation in rainfall, range of temperature and other weather phenomena such as mist, fog, etc. The eastern part of the valley experiences maximum rainfall and lower range of temperature, whereas the western part receives high rainfall with relatively high range of temperature. But transitional character in central part with a rain shadow area, i.e., Hojai and Lanka of Nagaon District.

2.6 Soils

The Brahmaputra Valley region possesses five distinct soil groups, viz., new alluvium, old alluvium, laterite, sub-montane soil and hill soil (Fig. 2.2) at the different physiographic location. The new alluvium along the riverbanks is rich in mineral contents and organic components and its fertility is subjected to renewal in each flood. In the Brahmaputra Valley, its elongated low land belts along both the banks of the master stream, that is utilised for the production of oil seed, jute and vegetables despite its conspicuous fertility. The new alluvial tracks are left out from the growth of urban landscape because of frequent flood, havocs and severe bank erosion. A great variety of agricultural crops are grown on this soil. The older alluvium is generally found above flood levels and is highly acidic with lower amount of potash. These soils are suitable for tea

cultivation and sugarcane, pulse, mustard, fruits and vegetables. The laterite soil covers a very limited area of Nagaon District. The Dhansiri valley and the Kaziranga area of Golaghat District possesses true laterite soil that is evolved under the control of sub-tropical winter dry climate. This soil is very poor in plant nutrients and is of limited agricultural value.

The sub-montane soil are located in the northern margin of the region on the north bank with its continuation to the river Dhansiri in Golaghat District on the south bank forming a hair pin bend through the Patkai and Naga foot-hills. One more tract is developed along the upper Kopili Valley in Nagaon District. These soils are formed by coarse debris deposited by streams flowing down from mountain range. The hill soils are found along the southern fringes of Golaghat, Jorhat, Sibsagar, Dibrugarh and Tinsukia Districts of the region. Mostly forests also cover this soil belt. This soil is derived from the ferromagnesians crystalline or metamorphic rocks and is now confined to the Meghalaya foothills between Dudhnoi (90° 45' east) and Lumding.

2.7 Natural Vegetation

The natural vegetation of the study area falls into six broad vegetation types – evergreen and semi-evergreen forest, sal forests, mixed deciduous, savannah and bamboo and cane and miscellaneous varieties. The evergreen and semi-evergreen vegetation which requires alluvial soil and rainfall exceeding 2500 mm flourish in Lakhimpur and Dhemaji Districts and in parts of Golaghat, Jorhat and Sibsagar Districts⁸. The important species of evergreen vegetation are Sam (artocarpur chaplasha) Gandsarai (Cinnamomun,

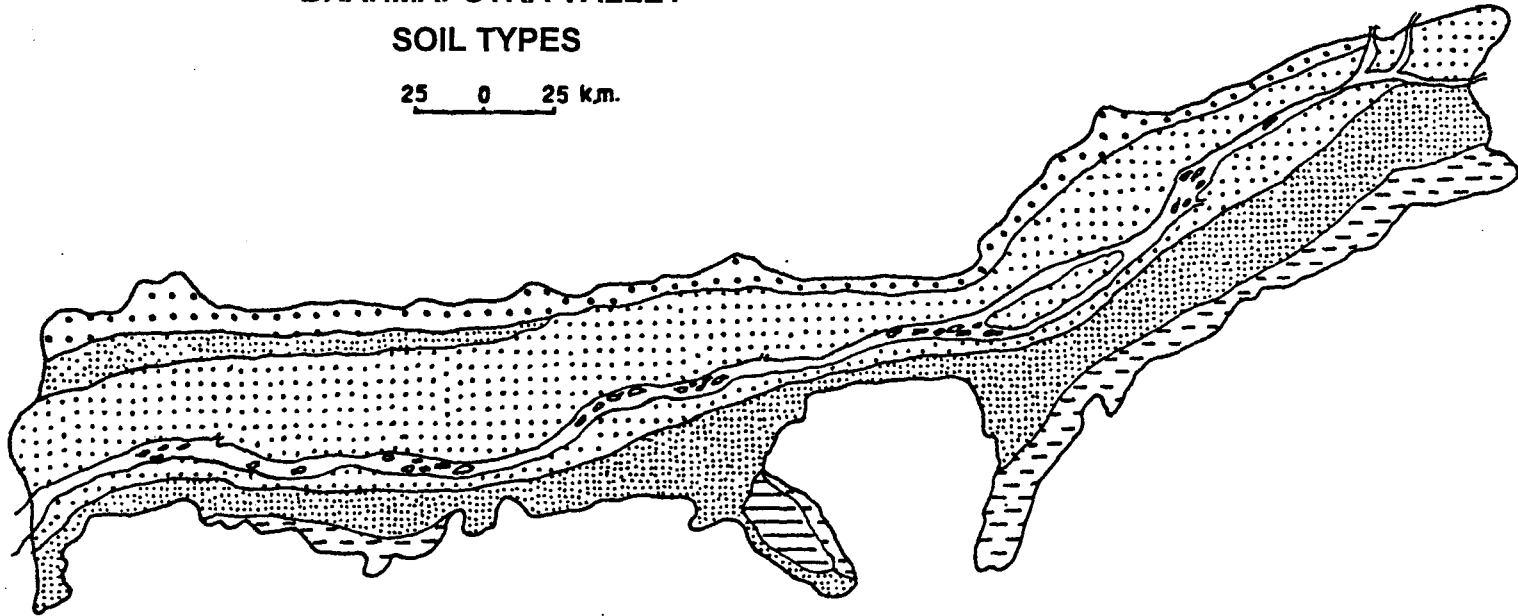
glanduliferum) Tita champa (*Mesua ferrea*) Khair (*Acacia catchu*) Ajar (*Lagestræmia vigeneæ*) Kathal, (*Artocarpus integrifolia*) Sonaru (*Cassia fistula*) Gamari (*Gmelina* and *agaru*). All these evergreen trees are used as timber-wood and construction materials and are of great economic value. The mixed evergreen vegetation is usually found in fringe areas of evergreen forest and along the northern boundaries of Darrang and Sonitpur District where annual rainfall varies from 1750 mm to 2000 mm. The main species of these types are – Jia (*Lanneo grandis* A. Rich), Poruli (*Stereospermum chelonoides* DC) Bhelu (*Tetramesa nudiflora* R. Br.) and so on. Sal forest area located basically in the District of Kokrajhar, Bongaigaon, Barpeta, Goalpara and also parts of Morigaon District. This forest has a high commercial value. The important tract of the Sal forest of the valley is the Mechapara words estate of Kokrajhar District which covers 250 Square Km of area and south western part of Darrang District also has a limited area of Sal. Mixed deciduous vegetation occurs mostly in the lower Brahmaputra valley in the transitional areas between highland and Savannah vegetation. These forests are confined to the District of Dhubri, Kokrajhar, Bongaigaon, Goalpara, Kamrup, Barpeta and Nalbari and Darrang Districts. Important species of these types of vegetation includes Simalu, Makari Sal, Bajar, and Sidha.

The Savannah vegetation occurs mostly in the well-claimed highland areas all throughout the valley. Important species of this type included Kum (*Carega arborea* Roxb) Bihmora (*Randia Dumetoras* Lent) and Amlukhi (*Enblica officinalis* Gaestn).

The riverine forest occurs along the northern fringe of the valley along the Himalayan foothills from Kokrajhar District in the west to Sonitpur District in the east.

**ASSAM
BRAHMAPUTRA VALLEY
SOIL TYPES**

25 0 25 k.m.



-  New Alluvium
-  Old Alluvium
-  Soils of Submontane Tract
-  Laterite
-  Red Loams & Lateritic Hill Soils

Fig. 2.2

This is predominant in the flood-affected areas throughout the valley. The important species of this type are Koroi (*Albizzia procera* Benth) Simul (*Bombak Malabaricum* Dc) Khakon (*Banbanga*) *Sonnera tioides* Hem) *sisso*. In addition to the above types of vegetation, bamboo, cane, reeds and various species of grass occurs in the different parts of the valley. Various types of Bamboo like Jati, Bhaluka, Mokal and Kotoha having great economic value and basically utilised for the constructional purposes and also a raw material for pulse and paper industries.

The Brahmaputra valley has a total of 11,497.5 Sq. Km's of Government reserved forest, which constitute 17.65 percent of the total areas of the valley and 70.02 percent of total area under reserved forests in the State of Assam. The Brahmaputra Valley has one National Park and 10 Wildlife Sanctuaries and covered 1,565.37 Sq. Km of the forest areas. Only national park is Kaziranga (430 Sq. Km). The wild life Sanctuaries are Kaziranga (194.09 Sq. Km), Manas (390 Sq. Km) Orang (72 Sq. Km) Pabhai (49 Sq. Km) Laukhowa (70 Sq. Km) Pabitora (16 Sq. Km) Sonai – Rupai (175 Sq. Km) Garampani (6 Sq. Km) Bornadi (26.21 Sq. Km) Nameri (137.07 Sq. Km).

Above an all the vegetal cover at any region has close relation with the productivity of soil and over all natural environmental condition of human Settlement, entire human activity directly and indirectly some way or other depends on vegetation (Fig. 2.2).

2.8 Land-use and Agriculture

Geographical factors have got considerable influences in the agricultural activities of the valley. Of specific importance is the aspect of precipitation its timely arrival

adequacy, consistency and regularity. Any deviation from the normal requirements and adverse fluctuation is immediately reflected in the cultivation and production of rice, the staple (rape and jute). Further constant deforestation in the catchment areas of the Brahmaputra System, resulted in increasing the frequency of flood, whose extent and scale have dominating impact upon the agricultural activity of the valley.

The Brahmaputra valley region is one of the promising areas in the country with diversified forms of economy, having a net shown area of 30,02, 721 hectares (30024.21 Sq. Km) in 1989-90, which constituted 53.27 percent of the total Geographical area of the valley. Out of the net shown area, 12,90,738 hectares (12907.38 Sq. Km) of land area (21) shown more than once, which constituted 22.9 percent of the total geographical area and 42.99 percent of the net shown area of the valley⁹. About 76.05 percent of its working population is directly engaged in the agrarian sector. The district wise uses of land under six broad categories of uses in 1989-1990 are shown in Table 2.1.

From table 2.1, it is observed that Nalbari district has the highest (71.36%) proportion of net sown area. Dibrugarh and Tinsukia Districts have the lowest (26.22%) proportion of net sown area. The District with the highest and the lowest proportion of cultivable waste are Kamrup (8.4%) and Barpeta (0.25%), Sibsagar district with 38.96 percent of the total geographical area, has the highest proportion of Land under plantation agriculture and non-agricultural use. In other district land under plantation agriculture and non-agricultural uses varies from 0.72 percent to 36.15 percent Kokrajhar and Bongaigaon district ranks first (with 34.02% of land under forest. While Dibrugarh and Tinsukia ranks 2nd with 17.16 percent of land under forest Goalpara district has the highest proportion of

Table 2.1: Land-Use in the Brahmaputra Valley, 1989-90*

District	Percentage of net area sown to the total area	Percentage of area under plantation, agriculture & non-agricultural use to the total area	Percentage of cultivable waste land to the total area	Percentage of under grooves & grazing to the total area	Percentage uncultivable waste land to the total area	Percentage of area under forest to the total area
Kokrajhar Bongaigaon	56.89	1.48	1.76	4.30	1.55	34.02
Dhubri	55.78	0.72	7.76	1.14	17.65	16.95
Barpeta	68.90	4.88	0.25	6.28	12.61	7.08
Nalbari	71.36	10.48	4.68	1.53	6.55	5.40
Darrang	56.84	17.39	3.28	6.88	11.90	3.71
Sonitpur	45.20	11.07	4.80	6.54	16.37	16.02
Lakhimpur Dhemaji	54.48	17.57	0.58	11.86	9.11	6.40
Goalpara	53.61	4.47	5.75	12.59	18.20	5.33
Kamrup	52.07	7.41	8.40	9.61	5.73	16.78
Nagaon Morigaon	69.44	7.43	4.55	3.90	5.15	9.53
Golaghat	41.59	27.61	4.16	7.93	13.85	4.86
Jorhat	47.49	21.83	2.48	2.54	17.00	8.66
Sibsagar	43.43	38.96	3.61	0.59	6.01	7.40
Dibrugarh Tinsukia	26.22	36.15	1.46	4.39	14.62	17.16
Brahmaputra Valley	53.27	14.20	3.64	6.21	10.19	12.49

* This is the latest data available for Land Use in the State of Assam

Source: Landuse/Land cover Statistics of Assam, 1989-90, based on Satellite Survey by the Assam Remote Sensing Application Centre, Guwahati.

uncultivable waste land (18.25) while Kokrajhar and Bongaigaon District have the lowest proportion of uncultivable waste land (1.55%)¹⁰ (Fig. 2.3).

Agriculture is the chief occupation of Brahmaputra valley. The valley contain 80 percent of Assam's cultivated area and produces 80 percent of rice, 98 percent of Jute, 86 percent of Tea, 95 percent of oil seed and 85 percent of Sugar cane. Of the total work force 56.31 percent is cultivators, 8.66 percent is agricultural Labourer, and 11.08 percent is engaged in allied agricultural activity such as fishing, hunting and livestock. The principal agricultural produce of the valley includes Tea, Rice, rope and mustard, Jute, Wheat, Sugarcane and pulses. Soil of high ground standing above the flood level, i.e., the Central and Upper Assam valley are composed of older alluvium and are highly acidic. This land is less suitable for paddy and population too sparse so tea plantations mostly cover this. At the same time the area of newer alluvium representing the river banks, which are less acidic and contain high percentage of nitrogen are the major rice growing area of the valley. The productivity in the low-lying area along the riverbank is always high due to the overflowing of the rivers replenishes the soil every year by deposit of silt and provides adequate sub-soil moisture for the agricultural crops. Soil of sandy loams gives a good yield of variety of crops, which includes rice wheat, jute, rope, mustard, sugarcane, pulses, tobacco, various citrus fruits and vegetables.

Largely the level of the land and the land being flooded by rain influences cultivation. Accordingly the plain district of the Brahmaputra valley can be divided into four groups according to the level of land.

ASSAM
BRAHMAPUTRA VALLEY
PATTERN OF LAND UTILIZATION
(1989-90)

25 0 25 50km.

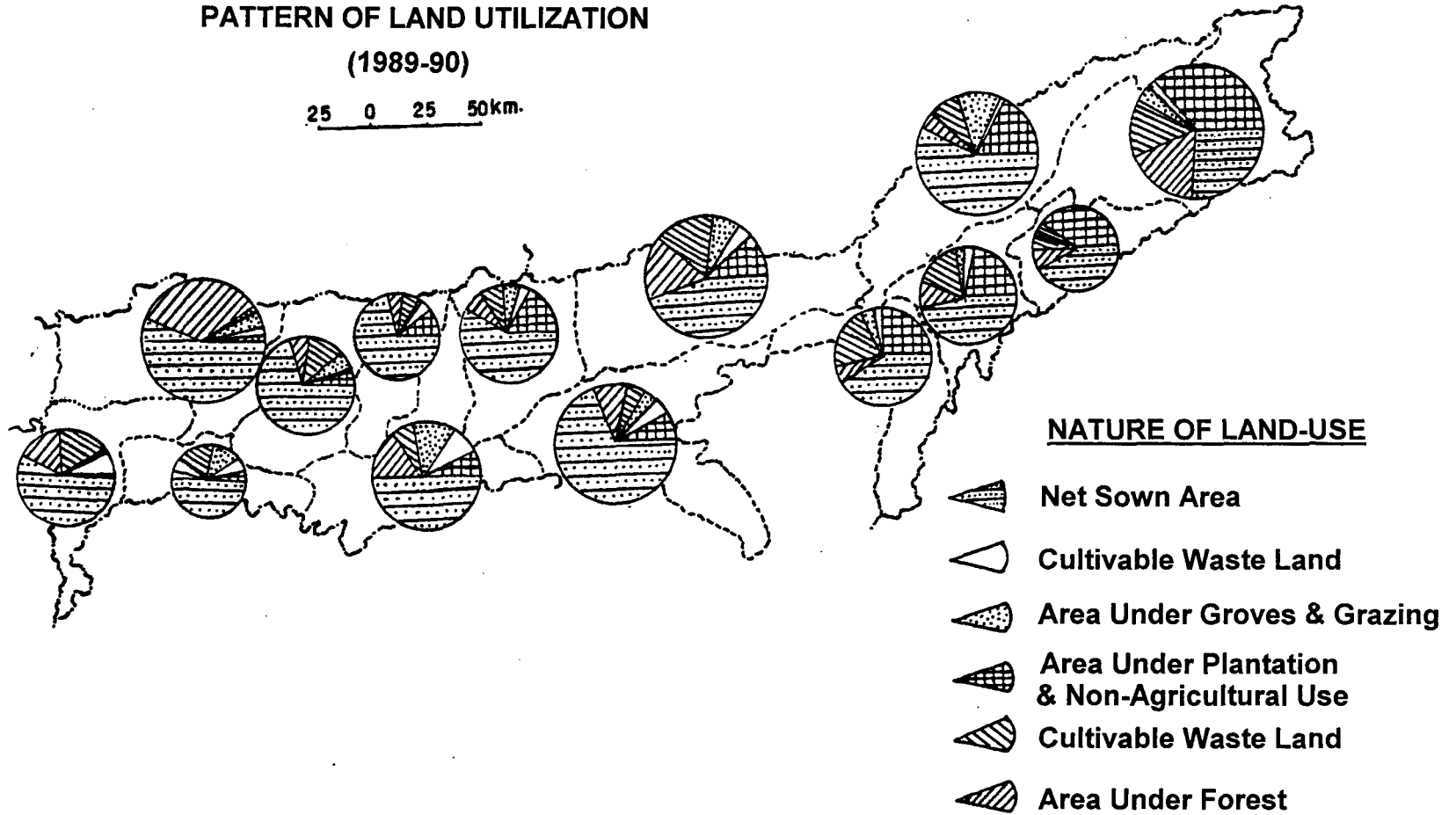


Fig. 2.3

Table 2.2: Area, Production and Average Foodgrains, 2001-02

District	Area (ha)	Production (in metric tonnes)	Average Yield (in Kg/ha)
Dhubri	131011	196143	1512
Kokrajhar	91022	98743	1100
Bongaigaon	101068	113542	1139
Goalpara	73292	120105	1660
Barpeta	172492	199234	1171
Nalbari	156675	180285	1167
Kamrup	171962	264256	1554
Darrang	188190	268033	1445
Sonitpur	142288	171605	1224
Lakhimpur	119173	120949	1028
Dhemaji	72257	90844	1275
Morigaon	91065	154450	1711
Nagaon	231956	413972	1805
Golaghat	83394	167668	2040
Jorhat	98929	168128	1725
Sibsagar	99555	201683	2057
Dibrugarh	86053	134984	1593
Tinsukia	64920	110072	1722

Source: Department of Agriculture, Government of Assam, 2001-02

- (a) The Chapari is found on the both sides of the Brahmaputra, it is a low land near the river, which is inundated during the rain. This land is suitable for Ahu Crops in summer and mastered and ropes in winter.
- (b) Behind the Chapari is the belt of low-lying region in which Bao or summer rice is grown. The water drains off slowly from this belt and land remain too damp for winter crops.
- (c) The level of country then gradually rises above the reach of the ordinary flood and sali rice becomes the chief crops. This is a broad belt containing most of the permanent cultivation.
- (d) Beyond this is the sub-montane area with irrigation facilities.

Rice is the principal crops throughout the valley occupying 68.85 percent (19,45,000 hectares) of the total crop area at the region followed by rape and mustard (7.5 percent of the cropped area), tea (5.9 percent of the cropped area), jute (3.79 percent of the cropped area), wheat (3.65 percent of the cropped area), sugarcane (1.34 percent of the cropped area), and pulses (0.39 percent of the cropped area) in 1990-91. Among this, jute and tea plays important role in external trade of the region (Table 2.2).

2.9 Occupational Structure in the Brahmaputra Valley

Occupational structure in the Brahmaputra Valley basically tilted towards the agriculture and agro-allied activities. It has been observed from the census 1971, 1991 and 2001 that, in 1971 highest working population is notice in the district of Sibsagar

(30.16%), Lakhimpur (29.48%), Darrang (29.11%) and non-Workers %age shows highest in the district of Goalpara (73.09%), Kamrup (73.9%), Nagaon (70.89%) lowest in the district of Sibsagar (69.84%) (Appendix 2.I). Again in the year of 1991 the working force of population depict highest in the district of Dhemaji (45.20%) and followed by Golaghat (41.00%), Lakhimpur (42.90%), Sibsagar (41.90%), Sonitpur (40.20%), Tinsukia (40.70%) and lowest is the district of Dhubri (29.40%), Barpeta (30.00%), Goalpara (33.70%), Kamrup (32.60%). In the case of Non-working population in the valley, district of Dhubri shows the highest (70.00%) followed by, Goalpara (66.30%), Kamrup (67.01%), Kokrajhar (64.50%), Morigaon (65.10%), Nagaon (64.50%), Nalbari (68.90%) (Appendix 2.II). In 2001, a diverse picture has been observed in respect of worker and non-worker population. In 2001, district of Dhubri shows lowest percentage of working population (71.10%), followed by Lakhimpur district shows high percentage of worker and low percentage of non-worker population (43.90%)¹¹ (Appendix 2.III).

To understand entire fabric of the study area, it needs to study nine broad industrial categories of worker, which has been group into three major head i.e. (i) primary worker (ii) Secondary worker (iii) Tertiary workers. Each of these three had has got its own identity. This has been evident from the analysis that Lakhimpur with a percentage of (84.24%) shows highest primary worker followed by districts of Nagaon (80.49%), Darrang (78.95%), Goalpara (79.94%). Almost all district have high percentage of person engage in primary activities, Secondary activities shows high percentage in the district of Dibrugarh (7.50%), Kamrup (5.92%), Sibsagar (4.60%),. Lakhimpur shows lowest (2.23%) percentage engage in Secondary Activity as because in this district highest

percentage of person are engaged in the primary sectors. In respect of Tertiary worker it has been notice that the district such as, Dibrugarh (24.79%), Kamrup (22.93%), Sibsagar (19.67%) shows highest. Dibrugarh and Kamrup district shows high percentage of secondary and tertiary workers. District having highest percentage of primary worker, shows low percentage of people engage in the Secondary and Tertiary sector (Appendix 2.I). Again in 1991, situation shows different. Dhemaji district shows higher percentage (85.66%) person engage in primary Sector, followed by Kokrajhar (84.03%), Lakhimpur (80.54%), Morigaon (82.23%), Sibsagar (78.79%). In respect in person engage of Secondary activity, district of Kamrup shows highest (11.94%) and even in the Tertiary Sector, Kamrup shows high percentage (42.41%) (Appendix 2.II). The district, such as Dibrugarh, Tinsukia, Jorhat, Sibsagar, Nalbari, Barpeta has higher involvement of the person in this sector, as because person engaged in primary sector is less in those district. Some of the district shows peculiar situation, such as Goalpara, Morigaon, Sonitpur and Bongaigaon district, where person engage in the primary sectors is very high and show low in the Secondary Sectors and Tertiary sectors. These indicate an agrarian economy.

The analysis of the worker, non-worker, Agricultural labourer, cultivator, workers in the broad industrial categories such as (i) Primary worker (ii) Tertiary worker is very much essential to find out the real truth of the problem. It is a fact that, the area dominated by the Scheduled caste and Scheduled Tribe population always represents low economic area. If the percentage of Scheduled caste is higher it means the area may be considered poor who leads the tendency of commit crime or criminal activities. Lower percentage of literacy rate, higher percentage of Scheduled Caste also creates a slum situation and there

arises the social problem, such as crime. The primary, secondary and tertiary workers analysis will help to identify the district of the Brahmaputra Valley and its level of development, which will ultimately helpful in explaining the phenomena in relation to the development of the district. Worker and Non-worker of the district will show the labour situation and the level of unemployment or over burden of man power in the Brahmaputra valley. Because higher the burden of non-working population, lower the level of economic growth and development and lower the level of the development than higher will be the problem and complexity in the society by which occurrence of crime shows common. So the analysis of the above variable is an important task for better understanding and self-explaining the situation of the study area.

2.10 Tea

Tea plantation is the only organised form of farming practice in this region. Today it is one of the organised industries in the Brahmaputra valley. Its cultivation as a cash crop in India as well as in the region began the second quarter of 19th century. Robert Bruce has first discovered it in India in 1823 at Tezpur. The systematic cultivation of tea started after 1835. In the Brahmaputra valley, tea is grown basically in between Brahmaputra and Naga Hills in Upper Assam. To the west of Mikir Hills in the Nagaon district which contain small tea growing area having 109 gardens with an area under cultivation 8014 hectare in 2002. To the north of Brahmaputra river is the Darrang district which contain about 41,968 hectares of land under tea in 2002 with a total number of garden 509.

Table 2.3: Number of Gardens, Area, Production and Average Yield of Tea in Brahmaputra Valley, 1998-2000

District	No. of Garden			Area under Tea cultivation (in hectares) (as on 31 st Dec.)			Production (in 000 Kg)			Average Yield (Kg/hectare)		
	1998	1999	2000	1998	1999	2000	1998	1999	2000	1998	1999	2000*
Darrang	323	509	NA	40950	41393	41968	86942	78501	80227	2123	1896	1912
Goalpara	196	196	NA	3338	3357	3522	6099	5436	5855	1827	1619	1662
Kamrup	106	53	NA	3307	3289	3300	5146	4941	5003	1556	1502	1516
Lakhimpur	104	204	NA	4809	5046	5230	9995	9413	9701	2078	1865	1855
Dibrugarh	15621	17725	NA	83380	88291	93138	164463	150469	155932	1972	1704	1674
Nagaon	71	109	NA	7746	7850	8014	14684	13559	14073	1896	1727	1756
Sibsagar	9103	11834	NA	71362	71267	74575	119749	113819	118324	1678	1597	1587
Brahmaputra Valley	25524	30630	NA	214892	220493	229747	407078	376138	389115	1894	1705	1693

* - Provisional

Source: Statistical Handbook of Assam, Directorate of Economics and Statistics, Government of Assam, 2002 and Directorate of Tea, Government of Assam, Udyog Bhaban, Guwahati, pp.120-121 (Data furnished in the table are as per old District of Assam Provisional) and Government of Assam, Directorate of Agriculture, Guwahati.

In the Brahmaputra valley, the district of Dibrugarh and Sibsagar shows large number of tea garden with increasing trend. In the Dibrugarh district, number of tea gardens in 1998 was has 15621 and has increased to 17725 in 1999. Area under tea plantation also shows a changing trend, from 83380 hectares in 1998 to 93138 hectares in 2000¹². In the Brahmaputra valley, the district of Dibrugarh, Sibsagar, Darrang, Lakhimpur and Nagaon shows growing trend. In the production of tea, almost all districts have shown a growing trend. Dibrugarh, Sibsagar, Darrang districts of Brahmaputra valley have recorded highest tea production. As regards the average yield of tea, it has been recorded highest in Darrang district with a 1912 kg per hectare, 1855 kg per hectare in Lakhimpur and 1756 kg per hectare in Nagaon district. Here it has been noticed that the Dibrugarh has got highest number of garden as well as area under tea cultivation and even production too, i.e., Dibrugarh, Sibsagar, they have less average yield as compared to the other district with a less number of garden, production and area under tea, e.g., Darrang, Nagaon, Goalpara, Kamrup, etc. This is highlighted in table 2.3.

2.11 Jute

Jute is a cash crops and the valley made in rapid progress in the cultivation of this important cash crops. The extension of jute cultivation is mostly due to the settlement of immigrant in the vacant farm land. Jute and *Aus-rice* are grown in the same land in the Brahmaputra Valley. The extension of jute in the valley was largely possible due to the presence of favourable factors controlling its even distribution and timely arrival, light silt renewed soils and clear water for rotting. It is a typical crop of a hot and humid climate the

Table 2.4: Area, Production and Yield Under Jute, Brahmaputra Valley 2001-02

District	Area (ha)	Production (bales)	Average Yield (Kg/ha)
Goalpara	3800	23940	1134
Dhubri	16150	131068	1461
Kokrajhar	2525	21072	1502
Bongaigaon	3895	40020	1849
Kamrup	3646	38726	1912
Nalbari	1315	12113	1658
Barpeta	3936	72412	1642
Darrang	7900	84591	1927
Sonitpur	2227	20691	1672
Nagaon	10666	148168	2628
Morigaon	4000	41111	1850
Jorhat	163	1613	1781
Golaghat	935	8979	1729
Sibsagar	46	455	1781
Lakhimpur	555	3810	1236
Dhemaji	165	1633	1781
Dibrugarh	16	158	1781
Tinsukia	13	129	1781
Brahmaputra	61953	650689	1781

Source: Directorate of Agriculture, Government of Assam, Guwahati.

growing season extends from February to September and is harvested in June. Jute cultivation is largely concentrated in new aluminium or the lower Brahmaputra Valley particularly in the sub-region of Nagaon, Kamrup, Darrang, and Goalpara. Area such as Dihing in Nagaon, Kharupetia in Darrang, Tarabari in Kamrup, Bilasipara in Goalpara is the centre of jute concentration. Table 2.4 illustrates the area, production and average yield of jute cultivation in the Brahmaputra Valley for 2001-02.

Among the other crops oil seeds, tobacco and sugarcane have their combined occupancy of 10.03 percent of the crops land while the remaining area are devoted to the practice of cotton, GGMS fruits, vegetables and potatoes. Besides these agricultural practices, the region acquires in raising popularity in this growth of Arboriculture, sericulture, pisciculture and animal husbandry as some allied activities of agriculture.

2.12 Transport and Communication

As far as transport and communication is concerned, Brahmaputra Valley has 1866 Km of National Highway, 1443 Km of State Highway and 22589 Km of other roads. Sonitpur district has a highest road length with 2423 Km and is followed by Kamrup district with 2415 Km. Lowest road length is found in the district of Morigaon with 766 Km. Table 2.5 gives the district-wise road length per lakh population and density per 100 Sq. Km geographical area. In addition to this, Brahmaputra Valley has a total rail network of 3533.22 Km, of which 3271.13 Km is meter gauge. This accounts for 0.063 Km of railway per 100 Sq Km of area. The Brahmaputra Valley has total navigable waterways of 3216 Km; of which only 1653 Km is navigable by steamers and large country boats. The

Table 2.5: Road Length and Density (1991)

Districts	Road Length per Lakh of Population	Road Length per 00 Sq Km Geographical Area
Dhubri	85	40
Kokkrajhar	124	31.7
Bongaigaon	107	34.5
Goalpara	153	56
Barpeta	93	39.7
Nalbari	136	61.3
Kamrup	121	55.6
Darrang	123	45.9
Sonitpur	170	45.6
Lakhimpur	139	45.9
Dhemaji	184	27.2
Morigaon	120	45
Nagaon	123	60.8
Golaghat	183	43.4
Jorhat	190	58
Saibsagar	198	67.2
Dibrugarh	138	42.5
Tinsukia	140	35.5

Source: Directorate of Economics and Statistics, Assam, Guwahati and Government of Assam, Statistical Hand Book of Assam, Directorate of Economics and Statistics, Guwahat, 2002.

Brahmaputra Valley has one major airport of Guwahati (Borjhar) out of the total of 5 airports in the Valley. This airport at Guwahati connects the valley, the state and the region with rest of the country and neighbouring countries.

2.13 Industries

The Brahmaputra Valley is very rich in industrial raw material. Its industrial economy is mostly unintegrated much of the resources remain under utilised. In fact, industrial development of the valley is handicapped by its isolation from rest of India, with inadequate infrastructure and a small local market. The valley received a strong impetus from the plantation sector for the development of tea, coal, petroleum and ancillary industrial units at an early stage. Since then only oil and tea industries have made sizeable advances. The present position of the industrial economy is mostly unintegrated. Commensurate development of diversified industries has not taken place to fill the gap. During the initial phases a number of industrial establishments (private and public sectors) have come up, but they received serious set back in 1962-65. Thus considering the potential for industrial development of the valley, except tea and oil, industrial activities in the valley is yet to take off in a big way.

The availability of substantial deposit of natural resources in the alluvial plain of the Brahmaputra Valley like petroleum and natural gas, forest, coal, limestone, etc. were capable of providing a favourable base for industrialisation particularly in the field of engineering, chemical and agro-based industries. Yet, the region reflects a scenario of economic backwardness, i.e., stagnation in agriculture and industry today.

Industrialisation of this region is closely associated with the development of tea plantation and also with petroleum, which is the single most important mineral resources. It has ample scope for encouraging industrialisation and processing and refining oil in the region. Trial boring started in 1989. The Assam oil Company was formed in 1899 and the Digboi Refinery was set up in 1901. The Third major industry is the plywood industry. Like tea and petroleum, this was set up in 1918 with the setting up of the Assam sawmill and Timber Company and Assam Railway and Trading Company at Margherita in 1924. But it was only during the early 1970's that efforts were made to develop the down stream (Lower Brahmaputra Valley) with Bongaigaon as a focus. The region has two well-developed modern industries, viz., Tea and Oil. Besides, there are plywood unit, jute and sugar mills, the cement factory, the match factory, etc. The industrial landscape of the region is confined mainly to certain localities around Guwahati in the Lower Assam Valley and around Dibrugarh, Tinsukia in the Upper Assam Valley. The industries of the region can be grouped under following four broad categories (1) Agro-based industry (includes tea industry, food processing industry, sugar industry and textile), (2) Mineral based industry (includes metallic industry, non-metallic industry, chemical industry and coal, mining, natural oil and gas refining, (3) Forest based industry (includes saw mills, hand board factories, cane and bamboo works, furniture works, khoir and agar oil manufacturing unit).

In the agro-based industry, the valley is rich with its rice and flour mills and bakeries units. Rice, flour and oil mills are found in almost all the urban centres with higher concern tradition in Nagaon and Kamrup district. The two sugar mills of the valley

are located at Baruah Bamun Gaon of Golaghat District and Kampur of Nagaon District. The most important of agro-based industry of the region is the tea industry mainly confined in Dibrugarh, Tinsukia, Sibsagar, Jorhat, Golaghat and Sonitpur Districts. The region has 30630 tea gardens out of which 655 garden have tea processing factories. The five important districts, viz., Dibrugarh, Tinsukia, Sibsagar, Jorhat and Golaghat have 66.87 percent of the tea-processing unit (438 factories) of the valley and valley has 227947 hectares of area under tea cultivation (Table 2.3). The Brahmaputra Valley alone produces 45 percent of Indian tea, which contribute 15 percent of the state income of Assam. Textile industry is slowly developed with a jute mill at Silghat of Nagaon district, a span-silk mill at Jagiroad of Nagaon district and a span-cotton mill at Chariduar at Sonitpur district. The synthetic fibre industries based on petrochemical product are located at Bongaigaon of Bongaigaon district and at Jagi Bhakat Gaon of Darrang district¹³.

Among the Mineral based industry, fertilised plant at Namrup of Dibrugarh district was set up to utilise the natural gas available at Naharkatia Oil field. This is a public sector plant under the control of Hindustan Fertiliser Corporation Limited (HFCL). The main product is Urea and Ammonium Sulphate. In 1970 this plant produced 27.5 thousand metric tonnes of urea and 60.5 thousand metric ton of Ammonium Sulphate. At present the total production capacity of this plant has increased by three times.

Coal mining is confined exclusively to Margherita, Ledo, Borgolai, and Naharkatia area of Tinsukia district. In addition to above a few coke making and bricks and tiles making industries are to be found in the valley. The valley has sufficient deposits of crude oil. Three oil refineries have already been established at Digboi, Noonmati and

Bongaigaon. Besides these, the fourth oil refinery has been set up at Numaligarh (Golaghat district) in 1995¹⁴.

There are a few iron and steel mills of smaller sizes based on scrap iron reproduction factories at Dibrugarh, Tinsukia, Jorhat, and Amingaon. These mills produce the agricultural and tea garden equipments and fabricated structures. Presently the Steel Authority of India Limited (SAIL) has set up a steel plant in the valley at Atagaon, Kamrup district in 1997. This plant has a capacity of 40,000 tonnes of galvanised steel and corrugated sheets. There is a fairly good growth of engineering workshops at Tinsukia, Dibrugarh and Guwahati. Cement factory is located at Bokajan along the boundary between Golaghat and Karbi Anglong hill district.

The rich forest wealth of the valley has helped in the development of certain forest based industries such as Saw Mills, Plywood Factories, Match Factories, Paper Mills, Cardboard and bamboo Works, etc.

Saw mills are found in many localities along the forest belt with higher concentration at Dibrugarh, Tinsukia, Sibsagar, Jorhat, Golaghat, Kamrup, Nagaon and Kokrajhar districts. The main centres of the plywood industry are Margherita, Tinsukia and Mariani situated in the South Bank of Upper Assam Plain. Two important paper mills of the valley are at Jagiroad in Morigaon district and Jogighopa in Bongaigaon district. The only hardboard factory in the valley is located at Guwahati with a capacity of 50 tonnes per day. Match factory is located at Dhubri district while Khoir and Agar manufacturing units are confined mainly at Hojai and Lanka of Nagaon district respectively.

The miscellaneous groups at industries includes various household cottage industries, printing press, rice manufacturing distilleries, electric power production units, repairing workshop, etc. The household cottage industries includes handloom weaving, sericulture, pottery making, brass and bell metal industry, blacksmith, silver and gold similarly, etc. Spinning and weaving of cotton and silk also falls in this category, which creates part time service to the common indigenous woman folk. The three varieties of the regions handloom silk, i.e., Eri, Muga and Pat are widely known and their commercial production is limited to Kamrup district with higher concentration of commercial looms at Sualkuchi. The region has manufacturing of brass and belt metal utensils at Sarthbari in Barpeta district, Hajo in Kamrup district, Titabor in Jorhat district.

2.14 Regional Distribution

The industrial establishment in the valley are heavily concentrated in the Lakhimpur sub-division. This sub-region also has in comparison to other sub-region a large share of participation in the valley as a whole. Dibrugarh, Tinsukia, Digboi, Makum, Margherita, Namrup, Naharkatia, are the important industrial towns in a long belt by the side of the railway line. Doom Dooma and Moran are important centre at the tea industry. Sibsagar sub-region is favourably endowed in tea industry. Most of the gardens are located along the railway line from Borpather to Namrup. Major sugar mill are located at Dergaon, Jorhat, Golaghat, Sibsagar, Mariani and Titabor are the important centre for industry. Mariani is developing a large plywood factory. Darrang sub-division has no other industry except tea. It contains nearly 509 tea gardens of all sizes which employs more than 95

percent of the factory labour of the sub-region. A number of grain mills mostly Rice mills have come up along the railway line from Khairabari to Rangapara. Tezpur with its relatively better facilities of transport is the centre of agglomeration of industrial development in the district.

Kamrup sub-region is mainly an agricultural region. It developed agricultural processing and small-scale metal-based industries. Hajo and Sarthebari are the traditional centres of the metal-belt industry. Barpeta is for ivory product. Nalbari has manufacturing units of Jhapi, a kind of hat made from bamboo and palm leaves. District contains large number of rice and oil mills. Other factories are largely concentrated in and around Guwahati, which has a unique location with regards to facilities by way of road, railway, water way and air way. With the establishment of industrial estate, a large number of modern size industries have come up in the valley.

The location of refineries in the Noonmati has also generated boom of industrial growth in the suburbs of the city as a result large number of industrial unit producing different types of utility goods have sprung up recently. Nagaon sub-region also contain number of teagarden and is rich in agriculture, spun silk mill is located at Jagiroad in this district. The proposed jute mill will also be located at Silghat on the bank of the river Brahmaputra, Hojai, Lanka, Jamunamukh are noted for rice mill.

2.15 Level of Development in the Brahmaputra Valley

In order to draw an overall pattern of level of regional development and disparities, all the indices under different development sectors like Agriculture (A), Industry (I),

Infrastructure (In) and Social and Demographic (SD) have been combined together and total rank scores for the district has been found out. On the basis of the scores, the districts of the valley have been put to different rank in ascending order. Table 2.6 shows the Development ranks in the Brahmaputra Valley. Finally the district has been classified into four level of development (Table 2.7).

1. Areas in the first category of development are the districts of Kamrup, Nagaon, Morigaon and Barpeta. These form a compact area with more or less similar geographical characteristics. In addition, urban areas in these districts contributed a major share. This area has developed agriculture, high occupancy in agriculture (person per hectare of area shown), and a high density of livestock and poultry population per Kilometre. The area has a relatively better accessibility with other parts of the valley and the country. Likewise, it has fairly developed infrastructure facilities, service facilities and other socio-cultural amenities.
2. The area with moderate level of development is found in twelve districts and forms four compact zones. These are (i) Upper Brahmaputra Valley includes the districts of Dibrugarh, Tinsukia, Sibsagar, Jorhat, Sonitpur and Darrang; (ii) West-Central parts of the Brahmaputra Valley including Nalbari; and (iii) The Western parts of the Brahmaputra valley includes Goalpara, Bongaigaon and Dhubri districts

In Upper Assam, the moderately developed area is characterised by oil-tea base industrial economy. This development has led a greater urbanisation, consequently have

Table 2.6: Development Rank of the Districts in the Brahmaputra Valley

Region	Economic Sector				Score	Status
	A	I	In	SD		
Dhubri	42	22	51	7	13	9
Kokrajhar	48	42	31	143	284	15
Bongaigaon	-	-	-	-	-	-
Goalpara	36	36	26	90	188	8
Barpeta	20	21	32	101	174	4
Nalbari	15	19	26	107	187	7
Kamrup	37	12	19	75	143	1
Darrang	25	27	36	127	215	13
Sonitpur	42	22	22	105	193	10
Lakhimpur	37	32	22	111	222	14
Dhemaji						
Morigaon						
Nagaon	22	19	34	88	163	3
Golaghat	60	21	27	132	240	13
Jorhat	39	24	19	103	183	5
Sibsagar	40	23	20	124	207	12
Dibrugarh						
Tinsukia	33	10	27	94	186	6

This is based on the average of data available for the period 1991-2001

Table 2.7: Status and Level of Development

Index	No.	District	Status
143-179	5	Kamrup, Nagaon, Morigaon, Barpeta	Developed
180-214	12	Dibrugarh, Tinsukia, Sibsaagar, Jorhat, Goalpara, Dhubri, Sonitpur, Darrang, Nalbari	Moderately developed
215-251	3	Lakhimpur, Dhemaji, Golaghat	Under developed

* This is based on the average of data available for the period 1991-2001 (quoted from Gopalakrishnan, R. (2000), *Land and People of Assam*, Omsons, Guwahati & Delhi, p. 196).

encouraged comparatively more favourable infrastructural facilities. This zone has a high literacy rate than other district in the valley (Jorhat, Sibsagar, Dibrugarh district rank first, third and third and fourth in literacy rate in the state). In the middle and lower part of the Brahmaputra Valley in the northern bank is attributed mainly to the dominant agricultural activity, i.e., Darrang and Nalbari district which maintain their primary (first and second position) for net area sown. Nalbari district also tops in the density of livestock and poultry population per Km. This zone has a high road length per 100 Km. of area (Nalbari tops the rank in the valley)¹⁵.

Lower part of the Brahmaputra valley, i.e., Goalpara, Bongaigaon and Dhubri district falls under this level of development. The districts of Lakhimpur, Dhemaji in the northern bank and Golaghat in the southern bank of the Brahmaputra Valley come in the category of under developed region.

This zone is much behind than other districts in agriculture, industrial activities, and in infrastructural facilities. Incidence of flood is more common in this zone and are also characterised by numerous turbulent tributaries like Subansiri in the right bank. Again the Kokrajhar district in the lower most part of the valley forms the backward area of the valley. Lack of industries, infrastructural, agricultural and agricultural facilities have been the pivot factor for low development of substantially high density of substantially high density of population is indicators of factors that have entirely different implication.

2.16 Cultural Landscape

Regional structure of physical landscape and the morphology of a region plays the vital role in the evolution of cultural landscape, i.e., population growth, pattern of human settlements, nature of land-use, socio-political organisation, economic activity of a man in a region. The locational factors, spatial characteristics of the transport network, degree of urbanisation, industrialisation, and the past economy are the major attributes of the socio-cultural situation in a region. The valley is predominantly based on agriculture having a characteristic of agrarian economy reflects in all economic activity.

2.17 Population Characteristics

The Brahmaputra valley witnesses a contracting scenario in respect of growth of population, density and distribution of population. In the year of 1971, the Assam valley had a total population of 18,84,046 person and has increased the population of the valley in 1981 with its total population of 1,55,61,600 (Estimated figure in 1981) having the percentage of decennial growth 24.92 percent and percentage of growth with 1872 as a base is 725.97 in 1991 and in 2001 it has gone to 1215.11 percent¹⁶. In 2001, the valley with 71.00 percent of the total Geographical area of the state of Assam has 85.03 percent of the total population of the state. It has an area of 56,694 Sq. Km and a population of 2,26,51,096 persons in 2001. The Brahmaputra valley constitutes 1.69 percent of the total area and 2.21 percent of total population of India¹⁷.

Table 2.8 shows the growth of population in the valley since 1872-2001 year.

The existing population of the Brahmaputra valley is an outcome of ten streams and average of population migrates to this region from time to time from the various part of

Table 2.8: Population Growth in the Brahmaputra Valley (1872-2001)

Year	Total Population (Persons)	Decennial Growth (Persons)	Percentage of Decennial Growth	Percentage of Growth with 1872 Population as Base
1872	1884046	-	-	-
1881	2252003	367957	19.53*	19.53
1891	2476481	224478	9.97	31.44
1901	2619077	142596	5.76	39.01
1911	3107755	488678	18.66	64.95
1921	3856507	748752	24.09	104.69
1931	4723833	867326	22.49	150.76
1941	5666248	942415	19.95	200.75
1951	6747551	1081303	19.08	258.14
1961	9179127	2431576	36.04	387.20
1971	12456477	3277350	35.70	561.16
1981	15561600**	3105123	24.92	725.97
1991	19109302	4573802	52.53	968.73
2001	23751392***	4642090	24.29	1215.11

* - Growth over 9 Years; ** - Estimated Population for 1981; *** - Provisional Population

1. Allen B.C.; Gait E.A.; et al.:

2. Census Reports, Assam; 1951, 1961, 1971, 2001

3. Statistical handbook, Assam, 1990: Directorate of Economics and Statistics, Government of Assam, Guwahati.

4. Census of India, 1991, Series-4, Part – 1, Assam of 1991, Provisional Population Totals, Directorate of Census Operation, Assam, Guwahati.

India and abroad. The region witness diverse racial and linguistic group from near and far and this process is responsible for the emergence of a socio-culturally complicated demographic pattern. Population of this region can be classified viewing on the level of socio-economic and cultural adoption of the population in to three distinct groups:

- (i) Indigenous permanent settlers,
- (ii) Non, Indigenous permanent settlers,
- (iii) Non-Indigenous money earners having domiciliary habitat outside this region.

This classification of the inhabitants has been made irrespective of their racial, linguistic and religious identities. It is basically a functional classification that represents the economic and emotional relationship between the dwellers and the land.

During the period of 1826, the Brahmaputra valley region had a population of over seven lakh. The ancestors of three seven lakh population representing the stream and waves of the Tibeto-Burman, caste-Hindus and the Scheduled Castes, Ahoms, the Muslim, and *Tai* people with Buddhist culture. It is important to note that the migratory waves of these groups of people in the pre-British were slow and their survivors had completely assimilated with other groups of people who came earlier to this region owing to the loss of their cultural linkages with the original homeland. And subjected to the process of natural growth, seven lakh settlers of the region in 1826 have increased to some 5.3 million in 1971 and are now, becoming the nucleus of the indigenous permanent settler groups. Process of migration assimilation and distribution of this group of population were very negligible. We are very negligible. These people were accustomed with subsistence

farming and service-oriented occupation of intra-regional ranges keeping them self-less away from frequent intra-regional migration¹⁸. Only a small number of persons who had travel occasionally were the pilgrimage, sight seeing in distance place.

Non-indigenous permanent settlers entered in to this region during the British reign, and even after the 1947 AD. Introduction of commercial plantation of tea in the Brahmaputra valley has open a opportunity and there started a continuous recruitment of labourers from central India, Orissa highland, south-Bihar and Telengana. These labourers account ten per cent of the state population in 1901 (ii). Introduction of a colonial system of administration cum-resource, functioning had also initiated the chain of migration from Bengal, North India Rajasthan, and Nepal as a clerks, factory works, traders and soldiers. Nearly 1.5 million landless Muslim agricultural immigrants from East Bengal had entered into the lower Brahmaputra valley between 1901 and 1947, which brings a spectacular charge of demography and economy of the state within a short period. Again after the partition of India in 1942 nearly 8 lakh Hindus refugees from the newly created East Pakistan had migrated into the region and settled permanently.

Non-Indigenous job seekers or money earners group of people use to migrate into this region from various states of the country as such, service holders, industrialist, seasonally migrating workers and traders. And above found in town industrial centres, transport nods and trade centre of the region. They reside here till termination of their works. This group of influx is encouraged because of direct rail connection, which has the advantage of easy form of personal movement in outwards and inward direction. These groups of people were not able to assimilate with permanent settlers¹⁹.

The distribution of population in the Brahmaputra valley is extremely uneven. Distribution of population in the region can be categorised into three zones that includes. (i) Upper Assam valley (ii) Lower Assam valley and (iii) Central Assam Valley. Each of this zone has got different pattern. Higher concentration of people is noted in western and central part.

The upper Assam valley area covers by district of Tinsukia, Dibrugarh, Lakhimpur, Dhemaji, Sibsagar, Jorhat and Golaghat with 38.62 percent of the total area of the region and only 30.47 percent of the total population in 1991. The lower Assam valley the area covered by Dhubri, Kokrajhar, Bongaigaon, Goalpara, Barpeta, Nalbari and Kamrup district. This zone on the contrary constitutes 35.85 per cent of the total area of the region and has 42.33 percent of the total population in 2001. The central valley comprises of Morigaon, Nagaon, Darrang and Sonitpur district. This area maintains balance with 25.52 percent of the total area and 27.69 percent of the total population of the valley. Higher concentration of population in the lower Assam valley may be due to developed transport network growth of Guwahati as regional Trade as well as industrial centre which resulted migration population from neighbouring state at different time are likely to be responsible for higher concentration of population in lower Assam. In 1971, district of Nagaon had lowest density i.e. 126 person per Sq. Km in the Brahmaputra Valley. High density was in the district of Lakhimpur 302 person per Sq.Km; followed by Kamrup 289 per Sq.Km; Goalpara 215 per Sq.Km (Appendix 2.I). This trend had shifted in 1991, during this period, lowest density was observed in the district of Dhemaji 148 person per Sq.Km and highest density in the district of Nagaon 494 person per Sq. Km; followed by Dhubri 473 person

ASSAM
BRAHMAPUTRA VALLEY
DISTRIBUTION OF POPULATION
(2001)

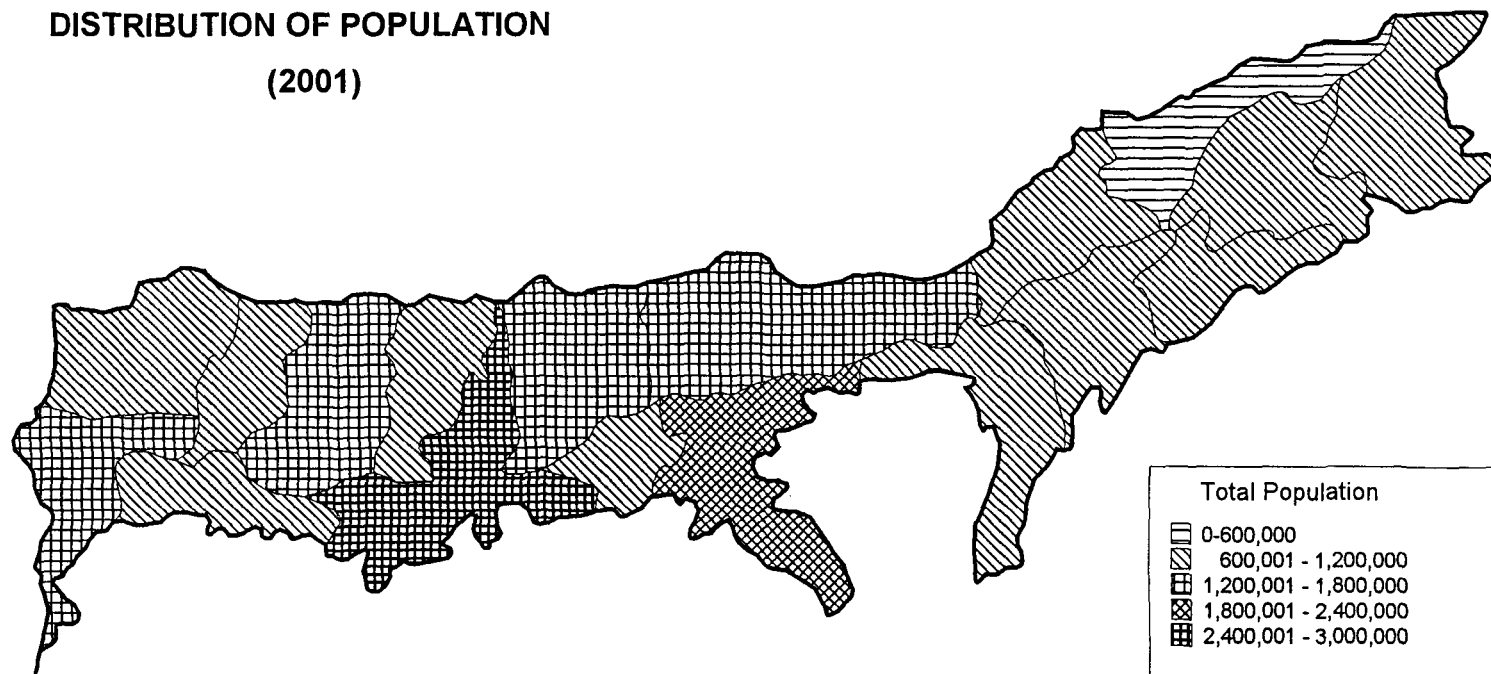


Fig. 2.4

Table 2.9: Population Characteristics of the Brahmaputra Valley, 2001

District	Area (Sq.Km.)	Population	Population Density (Persons/ Sq. Km.)	Percent of Area to Total Area of the Valley	Percent of Population to Total Population of the Valley
Kokrajhar	3129	930404	297	5.57	4.11
Dhubri	2838	1634589	576	5.05	7.22
Bongaigaon	2510	906310	361	4.47	4.00
Barpeta	3245	1642420	506	5.77	7.25
Nalbari	2257	1138184	504	4.02	5.02
Darrang	3481	1503943	432	6.19	6.64
Sonitpur	5324	1677874	315	9.47	7.41
Lakhimpur	2277	889325	391	4.05	3.93
Dhemaji	3237	569468	176	5.76	2.51
Goalpara	1824	822306	451	3.25	3.63
Kamrup	4345	2515030	579	7.73	11.10
Morigaon	1704	775874	455	3.03	3.43
Nagaon	3831	2315387	604	6.82	10.22
Golaghat	3502	945781	270	6.23	4.18
Jorhat	2851	1009197	354	5.07	4.46
Sibsagar	2668	1052802	395	4.75	4.65
Dibrugarh	3381	1172056	347	6.02	5.17
Tinsukia	3790	1150146	303	6.74	5.08
Brahmaputra Valley	55694	22651096	403	100.00	100.00

Source: Statistical Handbook, Assam, 2002, Directorate of Economics and Statistics.
Government of Assam

per Sq. Km, Kamrup 460 per Sq. Km, Barpeta 427 person per Sq. Km. District with low density were Tinsukia, Sonitpur, Sibsagar, Kokrajhar, Golaghat and Goalpara (see Table 2.9 and Appendix 2.II).

From the table 2.9, it has been known that the Nagaon district recorded higher density of population of 604 persons per sq. km. while Dhemaji district has the lowest density with 176 persons per Sq. Km (Appendix 2.I, 2.II, 2.III). Interestingly, in the Brahmaputra valley eight districts shows the highest density to more than 400 per Sq.Km (this includes Darrang, Kamrup, Nalbari, Barpeta, Goalpara, Dhubri, Morigaon, Nagaon district). A zone of continuation extending from the central lower Assam valley of the North Bank plain and up to the central lower and Central Assam Valley of the south bank of the region and again moderate density district in the valley are Bongaigaon, Golaghat, Jorhat, Tinsukia, Dibrugarh, i.e., between 300-400. In the study area the biggest district is the Sonitpur and Morigaon is the smallest district. The Brahmaputra valley has the density of population 403 persons per sq. km. Kamrup and Nagaon shares highest percentage of population to the total population of the valley, i.e., 11.10 and 10.22²⁰ percent respectively (Fig. 2.4 and Table 2.9).

2.18 Rural and Urban Population

Distribution of Rural and Urban population in a spatial unit is also plays vital role to know the inner phenomena that occurs in a area. In the Brahmaputra Valley, it has been observed that, there has been a sharp change in the rural population. if we observed the scenario from 1971 to 2001. The district of Nagaon (20.27 %), Morigaon (21.61 %),

Dhubri (24.23 %), Goalpara (22.56 %), and Dhubri (24.23 %) shows the high percentage of growth of rural population. In respect of urban population high decadal growth has been noticed in Dhemaji (342.36 %). In spite of low percentage of urban population 2001, there has been steady increase in the number of towns in the valley in every succeeding Census, i.e., during 1971, number of town in the valley was 61, it rose to 77, in 1991 and 108 in 2001 (Fig. 2.4 and Table 2.10).

The table 2.10 clearly indicates that the region presently has 108 urban centres in 2001. The district of Kamrup shows highest degree of urban population (with 35.80 percent of urban population is lowest in the Dhemaji district) with 6.91 percent. In this region district with highest number of urban centre,(eight) are Dhubri, Barpeta, Kamrup, Nagaon, Sonitpur, Jorhat, Dibrugarh, and Tinsukia while Dhemaji shows the lowest number of urban centres, (three). The districts having the urban population above the regional average of 12.88 percent are Dibrugarh with 18.77 percent, Tinsukia 19.49 percent, Jorhat 16.90 percent and Kamrup 35.80 percent. The growth of urban settlement during the period of 1901-91 is 670 percent in the region. According to 1991 Census reports, there were three declared cities in the valley namely Guwahati (with a population 5, 78,591 person) Dibrugarh with a population 1, 18,374 person) and Jorhat (with a population of 1, 04,917 person). Guwahati is not only a focal point in the Brahmaputra Valley but also plays a vital economic and commercial activity role for the entire North East Region.

Table 2.10: Population Composition of the Brahmaputra Valley, 2001

District	Rural Population	Urban Population	Urban Centres	percent of Urban to Total Population of the District
Kokrajhar	866772	63632	4	6.83
Dhubri	1444043	190546	8	11.66
Bongaigaon	796023	110287	5	12.17
Barpeta	1517280	125140	7	7.62
Nalbari	1110706	27478	2	2.41
Darrang	1430099	73844	4	4.91
Sonitpur	1530043	147831	7	8.81
Lakhimpur	824196	65129	2	7.32
Dhemaji	530138	39330	3	6.91
Goalpara	755017	67289	3	8.30
Kamrup	1614512	900518	10	35.80
Morigaon	737813	38061	2	4.91
Nagaon	2037466	277921	11	12.00
Golaghat	866625	79156	6	8.30
Jorhat	838549	170648	8	16.90
Sibsagar	955701	97101	5	9.22
Dibrugarh	952080	219976	10	18.77
Tinsukia	925972	224174	11	19.49
Brahmaputra Valley	19733040	2918061	108	14.79

Source: (1) Statistical Handbook, Assam, 2002, Directorate of Economics and Statistics, Government of Assam. (2) Provisional Population Figures, 2001, Census of India, Town and Village, Paper 2 of 2001, series 19.

2.19 Scheduled Caste and Scheduled Tribes Population in the Brahmaputra Valley

Table 2.11 indicates that the proportion of scheduled tribes and scheduled castes population in relation to the total population of the valley in the 1991 are 12.71 and 6.71 percent respectively. The proportionate of population in the Brahmaputra Valley was 10.67 percent (13, 28,743 person) and 5.6 percent (6, 93,044 person) respectively. So the growth of Scheduled cast and Scheduled tribe population in the Brahmaputra Valley during the period of 20 years (1971-91) are 2.04 percent and 2.11 percent respectively. The tribal population is highly concentrated (41.91%) in the Lower Assam Valley district, namely – Kokrajhar, Dhubri, Bongaigaon, Barpeta, Goalpara, and Kamrup. And moderate concentration of tribal population (31.67%) is observed in the four upper and central north district namely, Darrang, Sonitpur, Lakhimpur and Dhemaji district. Concentration of scheduled caste population to the total scheduled caste population is high in Kamrup and Nagaon districts respectively 11.83 percent and 14.89 percent. Simultaneously, high concentration of scheduled tribes population to the total scheduled tribe population is found in the districts of Kokrajhar, Kamrup and Dhemaji districts (13.64 %, 8.87 % and 8.71 %). According to the 1991 Census the Brahmaputra Valley has 12,74,170 persons scheduled caste population. So, the share of scheduled tribes shows the higher in the valley. For 2001 has been find out from proportionate percentage of Scheduled Caste and Scheduled Tribe figures. It has been observed that higher percentage of Scheduled Caste population has represented by Nagaon district (29.65%) followed by Barpeta (18.94%), Kamrup (18.64%) and Sonitpur (12.12%). Lowest has been noticed in districts of Goalpara (1.84%). In respect of Scheduled Tribe, it has been observed that district of Kamrup

Table 2.11: Scheduled Castes and Scheduled Tribes population in the Brahmaputra Valley, 1991

District	SC Population (Persons)	ST Population (Persons)	Percentage of SC Population to the Total SC Population	Percentage of ST Population to the Total ST Population
Kokrajhar	30114	329461	2.36	13.64
Dhubri	64161	32260	5.04	1.34
Bongaigaon	86744	141542	6.81	5.86
Barpeta	90687	110452	7.17	4.57
Nalbari	89194	179641	7.00	7.44
Darrang	64350	224957	5.05	9.31
Sonitpur	81000	152498	6.36	6.31
Lakhimpur	60180	177156	4.72	7.34
Dhemaji	30482	210312	2.39	8.71
Goalpara	36746	115099	2.88	4.77
Kamrup	150743	214340	11.83	8.87
Morigaon	88136	98483	6.92	4.08
Nagaon	189693	69848	14.89	2.89
Golaghat	46262	84916	3.63	3.52
Jorhat	66311	105307	5.20	4.36
Sibsagar	32303	34496	2.54	1.46
Dibrugarh	41927	82920	3.29	3.43
Tinsukia	25137	51493	1.97	2.13
Brahmaputra Valley	1274170	2415181	100.00	100.00

In respect of distribution of Scheduled Castes and Scheduled Tribes population in the Brahmaputra Valley, it has been noticed that during 1971, Nagaon represent highest percentage of Scheduled Caste population (9.95%) followed by Lakhimpur and Kamrup (5.77%) respectively. In respect of Scheduled Tribe population, Lakhimpur had high percentage (28.78%) followed by Goalpara (13.85%), Kamrup (10.60%). Lowest Scheduled represented by Dibrugarh (5.77%). The following Table has been

represent highest (26.50%) followed by Dhemaji (24.14%), Kokrajhar (23.78%) and lowest Scheduled Tribe has been noticed in district of Sibsagar (3.80%) (Appendix 2.III).

2.20 Level of Literacy in the Brahmaputra Valley

Level of literacy plays an important role in all human activities. It has got direct impact on economy, social structure, social institution, and development of areas as well as the level of ideological change among the people. A community with low level of literacy and a region with low level of literacy witness the occurrence of new types of crimes. The Table 2.12 shows the level of literacy rate in the Brahmaputra Valley:

From Table 2.12, it has been observed that district of Upper Assam such as Sibsagar, Jorhat, Golaghat, Dibrugarh have consistently indicated higher literacy rate as compared to other districts in the valley. Districts such as Goalpara (46.80%), Barpeta (43.20%), Darrang (42%), and Sonitpur (48.10%), show average literacy rate. But the district of Dhubri with 38 percent represent lowest literacy rates in the valley. This scenario of literacy has been changes rapidly in the Brahmaputra Valley during the period of 2001 (see appendix 2.III)

From Table 2.12 and Appendix 2.III, we can vividly observe the literacy percentage of the study area. The highest literacy rate has been assured in the southern part of Upper Brahmaputra Valley (that includes districts of Jorhat, Sibsagar, Dibrugarh, Golaghat) respectively, i.e., 77.91 percent in Jorhat, 75.33 percent in Sibsagar, 71.21 percent in Dibrugarh and 70.36 percent in Golaghat district in 2001. Percentage of literacy is moderate in the northern bank districts of Lakhimpur- 69.59 percent and Dhemaji- 65.96

Table 2.12: Literacy in the Brahmaputra Valley, 2001

District	Total Population (2001)	Literates (2001)	Percentage of Literates 2001	Total Population (1991)	Percentage of Literates 1991	Percentage Variation
Kokrajhar	930404	400,123	52.55	796880	40.47	12.08
Dhubri	1634589	649,944	49.86	1325653	38.36	11.5
Bongaigaon	906310	390,278	60.27	806472	49.06	11.21
Barpeta	1642420	449,754	57.35	1382715	43.24	14.11
Nalbari	1138184	769,225	68.08	1012608	55.99	12.09
Darrang	1503943	664,886	55.92	1286633	42.00	13.92
Sonitpur	1677874	694,570	60.29	1418484	48.14	12.15
Lakhimpur	889325	852,201	69.59	749675	58.96	10.63
Dhemaji	569468	517,607	65.96	472183	53.84	12.12
Goalpara	822306	313,511	58.56	661801	46.81	11.75
Kamrup	2515030	1,628,088	74.69	1987662	65.04	9.65
Morigaon	775874	375,465	59.46	640376	47.99	11.47
Nagaon	2315387	1,184,140	62.28	1892087	54.74	7.54
Golaghat	945781	568,250	70.36	801740	58.54	11.82
Jorhat	1009197	689,414	77.91	868445	65.51	12.4
Sibsagar	1052802	685,949	75.33	895112	64.46	10.87
Dibrugarh	1172056	717,603	71.21	1038090	58.32	12.89
Tinsukia	1150146	614,461	63.28	963176	50.28	13
Brahmaputra Valley	22651096	12,165,469	53.71	1899792	42.96	10.75

Source: Statistical Handbook of Assam, 2002, Directorate of Economics and Statistics, Government of Assam.

percent respectively. Low literacy is found in the districts of Dhubri – 49.86 percent, Kokrajhar – 52.55 percent and Goalpara – 58.56 percent, in lower part of the Brahmaputra Valley.

The districts of Kamrup district, other districts such as Darrang (55.92%), Nalbari (68.08%), Barpeta (57.35%), and Sonitpur (60.29%) in the northern bank have medium percentage of literacy rates. But in the southern bank high percentage of literacy is found in the districts of Morigaon, Nagaon, Golaghat, Jorhat, and Sibsagar.

To study the region thoroughly one of the important aspect of the society that is religion structure of population, cannot be undermined. This phenomenon like crime has got relation with the religious composition of the population. Some crime variable is highly associated and some crime variable is not with the religious composition in the study area. This aspect is a vital role in social, economic and political sphere (see Table 2.13).

From the above table 2.13, it has been noticed that the Hindu population shows the highest concentration, i.e., 68 percent followed by Muslim population (27.67%), Christian (3.09%), Buddhist (0.29%), in the Brahmaputra valley. In the valley, Tinsukia, Dibrugarh, Jorhat, Sibsagar, Lakhimpur, Dhemaji, Golaghat, i.e., Upper Assam of the Brahmaputra valley shows the highest distribution of the Hindu population, i.e., in between 80 to 90 percent. Moderate distribution is noticed in the Central and Lower Brahmaputra valley, i.e., Kamrup, Nalbari, Morigaon, Nagaon, Sonitpur, Bongaigaon. Lowest (28.73%) is noticed in the Dhubri district. Minority groups, is. E., Muslim population represent highest in Dhubri (70.45%) district and lowest in Dhemaji (1.49%). District of Kokrajhar shows

Table 2.13: Distribution of Religion in Brahmaputra Valley, 1991

District	Hindus	Muslims	Christians	Sikhs	Buddhists	Jains	Others	Total
Kokrajhar	66.38	19.33	9.82	0.01	0.10	0.09	4.27	100.00
Dhubri	28.73	70.45	0.57	0.01	0.01	0.17	0.06	100.00
Bongaigaon	64.00	32.74	2.22	0.06	0.03	0.12	0.83	100.00
Barpeta	40.26	56.07	0.26	0.01	0.01	0.04	3.35	100.00
Nalbari	77.48	19.94	1.08	0.00	0.08	0.11	1.31	100.00
Darrang	60.54	31.98	6.31	0.02	0.10	0.05	1.01	100.00
Sonitpur	80.20	13.33	6.00	0.07	0.22	0.09	0.09	100.00
Lakhimpur	79.70	14.51	4.05	0.05	1.63	0.03	0.04	100.00
Dhemaji	93.87	1.49	1.02	0.03	2.38	0.04	1.17	100.00
Goalpara	39.89	50.18	7.89	0.01	0.01	0.07	1.95	100.00
Kamrup	74.32	23.38	1.59	0.17	0.05	0.28	0.21	100.00
Morigaon	54.56	45.31	0.02	0.01	0.00	0.08	0.02	100.00
Nagaon	51.73	47.19	0.83	0.12	0.04	0.07	0.02	100.00
Golaghat	86.12	7.11	6.27	0.10	0.30	0.04	0.07	100.00
Jorhat	93.59	4.32	1.53	0.15	0.24	0.06	0.12	100.00
Sibsagar	89.26	7.63	2.32	0.14	0.33	0.05	0.27	100.00
Dibrugarh	91.30	4.49	3.42	0.19	0.35	0.08	0.17	100.00
Tinsukia	90.18	3.13	4.94	0.20	1.31	0.08	0.17	100.00
Brahmaputra Valley	68.00	27.67	3.09	0.08	0.29	0.10	0.77	100.00

In the valley in 1991, Hindu Religious group shows the majority i.e. 68 percent followed by Muslim 27.67 percent, Christian 3.09 percent. It is important to note that, during 1971, Dibrugarh and Sibsagar were the districts that had highest percentage of Hindu population (92.47 and 92.22% respectively) these were followed by Kamrup (69.95%), Darrang (78.45%) and Goalpara had the lowest Hindu population in 1971 (Appendix 2.I). Regarding Muslim population Goalpara indicated a high percentage (42.25%) and was followed by Nagaon (39.39%) and Kamrup (28.93%). It was lowest in Dibrugarh in the Brahmaputra Valley. But this phenomenon changed in 1991. In 1991, Dhemaji had the highest Hindu population (93.87 %), followed by Dibrugarh with 91.30 percent, Jorhat with; Tinsukia with 90.18 percent, Sibsagar with 89.26 percent, Golaghat with 86.12 percent, and Kamrup 73.32 percent. Dhubri represented lowest Hindu population with 28.73 percent. In respect of Muslims Dhubri 70.45 percent showed higher and followed by Barpeta 56.7 percent, Goalpara 50.18 percent, Morigaon 45.31 percent, Nagaon 47.19 percent. Lowest Muslim Population represents district of Dhemaji 1.49 percent followed by Tinsukia 3.13 percent and Jorhat 4.49 percent, Dibrugarh 4.49 percent. Christian religious population mainly dominate the district of Kokrajhar 9.82 percent, Darrang 6.31 percent, Goalpara 7.89 percent, Golaghat 6.27 percent, Sonitpur 6 percent and lowest in district of Barpeta 0.26 percent, Morigaon 0.02 percent, Dhubri 0.52 percent, Jorhat 1.53 percent, Dhemaji 1.02 percent, Nagaon 0.83 percent and Buddhist are highly dominated in the district of Dhemaji 2.38 percent, Tinsukia 1.31 percent, Lakhimpur 1.63 percent while comparing the religious group of 1971-1991 and 2001, it depict a picture that during these decade i.e. 1991-2001, there has been a little change in the pattern of religious composition in the Brahmaputra Valley. In the year of 2001, the religious population has been changed proportionately and shows almost same picture because in 1981 there was no census operation in Assam. So the growth could not be found out for the year of 2001. In 2001 changes of percentage of distribution of Hindu religious population has a little change in Lakhimpur 79.69 percent instead of 79.70 percent in 1991 and Tinsukia 90.12 percent instead of 91.18 percent in 1991 and Darrang 60.53 percent instead of 60.54 percent in 1991.

Source: Statistical hand book of Assam 2002. , Directorate of Economics and Statistic Government of Assam.

highest 9.82 percent of Christian population and moderate in Darrang, Sonitpur and Golaghat and lowest in the Morigaon district (0.02%) and Nagaon (0.83%), Barpeta (0.26%). Among the Buddhists, Dhemaji (2.38%) represent highest. It shows that in the Brahmaputra valley Hindu and Muslim religions dominate while Christians occupy third position.

2.21 Linguistic Composition

To know and study any kind of socio-cultural and economic phenomenon, a brief picture of percentage distribution of linguistic pattern of the study area felt necessary. This gives an overview idea about the dominant group in the study area. Table 2.14 shows the percentage distribution of linguistic pattern in Brahmaputra valley in 1991.

From Table 2.14 of the language distribution in the valley, it has been observed that there is a sea changed if we observed from 19971 to 2001 in the valley. In 1971, Sibsagar (85.77%) show the higher distribution of Assamese and Bengali (19.31%). In Darrang district, Dibrugarh shows the high percentage of Hindi linguistic group of population (11.28%) (Appendix 2.I). The entire district in 1971 shows high percentage of Assamese linguistic group. Bengali linguistic group of population mostly dominated in the district of Darrang, Nagaon, Goalpara, and Kamrup. Hindi linguistic group of population dominate in Darrang and Dibrugarh. In the year of 1991 (Appendix 2.II), it has been noticed that that there was a large variation in the distribution of the linguistic groups. Some district is highly dominated and some are not, e.g., Sibsagar, shows the high percentage of Assamese population (92.38%) followed by Jorhat (84.86%), Golaghat (84.10%), Dhubri (75.74%),

2.14: Percentage Distribution of Language in Brahmaputra Valley, Assam, 1991

(Percentage to Total Population of District)

District	Assamese	Bengali	Gujarati	Hindi	Kannada	Kashmiri	Konkani	Malayalam	Manipuri	Marathi	Nepali	Oriya	Punjabi	Sanskrit	Sindhi	Tamil	Telugu	Urdu	Others
Dhubri	75.74	17.68	0.00	2.51	0.00	0.00	0.00	0.01	0.00	0.00	0.20	0.02	0.01	0.00	0.02	0.00	0.00	0.00	3.78
Kokrajhar	22.07	19.70	0.00	2.50	0.00	0.00	0.00	0.00	0.01	0.00	2.45	0.17	0.00	0.00	0.00	0.00	0.00	0.01	53.07
Bongaigaon	48.80	27.76	0.01	3.19	0.01	0.00	0.00	0.02	0.01	0.01	0.81	0.07	0.07	0.00	0.00	0.01	0.13	0.01	19.09
Goalpara	54.94	22.49	0.00	1.06	0.01	0.00	0.00	0.01	0.01	0.03	0.31	0.01	0.01	0.00	0.02	0.00	0.00	0.01	21.09
Barpeta	62.66	28.51	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.01	0.01	0.00	0.00	0.00	0.00	0.00	7.78
Nalbari	71.61	8.03	0.00	1.16	0.00	0.00	0.00	0.00	0.01	0.00	2.26	0.16	0.00	0.00	0.00	0.00	0.00	0.00	16.77
Kamrup	72.41	13.61	0.02	4.76	0.01	0.00	0.00	0.06	0.25	0.03	1.25	0.11	0.16	0.00	0.01	0.03	0.23	0.02	7.05
Darrang	66.94	14.01	0.00	2.50	0.00	0.00	0.00	0.00	0.01	0.00	2.43	0.65	0.01	0.00	0.00	0.00	0.00	0.00	13.43
Sonitpur	54.73	13.16	0.02	6.75	0.00	0.00	0.03	0.02	0.01	0.00	6.43	2.83	0.06	0.00	0.00	0.01	0.05	0.03	15.87
Lakhimpur	64.94	9.82	0.01	3.44	0.00	0.00	0.00	0.01	0.01	0.00	2.45	0.40	0.04	0.00	0.00	0.00	0.02	0.01	18.85
Dhemaji	48.98	8.11	0.01	2.62	0.00	0.00	0.00	0.01	0.06	0.00	4.74	0.12	0.03	0.00	0.00	0.00	0.00	0.03	35.28
Morigaon	82.73	10.65	0.00	1.90	0.00	0.00	0.00	0.01	0.01	0.00	0.27	0.03	0.01	0.00	0.00	0.00	0.03	0.00	4.35
Nagaon	68.23	24.77	0.01	2.82	0.00	0.00	0.00	0.00	0.62	0.00	0.59	0.33	0.05	0.00	0.00	0.00	0.06	0.00	2.52
Golaghat	84.10	2.79	0.00	2.60	0.00	0.00	0.00	0.00	0.16	0.01	2.30	0.79	0.06	0.00	0.00	0.00	0.04	0.01	7.14
Jorhat	84.86	3.37	0.00	2.64	0.00	0.00	0.00	0.02	0.04	0.01	0.35	0.21	0.13	0.00	0.00	0.01	0.10	0.01	8.23
Sibsagar	92.38	2.00	0.02	2.09	0.01	0.00	0.00	0.02	0.08	0.01	0.60	0.57	0.07	0.00	0.00	0.01	0.07	0.02	2.04
Dibrugarh	82.45	5.62	0.08	7.42	0.00	0.00	0.00	0.03	0.07	0.01	1.54	0.62	0.21	0.00	0.00	0.01	0.19	0.02	1.71
Tinsukia	58.36	10.83	0.31	13.43	0.00	0.00	0.00	0.02	0.07	0.00	7.91	3.90	0.22	0.00	0.01	0.02	0.94	0.13	3.85
Brahmaputra Valley	67.40	14.49	0.03	3.70	0.00	0.00	0.00	0.02	0.11	0.01	1.98	0.64	0.07	0.00	0.00	0.01	0.11	0.02	11.41

Source: Statistical hand book of Assam 2002. , Directorate of Economics and Statistic Government of Assam.

Dibrugarh (82.45%) (Appendix 2.III). Districts that have low percentage of Assamese speakers are Kokrajhar (22.07%), Bongaigaon (48.80%), and Dhemaji (48.98%); whereas Bengali speakers were high in Barpeta (28.51%), followed by Goalpara (22.49%), Bongaigaon (27.76%), Kokrajhar (19.70%) and Nagaon (24.77%). Lowest was in the Sibsagar district (2.00%). In respect of Hindi linguistic group of population Tinsukia shows the high percentage of (13.43%), followed by Dibrugarh (7.42%), Sonitpur (6.75%), and Kamrup (4.76%) and lowest in the district of Barpeta (0.83%). Interestingly other largest linguistic group of population such as Nepali dominates the district of Tinsukia (7.91%) followed by Sonitpur (6.43%), Dhemaji (4.74%) and lowest in the district of Dhubri (0.20%). So, the distribution of linguistic group also gives us a vivid and an inner picture regarding the distribution of phenomena within these groups. It will also provide a basic idea about the association of the problem that has been undertaken for the study and for the study of problem, such as crime. Through knowledge of distribution of linguistic group felt necessary for the purpose.

2.22 Observations

- (1) The percentage growth of population in the Brahmaputra valley increases in all the decades, while observing the percentage of growth with 1872, population as base. In 1961, percentage of decadal growth was 387.20 percent and increases to 561.16 percent in 1971, 725.97 percent in 1981 to 968.73 percent in 1991 and 1215.11 percent in 2001.

- (2) The density of population in the Brahmaputra valley recorded highest in Nagaon district in all two decade, i.e., 1991 and 2001 km from 496 per Sq. Km in 1991 to 604 person per Sq. Km in 2001. Lowest density of population recorded in the Dhemaji district throughout two decades, i.e., 1991 and 2000. From 148 person per Sq. Km in 1991 to 176 person per Sq. Km, in 2001.
- (3) Number of town in the Brahmaputra valley shows in a increasing trend while observing in growth 1971 to 2001. From 77 in 1971 to 86 in 1991 and 108 in 2001.
- (4) Shares of Scheduled tribe population in the Brahmaputra valley indicates very high in the Lower Brahmaputra valley, because most of the district of lower Brahmaputra indicates high percentage of Scheduled tribe population as compared to Central and Upper Brahmaputra valley.
- (5) Through out the two decades, i.e. 1991 and 2001, Kokrajhar and Dhemaji show high percentage of Scheduled tribe population, from 13.64 percent in 1991 –to- 23.78 percent in Kokrajhar and Dhemaji 8.71 percent in 1991 to 24.14 percent in 2001. Shares of Scheduled tribe population were very low in the district of Dhubri through out the two decades in the valley, from 1.34 percent in 1991 –to- 3.99 percent in 2001.
- (6) While observing the Scheduled caste population, Nagaon district indicated very high share of Scheduled caste population through out three decade, from 9.95 percent in 1971 to 14.89 percent in 1991 and 29.65 percent in 2001.
- (7) Literacy rate has increase in all district in the Brahmaputra valley; Assam District of Jorhat recorded higher growth of literacy rate in two decade continually from

65.51 percent in 1991 to 77.9 percent in 2001. In the valley lowest literacy rate was found in the district of Dhubri in two decade, from 38.36 percent in 1991 to 49.86 percent in 2001. Region indicate an increasing trend of literacy rate from 42.96 percent in 1991 to 53.71 percent in 2001, which shows percentage of variation 10.75 percent in the Brahmaputra valley and Lowest variation was recorded in Nagaon, i.e. 7.54 percent, though district of Dhubri indicate growth of literacy rate over the decade, it remained below that of the regions average, i.e. 42.96 percent in 1991 to 53.71 percent in 2001. But percentage of variation was higher then regional variation, i.e., 11.5 percent of Dhubri and 10.75 percent of valley..

- (8) Dhemaji district shows highest percentage of Hindu population and Lower percentage of Muslim population in the valley, i.e. 93.87 percent Hindu; 1.49 percent Muslim which is lowest in the district of the valley. Again Dhubri shows highest percentage of Muslim population and lowest percentage of Hindu population over the decade, from 28.73 percent Hindu in 1991 and 2001 and 70.45 percent of Muslim in 1991-2002 (religious population figure for 2001 is a proportionate figure calculated by author by taking the percentage of the growth of population in the region).
- (9) Linguistically, share of Assamese linguistic groups of population was very high over the decade, i.e., 92.38 percent in 1991 and 2001; share of Nepali linguistic group was very high in the district of Tinsukia (7.91 %) in the Brahmaputra valley. Tinsukia shares high percentage of Hindi speaking group, i.e., 13.43 percent,

Bengali speaking group shares high percentage by the district of Nagaon, i.e., 24.72 percent in the valley over the decade, i.e., 1991 and 2001.

¹ Quoted from Barthakur, P. (1995): "The Bodo Tribal in the Changing Socio-Political Landscape of the Brahmaputra Valley – A Study in Political Geography", *Unpublished Ph.D. Thesis*, Department of Geography, Gauhati University, Guwahati.

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³ Singh, R.L. (ed.) (nd): *A Regional Geography*, National Geographical Society of India, Varanasi

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- ⁷ *Ibid*, p. 9.
- ⁸ Das, H.P. (1970): *Geography of Assam*, National Book Trust of India, New Delhi, p. 44.
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- ¹⁴ Gopalakrishnan, R., *op.cit.*, pp. 178-199.
- ¹⁵ *Ibid*.
- ¹⁶ Allen, B.C., Gait, et al. (1978): *Gazetteer of Bengal and North East India*, (reprinted), Mittal Publication, New Delhi.
- ¹⁷ Government of Assam (1971, 1991 & 2002): *Statistical Hand Book of Assam*, Directorate of Economics and Statistics, Guwahati and Allen, B.C. *op.cit.*
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- (ii) Census of India Reports on Assam, 1951, 1961, 1971, 1991 and 2001
- (iii) Government of Assam (1990): *Statistical Hand Book of Assam*, Directorate of Economics and Statistics, Guwahati.
- (iv) Census of India, 2001, Series 19, Paper 2, Assam, Directorate of Census Operation.
- (v) National Informatic Centre, Dispur, Secretariat, Guwahati
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CHAPTER – III

DEFINITION, CLASSIFICATION AND APPROACHES

3.1 Introduction

Since the beginning of human civilisation crime has been a baffling problem and widely seen as one of our most pressing social problem. Man's endeavours to fully grapple with it in order to end or arrest it, have proved partially successful. There is hardly any society, which is not beset with the problem of crime. Violation of norms or rules do occurs in a society and has been aptly corroborated by French sociologist Emile Durkheim in his esteemed treatise "crime as normal phenomena". He says, "A society composed of persons with angelic qualities would not be free from violation of norms of the society. Emile Durkheim has also pointed out, wherever there are people and lower, there are crimes and criminals: crime is present ... in all society of all types. There is no society that is not confronted with the problems of criminality. Its form changes the acts thus characterised are not the same every where, but every where and always there have been men who have behaved in such a way as to draw upon themselves penal repression....¹ What is normal simply is the existence of criminality. In fact crime is a constant phenomenon changing with the social change. Crime is a broad term of variable. In a

society people have some norms, beliefs, customs and tradition, which are implicitly accepted by its member as conducive to their well-being is healthy all round development. Infringement of three cherished norms and customs is condemned as anti-social. Thus many a writers has defined the termed crime as anti-social, immoral or sinful behaviours. However, according to the legal definition, crime is any forms of conduct, which is declared to be society harmful in a state and as such forbidden by law under pain of some punishment. P.W. Toppan² has defined crime as “An intensional act or omission is violation of criminal law, committed without defence and justification, and sanctioned by the law as fallacy and misdemeanour”. Many writers like Raffeale Garofalo, Beccaria, Jeremy Bentham; Montesque has defined crime at different sementee level. But crime is generally defined as an act and omission of an act for which the state can aptly sanctions. Justin Mular define crime is the commission or omission of act which the law forbids and commends under pain of punishment to be imposed by the state. Crime is basically the subject matter at criminology and involved in the study of human behaviours.

The existence of crime in a society is a challenge to its members due to its deleterious effect on the ordered social growth. In fact, it leads to a colossal waste of human energy and an enormous economic loss. Therefore, in the days of yore, the only conception of the punishment for the crime was death and the infliction of physical pain. In the list of Roman penalties, there was death by hanging. Hurling from the Tarpeian rock, crucifixion, breading, drowning in the sack, exile or beating with the rods. Besides, there barbaric and arbitrary forms of punishment, prison under the Roman Empire were also placed for the detaining offenders until they could be tried and executed. According to the

reasoning of these days a man who declared war upon society, forfeited his right to belong to it and as such he should be exterminated.

A little shift of ideology of capital punishment had been seen with the work of classical school represented by Beccaria and Jeremy Bentham. They were influenced by the writings of Montesquien, Hume, Bacon and Rousseau. Their “Essay on crime and punishments received wide acclaim all over the Europe. They sought to humanise the criminal law by insisting on the natural rights of human beings. He raised the voice of capital punishment, torture and death penalty this has resulted the reduction of capital punishment in Europe. He was also supported by Jeremy Bentham, Samuel Romilly, and resulted, reform of brutal criminal code of England. Along with this, the work of James Mackintosh, Thomas Foxwell Buxton and Robert Peel and also John Howard and Elizabeth Fery also made relentless effect to bring about reform³.

However, with the passage of time the old age idea of tetriculative deterrent and exemplary system of punishment has undergone a qualitative change and emphasis has shifted to correction reformation and rehabilitation of the offenders as a useful member of society.

The exponent of various school of criminological thought has given their respective definitions of crime. But their definitions are not very clear and free from confusion. It may therefore be pointed out that the criminal law gives a precise definition of forbidden acts that constitute crime and provide for the machinery and procedure to determine the violations and to identify offenders. Moreover the criminal law established substantive

norms of behaviours and more clear-cut specific and detailed standard than the norms in any other category of social controls.

3.2 Criminology

Criminology is ordinarily, the science of crime. The fact that criminology depend upon a variety of related social sciences and can not be ignored. Because criminology involved in the study of human nature in it's social setting and the study of man within that setting⁴. Crime, which is a subject matter of criminology, is neither a stable nor a homogenous concept. Sellin has remarked that crimes are like other phenomenon, which has no stable unit. According too him, a study of law making, law breaking and reaction to law breaking from the point of view of efficiency of the law as a method of control is a useful objective of a criminology.

Juridically, criminology is concerned not only with the law, which define crime but also with the uniformity in the application of these laws. It examines the moral standard and social values which serve to determine the limit of tolerance also prescribe acceptable behaviour. It covers the procedure for collection of data on crime, the suitabilities of interpretation and the statistical recording and measurement of crime. According to E.H. Sutherland, criminology is the body of knowledge regarding crime as a social phenomenon. It includes within its scope the processes of making laws, breaking laws, and reacting towards the breaking laws.

Many scholars have defined criminology in the different way and it appears that there are diversity of approach as regards scientific discipline of criminology and its operational definitions. However, in this regard, one can infer that theory and research of crime, criminal and social reaction were based on a normative orientation that is scientific in nature. Their goal consisted of a description, measurement, analysis, and interpretation of pattern uniformity, causal relationship.

The field of criminology is thus a broad one as a discipline, which makes scientific study of crime in all its aspect including a study of factors, which leads to crime in all its aspect including a study of factors which leads to crime being hidden and reported, prosecuted or tolerated, resented or accepted. It studies the economic conditions such as poverty, overcrowding, and unemployment source of earning, source of corrupt practices and influence, which may provide a background of crime. It involves a systematic study of different types of crime and criminal and of their relative importance at periods different of social and economic growth of society.

It examines the legislative policy of the government with regards to social and economic changes with reference to crime problem. It concerned itself with child-care, education, and training and treatment and rehabilitation of male adjusted and delinquent children.

3.3 Approaches

There are two fundamental approaches to the explanation of crime; first is individualistic or study of subjective approach and second is environmental and objective

approach. Individualistic approach lays importance to personality of the criminal and they fail to see the phenomenon which is not associated with the physical, biological and mental equipment of an individual. Environmental approach takes into consideration the physical and social condition. Though there are several other approaches to the study of crime, e.g., biological, legal, psychological, demonological, etc., emphasise has been given on environmental and spatial approaches in the present study⁵.

3.4 Sociological Approach

Emphasis on crime and delinquency as violation of behaviour of code of a state, is fundamentally not different from violation of behaviour codes of other social groups, e.g., the school, the family, the religious institution, the labour union, etc. The volume of violation of criminal code is only a small part of the total volume of violation of all behaviour codes in modern complex society.

Sociologists reject the idea that crimes are a natural and universal. There are various factors in the causation of crime and delinquency from the sociological viewpoint the most important being the environmental influences. Amongst the environmental factor for the causation of crime and delinquency is quite promising. Clifford R. Shaw⁶ in “Delinquency Area” found that certain slum area maintained extremely high delinquency rate constantly over many years. It is constant regardless of the population group living in it. Some of the important environmental factors are family condition, companionship factor, community condition, and economic condition⁷. There are several aspects of the

family factor, i.e., broken home, size of family, sibling position, unsatisfactory parent-child relationship, demoralised home condition, lack of discipline to controlled over child, etc.

3.5 Spatial Approach

Unlike the individualistic approach, environmental approach is a more sophisticated approach. This approach gave importance not on the personality of criminal but on the environmental condition which create favourable condition for the commission of crime. This gave much importance to sociological cultural, economic and political factors. Emphasis is given to human motivation. There locates the source of motivation outside the environmental and in the socio-cultural climate in which he lives. Here crime is viewed as social disorganisation, social problem, social deviance, social pathology, social dysfunction and social conflict⁸.

3.6 Relationship between Geography of Crime and Criminology

Criminology studies economic condition such as poverty, over crowding, unemployment, source of earning source of correct practice and influence, which may provide a background to crime that occur in particular geographical setting. The geography of crime, identifies the regional variation of crime pattern whereas criminology is identifies the basic component of behaviour which lead to a man criminal. Geography of crime is concerned with identification of problem, while criminology is concerned with, to find out new ways and means to control counter action. Hence, Geography of crime and

criminology can be said to be synonymous, as they have the ultimate objective to study the crime as a social problem in a defined spatial setting.

Geography of crime provides obvious launching pad of the various competing perspective within criminology. It leads with the spatial dimension, regional variation, and distribution of the crime. Crime is concentrated as areal covariance between various types of crime. The Geography of crime studies the crime pattern and mapped the incidence and correlates the delinquency. It also suggests possible causes of concentration of crime in the area. In the process it highlights the zone where criminality appears to be strongly correlated with areal concentration of poverty, disease and broken home; for example, in Chicago, crime rate in the inner most zone was found to be three times that of outer most zone.

3.7 Types of Crime

The eight major categories of crime and law breaking are classified by Marshall B. Clinaid and Richard Quinncy (1973) are: (1) violent personal, (2) occasional property, (3) occupation (white collar), (4) political, (5) public order, (6) conventional, (7) organised, and (8) professional of this we add a ninth category, i.e., (9) luvante delinquency⁹. But still we can categorise all above crimes in three principal types of crimes namely:

- (a) Traditional Crimes
- (b) White Collar Crimes
- (c) Organised Crimes

1. Traditional Crimes

Traditional crime is essentially a behaviour defined as criminal by law. These types of crimes are usually unorganised. Such types of crimes are held in low repute. Commission of such crimes requires comparatively little skill and talent. These types of crime are as under:

A. *Crime of Violence*

- (a) Murder: This is probably the most violent and most feared crime. It is a wilful killing of another. It is committed mostly out of enmity or revenge or to remove somebody out of one's enemy. Murder is usually a crime of passion and occurred due to provoked emotion.
- (b) Aggravated Assault: It is an unlawful attack by one person upon another with the purpose of provides him severely bodily injury by the use of weapon. The nature of crime is similar to murder but victim does not die.
- (c) Forceful Rape: Forceful rape is the carnal knowledge of a female through the use of force and the threat of force. It is violent in the nature but it is highly under reported crime because of fear. But degree of violence always there in these types of crime.
- (d) Robbery: This is a vicious type of crime which takes place in the presence of the victim to obtain valuables by use of force and threat of force. It may be house robbery, road robbery. It may be bank robbery, Post office robberies, etc.
- (e) Dacoity: There is little difference between robbery and dacoity because their modus of operandi is almost same. Dacoites operate in gangs well equipped with sophisticated

firearms. They generally loot property and there is also possibility of murder and rape in the course of operation.

- (f) Vandalism: This type of crime occurs when there is a wilful and malicious destruction injury; disfigurement of property and this is done without the consent of owner.
- (g) Weapons Carrying and Possessing: This type of crime occurs due to authorised possession of weapon, manufacturing weapon without proper sanction of law.
- (h) Prostitution: This crime is basically a commercialised form of sex such as prostitution, keeping bawdy house, procuring and transporting woman for immoral purposes. It is done against the will of a girl.
- (i) Narcotic Drugs Law: It is criminal offence to carry, possess, manufacture, use, sale and distribution of narcotic drugs.
- (j) Gambling: Gambling is a offence generally occur due to person involving in promoting, permitting and engaging in gambling and person engaging in this activity is called criminal.
- (k) Kidnapping: This type of crime takes place due to taking possession of the body of another person against his will, by force and fraud. It takes place for the purposes of murder, may be rape and marriage. Professional kidnappers are engaged in removing children for beggar, prostitution and getting ransom from the rich people.
- (l) Driving Under the Influence of Intoxication: This type of crime occurs due to driving and operating any vehicle under the influence of liquor or drug.
- (m) Drunkenness: Drunkenness itself is not considered crime in many nations. But in many countries where drunkenness is prohibited, there intoxication and drunkenness is

treated as crime, e.g., in decently exposure, disorderly conduct, assaults, never sexual violation. There are more avenues such as vagrancy (bagging, loitering) run away, which are characterised as a crime with victim.

B Crime Against Property

In the commission of such offences no violence and threat of force is used on victims. These offences usually occur in the absence of victim. So the question of identifying the criminal does not arise and solution of such cases are so low. These crimes are as follows:

(a) Burglary: It may be defined as unlawful entry into a structure to commit a felony theft.

In this type of offence, burglar may affect entrance in to a house by opening and breaking the door and windows, scaling wall and by cutting open passage in roofs. It may also be done by breaking/opening locks. Burglary is generally accepted as a crime of stealthy and opportunity. It is committed by both amateur & professionals. In this type of crime prevention and detection is a very difficult problem to law enforcement.

(b) Theft and Larceny: Theft and larceny is the unlawful taking and stealing property, without the use of force, violence, and trend. It includes various crimes such as shoplifting, pick pocketing, purse snatching, theft of auto-parts, bicycle theft, etc. Here offenders of theft and larceny are usually poor people who need money to support them.

(c) Auto-theft: This type of crime is mainly related with big cities. It is an unlawful taking of motor vehicle, scooters. In this, criminals are generally young age group population.

C. Other Types of Traditional Crime

- (a) Arson: When business premises, factories, houses, automobiles and personal property are deliberately put to homes by people trying to defend an insurance company. It is called arson. It is basically done by professional hired, and it is very difficult to convict an arsonist. It is a common features that when business declines arson increases.
- (b) Forgery and Counterfeiting: This type of crime is done by making altering, uttering, possessing checks, draft, bank papers, passports, stocks, certificates, etc. with intention to defraud. The work is done in such a manner that any thing pale is mode to appear true. Such as fabrication of old pictures, painting over a original, etc. forgery of signature of painting.
- (c) Fraud: This type of crimes are generally misleading balance sheet, excessive and misleading claim made by manufacturers, vendors, and advertisers of patent medicines, cosmetics and may other articles – advertising all these are the crime of fraud.
- (d) Embezzlement: This type of crime is often committed by trusted employees and workers with no criminal records. It is basically misappropriation of money or property entrusted to one's care, custody and control. It is motivated by expensive habit unusefull family expenses, illness of home, undesirable association, excessive drinking, gambling, etc.
- (e) Stolen Property: This type of crime occurs when some one buys, receives and possesses the stolen property.

2. White Collar Crime

Edwin A. Sutherland made the first systematic effort in 1939 to explain the white-collar crime. He is the originator of the concept. According to him, white-collar crime is a “violation of criminal law, by a person of the upper socio-economic class in course of his occupational activities”. It is mainly a violation of trust misrepresentation in advertising infringement of patent, trademark copyright, violation of labour law and breach of trust of various types. These types of crime are committed by upper socio-economic level persons of respectability and high social status. This type of crime is committed in business, e.g., commercial bribery, bribery of public official directly and indirectly in order to secure favourable contracts and legislation, misappropriation of funds, tax fraud, misappropriation of funds in receivership and bankruptcies. It also includes making, fraudulent claim of social security benefit, concealing assets in a personal bankruptcy. These types of crimes are less frequently detected by law authorities and white-collar crime is more injurious to social health in comparison to traditional crimes. In these types of crime financial losses are very much higher and secondly its damage is inflicted on public moral, prosecution for this kind of crime frequently avoided because of the political and financial importance of the parties concerned either because of apparent triviality of the crime or because of the difficulty of securing evidence sufficient for prosecution.

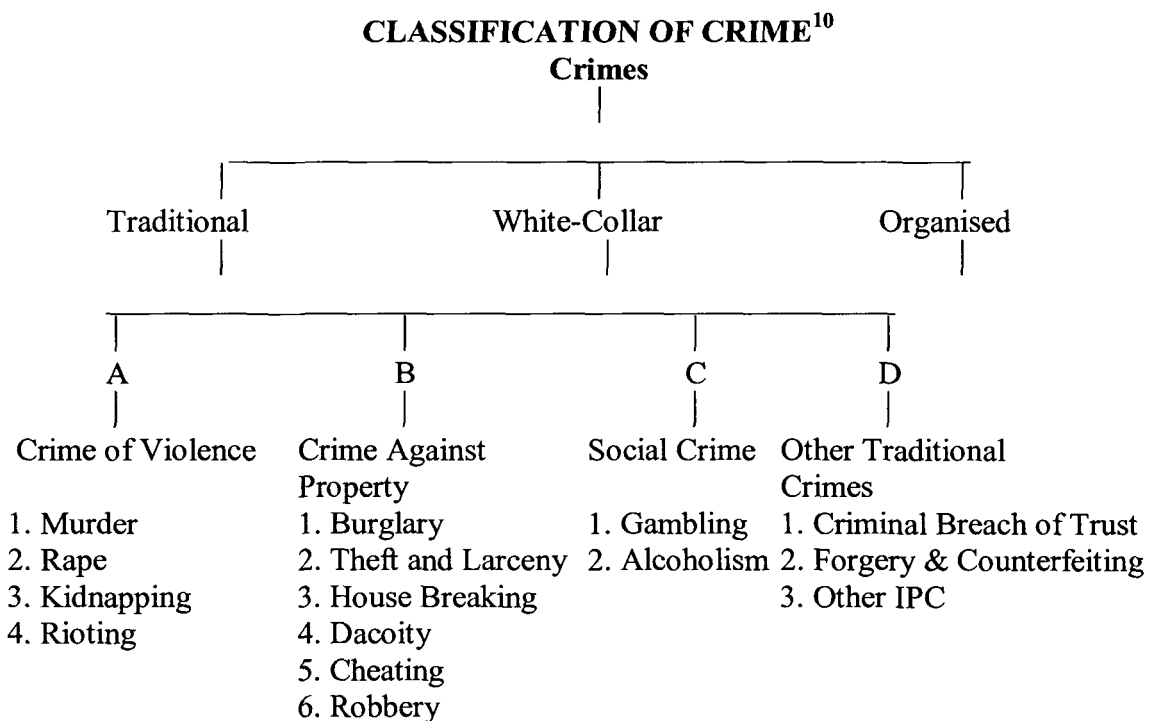
3. Organised Crime

Organised crime is committed on a greater organisational level. It is rather an illegal enterprise, which continues over a certain amount of time and develops a

hierarchical structure of boss, lieutenants and operators. Cressy describes the organised by definition, occupies a position and social system on organisation and has been designed to maximise profits by performing illegal services and providing legally for hidden product demanded by the member of the broader society, for example, importer and wholesaler of narcotics. The members have cigarette a virtual monopoly on some legitimate enterprises such as vending machines and juke boxes and they owned a large proportion of less wages. They won several state legislators and official branches of government of the local and federal level. They own a variety of retail firms, restaurant and bar hotels, transport companies, food companies, cement supply houses, garbage, collection routes and factories. This type of crime is predominant in America and Italy. The main objectives in the organised crime is gambling, illegal traffic in narcotics, loan sharking, commercialised prostitution, labour and management racketeering and infiltration into legitimate business. Here the bosses of criminal organisations remain largely immune to prosecution and punishment organised crime depends for its survival on weak law enforcement. In the organised crime, involvement of politician is seen. Here criminal and racketeers are the profits of organised crime to buy up and operate legitimate enterprises as food industries, garment manufacturing, bars and taverns, securities, labour union, etc. and illegal method in organised crime. These types of crime pose a far more serious threat to society as a whole than does traditional crime. Or organised crime is thus a destructive epidemic that has spread disease in many segment of the society.

Which study the typology crime, it has been reveals the fact that although the various type of crimes are interrelated in some way or the other but basically are different

in their nature. No two crimes have same origin and are same nature. Though the traditional, white-collar crimes and organised types of crime have got some interrelationship and influence mutually but each of them have got their own unique characteristics and are product of their own peculiar situations.



3.8 Importance of Study of Crime in the Brahmaputra Valley

The Brahmaputra valley, Assam with its predominant agrarian economy, has share 85.03% of total population of the state, with 71% total geographical area; high percentage of non working population (84.70%) to the total non-working population of the state, which is (63.01%) percent of the state in 1991¹¹. Valley also shares (85.35%) percent of main worker to the total main worker of Assam. The Brahmaputra Valley has a low level of industrial development, with the shares of the tertiary sector at only 8.80% in 1991. Besides, the valley has a high percentage of rural population (87.12%) and low percentage

of urban population (12.88%) in 2001. The valley also experiences high percentage of growth of population. The Brahmaputra valley shares (85.03%) population of the state in 2001. It has a density of 403 person per Sq. Km. The valley also accommodates a large number of immigrant population. In fact, the location of the valley has added to its secular character and multi-layered social, cultural and economic identity.

With these, valley also witnessed various ethnic, linguistic, socio-economic and political problems such as, Agitation on the various demands, ranging from setting up of university in the valley or ranging to the separate homeland.

The period of (1979-1985), was the period of agitation in the Brahmaputra valley, witnesses a situation like, Road Block Chakkaband, Black out, economic blocked, by the Wets Bengal Government; withdrawing scholarship of the student, by the government to dismantle the situation¹². School had been closed down; classes of the School, Colleges and universities have been suspended¹³. Many students left school due to agitation, which has increases the unproductive consumer in the valley, simultaneously the Boro plain tribal agitation of 1987 onwards, for the separate identity and distinct position in the national life by agitation by All Boro students Union. The movement is basically socio-economic and cultural among the Bodo Kachari Tribe, which ultimately had taken recourse of militancy¹⁴. These entire environments of the state had created the problem of insurgency in the valley in the form of (ULFA, NDFB, and BLT, MALTA) etc. This problem at insurgency created the problem, like kid/abduction, Extortion, Rape, Rioting, Counter Fighting, Murder, Cheating and thereby, a social problem i.e. problem of crime in the valley.

The consequences of this long historical process at socio-economic and political situation, which is imprinted at present stage in the Geographical space in the different form, pattern and dimension, hinders the process of economic development in the state as well as valley, Assam¹⁵.

So the study of crime in the Geographical perspective as a social problem (crime), felt importance in the Brahmaputra Valley, Assam, so that, a total perspective can be find out to check this social evil (crime) in the society and also to reduce this social phenomena in the Brahmaputra valley, Assam.

In short, one can state that

1. There has been a change in the approach of study of crime from biological, legal, psychological, demographical approaches to environmental, spatial and sociological approaches and gave much importance to the sociological, cultural, economic and political factor and human motivation has been given to priority.
2. Study of crime is viewed as a study of social disorganisation, social problem, social deviance, social pathology and social conflict, while resolving crime becomes a part of spatial besetting.
3. Concentration of offenders role in the inner most zone was found to be of three times that of out most zone and broken home, unemployment and overcrowding as forwarded by different exponent on this line.

4. Creation of smaller character of society aim constant cultural linguistic, ethnic, economic and political layer as well as ethnic linguistic and economic and political problem has busted in the increase of crime in the state as well as valley.
5. Sequences of long historical process of socio-economic and political situation in different form, pattern and dimension which has hinders economic development of the state as well as valley has encouraged in the increase of instances of crime in the valley.
6. High percentage of rural population, non-working manpower, low percentage of industrial development, low percentage of secondary workers, tertiary workers, literacy rate, urban population and high number of influx of refugee population in the valley created a secular character of society, constantly of several socio-economic and political problem in the valley and ultimately push the state as well as valley towards the field of criminology and increase the crime rate.

¹ Durkheim, E. (1950): *Use of Sociological Method*, (8th edition), (translated by Sarah, A. Volvayang), John H. Miller Press, Illinois (Crime as a Normal Phenomena), p. 65.

² Paul, W. Toppan (nd): *Crime, Justice and Corruption*, p. 10.

³ Bhattacharyya, S.K. (1992): "Crime – Its Causes and Remedies", Subject specific articles, Civil Service Examination, *Employment News*, August 8-14.

⁴ Sirohi, J.P.S. (1992): *Criminology and Criminal Administration*, Allahabad Law Agency, Allahabad, p. 7.

⁵ This old theory explained criminological conduct to devilish possession and instigation.

⁶ Clifford R. Shaw (1942): *Juvenile Delinquency and Urban Area*, Chicago University Press, Chicago.

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- ⁷ Horton, P.B. and Lealies, G.R. (1970): *The Sociology of Social Problem*, (4th Edition) Appleton Century Crafts, New York, p. 153.
- ⁸ John Cater and Trevor Jones (1991), *Social Geography – An Introduction to Contemporary Issues*, Arnold, London.
- ⁹ Jullan, J. and Kornblum, W. (1983): *Social Problem*, (4th Edition), Prentice Hall Inc, New Jersey, p. 165.
- ¹⁰ Ministry of Home Affairs: *Journal of Crime in India*, BPR & D (Bureau of Police Research and Development), 1995, 196 and 1975.
- ¹¹ Government of Assam (2002): *Statistical Hand Book of Assam*, Directorate of Economics and Statistics, Guwahati.
- ¹² Deka, P. (1991): “A Historical Perspective of the Years of Student Protest in Assam, 1905-1972 – An Explanation of its Works”, *Unpublished D.Phil Thesis*, Department of History, NEHU, Shillong.
- ¹³ Joshi, M.P. (1980): *Assam, the Indian Conflict*, New Delhi.
- ¹⁴ Marak, S.R. (1990): “The All Bodo Student Union Movement Study”, *Unpublished M.Phil Thesis*, Department of Political Science, NEHU, Shillong.
- ¹⁵ Gopalakrishnan, R. (2000): *Land and People of Assam*, Omson Publication, New Delhi.

CHAPTER – IV

URBANISATION, PATTERN AND DIMENSION

4.1 Introduction

Urbanisation is a process of population concentration. It proceeds in two ways, first multiplication of the point of concentration and the increasing size of individual's concentration¹. According to Anderson² urbanisation is a two way process, it involves not only movement from village to cities and change from agricultural occupations to business, trade, service and profession, but it also involves change in the migrants attitudes of belief values and behaviours patterns. Anderson has given five characteristics of urbanisation, money economy civil administration cultural change, written records and innovations.

Both the processes are taking place in the under-developed countries today as it was in the industrialised countries of the similar stage of development although they do not follow the pattern of the highly urbanised industrialised western countries. In this context, Kingsley Davis³ aptly states, "that in their urbanisation the under-developed countries are definitely not repeating past history"⁴, substantiates this fact. Further the differences between developed and under-developed countries regarding urbanisation is clearly brought by Davis when he stated that "The first thing to note is that today's under-developed countries are urbanising not only rapidly than the industrial nation are now but

are also more rapidly than the industrial nation did in the hey day of their urban growth.... The cities in the under-developed area are far outstripping the city boom of the industrialising era in the 19th century. All this fact indicates that the process of urbanisation is not a phenomenon, which follows a set pattern but depends to a great extent on the characteristic of the urban system. Within which it takes place as Mobogunje⁵ pointed out.

The process of urbanisation in any given region reveals certain temporary and special pattern of the various characteristics of the urbanisation, which indicates its pattern in dimension. The most important of which is the degree of level of urbanisation. This is defined as the percent of the total population of the region inhabiting the urban settlements. The level of urbanisation is not an average and can vary independent of the size of the urban population, the number of urban settlement and their average size⁶.

4.2 History of Urbanisation

Cities have existed since ancient time. Until recently they represented only a relatively small proportion of the total population. The first city was probably founded only 5000 & 6000 years ago. The earliest great cities made their appearance in the valley at the Nile. Munnod mentioned that the earliest city at which we have any definite records is Memphis, the capital of Egypt under the old empire, which came to its close about 2500 B.C. Thebes, Babylon, and Nineveh developed in the valley of Euphrates and Tigris and was situated at the meeting place of there two rivers. It had a population of about 20000. All the other ancient cities, which followed these were, Athens, Corinth, Sparta, Syracuse,

Miletus and so on. These cities were not only trading centres, but also were chosen to perform defence function⁷.

But there were ancient cities that represented urban communities with a dynamic economic function in the modern sense of the term. Rome was one of the great ancient cities. It was considered to be best-governed city that the world possessed at any time. It had a cosmopolitan population that nearly reached the figure of million people. This made Rome the largest city of its time. It also represented the world's largest urban community. Rome introduced the first Municipality and code of conduct. Many cities that followed Rome preserved the basic tenets of Roman jurisprudence. Most of the cities in the latter part of eleventh century owed much of their growth to the political factor, for example, London, Paris, Berlin, Rhine, and who indicated signs of revival only after 11th century. Consequently, one can infer that in future neither defence nor political factor is likely to play a vital role in the location and growth of great community. Trade and industry are the determining factors in the growth of the twentieth century municipalities; sign of this have been seen particularly in orient as well as in Europe and America.

The massive growth of cities and metropolitan areas, and the shift of a significant proportion of the population to the urban area as was the result of industrial revolution. This brought about concentration of industrial units at selected places. The first modern society was the outcome of the industrial revolution in England during the late 18th and early 19th centuries. In the recent time both North America and Europe witnesses high and rapid urbanisation. On the contrary, countries in Asia and Africa have vast majority of its people in rural areas.

The growth, improvement of cities leads to the growth of population and division of labour, greater division of labour leads to increase specialisation, increase in specialisation operates to increase productivity, both because the specialise can concentrate on relatively simple activity and because the specialised function can more easily be mechanised and accomplished through the use of more human energy.

Cities facilitated industrialisation. Conversely, industrialisation also had striking effect on the growth of cities. In the pioneer country of industrialisation, Great Britain, for example, there were in 1801 only 106 cities or urban places each containing 5,000 inhabitants or more representing no more than 26 percent of the country's total population. Half-century later, in 1851, there was 265 urban centres, constituting 45 percent of the total population. By 1891 the growth had reached 622 centres representing 68 percent of the population. By the turn of the century, most of Europe was under the influence of the processes of industrialisation and urbanisation. By 1920, the population of Europe (excepting Russia) had 32 percent of its population classed as urban; by 1985 it was more than 70 percent, with the heaviest densities in industrial areas such as the Rhineland and the English midlands. Parallel development took place in the United States, where in 1970, 95 percent of the population of the United States lived in legitimate theatres; fine hotels etc. are located in the centre. The land in the centre is so costly that the buildings expand vertically, filling the centre of the city with sky-scrapers. Residential areas become separated from the place of work. Consequently, residence emerged as a symbol of one's social status. This led to segregation of residential areas where the inhabitants were distinguished by racial, ethnic, religious, occupational or pecuniary characteristics. In

general the higher the social status the more advantageous was the residence, from the point of view of space per person, architectural designs and scenic beauty, freedom from nuisances such as smoke and noise and so on.

Spatial segregation offered a convenient means of understanding the city's social organisation. Moreover, it was also found that fertility, mortality, and morbidity; illegitimacy, illiteracy, vice, pauperism, and many other indices of social behaviour differ sharply from one area of the city to another. It is also true that no section of a city is absolutely homogeneous and that often it is necessary to relate different indices of behaviour to the individual as a unit rather than to the area.

4.3 Urbanisation in India

For the past half century the urban development in our country has lead to the centrifugal movement of the village people to the urban areas that were located within fairly easy access of public utilities while examining the trend of urbanisation in India, we found that the existence of city in India is not a new one. From the remains of Harappa and Mohenjodaro it can be assumed that the inhabitant of those places had urban characteristics. One can observe that cities have not been alien to Indian cultural heritage for they have been a component of south Asian Civilisation for virtually its entire history.

It is not a denying fact that urbanisation which was prevalent in ancient India was differing not only in degree but also in kind formal that prevalent in the modern India; compared to the ancient cities, until recently they represent only a relatively small proportion of the population. for Indian context the massive growth of cities and

metropolitan areas, and the shift of a proportion of the population to urban areas has been a characteristics feature of past five decades or so.

In India 80 percent of the people live in villages non-urban communities, which have a continuity of structural stagnation of five millionaires. The rest of the population just twenty percent (20 %) live in urban and quasi-urban communities when we compare this, with the percentage of total population leaving in the urban areas in the western country India is certainly a land of village. This 20 percent of urban population of India constitutes 110million people a member which is equivalent to the total population of the common market countries and half of the population of the common market countries and half of the population of the U.S.A. the next increase of urban population, during the decade 1961-1971 has been of the order of 23 million which is equivalent to nearly half of the population of Great Britain. This huge increment to population has to be accommodated in urban centre. The following table shows the growth of urban population in India, Actual and Estimated (1901-2001) are:

From the above table 4.1 we can observe that the growth of urban population since 1901 to 1921 was gradual. Next two decades saw a gradual increase in the population but after 1941, growth of urban population indicated increasing trend. In 1961, urban population was 86.32 million and in 1981, 160.10 million and in 1991, 217.18 million and in 2001, 285.35 million respectively which shows 31.39 percent of decade increase tune 1991 to 2001 and shows an increase of 68.17 percent⁸.

Urbanisation in India has shown a continuously rising trend since 1961. There has been a spurt in the growth of cities and metropolitan areas. This has brought about a shift

Table 4.1: Growth of Urban Population of India

Year	Total Urban Population (million)	Increase (in million)	Percentage increase in each decade
1901	25.60	-	-
1911	26.32	0.72	2.81
1921	28.22	1.9	7.22
1931	33.42	5.2	18.43
1941	43.81	10.39	31.09
1951	61.87	18.06	41.22
1961	86.32	24.45	39.52
1971	109.11	22.79	26.40
1981	160.10	50.99	46.73
1991	217.18	57.08	35.65
2001	285.35	68.17	31.39

Source: Census of India, 1991, Series 1, 2 and Census of India (Provisional) 2001, Govt. of India, New Delhi.

of significant proportion of the population to urban areas. This has become a characteristic feature of last fifty years. This also suggested urbanisation in India was an off-shoot of the industrial revolution which treated a demand for a large number of workers at centralised location.

So, during the five decades between 1941 and 1991 the growth rate of urban population was between 3.4 and 3.8 percent every year. There has been between 1921 and 1971 a steady shift towards urbanisation as shows below:

Table 4.2: Rural and Urban Population in Percentage

Area	Percentage of rural/urban population to total population										
	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001
Rural	89.0	89.6	88.7	87.9	86.7	82.7	81.7	79.8	76.3	73.9	72.2
Urban	11.0	10.4	11.3	12.1	13.3	17.3	18.3	20.2	23.7	26.1	27.8

Source: Census of India, 2001 (Provisional) Population Table and 1991.

Further in 1931 the total number of cities with more than one lakh population was 32, it increased to 107 in 1961, 216 in 1981 and 317 in 1991 (excluding Jammu and Kashmir). Biggest cities with more than ten lakh populations increased from two in 1941 to nine in 1971 and 12 in 1981 and 23 in 1991.⁹

Thus, one can observe that the overall inability of Indian population is rather small in comparison with industrialised countries at western world with a small proportion of Indian population changing their residences. There has been a remarkable growth of immigrant population in India during the last few decades. From the perspective of regional pattern of Indian population mobility based on district wise data, it appears that

region comprising metropolitan cities and large urban nodes, arising areas plantation etc. are the force of migration flood. Taking the different state of India a study of inter state and between adjoining indicates that the state like West Bengal, Maharashtra, Assam, Madhya Pradesh, Karnataka, Gujarat and Delhi acted as major area of population gain which is also dominates by mates, unskilled to semi-skilled labour and rural born flocks. This trend as persisted throughout the last 50 years. The exception being Punjab, Kerala, Tamil Nadu and Andhra Pradesh changing town area of immigration in 1911 to these of out migration in 1960. Areas like Uttar Pradesh, Bihar, Orissa, Jammu and Kashmir, Rajasthan have persistently remains as a area of out migration throughout the period. Kar also remarked that the urbanisation in to an interesting stage, that is a the precursor to an era of metropolitism.

Bulsara¹⁰ gives a general appraisal of the urban situation in India as follows:

- (i) India is still 18 percent urban and 82 percent rural in contrast to some western countries where the population is 80 percent urban and less than 20 percent rural.
- (ii) Forbidding condition of rural living and difficult accessibility because of extremely poor communications, are also driving out the young, educated, able and ambitious persons to explore the amenities of organised urban life.
- (iii) The birth rate of rural India is characteristically higher in contrast to urban India.
- (iv) Commercial, industrial and administrative towns and cities produce the bulk of industrial goods in India, maintain the major part of educational, scientific and technological institutions and keep the wheel of the civilised life moving. There is a glaring contrast and imbalance between the rural and urban sectors.

- (v) The general low standard of living of the 82 percent rural population has made its impact felt in the urban centres. 30 percent and more of our urban citizens live in slums; nearly 70 percent of these living in metropolitan areas having a single room as residence, wherein they make in living room, bed room, kitchen, study and sick room all in an average area of 120 square feet of space between 4.8 persons of the average urban household. Nearly 70 percent to 80 percent have no independent tap, bathroom or latrine in their tenement. Nearly 75 percent to 80 percent of the households have a monthly income or less than Rs. 250/- per month between 5 members and some of the metropolitan estimates put 25 percent of the populations below distribution line and 37 percent below poverty line.
- (vi) The housing shortage and its inadequacy is reflected in the quality of family life, which can be gauged partially from the fact that very city without a solitary exception has an extremely adverse sex ratio, this varies from 1,660 to 1,710 males to every 1,000 females as in Bombay and Calcutta to 500 and 800 females to 1,000 males in most of the other cities of 100,000 and more population.
- (vii) The average urban income is estimated to be higher than the average rural income of gainfully employed persons. The average per capita expenditure is 40 percent more than that of rural house of olds.

4.4 Definition of Town Since 1901

No statistical study of urbanisation is possible unless adequate note is taken of the definition of an urban area, town and city, which varies throughout in world and even one census year to another in the same country.

Restricting ourselves to our countries context, we find that the census definition of town remains more or less the same for the period of 1901-1957 and it was only in 1961 that several modification were introduced to make it more satisfying from the statistical point of view. But the census superintendent was given a lot of latitude as regards the classification of the places on the broad line of the rural and urban.

The urban population of a country comprises the total population at its town, although the definition of the town remains the same in Indian census through the decades 1901-1957, unfortunately could not maintain its application, due to an inherent weakness in the definition itself. Census of India 1901.

Town Includes

Every municipalities of whatever size (2) all civil line not included in the municipal limit, (3) Every other collection of houses particularly inhabited by not less than 5000 person. With the provincial superintendent may decide to treat as a town or census purposes. (4) Thus the primary consideration for deciding whether a particular place is a town or not is the administrative set up, not the size of its population. Even though municipalities, civilian and cantonment with less than the population of 5000 were classified as town. On the other hand places with a population of 5000 and over were sometimes treats as overground village by the census superintendent. Who also had the

discretion to treat as a town any place, irrespective of its administrative set up or population size, definition of town over not totally objective in as much as it was not based on a rigid statistical test.

The 1961 Census Definition

The definition of the town adopted for the 1961 census was much more rigorous than the followed in the earlier census, and more important. Since this new definition. Was persuaded all over India as uniformly as circumstances would permit. Hence census towns were defined in 1961 on the basis of the number of empirical tests (a) a density or not less than 1000 sq.mile (b) a population of 5000 (c) Three fourth (3/4) of the occupation, of the working population should be non-agricultural, and (d) the places, should have a few pronounced urban characteristics and amenities. Consequently such a course implied the elimination of a fair number of places which had so far enjoyed the status of towns and emerged as a number of new places as towns in 1961, all over India.

Town Groups

1951 to 1961 one of the few features of the 1957 census was the adoption of the concept of town group, on distinct from 'town', 'towngroup' was (6) defined as a group of towns which enjoyed one another so closely as to form a single inhabitant urban locality. However the distinction between town and town groups was limited only to town group with an aggregate population of 100,000 and over. In 1961 census, slight modifications were made for improvement in tabulation shows, namely the concept of town group was

applied to all the urban classes and not to class I town only (population one Lakh and above) as were use in 1957.

Census

For the 1971 census modification of town was the same as in 1961 excepting slight modification of in clause (c) of the criteria of town, i.e. instead of $\frac{3}{4}$ (three fourth) of working population it was changed. $\frac{3}{4}$ of male workers to be engaged in non-agricultural activities. From this source the 'town', 'town group' was given and instead expression urban agglomeration was end. According to definition as an urban agglomeration includes urban areas outside the municipal boundaries of the city but exclude rural pocket.

According to that, in 1961, 18.3 percent of the total population were living in urban areas as against 10.4 percent in 1911. Till 1931 the extent of change was not significant. In 1961, the big cities, which constituted only 3.86 percent of the total number of urban centres, contained 44.50 percent of the urban population. On the other hand, small town with ten then 20,000 each constituted 71.70 percent at the total number of urban centres contained only 23.48 percent of the urban population compared with the 1911 census. It is found that during the course of 50 years, 62.2 percent to the small towns has either decayed or remain stagnant, on the other hand the large towns are gaining ground both in number ad in size in population.

Subsequent Census indicated declining percentage share of agricultural employment to the total employment, i.e., share of main workers declined from 72.0 percent in 1961 to 68.0 percent in 1981, and to 64.0 percent in 1991. It shows that by the

end of 2000 about 180 million to 200million people were added to the rural population and of this addition at least 10 crores of them civil come to urban areas in search of job.

4.5 Urbanisation in Assam

Assam is one of the least urbanised States of India. Only 12.72 percent of its total population in 2001 is estimated to as urban. The state's low level of urbanisation is associated with economic backwardness and low per capita income.

Most of the towns and cities in Assam are located along the Brahmaputra River. Many of these towns and cities occupy both the banks. Important cities/towns along the Brahmaputra River are, Dhubri, Goalpara, Tezpur, Guwahati, Mangaldoi, Jorhat, Sibsagar, Dibrugarh and so on. These were river ports or transit points. But with the development of railways and National Highways, some of these urban centres were marginalised. Socio-political environment in the state was also not conducive in the 1980's, and the 1990's. New urban centres emerged largely as a response to internal administrative changes and reinforcement of existing transport network and linkages. These created a pattern resembling ribbon. This feature is most pronounced between Guwahati and Dispur, the new capital of the state.

In Assam, towns emerged in association with tea plantation (Rangapara), Railway (Jogighopa, Rangia, Chaparmukh, Lumding, Farkating, Simaluguri) and mining activity (Namrup, Moran and Margherita Ledo, Duliajan Oil Town, Digboi), etc. Two major urban agglomerations are around Guwahati and Dibrugarh. Most prominent feature of these towns located in the Brahmaputra Valley, is that they perform the function of linking the

neighbouring hill states not only with its different administrative centres but also with the Valley and rest of the country. Assam is only the state, which touches all the other states of the North Eastern Region. Some of the towns of Assam have as regional status, such as Dispur; the state capital is the biggest town of North Eastern Region. Jorhat, Tinsukia, Dibrugarh, Nagaon, Silchar, Tezpur and Kokrajhar, and Sibsagar are some of the towns having location of strategic importance- all of them are nodal entry points for the neighbouring states in the region.

Towns of Assam are growing fast. This is evident in each Census period. The state's urban growth rate of 36.24 percent was higher than the National Average of 31.2%.¹¹ Surely urbanisation is going to assume a bigger dimension in the years to come. Some closely spread town of Assam connected with tea garden in Dibrugarh and Lakhimpur district in the North East and Darrang district in the west. The North Eastern part of Assam has a number of mining and industrial towns. Karbi-Anglong and North Cachar districts of Assam have only few towns over a large area. The frequency of towns increases in Cachar district because of its prominent regional location¹².

From Table 4.3, it has been observed that both in 1991 and 2001, the growth of urban population in Assam shows upward trend in three district i.e., North Cachar Hill, Jorhat, Kamrup, and 7 (seven) district of the 20(Twenty) district shows growth of urban population in Assam, such as-Tinsukia, Cachar, Bongaigaon, Sibsagar, Sonitpur, Golaghat, and Dhemaji. Rest of the thirteen districts in Assam shows slow growth trend of urban population. This shows that urbanization in Assam is very slow as compared to the total growth of population in the state, it has also highlighted the fact that North bank of the

Table 4.3: Urban Population of Assam, 1991 and 2001

District	Percentage of urban Population	
	1991	2001
Kamrup	32.76	35.81
North Cachar	22.87	31.19
Tinsukia	16.49	19.49
Dibrugarh	17.61	18.77
Jorhat	15.27	16.91
Cachar	9.81	13.97
Bongaigaon	9.15	12.17
Nagaon	10.87	12.00
Dhubri	12.16	11.66
Karbi-Anglong	10.63	11.42
Sibsagar	7.23	9.22
Sonitpur	7.30	8.81
Hailakandi	7.60	8.39
Golaghat	5.90	8.37
Goalpara	7.80	8.18
Barpeta	7.02	7.62
Karimganj	7.30	7.33
Lakhimpur	6.54	7.32
Dhemaji	1.86	6.91
Kokrajhar	6.34	6.84
Darrang	4.93	4.91
Morigaon	5.16	4.91
Nalbari	2.31	2.41

Source: Census of India, 2001, Series 19, Paper 2, Assam.

river Brahmaputra is less urbanised then the South bank in terms of percentage of urban population and numbers of District having growth trend of urban population in the state.

The state of Assam shows low level of urbanization. In 1971 the region had urban population of 12,89,222, which represent only the of 0.08 percent of the urban population as against 20.2 percent of India's urban population as a whole in 1991 and the number of towns increased from 72 in 1971, to 86 in 1991 to 108 in 2001.

Table 4.4: Rank and Hierarchy of Towns, Assam

Class	1901	1911	1922	1931	1941	1951	1961	1971	1981	1991	2001
I	-	-	-	-	-	-	1	1	-	3	3
II	-	-	-	-	-	-	1	5	-	4	7
III	-	-	-	1	2	6	10	10	-	20	22
IV	2	3	4	5	6	7	10	24	-	32	32
V	6	8	6	7	6	5	21	23	-	15	41
VI	4	3	12	9	10	7	11	9	-	12	3
Total	12	14	22	22	24	25	54	72	-	86	108

Source: Census in India 2001 (Provisional Figure).

The Table 4.4 that in 1961 and 1971 Assam had only one class I city and it has gone up to three (3) in 1991 similar position is notice ever for II class city. But we can observed from the above Table is that there has been sharp change in the IV class city from 1961, i.e., 10 ten, and it has gone up to Thirty-two (32) in 1991. So Assam witnesses a series of change in this level of urbanisation (see Table 4.5).

Table 4.5 shows the movement and growth of major town in the Brahmaputra valley from one class to another. From this transformation, it can vividly highlight the nature and trend of urban growth in the study area. As observed from the above table, there has been a sharp rise and movement of numbers of towns and urban agglomeration in

Table 4.5: Growth of Urban Centres in the Brahmaputra Valley, 1901-2001

[illegible]

[illegible]

Bengali											
Duliajan No. I	-	-	-	-	-	-	-	-	-	-	V
Tinsukia (OG)	-	-	-	-	-	-	-	-	-	-	V
Dibrugarh (OG)	-	-	-	-	-	-	-	-	-	-	V
Tezpur (OG)	-	-	-	-	-	-	-	-	-	-	V
Jorhat (OG)	-	-	-	-	-	-	-	-	-	-	V
Nagaon (OG)	-	-	-	-	-	-	-	-	-	-	V
Guwahati (OG)	-	-	-	-	-	-	-	-	-	-	V
Barpathar	-	-	-	-	-	-	-	-	-	-	V
Kumar Kaibartagaon	-	-	-	-	-	-	-	-	-	-	V
Sikonidhara	-	-	-	-	-	-	-	-	-	-	V
Senchowagaon	-	-	-	-	-	-	-	-	-	-	V
Naubaisa	-	-	-	-	-	-	-	-	-	-	V
Titabor Town	-	-	-	-	-	-	-	-	-	-	V
Moran Town	-	-	-	-	-	-	-	-	-	-	V
Barbari AMC Area	-	-	-	-	-	-	-	-	-	-	V
Lido Town	-	-	-	-	-	-	-	-	-	-	V
Lido Tikok	-	-	-	-	-	-	-	-	-	-	V
Borgolia Grant No. II	-	-	-	-	-	-	-	-	-	-	V
Bahbarigaon	-	-	-	-	-	-	-	-	-	-	V

Source: Census of India and General Population Table, Series 2 Part 2(A), 1971 and Statistical Handbook of Assam, Directorate of Economics and Statistics, Guwahati, 2001.

between 1957-1961 i.e., includes 22 town in 1951 and 49 towns and urban agglomeration in 1981). A rapid growth of V and Vi class town has been notice 1961 to 2001. This suggested that population of every large village increased to be classed as town in the succeeding Census. There is also remarkable tendency towards formation of urban agglomeration shifting rapidly.

District wise levels of urbanisation in the Brahmaputra valley in the following table shown:¹³

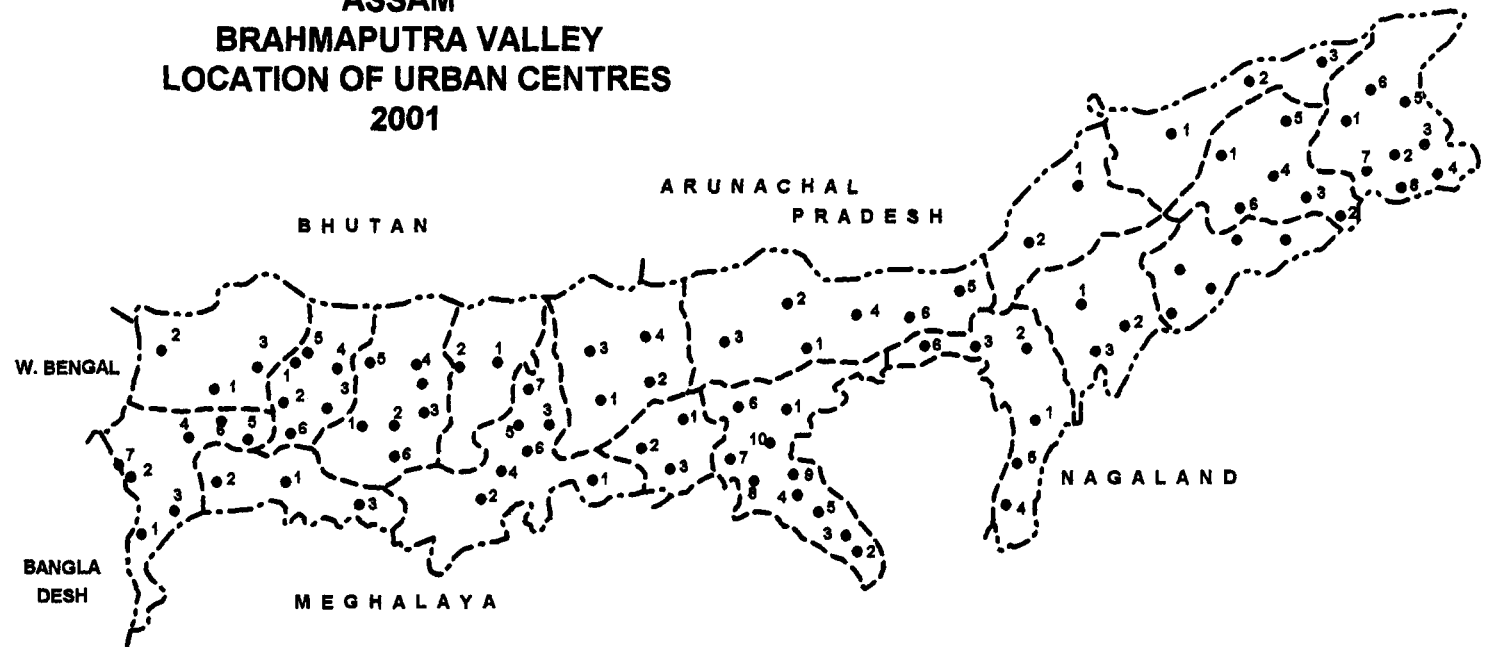
The above table from the table 4.6, it is observed that Kamrup district is highly urbanised district both in the State and in the Valley. This is in terms of percentage of urban population of all districts and percentage in valley as a whole (35.80% of the district and 3.97% of the Valley). It has 10 towns. Nalbari, Darrang and Morigaon are the least urbanised districts with 2.41, 4.91 and 4.91 respectively of urban population to the total population of the district (and shares 0.12, 0.33 and 0.17 percent of urban population to the total population of the valley). There are 3 towns in these districts. There are three district of Dibrugarh, Tinsukia, Jorhat in upper Brahmaputra Valley, show a higher urbanisation with a share of 0.97 percent, 0.99 percent and 0.75 percent of the total urban population of the valley, i.e., 12.88 percent. Two districts of Nagaon and Tezpur, in middle Brahmaputra valley have share of 1.23 percent and 0.65 percent of urban population to the total population of the valley. In lower Brahmaputra valley, the districts of Dhubri and Bongaigaon have high percentage of urban population, i.e., it is 0.84 percent and 0.49 percent respectively. From this analysis it is found that almost all the districts in the northern bank of the Brahmaputra except Sonitpur, Dhubri and Bongaigaon. Level of

Table – 4.6: Level of urbanisation in the Brahmaputra Valley

District	Total Population	Rural Population	Urban Population	% of urban popn to total popn of the district	% of urban popn to total popn of the Brahmaputra Valley	No. of Total towns
Kokrajhar	930404	866772	63632	6.84	0.28	4
Dhubri	1634589	1444043	190546	11.66	0.84	8
Bongaigaon	906310	796023	110287	12.17	0.49	5
Barpeta	1642420	1517280	125140	7.62	0.55	7
Nalbari	1138184	1110706	27478	2.41	0.12	2
Darrang	1503943	1430099	73844	4.91	0.33	4
Sonitpur	1677874	1530043	147831	8.81	0.65	7
Lakhimpur	889325	824196	65129	7.32	0.29	2
Dhemaji	569468	530138	39330	6.91	0.17	3
Goalpara	822306	755017	67289	8.18	0.30	3
Kamrup	2515030	1614512	900518	35.81	3.98	10
Morigaon	775874	737813	38061	4.91	0.17	2
Nagaon	2315387	2037466	277921	12.00	1.23	11
Golaghat	945781	866625	79156	8.37	0.35	2
Jorhat	1009197	838549	170648	16.91	0.75	6
Sibsagar	1052802	955701	97101	9.22	0.43	5
Dibrugarh	1172056	952080	219976	18.77	0.97	10
Tinsukia	1150146	925972	224174	19.49	0.99	11
Brahmaputra Valley	22651101	19733040	2918061	12.88	12.88	

Source: Statistical handbook of Assam, Directorate of Economics and statistics Government of Assam 2002.

ASSAM **BRAHMAPUTRA VALLEY** **LOCATION OF URBAN CENTRES** **2001**



DHUBRI
 1. Dhubri
 2. Mankachar
 3. Gauripur
 4. Bilaspur
 5. Sapatgram
 6. Golokganj
 7. Anand Nagar

KOKRAJHAR
 1. Kokrajhar
 2. Besugaon
 3. Gosaigaon

BONGAIGAON
 1. Bongaigaon
 2. Bongaigaon Rly Colony
 3. Bijnai
 4. Jagdishnagar BRPL Township

BARPETA
 1. Barpeta Road
 2. Barpeta
 3. Hawil
 4. Patshala
 5. Sorbhaj
 6. Bohari
 7. Sarthebari

NALBARI
 1. Nalbari
 2. Tihu

KAMRUP
 1. Guwahati
 2. Palasbari
 3. North Guwahati
 4. Amin Gaon
 5. Soalkuchi
 6. Hojo
 7. Rangia
 8. Dharapur

DARRANG
 1. Mangoldol
 2. Tangla
 3. Udaiguri
 4. Kharupetia

SONITPUR
 1. Tezpur
 2. Rangapara
 3. Dhekiajuli
 4. Biswanath Charuli
 5. Majgaon
 6. Gohpur

LAKHIMPUR
 1. North Lakhimpur
 2. Bihpuria

DHEMAJI
 1. Dhemaji
 2. Silapathar
 3. Junai

TINSUKIA
 1. Tinsukia
 2. Digboi
 3. Digboi Oil Town
 4. Margherita
 5. Doom Dooma
 6. Makum
 7. Lidu
 8. Borgolia Grant No II

DIBRUGARH
 1. Dibrugarh
 2. Barbari
 3. Duliajan Oil Town
 4. Naharkata
 5. Chabua
 6. Maran

JORHAT
 1. Jorhat
 2. Mariani
 3. Titabar

SIBSAGAR
 1. Sibsaagar
 2. Sonari
 3. Nazira
 4. Moranhat
 5. Amguri

GOLAGHAT
 1. Golaghat
 2. Dargaon
 3. Bokakhat
 4. Sarupathar
 5. Barpathar
 6. Numaligrah Township

MORIGAOON
 1. Morigaon
 2. Jagirroad
 3. Jagirroad Paper Mill

NAGAON
 1. Nagaon
 2. Lamling
 3. Lamling Rly Town
 4. Hojai
 5. Lanka
 6. Dhim
 7. Raha
 8. Kampur
 9. Dobaka
 10. Chota Hoibor

GOALPARA
 1. Goalpara
 2. Lakhimpur
 3. Kharijapikon

Fig. 4.1

Urbanisation is low and stagnant; whereas the districts in the southern bank of Brahmaputra such as, Tinsukia Jorhat Dibrugarh, Sibsagar, Kamrup, and Nagaon witnessed higher urban growth. High urbanisation was largely due to greater efforts towards industrial development.

4.6 Urbanisation and Crime

As we know that the urbanisation is a process of population concentration. It may be either natural, immigration or it may be of social political, economic Historical religions. All has leads ultimately as diverse characteristic and change the entire fabric of society. With the process of urbanisation it has observed a diversity of culture, religion, and profession in a city. It also effects intra and inter family relations; feeling of family obligation and emotional attachment of family member weakness lacks of family unity, moral laxity, Last of trip over life and ultimately resulted increase of since and social disorganisation arise urbanisation also witness, Drug addiction, population, juvenile delinquency, bagging, alcoholism, corruption and unemployment, Heterogeneous population, lacks of spirit of tolerance. It changes entire strata of society. The social change, which is inevitable in a dynamic society, results in disharmony, conflict, and cultural differentiation on the whole, social disorganisation takes place and traditional pattern of social control mechanism totally breaks down. In the wake of such rapid social changes, the incidence of crime has gone up tremendously in the urban area particularly in big cities. The rural migration in new cities is unable to adjust to the impersonal heterogeneity of their formless man of people. They are no longer controlled by the

traditional norms and family loyalties. They become restless person without associates. There is no sense of security. In the words of Durkheim, they become small particles in that world of disorganised dust. This heterogeneity of the urban life destroys, under such condition violence and crime proliferate. So the study of urban area and crime in Geographical perspective focus much more importance from sociological point of views. The Geography of crime studies the pattern of regional and intra urban scale of crime and also adds a new dimension to the field of criminological thoughts. Presently, in India witness a process of organisation in which larger villagers are shifting to VI class town and out growth to agglomeration, from II class agglomeration to municipalities. This types of scenario is also seen in are of study too. So along with this change the study of crime pattern in special dimension in urban region felt urgent need from to geographical point of view.

4.7 Observations

- (1) The growth of V class city showed increasing trend over the decade (Table 3.5). From 15 (fifteen) in 1991 to 41 (forty one) in 2001. Again, II class city was also change over the decade From 4 (four) in 1991 to 7 (seven) in 2001.
- (2) Number of town was also increase in the Brahmaputra valley (Table 3.5) From 72 (seventy two) in 1971 –to- 86 (eighty six) in 1991 and 108 (hundred eight) in 2001.

- (3) During the five decades, i.e., between 1941 to 1991 the growth rate of urban population in India; was between 3.4 and 3.8 percent in every year i.e., (Table 3.3)
- (4) State of Assam shows Sharpe change in the VI class city over the decade (Table 3.5) From 9 (nine) in 1971 to 12 (twelve) in 1991; but in 2001, number of VI class city has come down to 3 (three), which indicate up gradation of town to other class. This reveled the fact that smaller town are witnessing large-scale inflow of population.
- (5) Urbanisation of Assam is very slow as compared to the total population in the state.
- (6) North bank of the river Brahmaputra is less urbanized than the north bank on terms of percentage of urban population and number of districts having growth trend of urban population in the state.
- (7) Slow rate of urbanization, more or less stagnant economy, and wide spread poverty conditions aggravated as a result of political uncertainty which gripped the state since 1979. So that the low crime rate that dominated the pre-1979 scenario was transformed by the 1979-1985 socio-political unrest. The post-1985 situation saw crime rate progressing geometrically with many new types of crime being added. The interaction between environment, political, social, cultural and economic settings made the crime more sophisticated and at par with crime in the rest of the country. It introduced complex relationships that made the crime both in the urban and rural areas look unique in the Brahmaputra Valley (as it is separately observed in the Thana's located in urban and rural areas).

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- ⁹ Census of India, 1991, Series I, paper 2.251.
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- ¹¹ Census of India 2001, Assam, Series 19, Paper 2, P-2 and 4, and Census Info, India 2001.
- ¹² Urbanisation and Urban Development Policy Issues of the North Eastern Region (NEC Secretariat, Shillong), Seies Number 39, Vol. I, National Institute of Urban Affairs July 1983, New Delhi, pp. 42, 48, 53 and 134-140.
- ¹³ Statistical Hand Book of Assam, Directorate of Economics and Statistics, Guwahati.

CHAPTER – V

ANALYSIS OF SOCIO-ECONOMIC VARIABLES

5.1 Correlation of Socio-Economic Variables (1971-1991 and 2001)

In order to ascertain the ground reality of the socio-economic structure of the Brahmaputra valley, a comparative spatial analysis of socio-economic variables is imperative. This will help to explain the changing pattern of crime phenomena in the Brahmaputra valley. In addition, this analysis will enable us to identify the role and significance of the socio-economic variables towards occurrence of crime in the valley. This will also reinforce the conceptual base for examining crime phenomena.

The variables that have been identified for the analysis are: (i) Percentage of Scheduled Caste, (ii) Percentage of Scheduled Tribe (iii) Percentage of Literacy (iv) Percentage of workers (v) Percentage of Non-workers, (vi) Percentage of Primary workers, (vii) Percentage of Secondary workers, (viii) Percentage of Tertiary Workers, (ix) Percentage of Religious group, (x) Percentage of Linguistic group, (xi) Sex Ratio, (xii) Percentage of enrolment up to class XII for the year of 1971-1991; for the year of 2001,

percentage of Agricultural Labourers, Cultivator, Household industry, other workers have also been added.

5.2 Correlation of Variable to Variable

Tables (5.1 a, b; 5.2 a, b and 5.3) explain the correlation of Independent variables in the Brahmaputra Valley. The number of observations that have been considered is 7 for 1971, 18 for 1991 and 19 for 2001. On this basis, the correlation analysis suggests that, Scheduled caste population is correlated positively with Muslim population at 5 percent level of significance in 1971 and 2001 but is not significant during 1991. Likewise, correlation of Non-workers, Secondary workers and Tertiary workers has positive and significant correlation (5 percent level of significance) during 1991 but not significant in other years with Scheduled Caste. Again Scheduled Tribe population also positively correlated with Buddhist at 5 percent level of significance and significantly correlated at 1 percent level of significance with density in 2001. Whereas Scheduled Caste Population significantly correlated at 1 percent level of significance with Buddhist Population, Malayalam and Oriya Linguistic groups in 1971. These correlations are inversely related with each other. In 2001, Scheduled Caste population was negatively correlated with Buddhist religious group. Where as in 1991 Scheduled caste population is correlated with primary worker, Christian Population, was negatively correlated with Muslim population. This clearly suggested that the Scheduled caste population would always be high in the area where Muslim population is more and the area where this group of population is more indicates lower standard of living. Such conditions are founding the districts of Nagaon, Dhubri, Barpeta, etc. In such a setting, occurrence of crime is very high.

Table 5.1 (a): Correlation of Socio-Economic Variables, 1971

[illegible]

Table 5.1 (b): Correlation of Socio-Economic Variables, 1971

	Assamese	Bengali	Gujarati	Hindi	Kannada	Kashmiri	Malayalam	Marathi	Oriya	Punjabi	Sindhi	Tamil	Telugu	Urdu	Others
SC	0.24	0.55	-0.85	-0.63	-0.8	0.03	-0.69	0.35	-0.69	-0.64	-0.37	-0.42	-0.62	-0.74	-0.24
ST	-0.5	-0.33	-0.2	-0.32	-0.28	-0.15	-0.54	-0.74	-0.43	-0.52	-0.18	-0.62	-0.46	-0.04	0.91
Literate	0.72	-0.61	0.22	0.05	0.4	0.32	0.19	0.4	0.11	0.45	-0.08	0.66	0.29	0.3	-0.44
Worker	0.23	-0.63	-0.05	-0.07	0.4	-0.65	-0.04	-0.16	0.3	-0.05	-0.36	0.58	-0.17	0.07	0.12
Non-Worker	-0.23	0.63	0.05	0.07	-0.4	0.65	0.04	0.17	-0.3	0.05	0.36	-0.58	0.17	-0.07	-0.12
Primary	-0.27	0.05	-0.79	-0.58	-0.59	-0.63	-0.86	-0.46	-0.5	-0.83	-0.63	-0.5	-0.79	-0.5	0.55
Secondary	0.13	-0.03	0.82	0.66	0.63	0.54	0.88	0.36	0.58	0.85	0.62	0.46	0.83	0.56	-0.46
Tertiary	0.32	-0.06	0.77	0.54	0.56	0.67	0.84	0.5	0.46	0.82	0.63	0.51	0.76	0.47	-0.58
density	-0.17	-0.56	0.42	-0.21	0.05	0.3	0.06	-0.6	-0.3	-0.14	0.46	-0.21	-0.16	0.11	0.63
H	0.06	-0.81	0.64	0.5	0.86	0.11	0.49	-0.02	0.6	0.6	0.15	0.56	0.51	0.73	0.14
M	0	0.8	-0.66	-0.54	-0.88	-0.06	-0.51	0.07	-0.65	-0.61	-0.14	-0.55	-0.53	-0.76	-0.18
C	-0.65	-0.1	0.31	0.5	0.46	-0.59	0.28	-0.49	0.64	0.17	0	0.05	0.24	0.39	0.47
S	0.3	-0.03	0.53	0.7	0.63	0.5	0.66	0.67	0.63	0.92	0.19	0.55	0.87	0.63	-0.66
B	-0.22	-0.41	0.72	0.91	0.87	0.23	0.63	0.07	0.83	0.91	0.13	0.37	0.92	0.98	0.02
J	-0.17	0.52	-0.14	-0.11	-0.45	-0.11	-0.13	-0.24	-0.23	-0.15	-0.01	-0.35	-0.06	-0.25	-0.06
1000*F/M	-0.03	0.38	-0.73	-0.73	-0.86	-0.49	-0.74	-0.42	-0.71	-0.82	-0.41	-0.49	-0.77	-0.75	0.18
Enrolment	0.36	-0.78	-0.03	-0.43	0	0.08	-0.3	-0.28	-0.39	-0.2	-0.15	0.13	-0.32	0	0.3
Assamese	1	-0.24	-0.06	-0.41	-0.02	0.18	0.08	0.51	-0.23	0.05	0.02	0.66	-0.14	-0.32	-0.73
Bengali	.	1	-0.43	-0.02	-0.53	0.09	-0.16	0.4	-0.17	-0.23	0.01	-0.48	-0.1	-0.43	-0.31
Gujarati	.	.	1	0.64	0.82	0.46	0.9	0.03	0.62	0.76	0.72	0.45	0.72	0.69	-0.01
Hindi	.	.	.	1	0.77	0.19	0.67	0.2	0.9	0.87	0.19	0.22	0.93	0.88	-0.05

[illegible]

Table 5.2 (a): Correlation of Socio-Economic Variables (1991)

1991	SC	ST	Literacy Rate	Worker	Non-Worker	Primary	Secondary	Tertiary	density	H	M	C	S	B	J	Others	1000*F/M	Enrolment
SC	1	-0.03	0.15	-0.45	0.45	-0.51	0.47	0.51	0.74	-0.33	0.41	-0.48	0.08	-0.4	0.44	-0.22	-0.07	0.67
ST	.	1	-0.18	0.07	-0.07	0.05	-0.18	-0.01	-0.2	0.1	-0.19	0.42	-0.38	0.12	0.13	0.57	0.13	-0.06
Literate	.	.	1	0.4	-0.4	-0.48	0.34	0.51	-0.03	0.7	-0.62	-0.27	0.67	0.21	0.06	-0.51	-0.67	0.24
Worker	.	.	.	1	-1	0.4	-0.46	-0.37	-0.67	0.78	-0.8	0.27	0.34	0.7	-0.55	-0.34	-0.36	-0.33
Non-Worker	.	.	.	.	1	-0.4	0.46	0.37	0.67	-0.78	0.8	-0.27	-0.34	-0.7	0.55	0.34	0.36	0.33
Primary	.	.	.	.	.	1	-0.94	-0.99	-0.44	-0.06	0	0.28	-0.53	0.29	-0.8	0.24	0.62	-0.55
Secondary	.	.	.	.	.	.	1	0.89	0.48	0	0.07	-0.31	0.54	-0.27	0.77	-0.26	-0.6	0.48
Tertiary	.	.	.	.	.	.	.	1	0.42	0.08	-0.02	-0.27	0.51	-0.28	0.78	-0.23	-0.6	0.56
Density	.	.	.	.	.	.	.	.	1	-0.51	0.6	-0.55	-0.05	-0.55	0.47	-0.14	0.09	0.62
H	.	.	.	.	.	.	.	.	.	1	-0.99	0.09	0.6	0.53	-0.19	-0.32	-0.68	-0.15
M	.	.	.	.	.	.	.	.	.	.	1	-0.25	-0.55	-0.53	0.23	0.21	0.64	0.23
C	.	.	.	.	.	.	.	.	.	.	.	1	-0.06	-0.03	-0.2	0.37	0.03	-0.51
S	.	.	.	.	.	.	.	.	.	.	.	.	1	0.11	0.18	-0.52	-0.88	0.21
B	.	.	.	.	.	.	.	.	.	.	.	.	.	1	-0.35	-0.15	-0.2	-0.19
J	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	-0.14	-0.33	0.32
Others	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.43	-0.05
1000*F/M	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	-0.33
Enrolment	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1

(n=18) $r > .45$ sig at 5% $r > .55$ sig at 1%

Table 5.2 (b): Correlation of Socio-Economic Variables (1991)

	Assamese	Bengali	Gujarati	Hindi	Kannada	Kashmiri	Konkani	Malayalam	Manipuri	Marathi	Nepali	Oriya	Punjabi	Sanskrit	Sindhi	Tamil	Telugu	Urdu	Others
SC	0.15	0.41	-0.27	-0.18	0.07	.	0.06	0.18	0.72	0.08	-0.33	-0.23	-0.04	.	-0.09	0.16	-0.15	-0.35	-0.34
ST	-0.67	0.14	-0.3	-0.2	-0.05	.	0.06	-0.04	-0.19	-0.03	0.17	-0.21	-0.31	.	-0.27	-0.07	-0.29	-0.2	0.82
Literate	0.56	-0.63	0.03	0.09	0.26	.	-0.12	0.51	0.33	0.39	-0.07	-0.04	0.52	.	-0.28	0.47	0.13	0.08	-0.33
Worker	0.05	-0.62	0.26	0.34	-0.17	.	0.17	0	-0.03	-0.19	0.55	0.4	0.27	.	-0.45	0.04	0.18	0.38	0.13
Non-Worker	-0.05	0.62	-0.26	-0.34	0.17	.	-0.17	0	0.03	0.19	-0.55	-0.4	-0.27	.	0.45	-0.04	-0.18	-0.38	-0.13
Primary	-0.25	-0.02	-0.12	-0.22	-0.44	.	0.06	-0.8	-0.31	-0.64	0.17	0.04	-0.55	.	-0.31	-0.78	-0.29	-0.09	0.37
Secondary	0.27	0.03	0.35	0.38	0.27	.	-0.13	0.7	0.3	0.49	-0.06	0.12	0.6	.	0.4	0.76	0.5	0.27	-0.47
Tertiary	0.24	0.01	0.04	0.16	0.48	.	-0.03	0.81	0.31	0.68	-0.2	-0.09	0.52	.	0.28	0.76	0.21	0.03	-0.33
density	0.37	0.31	-0.23	-0.25	0.02	.	-0.18	0.06	0.37	-0.06	-0.51	-0.32	-0.13	.	0.1	0.05	-0.16	-0.4	-0.5
H	0.16	-0.77	0.34	0.45	-0.09	.	0.12	0.32	-0.03	-0.01	0.51	0.39	0.57	.	-0.5	0.41	0.35	0.44	0.05
M	-0.04	0.73	-0.35	-0.45	0.09	.	-0.14	-0.27	0.07	0	-0.56	-0.42	-0.53	.	0.48	-0.37	-0.34	-0.46	-0.16
C	-0.5	0.01	0.12	0.19	0.03	.	0.23	-0.17	-0.22	0.15	0.35	0.32	-0.04	.	0.1	-0.08	0.07	0.19	0.51
S	0.39	-0.41	0.58	0.68	0.16	.	-0.02	0.64	0.42	0.31	0.22	0.45	0.93	.	-0.05	0.76	0.66	0.55	-0.5
B	-0.2	-0.35	0.35	0.32	-0.24	.	-0.07	0	-0.1	-0.27	0.57	0.26	0.17	.	-0.13	-0.01	0.27	0.48	0.27
J	0	0.17	0	0.13	0.41	.	0.02	0.69	0.15	0.46	-0.13	-0.1	0.25	.	0.47	0.62	0.15	0	-0.12
Others	-0.68	0.5	-0.21	-0.35	-0.01	.	-0.15	-0.39	-0.29	-0.06	-0.11	-0.28	-0.45	.	-0.05	-0.33	-0.26	-0.18	0.69
1000*F/M	-0.29	0.48	-0.54	-0.67	-0.18	.	-0.16	-0.76	-0.28	-0.33	-0.41	-0.51	-0.85	.	0.07	-0.87	-0.63	-0.59	0.35
Enrolment	0.26	0.19	-0.15	-0.05	0	.	0.13	0.37	0.37	0.07	-0.24	-0.13	0.14	.	-0.12	0.31	-0.09	-0.2	-0.4
Assamese	1	-0.57	-0.06	-0.07	0.02	.	-0.17	0.21	0.16	0.15	-0.37	-0.1	0.27	.	-0.03	0.13	-0.02	-0.16	-0.84
Bengali	.	1	-0.15	-0.2	0.2	.	-0.01	-0.2	0.15	0.01	-0.24	-0.2	-0.35	.	0.24	-0.17	-0.12	-0.2	0.2
Gujarati	.	.	1	0.91	-0.11	.	-0.02	0.24	0.01	-0.11	0.66	0.8	0.7	.	0.2	0.51	0.97	0.95	-0.24
Hindi	.	.	.	1	-0.14	.	0.26	0.43	0.05	-0.08	0.74	0.86	0.8	.	0.11	0.63	0.89	0.89	-0.23

[illegible]

Table 5.3: Correlation of Socio-Economic Variable (2001)

2001	Hindus	Muslims	Christian	Sikhs	Buddhist	Jains	Others	Lit Rate	SC	ST	Ag Lab's	Cultivator	HH Indust	Other Workers	Work	Non-Work	Sex Ratio (F/M)	Density	Enrolment
H	1	-0.99	0.09	0.6	0.53	-0.19	-0.32	0.76	-0.39	0.02	-0.84	0.11	-0.43	0.32	0.68	-0.68	-0.55	-0.67	0.13
M		1	-0.25	-0.55	-0.53	0.23	0.21	-0.69	0.46	-0.05	0.81	-0.12	0.45	-0.3	-0.71	0.71	0.49	0.74	-0.07
C			1	-0.06	-0.03	-0.2	0.37	-0.24	-0.5	0.05	0.07	-0.07	-0.25	0.06	0.22	-0.22	0.22	-0.44	-0.45
S				1	0.11	0.18	-0.52	0.66	0.05	-0.32	-0.66	-0.47	-0.29	0.77	0.24	-0.24	-0.81	-0.12	-0.25
B					1	-0.35	-0.15	0.24	-0.3	0.2	-0.59	0.68	-0.55	-0.33	0.74	-0.74	-0.05	-0.59	0.31
J						1	-0.14	0	0.27	0.14	0.17	-0.53	0.44	0.38	-0.5	0.5	-0.42	0.5	-0.12
Others							1	-0.47	-0.11	0.4	0.42	0.06	0.38	-0.27	-0.23	0.23	0.34	-0.09	-0.04
Lit Rate								1	-0.06	-0.13	-0.82	-0.06	0.01	0.43	0.5	-0.5	-0.67	-0.17	0.44
SC									1	0.31	0.27	-0.17	0.36	0	-0.42	0.42	-0.05	0.68	0.03
ST										1	0.02	0.33	0.23	-0.34	0.1	-0.1	0.07	-0.05	0.12
Ag Lab											1	-0.08	0.29	-0.4	-0.7	0.7	0.61	0.45	-0.2
Cultivators												1	-0.36	-0.88	0.57	-0.57	0.46	-0.4	0.52
HH Indust													1	0.11	-0.55	0.55	-0.09	0.63	0.3
Other Workers														1	-0.17	0.17	-0.7	0.12	-0.43
Work															1	-1	-0.06	-0.61	0.3
Non-Work																1	0.06	0.61	-0.3
Sex Ratio (F/M)																	1	0.03	0.1
Density																		1	0.08
Enrolment																			1

(n= 18) $r > .45$ sig at 5% $r > .55$ sig at 1%

The tables also make it clear that the number of Non-workers, Secondary workers, and Tertiary workers are also significant. This indicated that non-workers are mostly in the form of labour in the secondary and tertiary sectors. Buddhist population shows negative correlation with Scheduled Caste; thereby suggesting that Buddhist population is basically engaged in the Secondary and Tertiary Sectors with minimum incidence of crime.

The Scheduled Tribe also an important variable of the study; shows significant correlation with literacy and density of population. This group is negatively correlated with Punjabi, Marathi, Assamese Linguistic groups and Muslim Population in 2001. This shows that the area that has been dominated by the scheduled tribe population indicates low literacy rate and low density in comparison to the Muslim religious group.

The most important variable for the present study is literacy. In the case of literacy rate, it is positively and significantly correlated with Assamese, Telegu, Urdu, Punjabi, and Kanada in 1971; while in 1991, it is significantly correlated with Assamese, Bengali, Urdu, Tamil, and Malayalam, Oriya linguistic groups. In 2001 it is correlated with Hindu, Sikh, other workers and student enrolment. While primary workers, Muslim Population, sex ratio, Agricultural Labourer, are negatively correlated in 1991-2001. This shows that literacy is high in the Assamese, Bengali, Urdu, Tamil, Malayalam, and Oriya linguistic groups and are mainly engaged in the Tertiary sectors. In such a situation, types of crime that are committed vary.

It is evident from the correlation tables that, Workers in the Brahmaputra Valley are inversely and significantly correlated at 1 percent level of significance with Hindu population and Nepali; they are negatively correlated with, density of population, Bengali,

Jain, Sindhi in 1991 and 2001. This variable shows positive significance with Hindu, Buddhist Populations and cultivators and negatively correlated with Density of population, Household industrial workers and Muslim populations at 1 percent level of significance in the Negative direction. Majority of Muslim population, are in the non-workers category

In the Brahmaputra valley, Non-workers had a weak correlation in 1971. In 1991 it was significant and was positively correlated with Schedule caste population, Secondary workers, Tertiary workers, density of population, Jain religious group and Sindhi linguistic group at 5 percent level of significance in the same direction; whereas Hindu population and Nepali population negatively correlated in 2001. Household industries workers and Muslim population were significantly correlated with non- workers at 1 percent level of significance in the same direction. Again cultivator Hindu and Buddhist population are negatively correlated with non-workers. This shows that, non-workers mainly dominate from the Schedule Caste population. They are basically engaged in secondary sectors and Tertiary sectors. Again the Hindu and Nepali are negatively correlated as because they are basically working groups.

Another important variable is the primary workers. It has been observed from the correlation of variable that primary workers in the valley significantly correlated at 1 percent level of significance and negatively correlated with Schedule Caste population. They are negatively correlated with secondary Workers, Sikh, Telegu, Punjabi, Malayalam, Oriya, and Gujrati linguistic group in 1971. In 1991, sex ratio indicated significant correlation with Scheduled caste, literacy rate, Secondary workers, Tertiary workers, Density of population, student Enrolment. Sikh, Marathi, Punjabi, Tamil,

Linguistic group shows significance correlation but in the negative direction. If one is increases other will decreases & viz. As the Scheduled Caste population indicate low-income group population, so they generally engage in primary activity i.e. cultivation, fishing, hunting, etc and they are not engaged in the Secondary activities such as industries, Trade and commerce and Transport. Most of the linguistic groups that are not engaged in agriculture and fishing are engaged in Trade and Commerce. In the Primary workers dominated areas, density of population will be very high, Sex ratio will also be high. Literacy rate shows significant correlation with secondary workers, Tertiary workers. Because this groups of populations is high class populations having well educated person engaged in service and trade, such as Marwari, Punjabi, Malayalam, Kashmiri, Sikh, Tamil. In regards to the student enrolment they have very less student enrolment. Density of populations among this group of populations also shows low as because Primary workers generally correlated a bit far from the urban periphery. So in such a situation the density of population will automatically be low. Such as situation will create a economically backward zone. So the occurrence of crime shows sea change in space and time.

While observing the secondary workers, it has been founded tertiary workers, Sikh and Buddhist religious groups and all other linguistic groups except Assamese, Bengali, and Marathi were significantly correlated at 1 percent level of significance in the same direction in 2001. While Scheduled Caste and Schedule Tribe population, Primary workers, sex ration shows negative correlation in 1971. In 1991 Schedule caste population, non-workers, Tertiary workers, Density of population, Student enrolment, Jain, Marathi

and Tamil linguistic groups are significantly correlated at 1 percent level of significance in the same direction. But Secondary workers were negatively correlated.

This means secondary workers mainly based on the industrial sectors such as Marwari, Punjabi, Sindhi, Bengali linguistic are engaged either Industry or Trade and Commerce and service and involvement of the primary workers. Scheduled Caste and Scheduled Tribe population in the Secondary sectors seems to be very less in 1971. In 1991, there has been a change in respect of Scheduled caste because the involvement in the secondary sectors has been notice. But in 2001 it shows negative correlation. Student enrolment is significantly correlated with secondary workers. In respect of Tertiary workers in the Brahmaputra Valley, it is significantly and positively correlated with secondary workers, Sikh, Punjabi, Malayalam, Kashmiri, Gujrati, and Sindhi. They are negatively correlated with Scheduled Caste and Scheduled Tribe population in 1971.

In 1991 Secondary workers, Student enrolment, level of significance of literary rate, Schedule caste population, linguistic group such as Malayalam, Telugu, Kashmiri, Marathi, Punjabi, Oriya are significantly and positively correlated at 1 percent level of significance in the same direction. While primary workers, Nepali linguistic groups of population are negatively correlated with Tertiary workers. This is attributed to the primary workers who are engaged in cultivation, fishing, hunting etc. Nepali groups are basically involved in the agriculture not in the trade and commerce. But Tamil, Sindhi, Malayalam, Punjabi, Kashmiri speakers basically form a part of the elite class and are involved in Trade, commerce, services, i.e., Secondary and Tertiary sectors

In respect of density of population, Scheduled Tribe population shows positive correlations in 1971. While scheduled caste populations, non-workers primary workers, Student enrolment, Jain population shows positively correlated in 1991. Whereas worker, Hindu, Christian religious groups of populations, Nepali linguistic group shows negative correlation with density of population at 1 percent level of significance in the negative direction. If one will increase other will decrease and viz. Besides this, in 2001, Muslim population Scheduled caste population, Agricultural labourer, House hold industries workers, Non-worker are highly and significantly correlated at 1 percent level of significance in the some direction, whereas, workers Hindu, Buddhist, Christian population religious groups of population shows negative correlation (see table 5.1 a, b; 5.2 a, b & 5.3.

Regarding the Hindu religious population, it is positively and relatively correlated with literacy in 1971. Urdu and Kannada linguistic groups of population correlated in 1971. In 1991 and 2001, worker, Buddhist population, Hindi, Punjabi Linguistic group shows significantly correlation in the Brahmaputra Valley. Where Muslim population, Non-workers, Sex Ratio density population shows negative correlation with Hindu Population in the valley in 1991 and 2001. From the above fact it is clear that literacy rates are high among the Hindu populations in the valley. But Non-working population, high sex ratio, high density of population have consistently shown low negative correlation with literacy. If one increases other will decrease in the opposite direction and vice versa in the Brahmaputra Valley.

Muslim population in the valley positively correlated with Scheduled Caste population and sex ratio and Jain linguistic group in 1971 and 1991. It also shows

significant and positive correlation with Agriculture labourer, Non-worker, density of population, House Hold industry worker in 1991 and 2001. But Muslim population shows Negative correlation with literacy rate, worker, Buddhist, Hindu religious population, Hindi and Nepali linguistic group in the Valley.

The Christian religious group of population in the valley is negatively correlated with Scheduled Cast population, Density of population and student enrolment in 1991 and 2001. Sikh Religious population are positively correlated with secondary worker, Tertiary workers and Literacy rate, while negatively correlated with primary workers, Agricultural labourer, Muslim population, Cultivators and Sex Ratio. This shows that in the Sikh religious group Literacy rate shows very high and engaged in secondary and tertiary sectors. Sex Ratio shows very low among them. Agricultural Labourers and Cultivators show negative correlation among the Sikh religious groups of population.

Buddhist religious groups of population in the valley show significant correlation with secondary and tertiary sector and with the Hindu religious groups of population in 1971, 1991 and 2001. Buddhist religious groups of population also show positive correlation with Gujrati, Hindi, Malayalam and Oriya linguistic group in the valley. They also show positive and significant correlation at 1 percent level of significance in the same direction with cultivator and workers. But shows negative correlation with sex ratio, Muslim population, scheduled caste population, density of population, household industry worker, Agricultural labourers, and Non-worker in the valley.

Buddhist religious groups represent progressive society. They are mostly engaged in Trade, Commerce, Service and agriculture. While Jain religious groups of populations

positively correlated with sex ratio, Non-workers that means non working groups of population are more in the Jain religious groups of populations. Sex ratio also high and literacy rate shows very low among them. Jain religious groups of population basically found among the Gujrati, Telegu, Oriya, Punjabi, Sindhi, and Malayalam linguistic groups of population. Workers in the group of populations shows negatively correlated in the same direction and & viz.

Sex Ratio, in the Brahmaputra Valley, positively correlated among Muslim population in 1971, 1991 and 2001 at 1 percent level of significance in the same direction. Again sex ratio is negatively correlated with literacy rate and Hindu religious groups of populations in 1991.

In 1991, student enrolment shows positive correlation with scheduled caste population, secondary and tertiary sector, density of population and negatively correlated with primary workers tertiary workers and Christian religious groups of populations. In 2001, Christian religious groups of population were negatively correlated with student enrolment, but shows positive correlation with cultivators. This analysis that shows that in the valley Scheduled caste population cultivators have got high school going children. This scenario even prevail in the case of secondary and tertiary worker that means where the industrial activities, trade and commerce, services shows excess, the school enrolment or school going children will be high and in those area drop out will be high for which problem of crime may also occur in the increasing rate. Where the literacy rate is very high density of population and sex ratio shows low and student enrolment indicates high for

which pattern of crime depicts diverse picture because there always prevails high percentage of tertiary workers rather than primary workers and agricultural labourers.

5.3 Socio-Economic Base of Crime Correlation

In this section, an effort has been made to establish the linkage between predictor set of variable (Socio-Economic) and criterion set of variable (crime). This is important because crime, its types and seriousness depend upon the geography and socio-economic characteristics of the area. The causes of variation in the intensity of crime can also be explored in depth.

From the table 5.4 a,b & table 5.5 , of Socio-Economic base of crime correlation, it is clear that violence crime is significantly correlated at 1% level of significance with property, traditional crime and social crime at 5% level of significance in the same direction. While analysing correlation of socio-economic and crime it shows that the violence crime is significantly and positively correlated with the Scheduled Caste population (0.74), Non-worker (0.59), Density of population (0.78), Muslim population (0.54), Jain population (0.48), Student enrolment (0.77), Secondary workers (0.48) at 1 percent level of significance in the same direction. While violence crime is significantly and positively correlated at 1 percent level of significance and 5 percent level of significance with worker (-0.59), Primary Worker (-0.51), Hindu population (-0.48) and others populations (-0.45) in the negative direction in 1991. Again in 2001 violence crime relatively and weakly correlated with other traditional crime (0.42) in the same direction, whereas, crime such as property and social too shows weak correlation relation with

Table 5.4 (a): Correlation of Socio-Economic Base of Crime, 1991 (n=18)

1991	Violence	Property	Social	Traditional	SC	ST	Literacy	Worker	Non-Worker	Primary	Secondary	Tertiary	Density	H	M	C	S	B	J	Others
Violence	1	0.68	0.45	0.71	0.74	-0.24	-0.04	-0.59	0.59	-0.51	0.48	0.5	0.78	-0.48	0.54	-0.4	0.11	-0.47	0.48	-0.08
Property Crime		1	0.76	0.94	0.6	-0.01	0.42	-0.24	0.24	-0.83	0.75	0.83	0.47	0.03	0.02	-0.22	0.49	-0.2	0.7	-0.26
Social Crime			1	0.82	0.38	0.02	0.54	0.03	-0.03	-0.51	0.34	0.55	0.32	0.13	-0.08	-0.34	0.33	0.1	0.38	-0.15
Other Traditional Crimes				1	0.52	-0.13	0.51	-0.15	0.15	-0.73	0.62	0.75	0.48	0.12	-0.05	-0.28	0.54	-0.22	0.58	-0.3
SC					1	-0.03	0.15	-0.45	0.45	-0.51	0.47	0.51	0.74	-0.33	0.41	-0.48	0.08	-0.4	0.44	-0.22
ST						1	-0.18	0.07	-0.07	0.05	-0.18	-0.01	-0.2	0.1	-0.19	0.42	-0.38	0.12	0.13	0.57
Literacy Rate							1	0.4	-0.4	-0.48	0.34	0.51	-0.03	0.7	-0.62	-0.27	0.67	0.21	0.06	-0.51
Worker								1	-1	0.4	-0.46	-0.37	-0.67	0.78	-0.8	0.27	0.34	0.7	-0.55	-0.34
Non-Worker									1	-0.4	0.46	0.37	0.67	-0.78	0.8	-0.27	-0.34	-0.7	0.55	0.34
Primary										1	-0.94	-0.99	-0.44	-0.06	0	0.28	-0.53	0.29	-0.8	0.24
Secondary											1	0.89	0.48	0	0.07	-0.31	0.54	-0.27	0.77	-0.26
Tertiary												1	0.42	0.08	-0.02	-0.27	0.51	-0.28	0.78	-0.23
Density													1	-0.51	0.6	-0.55	-0.05	-0.55	0.47	-0.14
H														1	-0.99	0.09	0.6	0.53	-0.19	-0.32
M															1	-0.25	-0.55	-0.53	0.23	0.21
C																1	-0.06	-0.03	-0.2	0.37
S																	1	0.11	0.18	-0.52
B																		1	-0.35	-0.15
J																			1	-0.14
Others																				1

$r > .45$ sig at 5% $r > .55$ sig at 1%

Table 5.4 (b): Correlation of Socio-Economic Crime, 1991 (n=18)

1991	1000*F/M	Enrolment	Assamese	Bengali	Gujarati	Hindi	Kannada	Konkani	Malayalam	Manipuri	Marathi	Nepali	Oriya	Punjabi	Sindhi	Tamil	Telugu	Urdu	Others
Violence	-0.11	0.77	0.2	0.43	-0.18	-0.1	0.08	0.12	0.19	0.52	0.07	-0.32	-0.12	0	0.19	0.2	-0.1	-0.26	-0.45
Property	-0.67	0.72	0.22	0.03	0.07	0.2	0.38	0.13	0.72	0.46	0.46	-0.05	0.08	0.4	0.18	0.74	0.22	0.1	-0.36
Social Crime	-0.48	0.62	0.22	-0.05	-0.14	-0.1	0.52	-0.13	0.56	0.38	0.36	-0.22	-0.22	0.17	-0.04	0.48	-0.03	-0.07	-0.18
Other Traditional	-0.66	0.73	0.36	-0.09	-0.02	0.13	0.36	0.12	0.67	0.45	0.38	-0.14	0.02	0.39	0.04	0.66	0.11	0	-0.43
SC	-0.07	0.67	0.15	0.41	-0.27	-0.18	0.07	0.06	0.18	0.72	0.08	-0.33	-0.23	-0.04	-0.09	0.16	-0.15	-0.35	-0.34
ST	0.13	-0.06	-0.67	0.14	-0.3	-0.2	-0.05	0.06	-0.04	-0.19	-0.03	0.17	-0.21	-0.31	-0.27	-0.07	-0.29	-0.2	0.82
Literacy Rate	-0.67	0.24	0.56	-0.63	0.03	0.09	0.26	-0.12	0.51	0.33	0.39	-0.07	-0.04	0.52	-0.28	0.47	0.13	0.08	-0.33
Worker	-0.36	-0.33	0.05	-0.62	0.26	0.34	-0.17	0.17	0	-0.03	-0.19	0.55	0.4	0.27	-0.45	0.04	0.18	0.38	0.13
Non-Worker	0.36	0.33	-0.05	0.62	-0.26	-0.34	0.17	-0.17	0	0.03	0.19	-0.55	-0.4	-0.27	0.45	-0.04	-0.18	-0.38	-0.13
Primary	0.62	-0.55	-0.25	-0.02	-0.12	-0.22	-0.44	0.06	-0.8	-0.31	-0.64	0.17	0.04	-0.55	-0.31	-0.78	-0.29	-0.09	0.37
Secondary	-0.6	0.48	0.27	0.03	0.35	0.38	0.27	-0.13	0.7	0.3	0.49	-0.06	0.12	0.6	0.4	0.76	0.5	0.27	-0.47
Tertiary	-0.6	0.56	0.24	0.01	0.04	0.16	0.48	-0.03	0.81	0.31	0.68	-0.2	-0.09	0.52	0.28	0.76	0.21	0.03	-0.33
density	0.09	0.62	0.37	0.31	-0.23	-0.25	0.02	-0.18	0.06	0.37	-0.06	-0.51	-0.32	-0.13	0.1	0.05	-0.16	-0.4	-0.5
H	-0.68	-0.15	0.16	-0.77	0.34	0.45	-0.09	0.12	0.32	-0.03	-0.01	0.51	0.39	0.57	-0.5	0.41	0.35	0.44	0.05
M	0.64	0.23	-0.04	0.73	-0.35	-0.45	0.09	-0.14	-0.27	0.07	0	-0.56	-0.42	-0.53	0.48	-0.37	-0.34	-0.46	-0.16
C	0.03	-0.51	-0.5	0.01	0.12	0.19	0.03	0.23	-0.17	-0.22	0.15	0.35	0.32	-0.04	0.1	-0.08	0.07	0.19	0.51
S	-0.88	0.21	0.39	-0.41	0.58	0.68	0.16	-0.02	0.64	0.42	0.31	0.22	0.45	0.93	-0.05	0.76	0.66	0.55	-0.5
B	-0.2	-0.19	-0.2	-0.35	0.35	0.32	-0.24	-0.07	0	-0.1	-0.27	0.57	0.26	0.17	-0.13	-0.01	0.27	0.48	0.27
J	-0.33	0.32	0	0.17	0	0.13	0.41	0.02	0.69	0.15	0.46	-0.13	-0.1	0.25	0.47	0.62	0.15	0	-0.12
Others	0.43	-0.05	-0.68	0.5	-0.21	-0.35	-0.01	-0.15	-0.39	-0.29	-0.06	-0.11	-0.28	-0.45	-0.05	-0.33	-0.26	-0.18	0.69

[illegible]

Table 5.5: Socio-Economic Base of Crime Correlation (2001) (n= 18)

[illegible]

violence (crime). In respect of Independent variables (Socio-Economic) and Dependent variable (crime). Violence crime shows significantly and positively correlated with Muslim population (0.52), Agricultural labourer (0.57), Density population (0.47) and negatively correlated with the literacy rate (0.55), student enrolment (0.45), Hindu Population (0.55). While correlating the violence crime with socio-economic variable for 1991 and 2001; it has indicates a scenario that violence crime which was significantly and positively correlated with property crime and other traditional crime in 1991 has shows a sea change in 2001. It shows that violence crime significantly correlated only with the other traditional crime in 2001; that also weak relationship (0.42). In respect of Socio-Economic with crime, it has been observed that, both in 1991 and 2001, violence crime shows significant and positive correlation with Scheduled caste population, Muslim population. Violence crime shows negative significance with Hindu & Buddhist religious groups of populatOions, Literacy rate, and student enrolment.

By examining the correlation of both the variable (Dependent & Independent) it is clear that in this kind of environment, tendency of violence as well as property crime shows very high. It is also evident from the analysis of correlation of predictor variable that, Non-workers, Scheduled caste population and Muslim population, agriculture labourer, Density of population are correlated with each other and with violence crime. This is evident from the index of low economic status. Violence crime also shows positive significance with Secondary worker, Non-worker, Schedule caste population. So the area where these kinds of environment exist, are the areas where the incidence of violence crime are common.

This because violence crime are significantly correlation at 1 percent level of significance with property crime, social crime and other traditional crime in 1991. But in 2001, there has been an improvement, i.e., violence crime shows positive correlations with only traditional crime but shows very weak relationship (0.42).

Property crime is another criterion sets of variable (Crime), which has been correlated, with predictor sets of variable (Socio-economic). It was found that, in 1991 property crime shows significant relation with social crime (0.76) and Traditional crime (0.94). But between predator and criterion, it shows high and positively significance with secondary worker (0.76), Tertiary worker (0.83), Density of population (0.47), Sikh population (0.49) and student enrolment (0.77).

In 2001, linguistic groups of Malayalam (0.72), Manipuri (0.46), Marathi (0.46), Tamil (0.74) and the Scheduled caste population (0.65) and Workers (0.56) show significant correlation with property crime. The socio-economic variables indicate the presence of high and positive correlation (Dependent and Independent variables) index in the population and areas occupied by the elite class of the society and other economically well to do populations. As noted earlier, Secondary and Tertiary workers are basically engaged in the industrial activity, Trade, Commerce and service. Along with the associated linguistic groups, indicate positive correlation in the property crime.

Property crime shows high occurrence with Sikh population, Manipuri, Malayalam, Tamil, Marathi Linguistic groups of population. Violence crime shows very high correlation with all other three categories of crime. It also evident from the fact that property crime seems to be highly concentrated in the mixed community and

cosmopolitans areas. In these areas, high literacy rate, high density and also areas where large number of population engages in secondary and tertiary sector with high economic activity form favourable environment for crime to occur more frequently.

In respect of social crime, it is significantly correlated with Traditional crime at 1 percent level of significance (0.82) in 1991. In 2001, correlation shows weak correlation with other Traditional Crime but have got relation with violence and property crime to where correlation crime with Socio-economic variable, it revealed that social crime is significantly correlated at 1 percent level of significance in the same direction with literacy rate, Tertiary workers, Student enrolment. Social crime among the Linguistic group, it shows positive correlation with Kanada, Malayalam, Tamil, and Oriya linguistic groups of population and negatively correlated with sex ratio and primary workers in 1991, whereas, in 2001, Social crime shows significant correlation with Scheduled Tribe population.

From the analysis of the correlation of both Predictor and criterion (Independent and Dependent) variables, it has been observed that social crime are committed in those areas/society where people are engaged in Tertiary Sector, i.e., Business, Trade, Service, having population density, high literacy rate high enrolment, high percent level of significance of school going children, Sex Ratio low, Person engaged in Tertiary Sector, i.e., Malayalam, Marathi, Tamil, Sindhi linguistic groups of population as shown in the previous chapter with mixed population shows significance correlations of occurrence of social crime. In 2001 it has been observed in Scheduled Tribe population and Scheduled Tribe people dominated too. In the area concentrated by the primary worker and agriculturist has no significance with social crime. It is only that area where they get ample

leisure time after their service time to enjoy so they go for alcoholism and gambling and commit social crime. This study reveals that social crime are concentrated in the developed areas where the Socio-Economic activities are concentrated as well as in areas dominated by Schedule Tribe people dominated area. In respect of Traditional crime the situation shows same as property crime occurred (Table 5.4 a, b and 5.5 a, b for socio-economic base of crime correlation).

5.4 District Wise Correlation of Crime Variable

Crime is a social and perennial problem for every society. There is no society in the world, which is not confronted with this social malady. This phenomenon has been changing day by day with the changing level of development in socio-economic, political, depending on the direction of change that has taken place in the society. So, to accelerate the ground reality of crime pattern in the time frame, correlation of crime variable has been found out, for each of these 18 districts as well as Thana of Brahmaputra valley, Assam. Thana level general correlation have been find out to establish the relationship, with the district by observing the smallest of the small unit (Police station) in the Brahmaputra valley. It has been highlighted in the review of the literature that such types of study in the Brahmaputra valley in particular has not been carried out or examine till date.

In the present study 15 (fifteen) types of crime variable has been taken for the purpose of analysis by grouping them into 4 (four) major category (i) violence crime (ii) property crime (iii) social crime, and other traditional crime (seeAppendix-5.I).

5.5 Dimension of Crime Differentiation in the Brahmaputra Valley (1975 – 2001)

In the present study crime variable and its value has been taken to find out inner malady of the phenomena. Comparative figure of mean and standard deviation has been given in the Appendix-5.I.

The mean and standard deviation has been calculated on the basis of the crime data given by the (SCRB) State Crime Record Bureau, Assam as well as from Thana of the selected districts. The standard mean and standard deviation has been given below (Appendix 5.I).

One can find out the amount of occurrence of crime and also the variation in the occurrence of crime. If the mean of one variable shows higher significant than the other variable, that means, that particular variable has got higher occurrence than the other variable. And if the value of standard deviation is higher than the mean, then this shows that there is a wide variation in the occurrence of crime. For example, Rioting and other IPC crime show very high in pre-agitation period in the Dhubri district. But in the agitation period both the crime variables shows larger amount of occurrence. But in case of alcoholism, CF-CBT shows larger variation in the occurrence of this crime. Similarly, in the district of Darrang, it has been observed that burglary, theft, LH/H Breaking, other IPC shows higher occurrence in the pre-agitation period. Again in the agitation period, other IPC burglary, LH/H Trespass, theft, riots shows high occurrence. Again robbery CF shows larger variation in the Darrang district, in the agitation period. In the post-agitation period, burglary, theft, rioting, and other IPC shows high occurrence but rape, kidnapping, dacoity CF juvenile has law and order variation in occurrence of crime. In the Nagaon district, it

has been observed that, burglary; LH/H Breaking, theft, rioting, juvenile, other IPC shows high occurrence in the pre agitation period. But, crime like alcoholism shows variation in the occurrence of crime and same is the case of post agitation period. In the agitation period, crime such as kidnapping/abduction, robbery, murder, robbery, burglary, theft, rioting, juvenile, other IPC indicate shows high occurrence, but murder, CF, and robbery shows variation in occurrence. During the agitation period, occurrence of crime, such as kidnapping/abduction shows high in the agitation and post agitation period. By observing and analysing the districts of Brahmaputra valley, it indicates that, crime in pre agitation period which was prevent has sharply changed or high occurrence of crime has been found in almost all the four major categories. But crime, like dacoity, rioting, and burglary shows a decreasing trend in the post agitation period, in the district of Darrang. Whereas gambling shows the decreasing trend in the post-agitation period, than the agitation period. In the Brahmaputra valley, large variation of occurrence of crime has been observed in the district of Sonitpur, Nagaon, Lakhimpur. In these three districts, during agitation period, crime variable such as murder varies in the occurrence, during agitation period. And district of Darrang shows high variation in pre-agitation, agitation and post-agitation period, in the case of crime, such as murder. In the Sibsagar too, juvenile crime variable varies in occurrence, during agitation period, and so on for others (Appendix -5.I).

The correlation of the each pairs of crime variable uncovers the potential causal relationship between the pairs of variable that seems to interact in the area. This analysis will certainly serve as a basis, to find out the cause and effect of the phenomena. In a broad area such as Brahmaputra valley, it is very difficult to identify the area, that dominated by

a particular type of crime and also to establish the relationship with each other, unless we find out correlation, for each and every variable that has been taken for the study.

The correlation coefficient is calculated between each pairs of 15 variables and the value thus obtained for the pre-agitation (1975-1978) agitation (1979-1985) and post-agitation period for the district (1985-2001) and for the Thana up to 1995.

By analysing districts level crime correlation in the Brahmaputra valley, Assam, it has been found that in the district of Jorhat (Table-5.6), kidnapping/abduction, dacoity, robbery, rioting, CBT, cheating, juvenile, gambling, alcoholism has got positively significant correlation with the murder. This shows that almost all categories of crimes in the study area has positive relation with murder. Here both violence and social crimes are significantly correlated at 1 percent level of significance, while property crime is positively correlated at 5 percent level of significance while it is insignificant with other traditional crimes. This gives idea that, when kidnapping/adduction is committed then person will be killed, may be due to ransom or due fear of identification, after getting the expected demands from person. In this district, it has been observed that, dacoity, robbery, burglary, LH/H breaking, theft, rioting, CBT cheating, juvenile, gambling all are having significant correlation with kidnapping, but alcoholism, other IPC has got positive correlation at 5 percent level of significance in the same direction. In respect of burglary, theft, rioting, CBT, cheating, gambling, has shows significant correlation at 1 percent level of significance in the same direction, whereas, juvenile crime variable shows significant at 5 percent level of significance in the same direction. Here, violence, property and traditional crime are significantly correlated in the same direction with robbery at 1 percent level of

Table 5.6: Correlation of Crimes in Jorhat District (n=19)

[illegible]

significance. Again theft, rioting, CBT, cheating, gambling has show positive and significant relation with burglary at 1 percent level of significance in the district. The major category of crime i.e. violence and property crime also shows a significantly correlation with burglary, in the same direction at 1 percent level of significance, and similar scenario has been observed in respect of LH/H breaking, theft. But in case of LH/H breaking it has significant and positive correlation with other IPC and traditional crime too. In case of rioting and CBT, it shows significant and positive correlation in the same direction at 1 percent level of significance with cheating, juvenile, gambling, alcoholism and other IPC and violence, property, social and traditional crime which is a major category of crime also show significant correlation with rioting and CBT. Crime such as juvenile, gambling, other IPC also has got significant correlation with cheating at 1 percent level of significance on the other hand, gambling, alcoholism, other IPC has got correlation at 5 percent level of significance in the same, direction with juvenile. At the same time, major crime such as violence crime, property crime and social crime also have positive correlation with juvenile crime variable. Again other IPC, alcoholism has got positive and significant correlation with gambling at 5 percent level of significance in the Jorhat district. In respect of violence and property crime too it is highly significant with gambling in the same direction whereas social crime shows correlation at 5 percent level of significance with gambling. Total crime and violence crime is significant with alcoholism at 5 percent level of significance in the same direction in the district. In respect of other IPC, total crime, it shows positive correlation at 1 percent level of significance with other IPC crime in the district.

In the district of Lakhimpur (Table 5.7), it has been observed that rioting crime variable and other IPC shows significant correlation with murder, which means, violence crime shows positive and significant correlation with murder at 1 percent level of significance in the district. Crime variables such as, burglary, theft and gambling have shown negative correlation with rape. That means this crime increases in a negative direction with rape at 5 percent level of significance and positive direction with cheating at 1 percent level of significance with rape. Dacoity is another important crime variable, which has got significantly correlated with LH/H Breaking. In the district, crime variable such as theft, rioting, total crime, property crime are significantly and positively correlated with burglary each other whereas cheating shows negative correlation. If one is increases other is decreases at 5 percent level of significance, LH/H Breaking in the district, shows significantly high correlation in the same district at 1 percent level of significance with LH/H Breaking, juvenile, cheating, rioting and also got positive correlation at 5 percent level of significance with theft, and property crime. In this district, rioting shows very high positive correlation with juvenile, other IPC, total crime, as well as violence and property crime. These two major category of crime has got high significant in the same direction with rioting at 1 percent level of significance. It is due to property clashes, by which violence crime occurs and thereby causing rioting. In the district, social crime is significantly correlated in the same direction at 1 percent level of significance with alcoholism; where as other IPC has got very high correlation with total crime in the district.

Table 5.7: Correlation of Crime in Lakhimpur District (n=27)

[illegible]

In the district of Dhubri, crime variable such as kidnapping, dacoity has shows significantly high correlation with murder in the same direction, and major category of crime i.e. violence crime also shows significantly high correlation with the murder. Besides these, crime variable such as juvenile, LH/H Breaking shows significant and positive correlation with rape. But in the opposite direction at 5 percent level of significance, if one is increase then other is decrease. At the same time, robbery, theft, rioting, juvenile shows very high and positive correlation in the same direction with dacoity and both, property and violence crime closely correlated at 5 percent level of significance with the robbery in the district. Again, crime variable such as LH/H Breaking, theft, rioting has closer significance with burglary at 1 percent level of significance and violence crime and property crime shows closer correlation with burglary in the same direction. Here, gambling shows positive significance with burglary at 5 percent level of significance. In the case of LH/H Breaking and theft, it shows positive correlation with theft, gambling and total crime at 5 percent level of significance and rioting, gambling and total crime at 1 percent level of significance and 5 percent level of significance, having closer relation with LH/H Breaking and theft. Here, the major category of crime such as violence, property and social crime too closely correlated with theft at 1 percent level of significance in the same direction. In the Dibrugarh district, rioting has got positive and highly relation with violence and property crime at 1 percent level of significance in the same direction. In the case of gambling, it shows significant at 1 percent level of significance with property crime in the district. By analysing over all scenario of in the

Table 5.8: Correlation of Crime in Dhubbri District (n=19)

[illegible]

district it has been found that violence and property crime is closely related at 1 percent level of significance in the same direction (Table 5.8).

While observing the dimension of crime variation in the district of Kokrajhar (Table 5.9), gambling shows negative correlation with murder at 5 percent level of significance, and kidnapping show highly significant at 1 percent level of significance with murder. It shows that, when a person kidnapping he/she will be murder due to ransom or fear of security leak. Robbery, LH/H Breaking shows positive and significant correlation with rape, that means when a person commit robbery or LH/H Breaking, they also commit crime such as rape. On the other hand, kidnapping/abduction has no any relation with other crime, as because, when a person kidnapped, the kidnapper will not commit any other crime or they only take person, while robbery, theft, rioting has significant correlation with dacoity. Theft and juvenile shows significant correlation at 1 percent level of significance with robbery/burglary in the district. Property crime shows positive correlation with LH/H breaking. Again, violence crime shows positives significance correlation with cheating. It has been observed that, in the Kokrajhar district, violence and property crime shows significantly closer correlation in the same direction, when there is property crime, then there will also be violence crime and when there occurs violence crime then there will also occur property crime.

While correlating crime variable in the Bongaigaon district it has been found that rape shows significant correlation with murder, and CBT shows positive correlation at 5 percent level of significance. Both rape and CBT shows positive correlation in the same direction, while juvenile shows negative correlation with murder, if one increases, other

Table 5.9: Correlation of Crime in Kokrajhar District (n=19)

[illegible]

Table 5.10: Correlation of Crime in Bongaigaon District (n=13)

[illegible]

will also decrease. Kidnapping/adduction in the Bongaigaon district shows higher correlation with rape, that means, they kidnapping/abduction a women, they also commit crime, such as rape, while committing crime, while, cheating has closer correlation with dacoity and burglary. Cheating with robbery shows significantly high correlation at 1 percent level of significance in the same directions. So the property crime shows positive correlation with dacoity and robbery in the district. In case of burglary, theft, alcoholism, gambling and other IPC shows closer relation at 1 percent level of significance in the same direction. Here, property crime, violence crime, social crime also shows significantly high correlation with burglary 1 percent level of significance, that means while committing burglary, they also commit the above crime viz. Again violence crime shows positive correlation at 5 percent level of significance with LH/H breaking. Juvenile on the other hand shows negative correlation with theft at 5 percent level of significance, if one increases other decreases. In case of rioting, alcoholism indicates positive correlation at 5 percent level of significance. Violence, property and social crime show positive correlation at 5 percent level of significance in the same direction with riot in the district. Again alcoholism shows significant correlation with gambling that means when they take alcohol, they also commit the crime such as gambling. Here, property and social crime shows positive and significant correlation at 1 percent level of significance. Social crime shows significant at 1 percent level of significance with alcoholism in the district in the same direction. While observing four major categories of crime, it shows that the district of Bongaigaon, significantly correlated with violence, property and traditional crime (Table 5.10).

The district of Barpeta on the other hand shows high significant in rape, kidnapping, robbery with murder at 1 percent level of significance, whereas, juvenile crime variable shows negative significance at 5 percent level of significance with murder. This shows that while committing crime such as rape, dacoity, kidnapping and robbery the person also commit murder. Again, CF shows significant correlation with rape at 1 percent level of significance on the other hand theft shows negatively significance at 5 percent level of significance with rape. Dacoity, LH/H breaking shows positive correlation at 5 percent level of significance in the same direction with kidnapping in the Barpeta district. In case of alcoholism it is highly correlated with dacoity at 1 percent level of significance in the same direction. This gives idea that, either they go for dacoity with drink or darkness, they commit crime, such as dacoity. Such situation has been noticed in the district of Barpeta. Again LH/H Breaking in the district shows significant correlation at 1 percent level of significance with property crime, while, CBT, CF, alcoholism positively correlated at 5 percent level of significance with theft. Most important factor of crime variable, i.e., rioting which shows very high significantly correlated with juvenile at 1 percent level of significance level, this means when a person commit crime, such as juvenile, then there will be rioting crime. Here, violence crime shows highly correlated with rioting. In Barpeta district violence crime significantly correlated at 1 percent level of significance with juvenile crime variable and social crime too has high and significant correlation at 1 percent level of significance in the district. While correlating four major categories of crime it has been found that violence and traditional crime shows significant

Table 5.11: Correlation of Crime in Barpeta District (n=19)

[illegible]

and closer association, whereas, property crime shows positive correlation at 5 percent level of significance in the district (Table 5.11).

The district of Nalbari with its 17 (seventeen) number of observation (Table 5.12), it has been found that, kidnapping/abduction and rioting shows very high correlation at 1 percent level of significance, but juvenile crime shows negative correlation at 5 percent level of significance, that mean if one is increase other crime will be decreases. In the Nalbari district, if a person is kidnapping he has been murdered. Again when there is rioting then there is murder. So murder, rioting and kidnapping have a closer relation. Cheating and theft in the district correlated with rape at 5 percent level of significance that mean, when a person goes to commit theft, he also commits crime such as rape. In the district, violence crime, and social crime shows positive correlation at 5 percent level of significance and viz. Another important crime variable is kidnapping has closer correlation with CF at 5 percent level of significance while property crime has got negative correlation at 5 percent level of significance with kidnapping in the district.

On the other hand, robbery and burglary has got significant correlation with dacoity in the same direction, But other IPC and juvenile shows negative correlation that means, if one increase other may decrease. Besides, crime variable such as burglary shows positive correlation with robbery at 5 percent level of significance and juvenile crime shows positively correlated in the negative direction with robbery. This gives idea that, while committing burglary crime, a person also commits crime, such as (murder, rape and kidnapping) while, committing burglary, and same situation prevails in the case of burglary too. But in the case of LH/H Breaking, it has significant correlation with juvenile

Table 5.12: Correlation of Crime in Nalbari District (n=17)

	Murder	Rape	Kid/obd	Dacoity	Robbery	Burglary	LH/H breaking	Theft	Rioting	CBT	Cheating	CF	Juvanule	Gambling	Alcoholim	Other IPC	Total	Violence	Property Crime	Social	Traditional
Murder	1	0.12	0.79	-0.31	0.13	-0.36	-0.46	-0.39	-0.64	-0.12	-0.27	0.26	-0.48	0.06	-0.4	0.15	-0.41	-0.01	-0.7	-0.18	0.14
Rape	.	1	0.33	-0.23	0.25	-0.05	0.17	0.08	0.22	0.14	0.52	0.3	0.42	0.44	0.2	0.43	0.52	0.56	0.1	0.52	0.45
Kid/obd	.	.	1	-0.26	0.17	-0.39	-0.26	-0.31	-0.36	-0.06	-0.14	0.53	-0.15	0.01	-0.28	0.13	-0.23	0.29	-0.56	-0.12	0.12
Dacoity	.	.	.	1	0.59	0.62	-0.15	-0.02	0.25	0.25	-0.28	-0.29	-0.57	-0.6	-0.01	-0.52	-0.12	0.19	0.32	-0.56	-0.5
Robbery	.	.	.	.	1	0.55	-0.3	-0.4	-0.12	0.2	-0.21	0.07	-0.58	-0.23	-0.32	-0.2	-0.25	0.24	-0.14	-0.38	-0.18
Burglary	.	.	.	.	.	1	0.18	-0.48	0.13	0.27	-0.25	-0.05	-0.36	-0.06	-0.37	-0.39	-0.15	0.01	0.14	-0.26	-0.36
LH/H breaking	.	.	.	.	.	.	1	0.22	0.42	-0.17	0.24	0.24	0.67	0.27	0.4	0.11	0.58	0.14	0.62	0.46	0.09
Theft	.	.	.	.	.	.	.	1	0.62	-0.02	0.56	-0.45	0.64	-0.19	0.91	0.11	0.71	0.35	0.76	0.31	0.11
Rioting	.	.	.	.	.	.	.	.	1	0.06	0.61	-0.46	0.82	-0.24	0.68	-0.17	0.71	0.73	0.8	0.17	-0.17
CBT	.	.	.	.	.	.	.	.	.	1	0.02	0.08	-0.23	-0.03	0.01	-0.07	0.04	0.06	0.07	0.02	0.04
Cheating	.	.	.	.	.	.	.	.	.	.	1	-0.18	0.78	0.33	0.67	0.46	0.82	0.52	0.46	0.64	0.46
CF	.	.	.	.	.	.	.	.	.	.	.	1	-0.26	0.32	-0.32	0.46	-0.11	-0.21	-0.36	0.13	0.49
Juvanule	.	.	.	.	.	.	.	.	.	.	.	.	1	0.7	0.72	0.29	0.84	0.51	0.79	0.97	0.26
Gambling	.	.	.	.	.	.	.	.	.	.	.	.	.	1	-0.09	0.47	0.18	-0.25	-0.17	0.86	0.47
Alcoholim	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.13	0.8	0.44	0.79	0.43	0.12
Other IPC	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.47	-0.09	-0.08	0.5	0.99
Total	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.55	0.77	0.58	0.47
Violence	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.41	0.04	-0.09
Property Crime	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.26	-0.08
Social	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.5
Other Traditional Crimes	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1

r> .482 sig at 5%; r> .606 sig at 1%

at 1 percent level of significance and property crime shows highly significant at 1 percent level of significance in the same direction with LH/H Breaking, this means, the person will commit crime such as dacoity, burglary, theft, cheating at the same time of committing crime such as LH/H Breaking in the district. Rioting, alcoholism, total crime shows significant correlation with theft at 1 percent level of significance and juvenile cheating at 1 percent level of significance; property crime shows highly significance with theft in the district. At the same time cheating, alcoholism and violence crime also shows significant correlation with rioting. Juvenile, alcoholism, total crime has closer correlation at 5 percent level of significance with cheating. Violence and social crime also has closer correlation at 5 percent level of significance with cheating in the district in the same direction. In the case of traditional crime, it is positively correlated with CF and juvenile with violence and alcoholism at 5 percent level of significance. In the districts, that both property and social shows positive and significant correlation in the same direction at 1 percent level of significance. While, social crime shows significantly correlation with gambling at 1 percent level of significance and property crime also shows significant correlation with alcoholism at 1 percent level of significance in the Nalbari district. In case of other IPC crime, it is correlated with other traditional crime in the same direction at 1 percent level of significance in the Nalbari district.

In the district of Darrang, while finding out the correlation with 27 (twenty seven) number of observation (Table 5.13), it has been noticed that, crime variable such as dacoity, robbery and violence crime are significantly and positively correlated with murder in the same direction, that means, in the Darrang district, when a person commit crime,

Table 5.13: Correlation of Crime in Darrang District (n=27)

[illegible]

such as dacoity, robbery the person also commit murder, rape, robbery, etc. at the same time. Kidnapping has a significant correlation with rape at 1 percent level of significance in the same direction. It shows that while kidnapped women, they may also commit crime such as rape. Again robbery, rioting has closer correlation with dacoity and violence crime also have got significantly correlation with dacoity. In the case of robbery it is positively correlated at 5 percent level of significance with gambling and violence crime, these shows that while committing gambling crime they also commit crime, such as robbery. In the Darrang district, it has been observed that crime such as theft, rioting, CBT, cheating, juvenile, gambling other IPC total crime has got significantly correlation with burglary, LH/H Breaking, theft and also with rioting. Here, almost all major categories of crime, such as violence/property traditional are closely correlated each other. But social crime has got very weak relation with theft and rioting in the district. Cheating, alcoholism, gambling has got significant and positive correlation with CBT, Here, property, social and traditional crime shows closer correlation with each other, viz., while, juvenile has got closer correlation with cheating and other IPC. District shows very high and significance with violence and other traditional crime. Again, alcoholism has got closer relation with CF at 1 percent level of significance and social crime shows highly significance with CF. At the same time, other IPC, gambling shows very high and positive correlation with juvenile at 1 percent level of significance in the district. This shows that, by bribing money a person commit juvenile crime. Property and social crime in the Darrang districts shows significantly correlation with gambling crime, these may be due to involvement in alcoholism and viz.

While analysing the correlation of crime variable of Sonitpur district, with its number of observation 19, it has been observed that robbery, theft, cheating has significant and positive correlation with murder. Violence and property crime shows significant and positive correlation with murder in the same direction. This picture shows that, while committing robbery, they also commit murder. While, burglary, LH/H Breaking, has negatively significant with rape, if one is increase then the other shows in the decreasing trend, viz., burglary is negatively significant at 5 percent level of significance with kidnapping. In the district, robbery, theft, is significantly and positively correlated with dacoity in the same direction. Violence crime also shows positively correlation with dacoity that mean, if one commits dacoity, then he also commits violence crime such as murder, rape, robbery etc. Rioting also significantly and positively related with robbery, burglary in the same direction. Both violence and property crime significantly correlates with burglary and robbery in the district of Sonitpur. Again juvenile, theft, rioting has got significant as well as positive correlation with LH/H Breaking, theft in the district. Property crime shows closer association at 1 percent level of significance with LH/H Breaking, while violence and property crime shows significant correlation with rioting in the same direction. Again CF shows high correlation with CBT at 1 percent level of significance where as, alcoholism has got positive correlation at 5 percent level of significance with juvenile, that means, the person commit juvenile crime when he is in drunkenness. Property crime has significant correlation with juvenile, it shows that, the person who commit juvenile crime, also commit robbery, burglary, theft, cheating, etc. Social crime is highly and significantly correlated with alcoholism in the same direction in

Table 5.14: Correlation of Crime in Sonitpur District (n=19)

[illegible]

the district. By observing the correlation of four major group of crime, it has been found that, in the district violence crime has significant correlation with property crime (Table 5.14).

The district of Nagaon with its 27 (twenty seven) number of observations (Table 5.15) it has been found that rioting, violence is significantly correlated at 1 percent level of significance with murder, that mean, where there is rioting there occurs murder crime and thereby, violence, robbery, CF has got closer relation with rape in the district as it is a fact that, when there robbery there shows rape. Again LH/H Breaking, CF shows significant correlation with robbery at 1 percent level of significance in the same direction in the district. From this fact, it has been observed that, in the Nagaon district, when there is a crime, such as LH/H Breaking, the crime committer also commit crime, such as robbery. Again, crime variable such as theft, cheating, and alcoholism has closely correlated LH/H Breaking at 1 percent level of significance in the same direction. Here both property and social crime has got highly correlation with each other in the district. Juvenile crime variable on the other hand, has got very high relation with cheating while CF shows positive correlation, in the negative direction. Both property crime and social crime has closer correlation with cheating. In the Nagaon district, property and social crime is significantly and positively correlated with juvenile at 5 percent level of significance in the same direction. Social crime significantly correlated at 1 percent level of significance with alcoholism in the district. In case of other IPC it has got high correlation with total crime. Here, both violence crime and property crime significantly correlated with other traditional crime.

Table 5.15: Correlation of Crime in Nagaon District (n=27)

[illegible]

The district of Dibrugarh with its number of observation 27 (twenty seven) by correlating crime variable, it has been found that, crime variable such as dacoity, is closely and highly correlated with murder at 1 percent level of significance in the same direction, it shows that, the district of Dibrugarh, criminal, while committing dacoity also commits the crime such as murder. While LH/H Breaking, alcoholism, juvenile has got close correlation with kidnapping/abduction, that means, the person who commits such type of crime, also commit the crime, such as kidnapping/abduction. LH/H Breaking, theft, rioting, gambling, alcoholism, total crime has got significant correlation with burglary and same situation is prevailing with LH/H Breaking except the crime variable LH/H Breaking. In the Dibrugarh district violence crime, property crime, social crime are significantly correlated with the burglary and LH/H Breaking, In this district rioting, cheating, alcoholism at 1 percent level of significance and juvenile, gambling at 5 percent level of significance, significant correlation in the same direction having closer with. Theft, rioting have closer correlation with violence crime, property crime and social crime with theft at 1 percent level of significance and violence crime, property crime and other traditional crime with rioting, cheating crime variable on the other hand has got correlation with CBT at 1 percent level of significance in the same direction. In case of cheating in the district, gambling, alcoholism other IPC shows significant and high correlation at 1 percent level of significance, having closer correlation with property crime and other traditional crime. Beside this, violence crime and other traditional crime positively significance in the negative direction with CF. Again, alcoholism, and gambling shows significantly and positively correlated with gambling and juvenile crime. It shows that, in the Dibrugarh

Table 5.16: Correlation of Crime in Dibrugarh District (n=27)

[illegible]

district, criminal commit juvenile crime while he is drunk and also involved the money. Again, gambling crime seems to be committed with the drunkenness. In the Dibrugarh district, violence crime is closely correlated with property crime and social crime in the same direction at 1 percent level of significance level, whereas, property crime is significantly correlated with social crime and other traditional crime in the same direction, in the district of Dibrugarh (Table 5.16).

The district of Goalpara with the number of observation of 27 (twenty seven) it shows that rape, theft, kidnapping, robbery shows significant correlation at 1 percent level of significance in the same direction with murder. That shows that, person while committing kidnapping, robbery, rape also commit murder.

Beside this violence crime, property crime and other traditional crime also has got closer correlation with rape. Dacoity, robbery, burglary, LH/H Breaking, theft, rioting, CF, other IPC shows significantly closer relation with the kidnapping and dacoity in the same direction at 1 percent level of significance in the district of Goalpara. At the same time, LH/H Breaking, theft with robbery shows positive correlation. Here, property crime has got closer correlation with robbery at 1 percent level of significance in the same direction, while rioting, CBT, CF, cheating, gambling, other IPC has significant and positive correlation at 1 percent level of significance with burglary, theft, LH/H Breaking in the same direction. In the district, major categories of crime, such as violence crime, property crime, social crime and other traditional crime show closer correlation with burglary, theft, LH/H Breaking. Beside this CBT, cheating, other IPC, CF also shows significant and

Table 5.17: Correlation of Crime in Goalpara District (n=27)

[illegible]

positive correlation with rioting at 1 percent level of significance in the same direction. Again social crime shows closer correlation with the gambling in the district (Table 5.17).

While observing the correlation of four major category of crime in the district it shows a picture that, property and traditional crime has got closer correlation at 1 percent level of significance with violence crime and property crime with social crime. So, each of this has got closer association. While correlating the 27 (twenty seven) number of observation of crime variable in the Kamrup district (Table 5.18), it has been found that, rioting and juvenile crime has got significance correlation with murder at 1 percent level of significance in the same direction and violence crime shows highly correlation with murder crime. That mean, when there is rioting, there occur the crime such as murder. At the same time, when the person commits the juvenile crime, the criminal murders the person in many reasons. This is the picture and situation of murder in the Kamrup district. Kidnapping/abduction, dacoity, robbery, LH/H Breaking, theft, cheating, other IPC has got very high correlation with rape at 1 percent level of significance in the same direction.

Dacoity, robbery, CBT and CF, is significantly correlation with kidnapping and abduction. Again, robbery with dacoity, CF with robbery and rioting, cheating, juvenile, gambling, alcoholism, other IPC with rioting, and theft shows significantly correlated at 1 percent level of significance in the same direction. Beside this, CF and cheating with CBT, gambling, alcoholism at 5 percent level of significance and other IPC at 1 percent level of significance with cheating shows significantly correlated in the same direction in the Kamrup district. In the district, violence crime and property crime shows significantly correlated with juvenile crime variable at 1 percent level of significance in the same

Table 5.18: Correlation of Crime in Kamrup District (n=27)

[illegible]

direction. In case of gambling, it shows significant relation with alcoholism and other IPC with alcoholism at 1 percent level of significance in the same direction in the same district. Property, social, violence and other traditional crime are significantly correlated with alcoholism in the district. By examining correlation of major categories of crime in the district, it has been found that almost all categories of crime show significantly correlation to each other at 1 percent level of significance in the same direction. In the district of Kamrup this depicts a picture that all the categories of crime occur in the district of Kamrup and also has closer correlation to each other.

The district of Tinsukia with its number of observation 13 (thirteen) shows that, kidnapping/abduction positively correlated at 5 percent level of significance in the same direction with murder, that mean when a person kidnapping by the abductor he/she will be murder by the kidnapper, it maybe due to fear of the law or by not getting the ransom as expected and also maybe due to fear of security leakage. Again, alcoholism has significant correlation with robbery at the same direction. Social crime too significantly correlated with robbery at 1 percent level of significance in the direction. Again, CBT with burglary and LH/H Breaking show positive correlation in the same direction at 1 percent level of significance, Alcoholism shows negative correlation with theft. In this district, both, property and violence crime shows high correlated at 1 percent level of significance with theft and rioting. In the district, CF, CBT, and property crime with cheating shows high correlation at 1 percent level of significance in the same direction. Property crime also shows significant correlation with gambling at 1 percent level of significance in the district. While observing the four categories of crime in the district it shows that, property

[illegible][illegible]

crime is significantly correlated with total crime at 5 percent level of significance in the same direction (Table 5.19).

Golaghat district with its 15 (fifteen) number of observation, correlation of crime variable has been carried out (Table 5.20) and observed that, dacoity, theft, rioting shows closer correlation with murder; robbery, burglary, theft, other IPC with kidnapping; rioting with dacoity; CF with robbery at 1 percent level of significance in the same direction. It shows that, in the district, a person, when he commits the crime, such as dacoity, theft he also commit crime of murder and while, carrying kidnapping/abduction they also commit crime, such as robbery, burglary and theft. Again, when a person goes for robbery, he also commits crime, such as counter fighting. Again theft, total crime, other IPC has got significant correlation with burglary and LH/H Breaking. It shows that, person while going to commit crime of theft, he also commit crime i.e. LH/H Breaking. At the same time, rioting, juvenile, has got significant correlation in the negative direction with theft. It shows that if one is increase other will decrease. And property crime at the same, time positively correlated with theft. Again juvenile with cheating shows positively significant one in the negative direction. If one crime increases other will decrease viz. In the case of CF and gambling, it has positive correlation with CBT, at 1 percent level of significance; alcoholism, other IPC shows positive significant at 5 percent level of significance with juvenile, in the same direction. It shows that, a person who commit crime such as alcoholism also commit juvenile, due to the intoxication of liquor. While analysing the four major categories of crime in the district, it has been observed that violence crime has got significant correlation with property, social and traditional crime; property crime with

Table 5.20: Correlation of Crime in Golaghat District (n=15)

[illegible]

social and traditional crime and social crime with traditional crime at 1 percent level of significance in the same direction in the district of Golaghat. In the district, all the three categories of crime have shows closer correlation with each other.

In the district of Sibsagar, with its number of observation 27 correlations between crime variables has been found out. Here, it shows that almost all the crime variable shows significant correlation with kidnapping/abduction, murder, dacoity, and robbery at 1 percent level of significance in the same direction. Again, theft, juvenile, gambling, alcoholism, total crime shows significant correlation with burglary and LH/H Breaking. Beside these, the major crime category, such as violence, property and social crime also shows significant correlation with burglary and LH/H Breaking at 1 percent level of significance in the same direction. It has been notice that, when a person goes for committing burglary and LH/H Breaking, they also commit crime, such as juvenile, theft, alcoholism and viz. Rioting, cheating, gambling, alcoholism, other IPC has got significant correlation with theft and juvenile; gambling, alcoholism. Other IPC shows correlation with rioting, cheating and CF at 1 percent level of significance in the same direction in the district. On the other hand, gambling, alcoholism, other IPC shows significant correlation with juvenile crime at 1 percent level of significance in the same direction in the district of Sibsagar. While correlating the four major categories of crime, it has been observed that all four categories of crime significantly correlated at 1 percent level of significance in the same direction in the district (Table 5.21).

Correlation of crime for the district of Morigaon has been found out with its number of observation 13 (Table 5.22). Here, it has been observed that almost all crime

Table 5.21: Correlation of Crime in Sibsagar District (n=27)

[illegible]

Table 5.22: Correlation of Crime in Morigaon District (n=13)

[illegible]

variables are significantly correlated with murder, kidnapping, rape, dacoity, robbery, and burglary, LH/H Breaking in the same direction at 1 percent level of significance. In the case of theft, it has got significant correlation with rioting, CBT, cheating, juvenile, other IPC at 1 percent level of significance in the same direction. Again, cheating, juvenile, gambling with CF, CBT and juvenile, gambling, other IPC with cheating significantly correlated at 1 percent level of significance in the same direction in the district. While analysing the four categories of crime in the Morigaon district, it is has vividly shows, the inner picture of the crime situation of the district. All the four major categories of crime such as violence crime, property crime, social crime and other traditional crime highly correlated each other at 1 percent level of significance in the same direction.

Dhemaji district with its 13 (thirteen) number of observation shows that, all crime variable i.e. rape, kidnapping, dacoity, robbery, LH/H Breaking, theft, rioting, CBT, cheating, CF, juvenile, gambling, alcoholism, other IPC, shows significantly correlation with murder. From this, it has came to know that the person who commit above crime, also commit murder in the area. Again, cheating with rape; rioting and juvenile with dacoity; juvenile with burglary and rioting, shows significantly high correlation at 1 percent level of significance in the same direction in the district. On the contrary cheating shows highly significance at 1 percent level of significance with rioting in the Dhemaji district. Alcoholism with CF, gambling with juvenile has got significant correlation at 1 percent level of significance in the district. While examining correlation of the four major categories of crime, it has found that violence crime shows significant correlation at 1 percent level of significance with the property crime in the same direction. In this district,

Table 5.23: Correlation of Crime in Dhemaji District (n=13)

[illegible]

violence and property crime shows closer and significant correlation at 1 percent level of significance each other. But social crime has got weak relationship (Table 5.23).

The overall crime scenario of the Brahmaputra valley will highlight the inner fact of the crime variables in the study area vividly. By analysing the correlation of crime, of four major categories together, it shows that, rape, kidnapping/abduction, robbery, rioting, burglary crime, is significantly correlated with murder in the same direction at 1 percent level of significance, in the district of Barpeta, Sibsagar, Morigaon, Darrang, whereas, the district of Kokrajhar, Tinsukia, Nalbari, crime such as kidnapping, is very highly correlated with murder at 1 percent level of significance in the same direction.

Murder is highly correlated in the Dibrugarh and rioting with murder at 1 percent level of significance in the Nagaon district in the same direction. This shows that, when a person or group of persons commits dacoity, they also commit crime such as murder. In the same way, when there occurs crime such as murder.

In the case of rape, it has been observed that Bongaigaon and Darrang district kidnapping/abduction had very high correlation with rape. This depicts that, when a person kidnapping/abduction by someone he also commit rape crime. Again, the district of Sibsagar, Jorhat, Golaghat and Dibrugarh, shows negative correlation with crime variable such as rape. The district of Tinsukia, shows significant correlation between juvenile and rape; and district of Kokrajhar, robbery with rape at 1 percent level of significance in the same direction, this gives idea that, in the Kokrajhar district, when a criminal commit robbery crime, he also commit rape crime too. Sonitpur district shows significantly negative correlation of burglary crime with rape in other districts. In Morigaon district

almost all crime has got significant correlation with rape. While the district of Kamrup and Goalpara, kidnapping/abduction, dacoity, and robbery show very high relationship with rape.

In respect of kidnapping and abduction, district of Sibsagar, Jorhat, Golaghat, Dibrugarh, Morigaon, Barpeta are highly significant with dacoity, robbery, burglary, theft, rioting, CF with kidnapping, accept gambling and alcoholism. Whereas districts like Lakhimpur, Darrang, Bongaigaon, Nagaon, Dhemaji do not show any correlation with kidnapping/abduction. This shows that, while kidnapping a person by a kidnapping/abductor, he do not commit any crime, at the time of operation. Again districts of Sonitpur and Tinsukia, burglary shows negative correlation with kidnapping, that, if shows that in one will increase, other will decrease and viz.

In the case of dacoity in the Brahmaputra valley, robbery, burglary, LH/H Breaking, theft, gambling, alcoholism, shows very high relationship at 1 percent level of significance with dacoity, in the district of Jorhat, Sibsagar, Morigaon and Goalpara, rioting shows high correlation with dacoity at 1 percent level of significance in the same direction in the district of Dhubri and Golaghat. Here, when there will be rioting, a person will also commit crime such as dacoity at the time of rioting in the Nagaon, Tinsukia, Dibrugarh districts on the other hand dacoity have no correlation with any other crime.

While analysing the situation of robbery crime variable in the Brahmaputra valley, it has been observed that LH/H Breaking, dacoity, burglary, cheating, CF, CBT, gambling and alcoholism shows significantly high correlation at 1 percent level of significance in the same direction in the district of Jorhat, Sibsagar, Morigaon, Golaghat. Whereas, in the

Lakhimpur, Dhemaji, Dibrugarh district other crime variable has no any correlation with robbery.

Districts of Nagaon and Goalpara show high relationship with burglary and robbery that means, when a person will commit a crime such as robbery, he also commits burglary. District of Tinsukia again, alcoholism shows significant correlation with robbery at 1 percent level of significance in the same direction. While correlating the crime variable i.e. burglary in the Brahmaputra valley, it has been found that dacoity, LH/H Breaking, theft, CBT, CF, cheating, gambling, alcoholism shows significant correlation with burglary at 1 percent level of significance in the same direction in the district of Dibrugarh, Goalpara, Darrang, Bongaigaon, Morigaon, while in the Dhemaji, Nalbari, Kokrajhar district Juvenile shows high relationship with burglary, this shows that, while, commit juvenile crime, the person also involved in the committing of crime such as burglary. In the district of Sonitpur rioting has got significantly correlation with burglary crime. But in the district of Barpeta and Kamrup other crime has no relationship with burglary.

In regards to the LH/H Breaking, in the Brahmaputra valley, Jorhat, Morigaon, Dibrugarh, Goalpara, Darrang, Nagaon, Sonitpur, Sibsagar and Golaghat district crime variable such as theft, rioting, CBT, cheating, gambling, alcoholism, other IPC has got significantly very high relationship with LH/H Breaking. Again, property crime shows high correlation with LH/H Breaking in the district of Kokrajhar, Bongaigaon and Barpeta. Surprisingly, LH/H Breaking has no correlation with any crime variable, in Kamrup and Dhemaji district in the valley.

In the case of theft, in the Brahmaputra valley, juvenile crime and property crime (dacoity, burglary, cheating, etc) positively correlated with theft in the Kokrajhar and Dhemaji district. The crime variable that are highly correlated with theft are, alcoholism with theft in the Lakhimpur district, rioting with theft in the Dhubri district; CBT, CF and alcoholism with theft in the Barpeta district, shows significant correlation at 1 percent level of significance in the same direction. In rest of the valley, rioting, LH/H Breaking, CBT, CF, dacoity, gambling, and alcoholism shows highly correlated with theft at 1 percent level of significance in the same direction.

While examining and analysing the rioting in the Brahmaputra valley, it has been observed that cheating, rioting, CBT, gambling, alcoholism, juvenile and other IPC has a very high and significant correlation with rioting in the district of Jorhat, Morigaon, Kamrup, Goalpara, Darrang, Nagaon and Dibrugarh district. Whereas, juvenile crime with rioting and violence with rioting significantly and positively correlated at 1 percent level of significance in the same direction in the district of Barpeta, Dhemaji, Lakhimpur and Tinsukia, Kokrajhar, Dhubri district, rioting which is a most important crime variable shows no any relationship with other variable, in the district of Golaghat.

In respect of Criminal Breach of Trust (CBT) in the Brahmaputra valley, cheating, gambling, alcoholism and other IPC are significantly correlated with CBT in the district of Jorhat, Morigaon, and Goalpara, while rest of the district in the Brahmaputra valley, shows negative correlation with other crime variable. In the case of CBT, cheating in the valley shows a different picture, i.e., juvenile with cheating; property with cheating; violence with cheating shows very high and significant correlation at 1 percent level of significance in

the same direction, in the districts of Nagaon, Tinsukia, and Kokrajhar respectively. While, other crime variables have shown no closer correlation with cheating in the rest of the district in the valley. Again, while examining and analysing the CF (Counter Fighting) in the Brahmaputra valley, alcoholism with CF, violence with CF, shows significantly correlation at the level of 1 percent level of significance in the same direction in the districts of Darrang, Goalpara, and Kokrajhar i.e. (murder, rape, kidnapping, robbery). Again, a person, while committing alcoholism crime also commit crime such as counter fighting (CF). Rest of the district in the Brahmaputra valley, has no correlation with CF with other crime variable

In the Brahmaputra valley it has been observed by correlating the crime variable that alcoholism and gambling shows significant correlation with juvenile crime in the districts of Sonitpur, Golaghat, Sibsagar, Dibrugarh and Dhemaji at 1 percent level of significance in the same direction. This shows that a person while committing gambling and alcoholism crime, also commit juvenile crime, this maybe by involving money in alcoholic intoxication. Again, district of Nagaon shows closer correlation with property crime.

Gambling which is an important crime variable in the valley shows a diverse scenario. Here property crime shows closer correlation with gambling in the districts of Tinsukia and Dhubri at 1 percent level of significance in the same direction. Social crime shows significantly correlation with gambling at 1 percent level of significance in the districts of Barpeta, Nalbari and Kokrajhar, this shows that while committing alcoholism crime, the person also involved in gambling due to absence of sense or, while district of

Sonitpur, and Nagaon, Golaghat and Lakhimpur have no closer correlation with other crime variable with gambling.

Alcoholism again shows significantly high and positive correlation with gambling at 1 percent level of significance in the districts of Dibrugarh, Kamrup and Bongaigaon. In the case of alcoholism, almost all districts shows significant and positive correlation of social crime with alcoholism in the same direction, except Nalbari, Sibsagar and Kamrup district. In Nalbari, property with alcoholism shows high correlation while in the district of Sibsagar and Kamrup, the entire crime variable significantly and positively correlated with alcoholism in the same direction. In respect of other traditional crime, violence crime is significantly correlated with other IPC in the districts of Lakhimpur. The district where violence, property and social crime shows significantly positive correlation with other crime are:- Dibrugarh, Sibsagar and Dhemaji in the same direction. But the, violence, property and other traditional crime shows significant correlation with traditional crime in the districts of Kamrup and Nagaon. Other crime variable shows weak relation with other IPC are the district Barpeta and Sonitpur.

In the Brahmaputra valley correlation of major four categories of crime has also been find out and it depicts a sea change in the scenario of crime, in the district. It has provides a picture of concentration of crime in the different district, differently. It has been observed that, property, social and traditional crime shows significantly and positively high correlation at 1 percent level of significance with violence crime in the same direction in the district of Jorhat, Dibrugarh, Goalpara at 5 percent level of significance, Kamrup,

Sibsagar and Morigaon. On the other hand, property crime shows high correlation with violence crime in the Dhubri, Sonitpur and Dhemaji district.

While, social crime shows closer correlation with property crime at 1 percent level of significance in the district of Lakhimpur, Dhubri, Darrang, Nagaon, Morigaon in the same direction. Social and other traditional crime shows a very high correlation with property crime, in the districts of Darrang, Dibrugarh, Goalpara, Kamrup and Sibsaagar. In respect of traditional crime, it is highly correlated with property crime at 1 percent level of significance in the district of Morigaon in the Brahmaputra valley. Traditional crime on the other hand shows significant and positive correlation with social crime at 1 percent level of significance in the same direction in the districts of Jorhat, Dibrugarh, Goalpara, Kamrup, Golaghat, Sibsaagar, and Morigaon. But the districts such as, Jorhat, Bongaigaon, Darrang, Goalpara, Kamrup, Sibsaagar and Morigaon have significantly correlated each other with violence, property, social and traditional crime at 1 percent level of significance in the same direction in the Brahmaputra valley, Assam.

5.6 Dimension and Variation of Thana Wise Correlation of Crime Variable

Crime scenario in the Brahmaputra valley, Assam always differs if we compare to the district and Thana level correlation of crime. The Thana as a small unit of the study is areas show in-depth picture of the phenomena. For the better understanding of crime phenomenon and to highlight the inner crime scenario of the smallest of the small unit (police station) and also to bring a vivid picture of crime pattern of the districts of the valley, Thana level analysis of variation of crime felt necessary.

For the Thana level analysis seven districts has been selected out of 18 (eighteen) districts of the Brahmaputra valley. These seven districts have been selected, by representing middle, lower and upper Brahmaputra valley, Assam. These districts are – Kamrup, Nagaon, Sonitpur, Sibsagar, Dhemaji, Kokrajhar and Goalpara. Each of these districts has its distinctive character in respect of religion, population composition, linguistic composition, level of socio-economic development, density, literacy rate, sex ratio, agricultural Labourers, worker and non-worker and political stability and instability as well.

In the upper Brahmaputra valley, districts of Dhemaji show highest Hindu population (93.87 percent level of significance) in the valley. In respect of religious groups Muslim (1.49 percent level of significance) and Christian (1.02 percent level of significance) shows the lowest in the district as well as in the valley according to 2001. Dhemaji district represent high percent level of significance of cultivators (73.0 percent level of significance) in the valley. In respect of density, this district has lowest density of population among the districts of the Brahmaputra valley. This district also shows higher decadal growth of urban population i.e. (342.36 percent level of significance) and lowest urban population in the valley.

In respect of Sibsagar district, it has been observed that this district shows high Hindu population (89.265), low scheduled caste and scheduled tribe population i.e. (3.58 percent level of significance) and (3.80 percent level of significance). This district has second highest literacy rate (75.3 percent level of significance) next to Jorhat (77.9 percent level of significance). These districts also represent Ahom population stock at large. While

examining scenario of Dhemaji and Sibsagar, it has found that both the district shows very negligible scheduled caste population in the districts of upper Brahmaputra valley, except Jorhat (6.52 percent level of significance).

In the middle Brahmaputra valley, Assam, districts such as Nagaon, Kamrup and Sonitpur has been taken for the study as because these three districts have got diverse character than the other districts. Nagaon district shows mixed population both Hindu (51.73 percent level of significance) and Muslim (47.19 percent level of significance) and also highly affected district by the crime such as rioting i.e., incidence of Nellie, Nagaon district. Scheduled caste population shows highest in the Brahmaputra valley i.e. (29.65 percent level of significance). This district also represents highest percent level of significance of rural population (20, 37466) person as compare to the other districts of the valley. Not only this, but also it posses highest density (604) person per/sq km. in the valley. The district of Kamrup is highly urbanized district in the Brahmaputra valley with an urban population of (25, 15030) person. In this district sex ratio shows lowest (894). In the Kamrup district “Guwahati” as a highly urbanized city with the population of (808021) person plays a vital role in economic activities of the North Eastern Region and it is also the heart of the North East. So, this district has its own identity, for which this district has been selected. Again, the district of Sonitpur posses mixed population, where almost all linguistic groups of population is found. Nepali linguistic groups of population represents by Sonitpur (6.43%) next to Tinsukia (7.91%). Oriya and Hindi linguistic group also second highest in the Sonitpur district (2.83%) and (6.73%) respectively according to 1991 census.

In the lower Brahmaputra valley, districts such as Goalpara and Kokrajhar has been selected, because these districts differ in many respect, then the other districts of the lower Brahmaputra valley. District of Goalpara has lowest scheduled caste population (1.84%) and highest sex ratio in the Brahmaputra valley (955 persons per thousand male). In respect of religion, Goalpara district represent second highest Muslim (50.18%) and Christian population (7.89%) in the valley. Similarly, district of Kokrajhar has been chosen as because it represents highest percent level of significance of scheduled tribe population in the Brahmaputra valley (13.64%) and also shows high percent level of significance of Christian religious group (9.82%) in the districts of the lower Brahmaputra valley as well as a whole.

5.7 Mean and Standard Deviation

By thorough analysis of Thana wise mean and standard deviation it has highlighted the fact that Thanas of lower Brahmaputra Valley such as Kokrajhar and Gossaigaon indicated large variation in the occurrence of alcoholism and social crime, whereas, Dudhnoi shows large variation in the robbery, alcoholism and CBT. On the other hand, Thanas of Goalpara and Lakhimpur shows variation in robbery and Runikhata in rioting, burglary and larking house trespass and house breaking.

In the middle Brahmaputra Valley, Gohpur Thana indicated large variation in the murder, rape and CBT, Rangapara with CBT, Jhalukbari with murder, lurking house trespass and house breaking and CBT. Boko Thana depicts larger variation with murder, rioting, robbery, property crime and gambling. Thanas of Panbazar with CF, Rangia with

violence crime, Nagaon with CBT and CF, Lanka with larking house trespass and house breaking, Biswanath Chariali with dacoity, cheating, alcoholism, CBT and social crime. Dhekiajuli with theft shows wider variation in the occurrence of crime. In the case of Jamunamukh and Hojai Thana majority of crime variable indicated wider variation such as murder, rape, rioting, violence crime, larking house trespass and house breaking, cheating, gambling, social crime, CBT and CF in the former and in the later with murder, rape, rioting, robbery, violence crime and dacoity, Kaliabor Thana with CF, CBT and social crime.

In the Upper Brahmaputra Valley, Thana of Dhemaji and Junai indicated larger variation in violence crime, rioting, larking house trespass and house breaking, gambling, social crime and CBT with former and later with rape, violence crime, dacoity, larking house trespass and house breaking and CF. In the district of Sibsagar Thana such as Raha shows larger variation with rioting, violence crime, dacoity, larking house trespass and house breaking, alcoholism and in the Thanas of Demow variation in the occurrence has been observed in rioting, dacoity, gambling. Again, Thanas of Jorhat indicated wider variation in cheating and gambling, Nazira in dacoity. In Sibsagar Thana, gambling and alcoholism depict larger variation (see Appendix 5. II).

5.8 Thana wise Correlation of Crime

By correlating crime variable of each and every Thana of these seven selected districts, it has been observed that, the Thana such as Nazira, Amguri, Demow, Sonari, Kakotibari and Sibsagar Thana of the Sibsagar district shows significant correlation of

violence crime with rape, kidnapping, murder, rioting and burglary at 1 percent level of significance in the same direction. Again in the Thanas, such as Sibsagar, Amguri, Sonari are highly correlated with property crime, this shows that, both violence and property crime in these three Thana of the Sibsagar district are correlated each other. But in the Kakotibari Thana, it has been observed that robbery crime significantly correlated with murder in the negative direction if one is increase other will decrease and viz. beside these, Thana such as Moranhat shows absence of occurrence of social crime or has very weak relation. Same picture shows in the case of Sibsagar too. In the Jorhat, Thana of the Sibsagar district, social crime shows significant correlation with murder at 1 percent level of significance in the negative direction, again, this particular police station have significant correlation of property crime with rioting. Moranhat Thana of the Sibsagar district, on the other hand shows significant correlation of property crime with rape, but in the negative direction at 1 percent level of significance. While, Amguri Thana shows closer correlation with violence, property and social crime each other at 1 percent level of significance in the same direction in the district of Sibsagar.

In Dhemaji district, Thanas such as Dhemaji shows significant correlation of violence crime with murder, kidnapping/abduction, rioting and robbery at 1 percent level of significance in the same direction; while, Junai Thana, shows significant correlation of property crime with murder and violence crime. Both Junai and Dhemaji Thanas, show positive correlation of traditional crime with violence crime i.e. murder, kidnapping /abduction. While, property crime shows high correlation both in the Junai and Dhemaji police station with theft, rioting and CBT.

Social crime is highly correlated with property crime, i.e., theft in the Junai police station, whereas, social crime shows significant correlation with violence crime, i.e., Rape in the Dhemaji Thana of Dhemaji district. This gives knowledge that when a person commits a crime such as gambling and alcoholism, the person also commits crime such as rape. So, rape incidence in the Dhemaji Thanas area has a closer relationship. Both the Thanas i.e. Junai and Dhemaji, violence and property crime shows closer correlation with theft, rioting and CBT, that shows, when there will be theft, rioting or Breach of Trust crime, in that situation occurrence of murder, kidnapping, dacoity, rape also occur in the district see figure (Appendix 5.III).

While observing the three districts, i.e., Nagaon, Kamrup and Sonitpur in the middle Brahmaputra valley, it shows that the Thana's at Nagaon district such as Lanka, Rupahihat, Kaliabor, Samaguri, and Nagaon shows high correlation of violence crime with rape and robbery. The Thanas such as Nagaon, Lanka, Kamrup, Raha and Jamunamukh has shows closer correlation each other with violence, property, social and traditional crime at 1 percent level of significance in the same direction. Interestingly, the Hojai Thana shows very high correlation of traditional crime, violence and property crime in the districts. Beside these, Thana such as, Lumding shows very high correlation at 1 percent level of significance with LH/H Breaking but in the negative direction. Kaliabor Thana and Nagaon Thana too, highly significant with gambling (figure) and later is traditional crime with social crime and gambling but in the negative direction. If one shows increase other will decrease and viz. Again Thana of, Lanka alone shows significantly high correlation of social crime with all four major category of crime in the districts. This picture vividly

gives an idea that, all the crime variable in this police station are inter linked each other with the, crime such as gambling and alcoholism. When a person commit social crime, the person also commit violence and traditional crime such as, murder, rape, robbery, theft, cheating, CBT, CF, juvenile etc (Appendix 5.IV).

In the district of Sonitpur, police station such as Tezpur, Sotia, Bihali, Gohpur, and Dhekiajuli shows significant correlation of violence crime with murder, rape, kidnapping, and robbery at 1 percent level of significance in the same direction. In the Tezpur Thana violence crime with murder, rape, rioting and robbery, in the Gohpur Thana violence with murder, rape, robbery, while, in Sotia violence with murder, rioting and robbery has got high correlation, in the same direction. While, in the Tezpur Thana social crime, traditional crime with murder significantly correlated but in a negative direction, if one is increase other will decrease and viz. In the Bihali Thana traditional crime significantly correlated with rape at 1 percent level of significance in the same direction.

In Biswanath Chariali, traditional crime has positive significance with dacoity at 5 percent level of significance in the negative direction. This gives an idea that both social crime i.e. (gambling, alcoholism) and traditional i.e. (CBT, CF, other IPC) has got negative correlation in the Tezpur Thana, person while committing these types of crime will not commit murder. On the other hand Thana that is associated with violence crime also associated with property. Property crime has significantly high in the Gohpur Thana. Violence and property crime significantly correlated in the Biswanath Thana at 1 percent level of significance in the same direction. While Sotia Thana of Sonitpur district shows significantly high correlation with property. Beside these Thana such as Bihali, Sotia,

Tezpur, Dhekiajuli shows highly significance with social crime (gambling, alcoholism along with other crime) (Appendix 5.VI).

In Kamrup district, Thanas such as, Panbazar, Rangia, Chaygaon, Palasbari, and Boko are highly correlation of violence crime with rioting, kidnapping/abduction, burglary, rape, and murder at 1 percent level of significance in the same direction. Among these Thanas, Panbazar, Rangia, Chaygaon, Palasbari shows very high correlation between violence, social and property crime. Both violence and property crime are highly significance in the Chaygaon Thana. While social crime (gambling and alcoholism) is highly significant in Boko Thana and is correlated with violence crime at 1 percent level of significance in the same direction.

In Kamalpur Thana social crime has weak correlation with violence, property and traditional crime, or social crime are absent. In Palasbari, violence crime, social crime and traditional crime show very high association at 1 percent level of significance in the same direction. In respect of property crime, police station such as Rangia, Panbazar, Chaygaon, Palasbari, Boko are highly correlated at 1 percent level of significance with LH/H Breaking, rioting, dacoity, cheating, theft and burglary in the Kamrup district (Appendix 5.IV).

In the lower Brahmaputra valley, two districts have been taken for the studies are Goalpara and Kokrajhar. In the Kokrajhar district Thana such as Runikhata, (Sidly part) and Gossaigaon shows significant and high correlation of violence crime in all variables at 1 percent level of significance with murder, rape, kidnapping/abduction, rioting, and robbery in the same direction. Thana such as Runikhata (Sidly part), Gossaigaon, and

Kokrajhar shows higher correlation of violence crime. In Runikhata kidnapping/abduction, rioting and rape shows high correlation with murder at 1 percent level of significance in the same direction. In the Kokrajhar Thana, kidnapping/abduction and robbery are highly correlated with murder at 1 percent level of significance in the same direction. That mean, when a person is kidnapping/abducted by a person, will be killed, because of non fulfilment of demands or it maybe due to fear or by clashes between them or fear of law and order and viz. In the Runikhata (Sidly part) and Gossaigaon all the four major categories of crime shows higher correlation each other at 1 percent level of significance in the same direction.

In Thanas of Kokrajhar and Gossaigaon, social crime significantly correlated with dacoity, burglary, rioting, and robbery and for the latter i.e. (Gossaigaon) with rioting and robbery at 1 percent level of significance but in the negative direction, that means, if one increases other will decrease and viz. This shows that in this police station area those person who commit social crime i.e. alcoholism and gambling will not commit other crime (Appendix 5.V).

In the district of Goalpara it has been observed from the analysis of correlation that, Thana such as Goalpara and Dudhnoi depicts higher correlation of violence crime with murder, rape, kidnapping/abduction, rioting and robbery. Thanas of Lakhimpur, traditional crime positively correlated with alcoholism and dacoity at 5 percent level of significance but in the negative direction. While Goalpara Thana shows traditional crime highly correlated with rape and gambling at 5 percent level of significance in the negative direction. In Dudhnoi Thana traditional crime significantly correlated with rioting at 1

percent level of significance but in the negative direction. This shows that, Thana of Lakhipur, Dudhnoi, Goalpara has very high and high correlation of traditional crime with rioting, gambling and dacoity at 1 percent level of significance and 5 percent level of significance but in the negative direction. (Appendix5.V).

By thorough analysis and observation of correlation of 15 types of crime variable 41 (forty one) Thanas of the seven district of the Brahmaputra valley, Assam; it has been notice that, the Thanas such as, Panbazar, Rangia, Palasbari, Chaygaon of the Kamrup district, Nagaon, Lanka, Kampur, Samaguri, Hojai, Dhakuwakhana, Kaliabor and Rupahihat of the Nagaon district, Tezpur, Sotia, Bihali, Gohpur and Dhekiajuli of the Sonitpur district shows highly sensitive Thanas, where all categories of crime highly correlated each other and committed above crime in these Thana area. Among these above Thanas, Sibsagar, Nagaon, Panbazar and Tezpur Thanas shows significant correlation in all four major categories of crimes each other at 1 percent level of significance in the same direction and also highlight the fact that, these Thana shows very high correlation as compared to the other Thana. This may be due to urban area i.e. Sibsagar town, Nagaon town, Guwahati city, Tezpur town falls under the jurisdiction of these Thana. As in the town all kinds of socio-economic and political activities concentrated so, the occurrence of all categories of crime is also common. or evident.

In respect of property crime it has been observed from the thorough analysis of correlation that, the Thana such as, Chaygaon, Panbazar, Rangia, Palasbari of the Kamrup district. Nagaon, Lanka, Samaguri, Raha, Jamunamukh, Dhing, Khakuwakhana, Kampur of Nagaon district, significantly and positively correlated with the property crime that

means, occurrence of property crime seem to be extreme in these Thana except Nagaon Thana. Here all four categories of crime occurrence is high. In the Sonitpur district, Thanas such as, Tezpur, Gohpur, Dhekiajuli, Sotia, Bihali are highly correlated with property crime. In this Thana occurrence of property crime is very high i.e. burglary, theft in Dhekiajuli, LH/H Breaking, theft, burglary, cheating in Sotia, dacoity, LH/H Breaking, cheating, rioting, burglary in the Biswanath Chariali and, Rioting, burglary, theft and cheating in Gohpur Thana. In the districts of Kokrajhar and Goalpara, Thana such as, Kokrajhar and Runikhata of Kokrajhar district; Dudhnoi and Lakhipur in the Goalpara district are highly significantly correlated with property crime at 1 percent level of significance in the same direction i.e. property with kidnapping/abduction, robbery, dacoity, LH/H Breaking and theft in Runikhata, property with robbery, dacoity, LH/H Breaking in Kokrajhar. In Goalpara district, property with murder, rape, kidnapping/abduction, dacoity, LH/H Breaking and cheating in Dudhnoi Thana, property with LH/H Breaking and theft in the Lakhipur Thana. Whereas, the Gossaigaon Thana shows very high correlation at 1 percent level of significance in property and violence crime with rioting, robbery, dacoity and property crime and murder, rape, kidnapping, rioting and robbery with violence crime in the Kokrajhar district, in the same direction.

Again in the upper Brahmaputra valley, Thana such as Amguri, Sonari, Kakotibari and Sibsagar of the Sibsagar district property crime significantly correlated with rape and kidnapping/abduction, whereas, in the Dhemaji district both the police station, i.e., Dhemaji and Junai shows very high association of property crime at 1 percent level of significance in the same direction with LH/H Breaking, dacoity, cheating and theft.

Interestingly Dhemaji police station shows closer correlation with both violence and property crime, i.e., social with rape and alcoholism. This shows that, rape crime committed in Dhemaji Thana whenever, a person is drunk. In the Moranhat police station of Sibsagar district, social crime is significantly correlated at 1 percent level of significance with murder but in the negative direction, if one increase other will decrease and viz., whereas some of the crime variable in Thana of the Sibsagar district shows significantly correlated at 1 percent level of significance but in the negative direction these are – social crime with murder in Jorhat; property crime with rioting in Jorhat; property crime with rape in the Moranhat Thana. Social crime shows almost NIL in the Sibsagar and Moranhat Thana of the Sibsagar district. Again, Kamalpur Thana of Kamrup district, Moranhat of Sibsagar district shows very weak correlation with social crime or almost NIL that means in these two police station occurrence of crime that has caused by gambling and alcoholism is almost NIL. Again, Hojai, Samaguri, Kampur, Dhing, Nagaon of the Nagaon district; Rangia, Chaygaon, Palasbari, Panbazar of the Kamrup district; Sotia, Tezpur, Gohpur of the Sonitpur district social crime is highly correlated at 1 percent level of significance in the same direction. In the district of Dhemaji, both Dhemaji and Junai Thana shows high correlation of social crime with alcoholism, murder, burglary, gambling.

In respect of traditional crime, Runikhata (Sidly part) and Gossaigaon of the Kokrajhar district; Sotia, Dhekiajuli, Gohpur of the Sonitpur district; Junai police station of the Dhemaji district; Panbazar, Palasbari and Kamalpur of the Kamrup district; Sonari, Kakotibari, Nazira, Lanka, Jorhat, Rupahihat, Samaguri, Hojai, Dhing shows very high and

significant correlation with property, violence and social crime in the Brahmaputra valley, Assam.

5.9 Observations

- (1) Schedule caste population positively correlated at 5 percent level of significance with Muslim population in the same direction in 1971 and 2001. But in 1991, it shows weak relation. Scheduled caste population positively correlated with density at 5 percent level of significance in the same direction.
- (2) Literacy rate (1991-2001) in the valley, shows significant correlation at 1 percent level of significance with Muslim population, sex ratio, and vice versa. Literacy rate among Muslim population always depict low and sex ratio among Muslim always indicate high. Sikh population in the valley was significantly correlated with literacy at 1 percent level of significance in the same direction.
- (3) Workers in the Brahmaputra valley were significantly correlated at 1 percent in the same direction with Hindu population and Nepali linguistic group and negatively correlated at 1 percent level of significance with secondary workers, density of population, Bengali linguistic groups, Jain religious groups of population and cultivators in 1991 and 2001. Worker significantly correlated at 1 percent level of significance in the same direction with cultivator in 2001. Non-workers shows weak relationship in 1971 but in 1991 are significantly correlated at 1 percent level of significance in the same direction with secondary workers, density of population,

Jain, Sindhi, linguistic groups of population at 5 percent level of significance in the valley in 1991 and 2001.

- (4) Primary worker in the valley significantly correlated at 1 percent level of significance with sex ratio, secondary and tertiary workers but in the negative direction in 1991. It is also significantly correlated in the same direction at 1 percent level of significance with Marathi, Punjabi and Tamil linguistic group for 1971, 1991 and 2002.
- (5) Secondary worker significantly correlated at 1 percent level of significance with primary worker but in the negative direction in 1971 and 1991. Secondary worker positively correlated at 1 percent level of significance with tertiary worker. Sikh population at 1 percent level of significance in the same direction in 1971 and 1991. Secondary workers also significantly correlated at 1 percent level of significance with Punjabi, Malayalam, Gujrati and Hindi linguistic group in 1971 in the same direction and secondary worker positively and significantly correlated with density of population, student enrolment, non-worker, Scheduled caste at 5 percent level of significance and Jain religious groups of population and Tamil (at 1%) in the same direction in 1991.
- (6) Tertiary worker was significantly correlated at 1 percent level of significance with secondary workers in the same direction in 1971 and 1991. Secondary workers show significant correlation at 1 percent level of significance in 1971 and 5 percent level of significance in 1991 in the same direction. Tertiary worker was significantly correlated with Sikh population, Punjabi, Tamil, Malayalam, Kanada

- and Gujrati linguistic groups in the same direction in 1971 and 1991, and literacy rate and Scheduled caste also positively correlated at 5 percent level of significance in the same direction in 1991.
- (7) Density in the valley was significant correlation at 1 percent level of significance with non-workers in the same direction in 1971, 1991 and 2001. Density of population also significant correlation at 1 percent level of significance with Scheduled caste population and student enrolment in the same direction in 1991 and 2001. But density was negative correlation Hindu 5 percent level of significance, Christian at 1 percent level of significance, Jain at 5 percent level of significance in 1991 and 2001. Density of population was indicates significant correlation with primary workers at 1 percent level of significance in 1991 and with agricultural Labourers 5 percent level of significance in 2001. Both in 1991 and 2001 density was indicating significant correlation at 1 percent level of significance with workers in the same direction.
- (8) Hindu religious group was significant correlation at 1 percent level of significance with sex ratio, non-worker but in the negative direction. If one increases other will decrease and, viz., in 1971, 1991 and 2001. It is a common tendency that non-worker and sex ratio among Hindu indicate low.
- (9) Muslim population positively correlated at 5 percent level of significance with Scheduled caste population in the same direction in 1971, 1991 and 2001 but 1971 was weak relation. Sex ratio was significant correlation at 1% in the 1971, 1991 and 2001, in the same direction.

- (10) Muslim population significantly correlated at 1 percent level of significance with literacy rate, but in the negative direction in 1971, 1991 and 2001 in the valley. It is a true fact in general that literacy rate among Muslim community always shows low. Again it revealed the truth that, Muslim population indicates significant correlation at 1 percent level of significance with Sikh, Buddhist and Hindu population, but in the negative direction if one is increases than other will decreases in 1971, 1991 and 2001.
- (11) Christian population positively and significantly correlated at 1 percent level of significance and 5 percent level of significance with density of population and student enrolment in 1991 and 2001 respectively, but in the negative direction and Scheduled caste population also indicate negative correlation at 5 percent level of significance in 1991.
- (12) Sikh population shows positive and significance correlation at 1 percent level of significance with literacy rate. Secondary workers and tertiary workers in 1971 and 1991 and for 2001 it is significantly correlated at 1 percent level of significance in the same direction.
- (13) Sikh population significantly correlated at 1 percent level of significance with sex ratio. But in the negative direction in 1971, 1991 and 2001.
- (14) Buddhist population was significantly correlated at 1 percent level of significance with Hindu population in the same direction in 1971, 1991 and 2001. Buddhist population significantly correlated at 1 percent level of significance with density of population, Muslim population but in the negative direction. Agricultural labour,

household industry workers and non-workers were negatively correlated at 1 percent level of significance in 2001.

- (15) Sex ratio indicates positive correlation at 1 percent level of significance with Muslim population in the same direction in 1971, 1991 and 2001.
- (16) Enrolment was significantly correlated at 1 percent level of significance but in the same direction in 1991 and 2001 and negative correlated at 1 percent level of significance with Christian population, student enrolment indicate significant correlation at 1 percent level of significance with secondary and tertiary workers and density of population in 1991.
- (17) Violence crime was significantly correlated at 1 percent level of significance with property crime and traditional crime; and social crime at 5 percent level of significance in the same direction in 1999, i.e. property crime (0.68), traditional crime (0.74) and social crime (0.45). Violence crime in 2001 was weak correlation. Violence crime was significantly correlated at 1% with Muslim population and density of population in the same direction in 1991 and 2001.
- (18) Violence crime was significantly correlated at 1 percent level of significance with Hindu population but in the negative direction in 1991 and 2001 from (0.48) in 1991 to (-0.55) in 2001. Literacy rate (-0.55) in 2001. This revealed the fact that violence crime was found very less in those area, where Hindu population dominates and also in those area where density of population was low.
- (19) Violence crime in the valley significantly correlated at 1 percent level of significance in the same direction with non-workers (0.59), Secondary workers

(0.48), Density of population (0.78), Jain population (0.48) in 1991. Violence crime positively and significantly correlated at 1 percent level of significance and 5 percent level of significance with Scheduled caste and Muslim population in 1991 and 2001, i.e. scheduled caste (0.74), Muslim population (0.54) in 1991 to (0.43) Scheduled caste and (0.52) Muslim population in 2001.

(20) Property crime in the valley was significantly correlated at 1 percent level of significance with violence, social and traditional crime in 1991, i.e., violence crime (0.68), Social crime (0.76), Traditional crime (0.94) in 1991. Property crime was significantly correlated at 1 percent level of significance with traditional crime in the same direction from (0.94) in 1991-to- (0.87%) percent in 2001. Property crime was positive and significant correlation at 5 percent level of significance and 1 percent level of significance with secondary workers (0.76), tertiary workers (0.83), density of population (0.47), Sikh population (0.49) and student enrolment (0.72) in the same direction in 1991.

(21) Property crime was significantly correlated at 1 percent level of significance with sex ration (-0.67), primary worker (-0.83) but in the negative direction, if one increases other will decrease and vice-versa. Property crime was positively and significantly correlated with Malayalam at 1 percent level of significance, Sikh population at 5 percent level of significance, Manipuri at 5 percent level of significance, Tamil at 1 percent level of significance in the same direction in 1991.

(22) Social crime significantly correlated at 1 percent level of significance with violence, property and traditional crime in the same direction in 1991, i.e. violence

crime (0.45), property crime (0.94) and traditional crime (0.82) in 1991. In 2001, social crime was weakly related with violence and property and traditional crime in the valley. Indicating that, compared to 1991, occurrence of social crime in 2001 was decrease as the political environment in the region was improved.

- (23) Social crime was significantly correlated at 5 percent level of significance and 1 percent level of significance with student enrolment (0.62) percent, literacy rate (0.54), tertiary workers Kannada at 5 percent level of significance, i.e. (0.52), Malayalam (0.67), Manipuri (0.45), Tamil (0.66) linguistic groups of population in the same direction in 1991. Social crime was positively correlated with Scheduled tribe population (at 5) in the same direction in 2001 (0.45) but has weak relation in 1991, (0.02).
- (24) Traditional crime in the valley significantly correlated at 1 percent level of significance in the same direction with violence and property in 1991 and 2001. And violence, property, social and traditional crime in 1991 only. From (0.74) violence, (0.94) property in 1991 to (0.42) in 2001. In 1991, violence (0.71) in 2001. In 1991, violence (0.71), property crime (0.94) and social crime (0.82).
- (25) Traditional crime was significantly correlated at 1 percent level of significance with secondary and tertiary worker, literacy rate, density of population, student enrolment and Sikh and Jain religious population in the same direction in 1991. Traditional crime was negatively correlated with primary workers at 1 percent level of significance, (-0.73) in 1991.

- (26) Nagaon district disclosed larger variation in the murder, robbery and CD in the agitation period and property in the agitation period, i.e. mean-181.83 and SD=251.48 in murder, robbery-mean=166 and SD=344.97; CF- Mean=72.4 and SD=141.62, property crime- mean=306.48 and SD=491.93.
- (27) Darrang district revealed larger variation in the out race of rape, kidnapping/abduction, dacoity, CF, juvenile, alcoholism and gambling in the post-agitation period, i.e. rape-mean-40.06 and SD=53.17, kidnapping/abduction-mean-59.94 and SD=69.21, dacoity mean= 65 and SD=71.6, CF-mean= 2.27 and SD= 3.86, Juvenile- mean= 50.6 and SD= 73.43, Gambling-mean= 11.88 and SD= 12.61, alcoholism-mean= 4.26 and SD= 6.01.
- (28) Darrang district revealed larger variation in the occurrence of CF in all three period, i.e. (mean= 6.66 and SD= 13.22 in pre-agitation, mean- 0.5 and SD= 13.22 in pre-agitation, mean- 0.5 and SD= 1.13 in agitation period, mean= 2.27 and SD= 3.86 in post-agitation period. CBT revealed large and variation in the district of Kamrup in the post-agitation period, i.e. (mean- 114.31 and SD= 149.63). District of Kamrup, Nalbari, Goalpara and Nagaon, had large variation in CF in agitation period. Nalbari, Golaghat and Jorhat indicated larger variation in the social crime during post-agitation period, i.e. mean= 11.47 and SD= 18.1 in Golaghat, mean= 55.25 and SD= 158.3 in Jorhat, mean= 9.88 and SD= 15.42 in Nalbari.
- (29) Dhemaji disclose larger variation in CBT, Juvenile, alcoholism and social crime, i.e. mean= 17.85 and SD= 39.22, mean= 13.25 and SD= 17.89 in juvenile, mean= 13.38 and SD= 23.36 in alcoholism, mean= 16.54 and SD= 23.10 in social crime.

Nagaon and Lakhimpur revealed larger variation in the occurrence of murder in the agitation period, (mean- 181.83 and SD= 251.48 in Nagaon, mean- 80 and SD= 85.48. District of Bongaigaon, Nalbari and Kokrajhar is significantly correlated at 1 percent level of significance with Juvenile, but in the negative direction. If one is increased, other with decrease..

- (30) Jorhat, Sibsagar, Morigaon and Goalpara was significant correlation with murder (Jorhat- murder with rape, kidnapping and abduction, rioting) at 1 percent level of significance and robbery at 5 percent level of significance in the same direction, Sibsagar- murder with kidnapping and abduction, robbery, rioting at 1 percent level of significance and rape at 5 percent level of significance in the same direction and Morigaon- murder with rape, kidnapping and abduction, robbery and rioting at 1 percent level of significance in the same direction, Goalpara- murder with rape, kidnapping/abduction, robbery at 1 percent level of significance in the same direction in the valley Brahmaputra valley.
- (31) Rape crime was significantly correlated at 1 percent level of significance with kidnapping and abduction in the district of Kamrup, Goalpara, Darrang, Bongaigaon and Nagaon district rape with robbery at 1 percent level of significance in the same direction. Morigaon significantly correlated at 1 percent level of significance with kidnapping/abduction, robbery and rioting in the same direction in the valley.
- (32) Tinsukia district rape was significantly correlated at 1 percent level of significance with juvenile. Rape with robbery significantly correlated at 1 percent level of

significance in the same district. Rape revealed significant correlation at 1 percent level of significance with robbery but in the negative direction in the district of Sonitpur in the valley. Rape discloses significant correlation at 1 percent level of significance with the entire major crime variable in the same direction in the district of Morigaon in the same valley.

- (33) District of Sibsagar, Jorhat, Golaghat, Dibrugarh, Morigaon and Barpeta kidnapping/abduction significantly correlated at 1 percent level of significance with dacoity, robbery, burglary, theft, rioting, C.F in the same direction, accept gambling and alcoholism in the valley. Sibsagar, Jorhat, Morigaon and Golaghat kidnapping and abduction revealed significant correlation at 1 percent level of significance with robbery in the same direction. Lakhimpur, Dhemaji and Dibrugarh indicate weak correlation with robbery. But Kamrup, Golaghat and Goalpara disclosed significant correlation at 1 percent level of significance with robbery in the same direction in the valley.
- (34) Burglary in the valley was significantly correlated at 1 percent level of significance with theft, gambling, alcoholism, other IPC, violence crime, property, social and other traditional crime in the same direction in Bongaigaon district, theft, rioting, CBT, cheating, juvenile, gambling, other IPC violence, property and other traditional crime in Darrang and Goalpara LH/H breaking, theft, rioting, cheating, Juvenile, gambling and alcoholism, other IPC, violence, social and other traditional crime significantly correlated at 1 percent level of significance in the district of Dibrugarh in the valley

- (35) Where as Kokrajhar, Dhemaji and Nalbari district significantly correlated at 1 percent level of significance with burglary in the valley. But district of Sonitpur burglary revealed significant correlation at 1 percent level of significance with rioting in the same direction.
- (36) LH/H breaking was significantly correlated with theft, rioting, CBT, cheating, gambling, alcoholism ad other IPC at 1 percent level of significance in the same direction in the districts of Jorhat, Morigaon, Dibrugarh, Goalpara, Darrang, Nagaon, Sonitpur, Sibsagar and Golaghat. LH/H breaking are very highly correlated at 1 percent level of significance with property crime in the district of Kokrajhar, Bongaigaon and Barpeta in the Brahmaputra valley.
- (37) Dacoity which was a important variable in the study disclose closed correlation at 1 percent level of significance with burglary, theft, gambling and alcoholism in the same direction in the district of Jorhat, Sibsagar, Morigaon and Goalpara in the valley. Robbery in the valley was significantly correlated at 1 percent level of significance with LH/H breaking, dacoity, burglary, cheating, CF, CBT, gambling and alcoholism in the same direction in the district of Jorhat, Sibsagar, Morigaon and Golaghat in the valley.
- (38) Robbery was significantly correlated at 1 percent level of significance with burglary in the same direction in the district of Goalpara and Nagaon. Theft crime in the valley was positively correlated with juvenile at 5 percent level of significance and property crime at 1 percent level of significance in the same direction in the Kokrajhar and Dhemaji district. Theft crime with alcoholism in

Lakhimpur, rioting crime with theft in Dhubri, Alcoholism, and CBT. CF with theft in Barpeta was significantly correlated at 1 percent level of significance in the same direction. Rest of the district was in Brahmaputra valley, theft was significantly correlated at 1 percent level of significance with LH/H Breaking, CBT, CF, dacoity, gambling and alcoholism in the same direction.

- (39) Rioting was significantly and positively correlated at 1 percent level of significance in the direction in the district of Jorhat, Morigaon, Kamrup, Goalpara, Darrang, Nagaon and Dibrugarh, i.e., Jorhat- rioting with CBT, cheating, juvenile, social crime and other traditional crime, Goalpara- rioting with CBT, cheating other IPC, violence with CBT, cheating, juvenile, other IPC, total crime, violence crime, property crime and other traditional crime. Dibrugarh- rioting with cheating, juvenile at 5 percent level of significance), alcoholism, other IPC, violence crime, property crime and other traditional crime. But Dibrugarh was positively correlated at 5 percent level of significance with CF. But in the negative direction in the valley.
- (40) CBT in the Brahmaputra valley disclosed significant correlation in the district of Jorhat, Morigaon, Goalpara, i.e., CBT with cheating, juvenile, gambling, alcoholism, other IPC violence crime, property crime and other traditional crime. Juvenile crime with rioting and violence crime with rioting was significantly correlated at 1 percent level of significance in the same direction in the district of Nagaon, Tinsukia and Kokrajhar in the valley.

- (41) Counterfeiting in the valley was positively and significantly correlated at 1 percent level of significance in the same direction in the district of Darrang, Kokrajhar and Goalpara, i.e., CF with violence crime in Kokrajhar. CF with alcoholism and social crime in Darrang, CF with LH/H breaking at 5 percent level of significance, kidnapping/abduction at 5 percent level of significance, other IPC at 5 percent level of significance, violence crime at 5 percent level of significance, other traditional crime at 5 percent level of significance and other district in the valley was free from CF in the Brahmaputra valley.
- (42) District of Sibsagar, Jorhat, Golaghat, Morigaon, Nalbari, Darrang and Sonitpur revealed the fact that those district was positively and significantly correlated violence crime with gambling and alcoholism, i.e., Jorhat- violence with gambling and alcoholism at 1 percent level of significance, Sibsagar- violence with alcoholism and gambling at 5 percent level of significance, Golaghat- violence with alcoholism at 1 percent level of significance, Morigaon- violence with gambling and alcoholism at 1 percent level of significance, Nalbari- violence with alcoholism at 1 percent level of significance, Darrang- violence with gambling at 5 percent level of significance, Sonitpur- violence with alcoholism at 5 percent level of significance in the same direction in the valley.
- (43) District of Jorhat, Goalpara, Sibsagar and Morigaon gambling was significantly correlated at 1 percent level of significance in the same direction with violence, property, social and other traditional crime in the Brahmaputra valley. Gambling was significant correlation at 1 percent level of significance with social and

property crime in the same direction in the district of Bongaigaon and district of Darrang was significantly correlated at 1 percent level of significance with property, social and other traditional crime in the Brahmaputra valley. Gambling was significantly correlated at 1 percent level of significance with social crime in the district of Tinsukia, Kokrajhar and Barpeta in the Brahmaputra valley.

- (44) Barpeta, Darrang, Sonitpur, Dibrugarh, Goalpara and Golaghat district alcoholism significantly correlated at 1 percent level of significance with social crime in the Brahmaputra valley. District of Lakhimpur, Tinsukia and Bongaigaon alcoholism was significantly correlated at 1 percent level of significance with social and property crime in the same direction and Nagaon- alcoholism with property crime at 5 percent level of significance, social crime at 5 percent level of significance. District of Dhubri and Nalbari significantly correlated at 1 percent level of significance alcoholism with property crime in the valley.
- (45) Alcoholism was significantly correlated at 1 percent level of significance with violence, property and social crime in the district of Jorhat, Sibsagar and Kamrup is significantly correlated at 1 percent level of significance with all four major categories of crime in the valley. Sibsagar, Jorhat, Kamrup and Dibrugarh violence crime was significantly correlated at 1 percent level of significance with property, social and other traditional crime in the valley. Violence crime with property crime in Dhubri and Sonitpur, violence with property crime and other traditional crime in Bongaigaon and Darrang. Violence with property crime in the district of Goalpara significantly correlated at 1 percent level of significance in the same direction.

- (46) Property crime was positively and significantly correlated with social crime in the district of Lakhimpur at 5 percent level of significance, Dhubri at 5 percent level of significance and Nagaon at 1 percent level of significance in the same direction. Property crime was significantly and positively correlated with social and other traditional crime in the district of Darrang at 5 percent level of significance with social crime and at 1 percent level of significance with other traditional crime. Property crime also significantly correlated at 1 percent level of significance in the district of Dibrugarh, Goalpara, Kamrup, Sibsagar in the same direction.
- (47) Social crime was closely correlated at 1 percent level of significance with property crime in the same direction in the district of Lakhimpur, Dhubri, Darrang, Nagaon, and Morigaon. Social and other traditional crime in the district of Darrang, Dibrugarh, Goalpara, Kamrup and Sibsagar district was highly correlated with property crime at 1 percent level of significance in the same direction.
- (48) Traditional crime was closely correlated with social crime at 1 percent level of significance in the same direction in the district of Jorhat, Dibrugarh, Goalpara, Kamrup, Golaghat, Sibsagar and Morigaon. But district of Jorhat, Bongaigaon, Darrang, Goalpara, Kamrup, Sibsagar and Morigaon have significantly correlated with property crime, social crime and other traditional crime at 1 percent level of significance in the same direction in the Brahmaputra valley.
- (49) Thanas of Nazira, Amguri, Demow, Sonari and Kakotibari of Sibsagar district was significantly correlated at 1 percent level of significance with violence crime (rape, kidnapping/abduction, murder, rioting and burglary) in the same direction.

- (50) Thana of Sibsagar, Amguri and Sonari was significantly correlated with property crime at 1 percent level of significance in the same direction indicating that violence and property crime in those Thana was significantly correlated each other. But robbery crime was significantly at 1 percent level of significance but in the negative direction in Kakotibari Thana. Thana of Moranhat and Sibsagar was weakly correlated with social crime.
- (51) Thana of Jorhat was significantly correlated at 1 percent level of significance but in the negative direction but property crime in the Moranhat than is significantly correlated at 1 percent level of significance with rape but in the negative direction. Amguri Thana was significantly correlated at 1% with violence, property and social crime in Sibsagar district in the same direction.
- (52) Dhemaji Thana of Dhemaji district was significantly correlated at 1 percent level of significance with violence crime in the same direction with (murder, kidnapping/abduction, rioting and robbery). But Junai Thana property crime was significantly correlated with murder, but it has revealed both the Thana was significantly correlated property crime, i.e. with theft, rioting and CBT and 1 percent level of significance on the same direction. Junai Thana highly correlated at 1 percent level of significance with property crime, i.e. theft and social crime in Dhemaji Thana significantly correlated at 1 percent level of significance with violence crime in the same direction (Rape).

- (53) Thana of Dhemaji and Junai was significantly correlated with property and violence crime at 1 percent level of significance in the same direction with (theft, rioting and CBT).
- (54) Thana of Lanka, Rupahihat, Kaliabor, Samaguri and Nagaon revealed significant correlation of violence crime with rape and robbery at 1 percent level of significance in the same direction and Nagaon, Lanka, Kampur, Raha and Jamunamukh significantly correlated at 1 percent level of significance of violence crime, property crime, social and traditional crime.
- (55) Violence was significantly correlated at 1 percent level of significance as the same direction with (murder, rape, kidnapping/abduction and robbery in the Thana of Tezpur, Sotia, Bihali, Gohpur, Dhekiajuli and Kamrup. Linguistic violence crime was significantly correlated at 1 percent level of significance with rioting, kidnapping/abduction, burglary, rape and murder in the same direction in the Thana of Panbazar, Rangia, Chaygaon, Palasbari and Boko.
- (56) In Central Brahmaputra valley, social crime significantly correlated at 1 percent level of significance in the same direction in the Thanas of Lanka, Dhekiajuli, Tezpur, Bihali, Boko and Palasbari. Property crime in the Thanas Sotia, Rangia, Panbazar, Chaygaon, Palasbari, Boko, Hojai and Gohpur. Violence and property crime in the Thanas of Biswanath Chariali and Chaygaon significantly correlated at 1 percent level of significance in the same direction. Traditional crime was significant correlation of 1 percent level of significance in the Thana of Hojai and Bihali at 1 percent level of significance and Biswanath Chariali at 5 percent level of

significance in the same direction. But Tezpur was negatively correlated at 1 percent level of significance with social and traditional crime in the same direction.

- (57) In the Lower Brahmaputra valley, it has revealed the fact that, Thana of Runikhata (Sidly part), Gossaigaon, Kokrajhar, Goalpara and Dodhnoi was significantly correlated at 1 percent level of significance with the violence crime in the same direction. (Murder, rape, kidnapping/abduction, robbery and rioting. Gossaigaon Thana was significantly correlated at 1 percent level of significance with violence, property, social and traditional crime in the same direction. Property crime was significantly correlated at 1 percent level of significance in Kokrajhar, Runikhata, Dudhnoi, Lakhimpur and violence and property at 1 percent level of significance in the Thanas of Dudhnoi and Gossaigaon in the same direction and social crime significantly correlated at 1 percent level of significance in Kokrajhar and Gossaigaon Thana in the same direction.

CHAPTER – VI

SPATIO-TEMPORAL PATTERN OF CRIME

In this chapter, an attempt has been made to analyse the Spatio-Temporal pattern of crime and associated changes in crime concentration in the Brahmaputra Valley. This Analysis will highlight the changing pattern of crime in the space, time and dimension, in order to ascertain ground reality of occurrence of crime in the study area. This chapter will also depict clear picture how the changing socio-economic as well as Political Environment in the valley has transformed the pattern and dimension, of crime in the Brahmaputra Valley (see Appendix 6.I).

6.1 Violence Crime

(1) Area of Very High Concentration

A very high concentration of violence crime (Fig. 6.1) (Murder, Rape, Kidnapped, Rioting, Robbing) has been observed in the pre-agitation, agitation and post agitation of period in the Brahmaputra valley. It has been observed that the major areas of very high concentration of violence crime (with very high average score value and are given in the

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE VIOLENCE CRIME
Pre Agitational Period (1975-78)

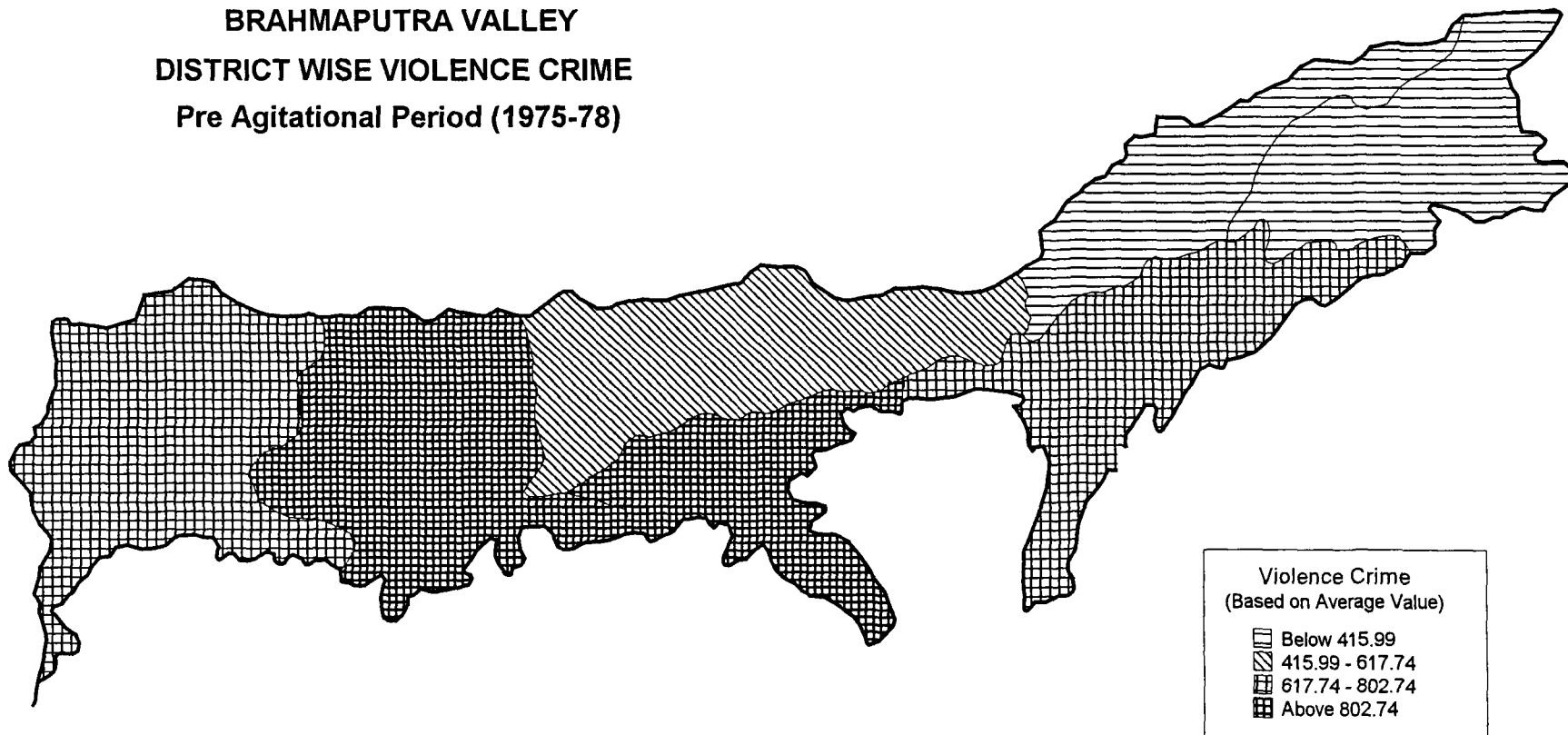


Fig. 6.1

brackets) in the pre-agitation period are - Central Brahmaputra Valley, particularly the South bank plains that includes the districts of Kamrup, Barpeta, Nalbari, Morigaon (1025.5) and Nagaon (816.25) district. In the pre-agitation period Kamrup is a urbanised district with high literacy rate, high density of population and high enrolment and high economic activity having high percentage of primary workers (71.15), Secondary workers (5.92) and Tertiary workers (22.93) shows very high concentration of violence crime. As noted in the preceding chapter, in Kamrup district, violence, property, social and traditional crime are correlated with each other. This was due to increased manpower requirements needed for various types of economic activities in the district, such as all kinds of industrial activities, services and Trade. Besides, Kamrup district was the centre of various agitations and movements that rocked the state for the last 50 years. This was one of the reasons for high concentration of violent crime in the district.

The district of Nagaon followed Kamrup. District of Nagaon was characterised by large number non-workers, Primary workers, Low literacy rate, high sex ratio and high percentage of rural population, high percentage of immigrants (who were largely engaged in the agriculture and Secondary sector). This brought about very high population densities in predominantly rural areas of the district. This was followed by over crowding in the towns. These were conducive for occurrence of violence crime (see also Chapter V for details of correlation). It has been observed that in this district property crime shows positive correlation with violence crime. This is because economic activities show very high correlation.

During the agitation period, concentration very high violence crime was observed in the Goalpara district (744.71), and extending through the Lower Brahmaputra Valley up to Nagaon (1634.29), to parts of Kamrup (1274.29) and Darrang district in the North bank. Here the average score value of violence crime was high. It has been observed that during agitation period, these districts were badly affected by the agitation. Nagaon and Goalpara districts with high percentage of immigrant Muslim population suggested high incidence of riots and killing during the agitation period (1979-1985).

The correlation also indicated that the increase in crime was also due to large-scale student movement that merged with mass movement in this period. This is because majority of the population of the valley, were involved in this agitation that came to be known as The Anti-Foreigner's Movement. It was this period that the socio-economic and political situation in the valley deteriorated. Most of the educational institutions were suspended, (as many of its students had taken prominent parting the movement), postponement of examination in schools, colleges and university for a long period became the order postponement of examination in schools, colleges and university for a long period became the order of the day.

Various scholars have dealt the reasons for the movement in detail. Suffice it to say here that rising population aspirations, stagnating economy and other related issues acted as a catalyst and triggered off violent response from the population. In addition, discrepancies in the electoral rolls, status of the immigrants and continuous influx compounded the already tense socio-economic and political relations in the valley. The resultant movement encompassed the entire state and the socio-economic and cultural as

well as political environment deteriorated. This let loose various anti-social tendencies in the valley. Insurgency began to dominate the valley landscape and was followed by spurt in criminal activities.

Most effected districts were Nagaon and Goalpara. These districts indicated high concentration of violence crime. Darrang district with a high percentage primary workers, Non workers and high percentage of Schedule tribe and low urban population also had very high concentration of violence crime. This district also been affected by agitation (Fig. 6.2).

In the post agitation period, violence crime shows very high concentration in the South Western part of Lower Brahmaputra Valley; the average scores were high in the districts of Dhubri (636.38), North Bank Plains of Barpeta (603.88), parts of Kamrup (715.00) and Sonitpur district (472.50). Districts of Barpeta, Nagaon and Dhubri in the post agitation period indicated high score of violence crimes. These were attributed to the successive waves of immigration, high rural and urban densities, and resultant over crowding, low literacy, high non-working population and large scale of unemployment in these districts. Moreover, the urban population indicated high Scheduled Caste population. Such situations encourage higher incidence of violence crime. The district of Kamrup, as compared to other districts in the Central and Lower Brahmaputra Valley, is a highly urbanised district with high percentage of literacy, high percentage of Secondary workers, Tertiary workers, high density of population, high percentage of school going children, and intense economic activity. These attributes continuously pull population from the vast rural hinterland and become focal point for the immigrants to converge from all directions.

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE VIOLENCE CRIME
Agitational Period (1979-85)

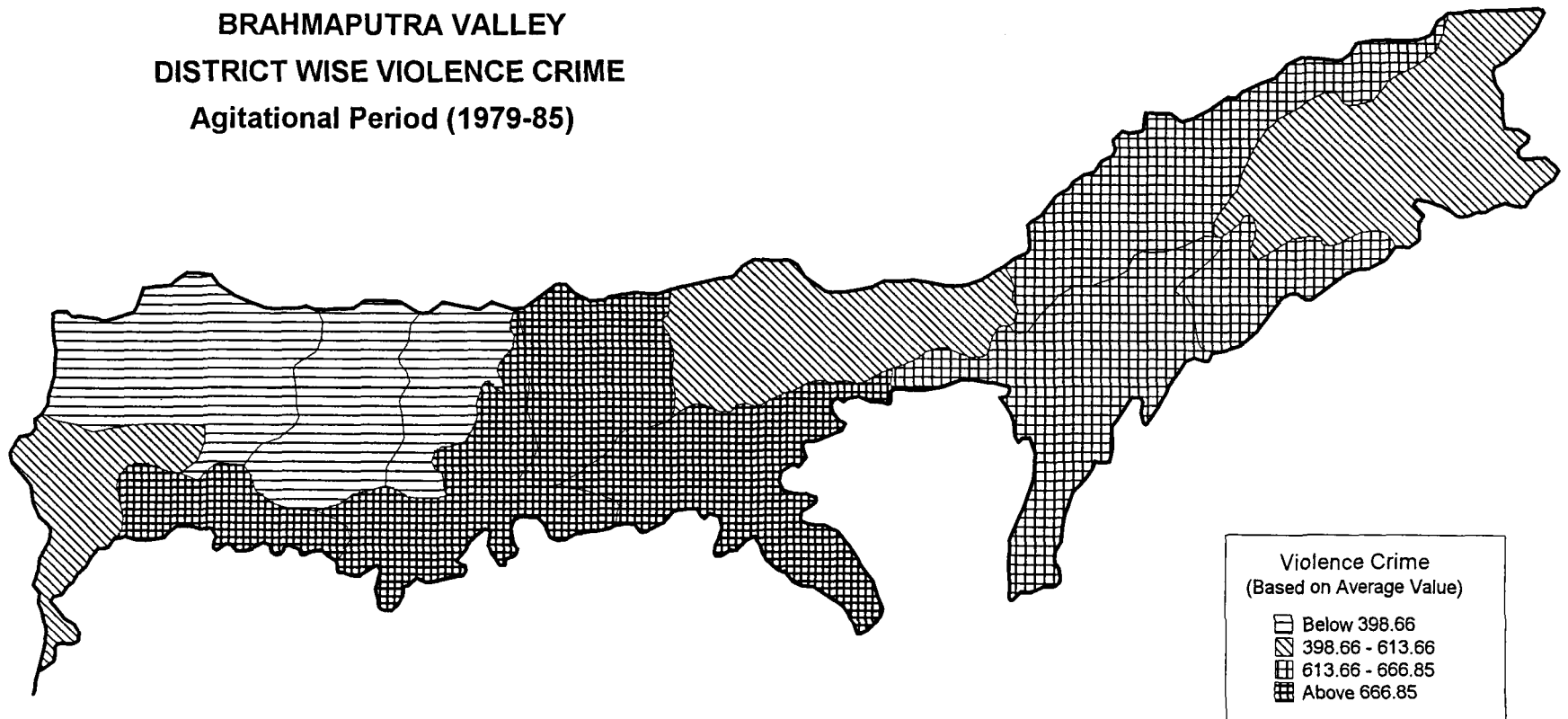


Fig. 6.2

These cumulatively result in the growth of slums and over crowding. In such an environment where insurgency by several groups of people had engulfed the state of Assam, concentration of violence crime was obviously very high.

In continuation to the 1979-1985 movement, the districts of Lower Brahmaputra Valley also witnessed Boroland Movement. This movement aimed for a separate identity and distinct position in the national main stream, for the Boro plain tribes of Assam. This movement was basically socio-cultural and economic in character. This also took the form of insurgency. This increased the scope of crime in the Brahmaputra Valley, particularly the districts of Kokrajhar, Darrang Barpeta, Nalbari, Kamrup Sonitpur and Lakhimpur in the post agitation period. These districts indicated very high concentration of violence crime (Fig. 6.3 and see Appendix 6.I for average score value).

(2) Area of High Concentration

Violence crime in the pre-agitation period shows high concentration with high score average value of violence crime in the Lower Brahmaputra Valley, South bank plain of Upper Brahmaputra Valley. This includes present district of Dhubri, Kokrajhar, Bongaigaon, Goalpara (789.25), Golaghat, Jorhat and Sibsagar (617.75). District of Kokrajhar, Bongaigaon and Goalpara shows high concentration of violence crime because during this period, this region had to face agitation of Bodo language or language riot; murder are rampant in the entire North Bank Plain including districts of Darrang, Sonitpur, Lakhimpur, Goalpara. During this period entire socio-economic and political relations were at low ebb and different from other parts of the valley. The occurrence of violence

crime was high. There was high concentration of violence crime in the districts of Sibsagar, Jorhat and Golaghat; this was partially attributed to the fact that these districts were economically better developed than other districts, had high percentage of literacy rate, high Hindu population, high percentage of Tertiary and Secondary workers. This mean that the districts which have prominent industry and trade, commerce and Service, vibrant economy and high density of population and slum tend to indicate positive significance of violence, property and social crime. Violence crime shows positive significance with property crime in those districts as explain the earlier chapter. So violence crime in those districts was due to the property crime. This is evident from the correlation and analysis.

Violence crime in the agitation period shows high concentration, with high average value of violence crime in the Upper Brahmaputra Valley except the districts of Dibrugarh and Tinsukia. Increase in the incidence of violence crime in this area, was the result of the general socio-political scenario and insurgency in the state in 1979-1985. Assamese linguistic group as well as high concentration of Hindu population also due to the fact that Assam agitation was mainly concentrated in the Middle and Upper Brahmaputra Valley, i.e., area mainly dominated by Assamese crime population concentrated was very high.

In the post-agitation period, violence crime shows high concentration in the north bank plain, having high average value score of violence crime and includes the districts of Kokrajhar (367.63), Darrang (393.69), Lakhimpur (309.81) and Dibrugarh (333.88). Except the district of Dibrugarh all other district had direct relation with the Boro Movement.

Districts with high percentage of Boro population during the agitation period were the worst affected by violence crime such as rioting and murder. This trend continued in the Post agitation period. Further, Dibrugarh was a moderately developed district with mixed population having high percentage of literacy rate and high Urban centre and high Urban population, Secondary workers and Tertiary workers are and coincide with degree of economic activity in the district. As a consequence, the district displays high incidence of property crime and positive correlation.

3. Area of Medium Concentration

Medium concentration of violence crime has been observed in the North Bank of Central Brahmaputra Valley, i.e., Darrang district in the pre-agitation period. Parameters in this area indicate high percentage of Hindu population, pre-dominantly agricultural economy, (i.e., primary worker (78.95%)), Non-workers shows high percentage (70.89%), Scheduled Tribe population are higher than Schedule caste population in area dominated by low socio-economic stagnation, low percentage of urban population, and low Density of population. This area shows low and medium concentration of violence crime (see Fig. 6.1).

In the agitation period, medium occurrence of violence crime had been observed in the Eastern Central plain of Upper Brahmaputra Valley. This area had medium score average value of violence crime, and included districts of Dibrugarh and Tinsukia (661.43). These districts indicated high Hindu population; high primary workers and tertiary workers, low sex ration, low Scheduled caste and Scheduled Tribe population and

also mixed linguistic groups of population. These parameters are indicative of the fact that the people in this area are mainly engaged in agriculture and service sectors. More over this area is highly developed and have high urban population.

In this Post agitation period medium concentration has been observed in the South Brahmaputra Valley, i.e., in the districts of Goalpara (301.00), Nalbari (279.94), Tinsukia (307.69), and Sibsagar (308.05) (see Fig. 6.3).

(4) Area of Low Concentration

It has found that entire North Bank, Plain of Upper Brahmaputra Valley, which includes the districts of Lakhimpur and Dhemaji shows very low concentration of violence crime with low average score value. This can be attributed to the religious composition in the area. Beside, the area also displays high primary workers and non-workers and low percentage of secondary and Tertiary worker. This shows that, people are predominantly engaged in agriculture and have negative significance of violence crime. These are reinforced by factors like low literacy rate, low density of population and low enrolment. This shows that area is mostly backward and low socio-economic zone.

The areas occupied by the Boro population group (they straddle both banks of the Brahmaputra River) show very high concentration of violence crime, because the Boro movement had affected this entire area. This was followed by a period of low occurrence of violence crime. This clearly indicated that political stability and instability of a region had direct influence on the increase or decrease of crime. In addition, these areas were characterised by low economic activities. The Schedule Tribe, having agrarian economy and low percentage of person engage in the Secondary and Tertiary sectors, dominated

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE VIOLENCE CRIME
Post Agitational Period (1986-2001)

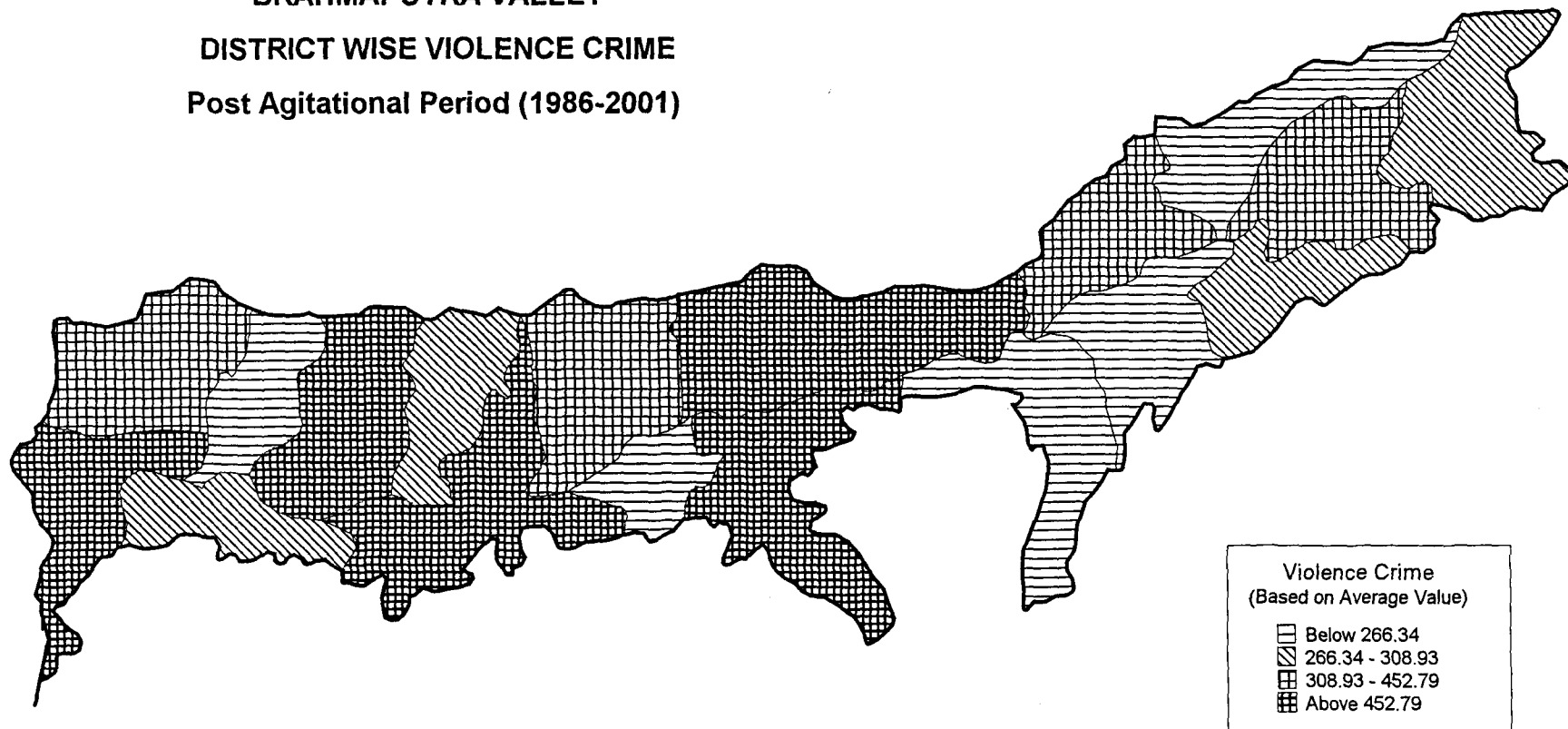


Fig. 6.3

them. In the post agitation period, the districts of Bongaigaon (225.77), Morigaon (165.92), Dhemaji 9130.72), Golaghat (247.88), and Sibsagar (308.06) had low average value score of violence crime (see Fig. 6.1, 6.2 & 6.3 and Appendix 6.I for average score values).

6.2 Property Crime

(1) *Area of Very High Concentration*

An analysis of Density maps (Fig. 6.4) of property crime, its pattern and concentration in the valley, shows that, the districts of Barpeta, Nalbari, Kamrup (4581.25), and Golaghat, Sibsagar and Jorhat (3024) have high concentration of property crime. These districts also indicated very high average score value of property crime. This is attributed to the fact that these districts are moderately to highly developed, have high urban population, high literacy rate, high density of population, and more persons engaged in the Secondary and Tertiary Sectors. Such environments create over crowding, growing number of slums, increasing unemployment, and so on, -all leading towards increase in the property crime. These are the areas, where high economic activities such as Industry, Trade, Commerce and Services are concentrated and these are the breeding ground of crime such as property crime. As already explain in the previous chapter that this is the positive indicator of property crime. As noted earlier, these districts confronted with the property, social, violence and traditional crime, have showed inter-linkages each other. The

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE PROPERTY CRIME
Pre Agitational Period (1975-78)

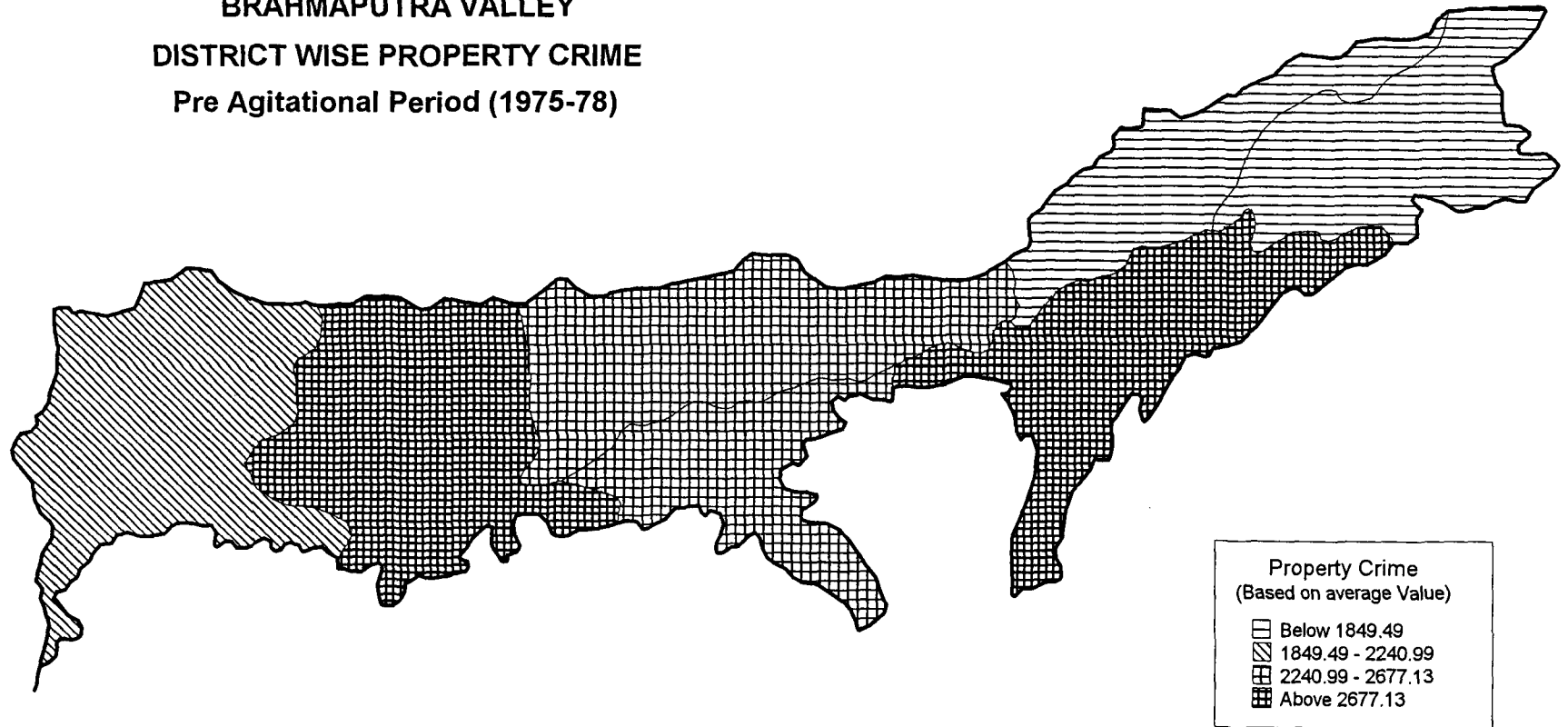


Fig. 6.4

districts such as Kamrup, Jorhat and Sibsagar, show high urban growth and cosmopolitan character.

During agitation period (Fig. 6.5), a very high concentration of property crime has been noticed in the entire South Bank Plain, extending from district of Kamrup (3254) up to Sibsagar (2035.37) at the Upper Brahmaputra Valley with high average score value. The entire belt shows high concentration of property crime. The districts of Kamrup, Sibsagar, Jorhat and Golaghat indicate high and positive significance of property crime. This is also true with Nagaon district, which had high percentage of Scheduled caste population, Non worker, high percentage of Rural Population, which shows high agricultural activities. Increase in the population, largely through immigration, resulted in the increase of property crime. Another factor for the high density of property crime is because of intense economic activity and affluence. These were conducive for higher incidence of property crime. Nagaon district was also seriously affected during the 1979-1985 period, which encouraged large-scale offences to dominate the district landscape.

In the post agitation period (Fig. 6.6), concentration of very high property crime was in the districts of Sonitpur (1048.25), Lakhimpur (83.75), Sibsagar (849.04), Dibrugarh (886.36), Nagaon (1325.25), and Kamrup (2208.81). Kamrup district indicated high occurrence of all type of crimes in all the three period. It is evident that, Sibsagar and Dibrugarh districts, continued to show very high concentration of property crime. This was attributed to relatively higher rate of economic growth, high urban population, more number of urban centres, higher Trade and Commerce (largely due to Oil and Tea) higher literacy rate and high non-workers. These characteristics also caused over crowding in

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE PEOPRETY CRIME
Agitational Period (1979-85)

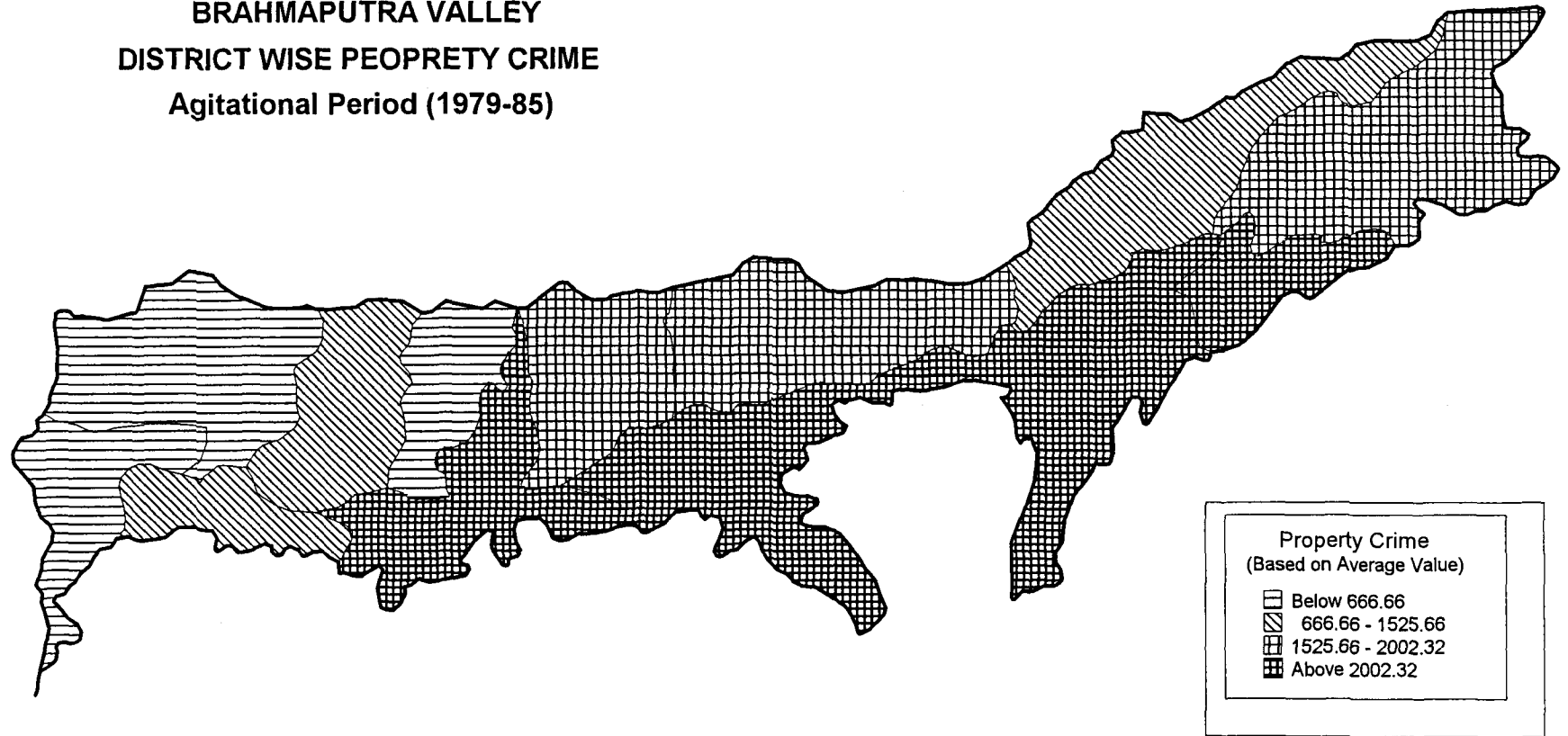


Fig. 6.5

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE PROPERTY CRIME
Post Agitational Crime (1986-2001)

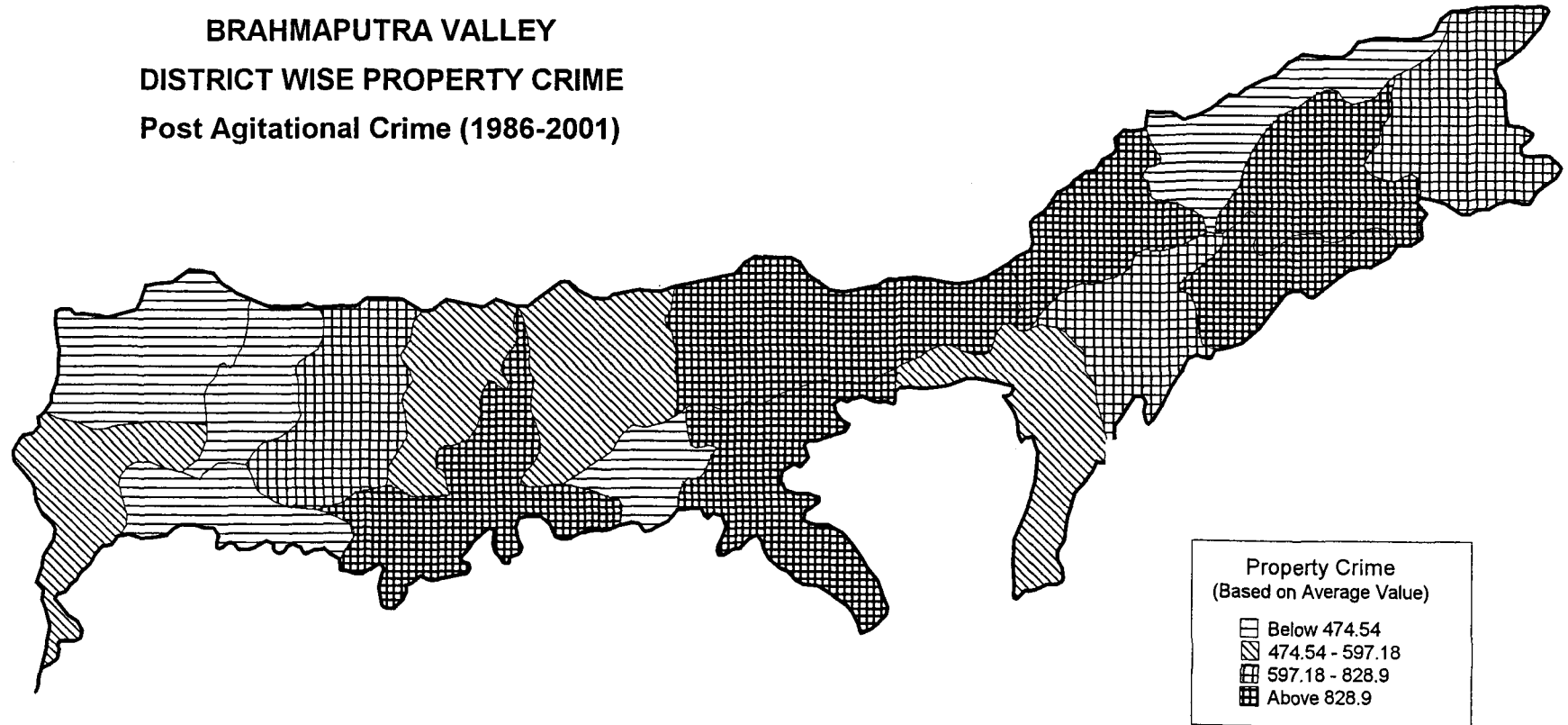


Fig. 6.6

urban areas which indirectly facilitated higher occurrence of property crimes. It is a fact that an area where growth of economy shows upward trend with high percentage of unemployment and non-workers, and corresponding increase in the property crimes.

During the post-agitation period, Sonitpur and Lakhimpur districts were also affected by the Bodo-Movement. So that, Sonitpur district with high Hindu population (80.2%), high percentage of Non-worker (62.40%), high sex ratio (942) and low density of population with mixed Linguistic community, i.e., Assamese (54.73%), Nepali (6.43%), exhibits low level of economic activities. The districts thus become conducive for high rate of property crime. Like wise the district of Lakhimpur even with high Hindu population (21.39%), percentage of worker (56.10%), sex ratio (952), low density of population (391), student enrolment (32%), continues to remain as a economically backward district. These are evident from the presence of high rate of unemployment which leads to higher instances of property crime. It is a common fact that, in a environment incidence such as dacoity, LH/H Breaking, theft, burglary are common for their survival, due to poor condition. So both agitation and economic backwardness is the root cause for high property crime.

(2) Area of High Concentration

In the pre-agitation period, the districts of Darrang and Sonitpur (2330.25) and Nagaon (2241) indicated higher concentration of property crime. Darrang district in particular is also characterised by a backward agrarian economy with mixed population and high percentage of Scheduled Tribe population (10.6%), high percentage of non-

workers (70.89%), primary workers (78.95%), high Hindu population (78.45%), low sex ratio (888) person, all are the indices of backward region.

Assam agitation and subsequent insurgency totally transformed the social, economic and political transactions in the valley and the state. These enable many anti-social elements to take advantage and further their respective interest in the area. These resulted in large-scale occurrences of property crime, Dacoity, Burglary, and Theft in this period. Nagaon district explains this clearly. It has been observed that this district is dominated by the large Schedule caste population, and Muslim population, exhibit high percentage of non-worker (72.88%), Primary workers (80.49%), High sex ratio of 899 and low density of population. This district also confronted with large scale of immigration, creating a diverse environment, and pressures on land. Whereas person engaged in Secondary and Tertiary sectors indicated low percentages, which suggested high unemployment an conducive atmosphere for Dacoity, Theft, and Burglary; these were obviously encouraged by extreme poverty.

Similarly, in the agitation period, a very high score average value of property crime was in the districts of Darrang (1922.29), Sonitpur (1525.67), Dibrugarh and Tinsukia (1956.71) shows very high concentration of property crime. As noted earlier in Chapter V that, zones of Hindu dominated area and Assamese linguistic majority areas have reasonable moderate to high level of economic activities. They exhibit high incidence of property crime. It has been observed that, during pre-agitation period property crime was concentrated up to Sibsagar but during the agitation period it extended to enclose Dibrugarh and Tinsukia districts. This was because property crime such as dacoity, looting,

cheating and burglary during the agitation period shows high in areas where trade, commerce, industries were heavily concentrated. While Darrang district indicated high concentration of property crime not only due to the economic factors but also due to impact of Assam agitation and its aftermath.

These developments suggested that, changing political conditions and accompanying socio-economic environment have direct impact on the pattern, dimension and spatio-temporal changes of crime in the Brahmaputra Valley.

In the post- agitation period, property crime was high in the districts of Barpeta (719.44), Sibsagar (849.94) and Tinsukia. While observing the changing property crime scenario, it has been noticed that, district of Tinsukia depict similar situation. However, the districts of Jorhat and Barpeta indicated significant changes in the occurrence of property crime; Jorhat indicated a declining trend while Barpeta indicated an increasing trend. The latter situations were partially explained by increasing immigration in every Census in the district. Barpeta also indicated high concentration of property crime; this was, in addition, due to high percentage of Non workers (68.60%), Sex ratio (941), Density of population (506) and student enrolment (23.76%) and also high Scheduled Tribe population (23.07%) with low literacy rate and high urban growth in every Census. Jorhat district, on the hand was characterised by a higher level of economic activity. This was related to the Tea industry, trade and commerce. The district also indicated high unemployment This encouraged increase in the property crime in the district.(see Fig. 6.4, 6.5 & 6.6 and see Appendix 6.I).

(3) Area of Medium Concentration

It is also evident that medium concentration of property crime has been found in the districts of Dhubri, Goalpara, Kokrajhar, Bongaigaon in the pre-agitation period and average score value was also medium in these area. This was because, these, areas were low socio-economic area, in the pre-agitation period. Consisting mostly of agrarian economy, these districts had very low level of economic activity and low industrial development. Most of the people were engaged in the Primary sector. These periods exhibit more violence crime then the property crime as because entire population of these area involved in agitation. So concentration of property crime shows very less and medium concentration.

In the agitation period, districts such as Goalpara (1477.88), Barpeta (666.67) and Dhemaji show medium concentration of property crime, with medium average score value. As stated earlier in this chapter, the reasons were attributed to lack of economic development.

It is a accepted paradigm that where the industrial development shows high, people of the district must well off in trade, commerce, and services. These attract high degree of property offence. These are found in the districts of (in the post agitation period) Nalbari (506.63), Darrang (562.63) and Morigaon (317.31) . These area also exhibit similar socio-economic situation (see Fig. 6.4, 6.5 & 6.6 for pre-agitation, agitation and post-agitation period and see Appendix 6.I).

(4) Area of Low Concentration

Concentration of property crime was very low with score of average value of property crime in the districts of Lakhimpur and Dhemaji (748.5), Dibrugarh and Tinsukia (1607.25). These districts were economically very backward and basically had an agrarian economy. They displayed high percentage of primary workers and non-workers, high Hindu and high Scheduled Tribe populations, and high student enrolment. This area has low concentration of property crime. In addition, districts such as Dibrugarh, Tinsukia, Lakhimpur and Dhemaji had high percentage of Hindu population, and high percentage of primary workers, high percentage of non-Workers, high percentage of person engaged in Tertiary Sector, low density of population, and low student enrolment.

Homogeneities in population composition is another factor, for low occurrence of property crime. Property crime in the agitation period showed very low in the present district of Dhubri (587), Kokrajhar and Bongaigaon (490.00) and Nalbari (571.00). This area exhibited very low concentration of property crime. Property crime always is very low where sex ratio and primary workers seem to be very high (see chapter V). In the post agitation period concentration of very low property crime includes the district of Kokrajhar (468.75), Bongaigaon (357.92), Goalpara (450.31), Dhemaji (208.23) and Morigaon (317.31). These districts indicate similar characteristics, such as higher percentage of Scheduled Tribe population to the total population, high percentage of cultivator, high school enrolment, low density of population, high sex ratio and high percentage of cultivator and agrarian economy. These districts have stagnant economy and can be termed low socio-economic area. Property crime showed very low with low average score value of

property crime in the valley (see Fig. 6.4, 6.5 & 6.6 for pre-agitation, agitation and post-agitation period and Appendix 6.I).

6.3 Social Crime

(1) *Area of Very High Concentration*

By observing Fig. 6.7 of social crime, it is clear that social crime is very high with very high average score value in the districts of Sibsagar (415.75), Dibrugarh (260.4) and Tinsukia. During the pre-agitation period these district had high percentage of literacy rate, high percentage of primary workers and Tertiary workers, high percentage of school enrolment, predominantly Hindu population. People of this area are mainly engage in agriculture and services. By observing the Fig. 6.8, it has found that, similar trend had seen observed even in the agitation period, in the district of Kamrup with average value of (255.00) shows high concentration of social crime. In the post-agitation period, the Upper Brahmaputra Valley also shows high percentage of cultivator, workers, school enrolment, and sex ratio, high percentage of net area sown to the total area and high density of population - all favouring high incidence of social crime (Fig. 6.9).

(2) *Area of High Concentration*

Social crimes show high concentration in the pre-agitation period in the districts of Kamrup with a average score value of (199.5), and Lakhimpur (117.25). Social crime shows positive significance with the Secondary and Tertiary workers, density of population and literacy rate, Thus areas with such percentages as noted above have the

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE SOCIAL CRIME
Pre Agitational Period (1975-78)

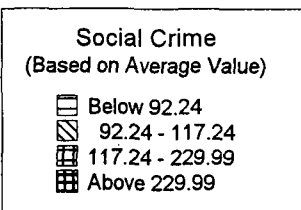
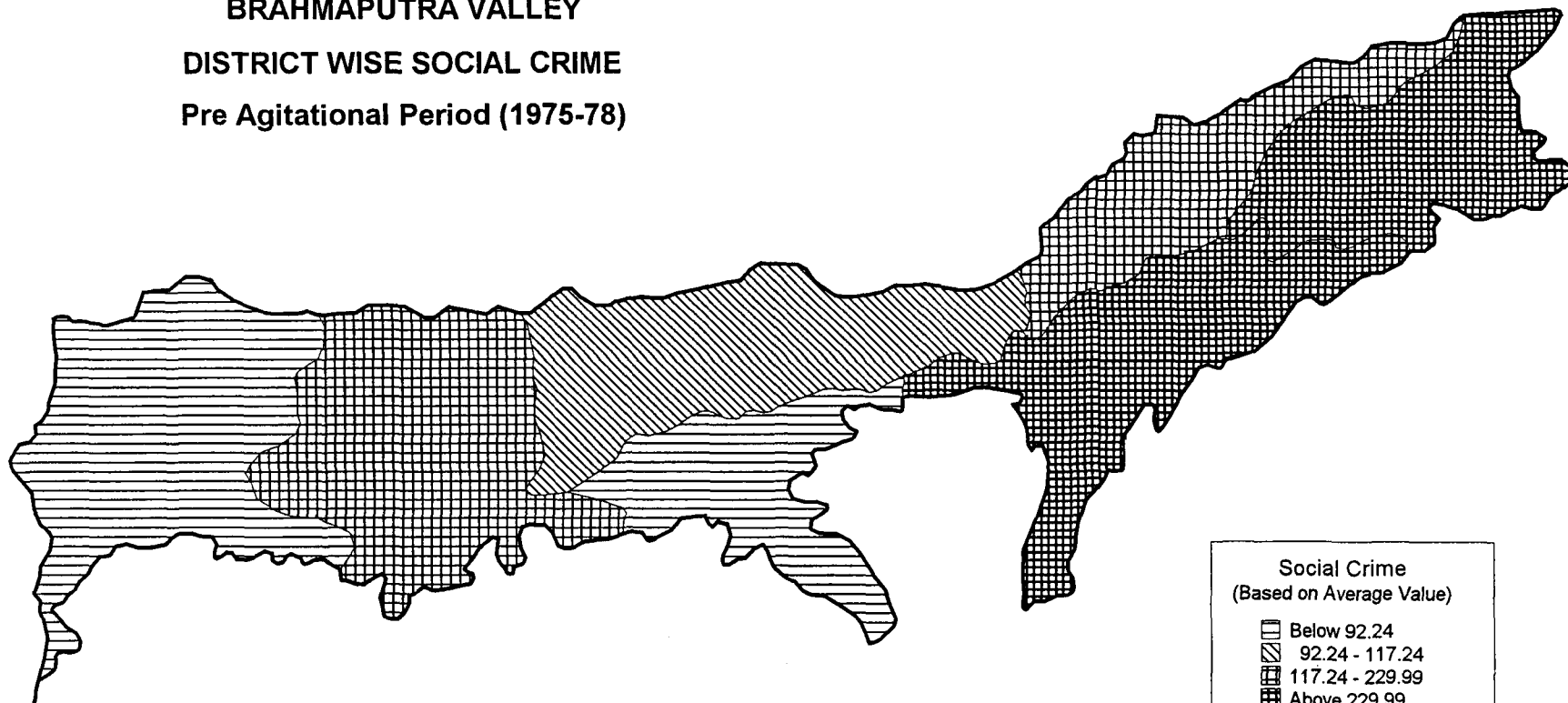


Fig. 6.7

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE SOCIAL CRIME
Agitational Period (1979-85)

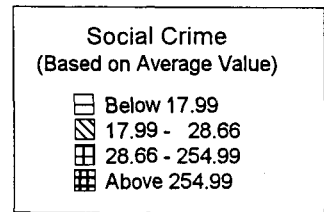
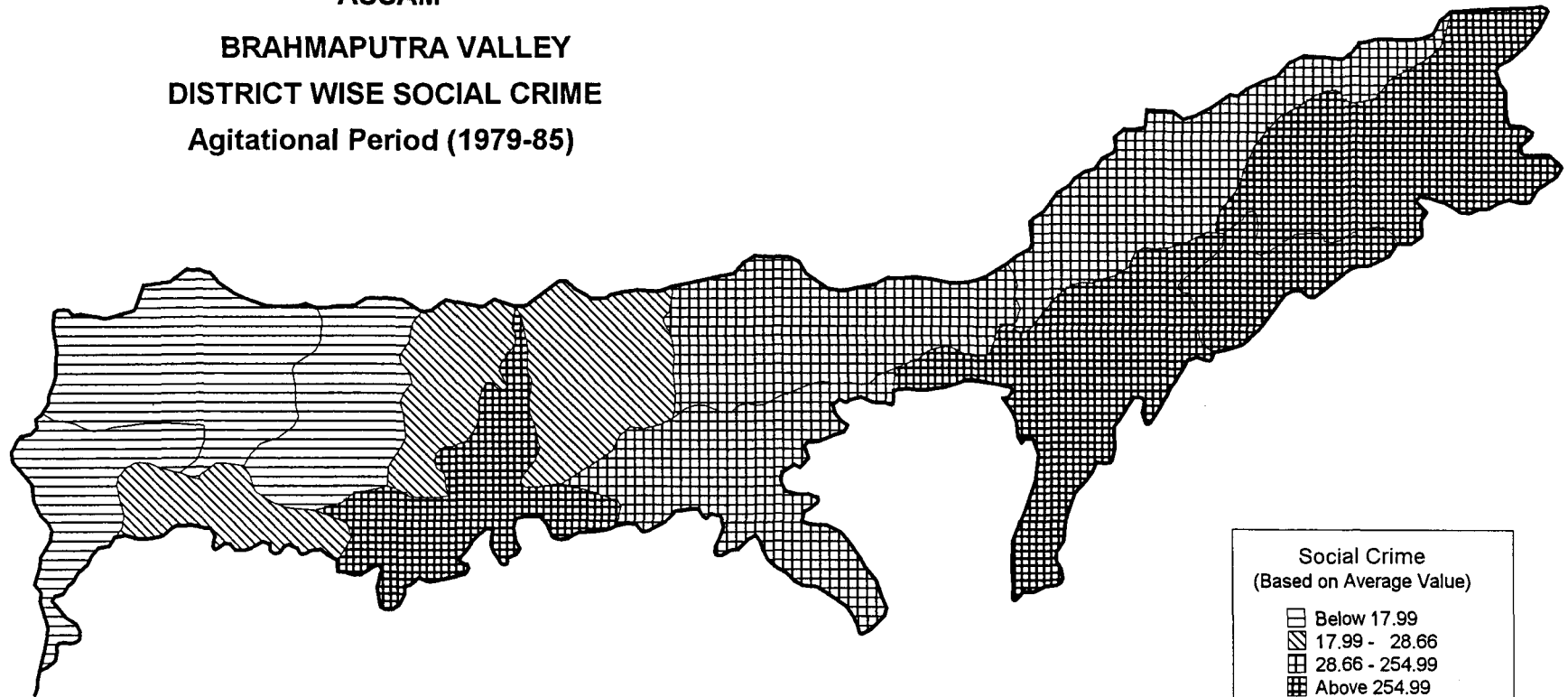


Fig. 6.8

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE SOCIAL CRIME
Post Agitational Period (1986-2001)

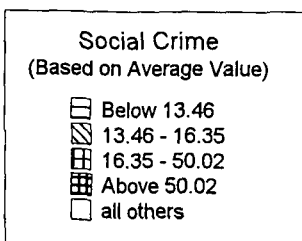
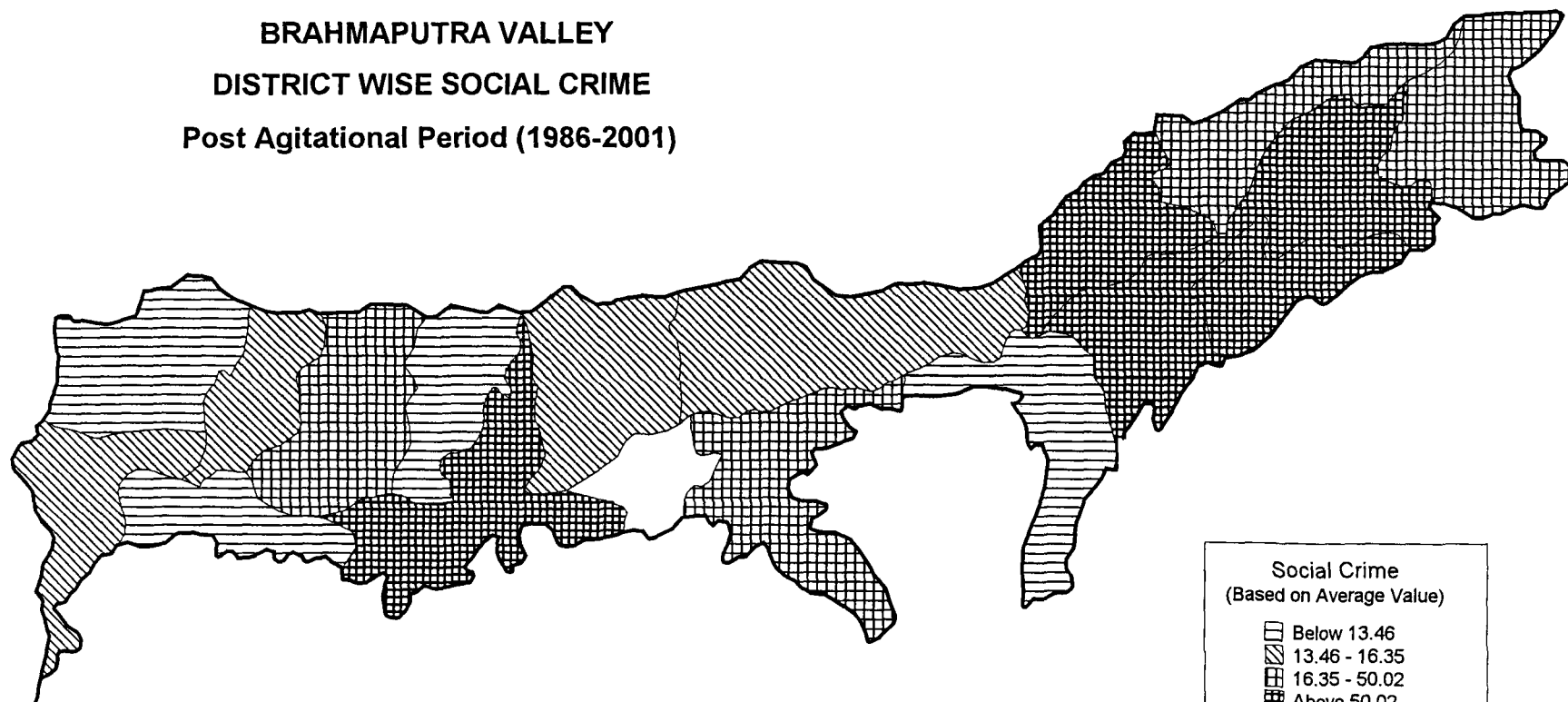


Fig. 6.9

tendency to have high percentage of Secondary and Tertiary workers, Non workers and student enrolment; increasing slums and unemployment, become breeding grounds of all short of offence. Consequently, correlation crime variable clearly indicate that Kamrup district shows positive correlation with all four types of crime with each other but are less linked as compared to the agitation period. In the district of Lakhimpur, social crime shows high concentration. During the pre-agitation period this district was predominantly concentrated by high Hindu population (87.56%), High primary workers (84.24%), High Scheduled Tribe population (28.78%), High student enrolment (28.48%), Low-Urban population, Low density of population and Low literacy rate and resulted Low economic activities, and high unemployment.

During the agitation period, social crime, shows high concentration in districts of Nagaon (43.57), Sonitpur (28.67), and Lakhimpur (174.29) shows high concentration of social crime and had with very high average score value, as because, these district are least developed or under developed. They have mostly agrarian economy, having high percentage of primary worker, Non-workers, cultivators, density of population low and Sex ratio high. Districts of Sonitpur and Lakhimpur had high Tertiary workers but these districts shows low to medium level economic activities, having high percentage of unemployed population. As a result, concentrations of incidence like alcoholism and gambling was very high in this area. (See Fig. 6.7, 6.8 & 6.9 for pre-agitation, agitation and post-agitation period and Appendix 6.I).

(3) Area of Medium Concentration

It is also evident from the illustrations of Social crime which has been drawn from the average score value, that in the pre-agitation period, medium concentration of social crime had been notice in the districts of Darrang and Sonitpur (94.5). These districts show moderate socio-economic development, with high percentage of Boro Tribal population in the pre agitation period. During this period, these districts had high percentage of primary workers, Non-workers, high percentage of Hindu population, Student enrolment showed very high, and low literacy rate. Economic activities were very limited and negligible. This area also witnessed political uncertainties from 1974 onwards (Boro language movement in 1974). These resulted in low level of development and moderate concentration of social crime in the districts of Goalpara (39.25) and district of Nalbari and Darrang (94.5) in the North Bank Plain of Central Brahmaputra Valley). These districts indicated high percentage of cultivators, workers, school enrolment, and sex ratio; high percentage of net area sown to the total area and high density of population meaning an agrarian economy. So in such situation, social crime rates were very high. Predominantly Bodo Tribal and Rabha Tribal dominated areas have low economic development. So the concentration of social crime is less.

It is also apparent from the correlation tables that during the Post agitation period, moderate concentration of social crime dominated the districts of Dhubri (13.50), Bongaigaon (14.54), Darrang (16.13), Sonitpur (16.19) and Morigaon (13.45). These districts, except Dhubri had high percentage of Tribal population. Districts, such as Darrang and Sonitpur exhibited high concentration of Tribal population and low economic development. These districts also indicated heavy immigration settlements, which changed

the demographical pattern of the area. They had additional attributes of literacy rate lower than the regional average, large number of cultivators and non-workers shows medium concentration of social crime. Dhubri and Morigaon districts also indicate high immigration population with high percentage of Non-workers, Primary workers, High density of population, low literacy, high sex ratio, and high percentage of student enrolment as well as cultivators. So that, social crime shows medium concentration in the area (sees Fig. 6.7, 6.8 & 6.9 and see Appendix 6.I).

(4) *Area of Low Concentration*

District of Nagaon shows very low concentration of social crime. This area has attracted considerable proportion of non-indigenous agricultural immigrants. This area also exhibits high growth of population and resultant increase in population pressure on land. This has also revealed high percentage of agricultural workers, Non-workers, and cultivator. The North Bank Plain also displays high sex ratio, low density population, low literacy rate and high percentage of Schedule Tribe population.

All these suggest low level of concentration of social crime, in the pre- agitation period. However in the agitation period, districts of Dhubri (6.23), Kokrajhar (4.67) and Bongaigaon, display low level of social crime These districts were least affected by the political uncertainty that gripped the valley in the 1980's. This was in contrast to the districts of It is interesting to note that, during agitation period these districts were remain less effected as compared to the other district of Eastern part of Central and Upper Brahmaputra Valley. So, crime scenario during the agitation period, in the Lower

Brahmaputra Valley, more or less remains stagnant. In the post agitation period too almost similar scenario had been observed, except Golaghat (11.47) and Nalbari (9.88). These two districts were affected during agitation with high and medium concentration of social crime. But after agitation, the scenario changed. Economic activities which were stagnant during that agitation period had revived and situation shows change (see Fig. 6.7, 6.8 & 6.9 and see Appendix 6.I).

6.4 Other Traditional Crime

(1) *Area of Very High Concentration*

From the observation of the Maps (Fig-6.10) other Traditional crime prepared from average score value that, it has reflects that, western part of central Brahmaputra Valley, South Bank Plain of Upper Brahmaputra Valley, district comprising Kamrup, Nalbari and Barpeta (1746.25). Golaghat, Jorhat and Sibsagar (1672) in the pre-agitation period show very high concentration. As it has already explain in the earlier chapter of correlation of crime that, Traditional crime are closely correlated with violence, property as well as social crime. So traditional crime always shows very high concentration where violence and property occurs high. And other traditional crime are committed in the similar environment, where violence and property are concentrated. It has been observed that, during the pre-agricultural period, traditional crimes are concentrated in area, where socio-economic activity concentrated very high, with high percentage of literacy rate, Secondary workers and Tertiary workers and high with value of economic activities. In the agitation, too exhibit similar trend, accept district of Morigaon and Dhemaji. In the agitation period

(Fig. 6.11), other traditional crime are concentrated mostly in the south bank plain of central and upper Brahmaputra valley, extending from Kamrup (1919.71) and Nagaon (1653.00) district, have similar, socio-economic situation. The district of Morigaon and Nagaon have witness of large scale non-indigenous agricultural immigrants from the Bangladesh, creating a diverse Spatio-Temporal changes of arable land, by which evolve a social phenomena such as large scale non-workers, cultivators, Primary workers and High percentage of Schedule caste population and district also witness of high population density and high student enrolment, low literacy rate by which offences like counter fighting and criminal breach of trust and other. Similar heinous crimes are committed in this environment. In the post agitation period it has been observed that the district of Kamrup (1654), Nagaon (1415.50), Sonitpur (926.24), Sibsagar (1095.25), Dibrugarh (997.31) shows very high concentration of other traditions crime.

This district are both developed and moderately developed, but shows up ward trend of economic activity. This districts have both Homogeneous and Heterogeneous population, composition, exhibit high literacy rate an low literacy, high sex ration and low sex relation, high student enrolment and low student enrolment show high concentration of violence and property as well as social crime. As this four categories of crime are correlated each other as explain. In the previous chapter and explain similar parameter for the occurrence of other Traditional crime in the past chapter, So concentration of traditional crime i.e. CBT are high in those area where economic activity shows very high (Fig. 6.12).

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE OTHER TRADITIONAL CRIME
Pre Agitational Period (1975-78)

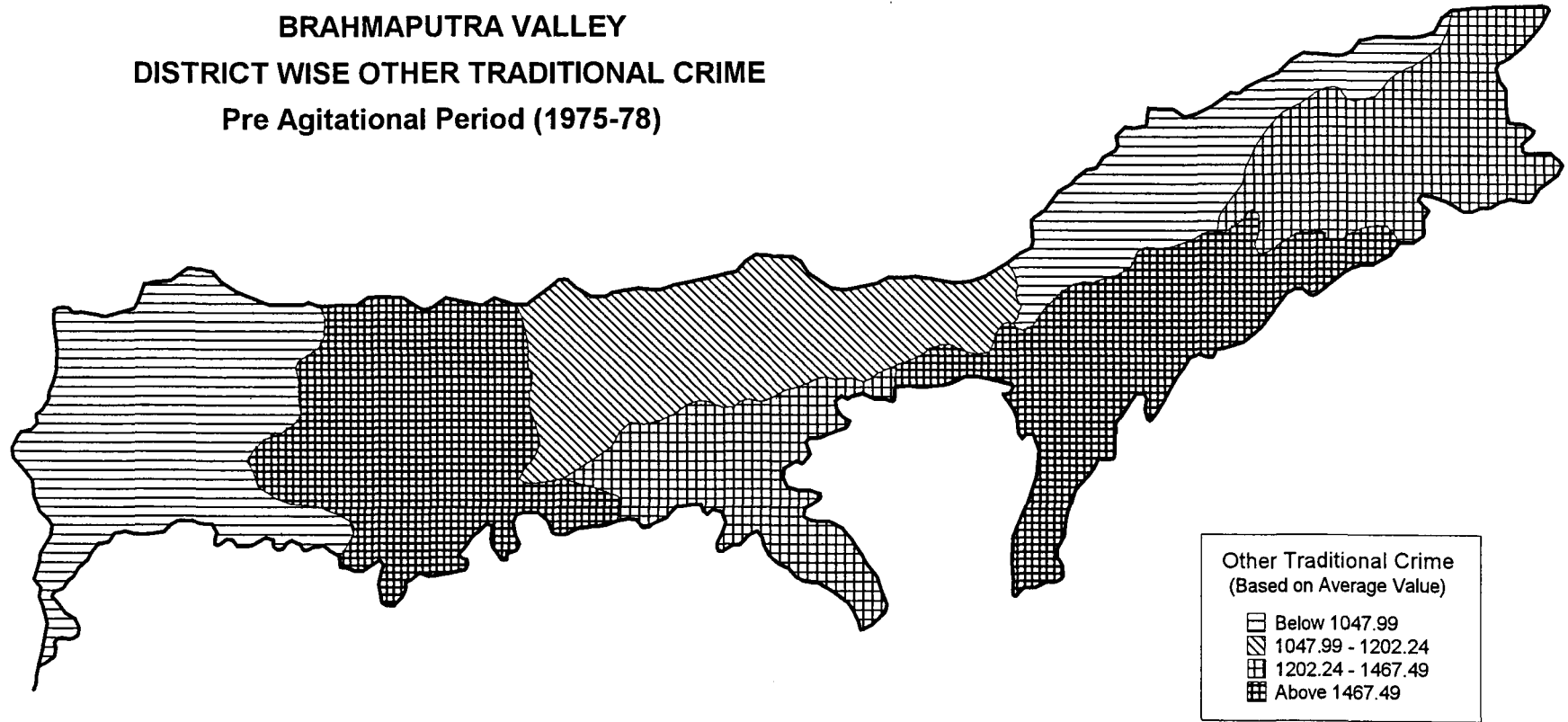


Fig. 6.10

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE OTHER TRADITIONAL CRIME
Agitational Period (1979-85)

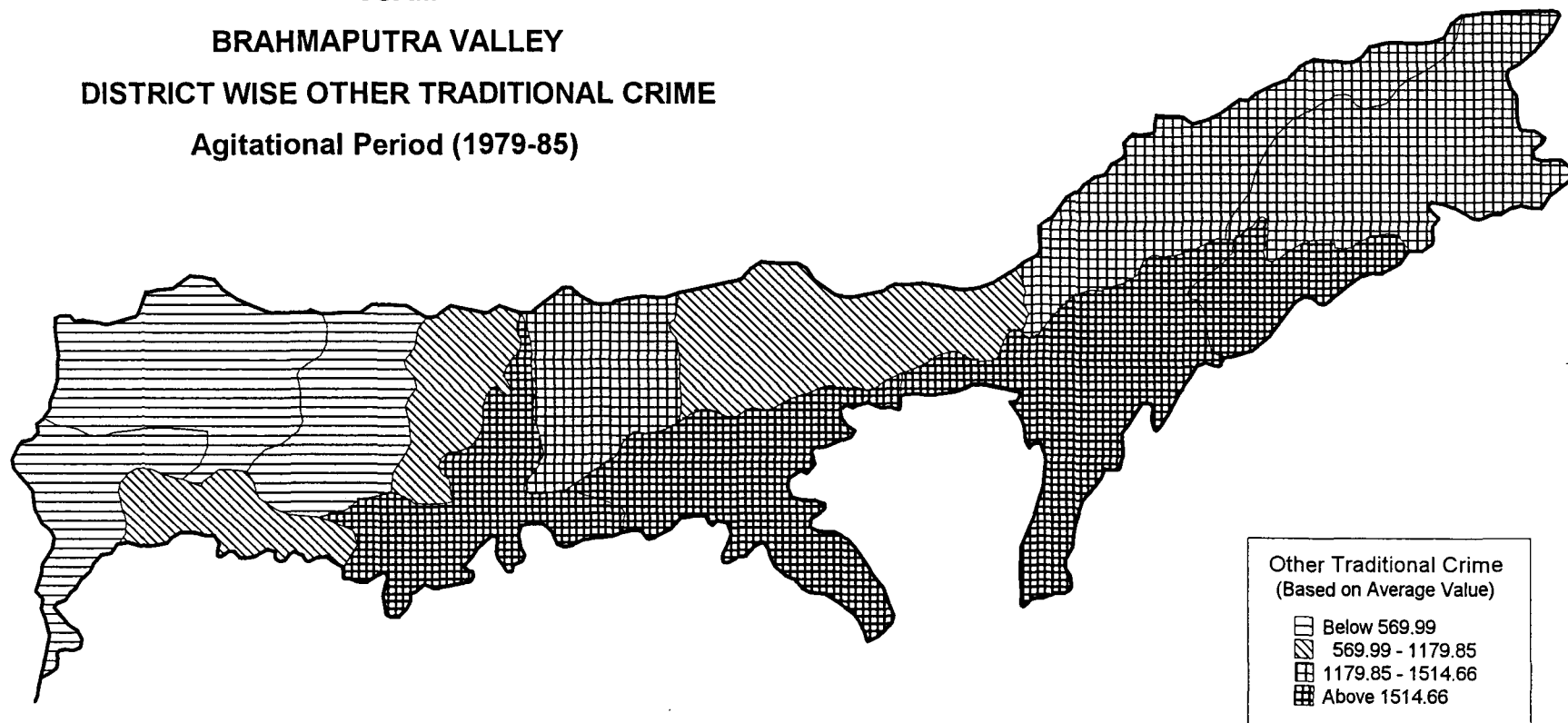


Fig. 6.11

ASSAM
BRAHMAPUTRA VALLEY
DISTRICT WISE OTHER TRADITIONAL CRIME
Post Agitational Period (1986-2001)

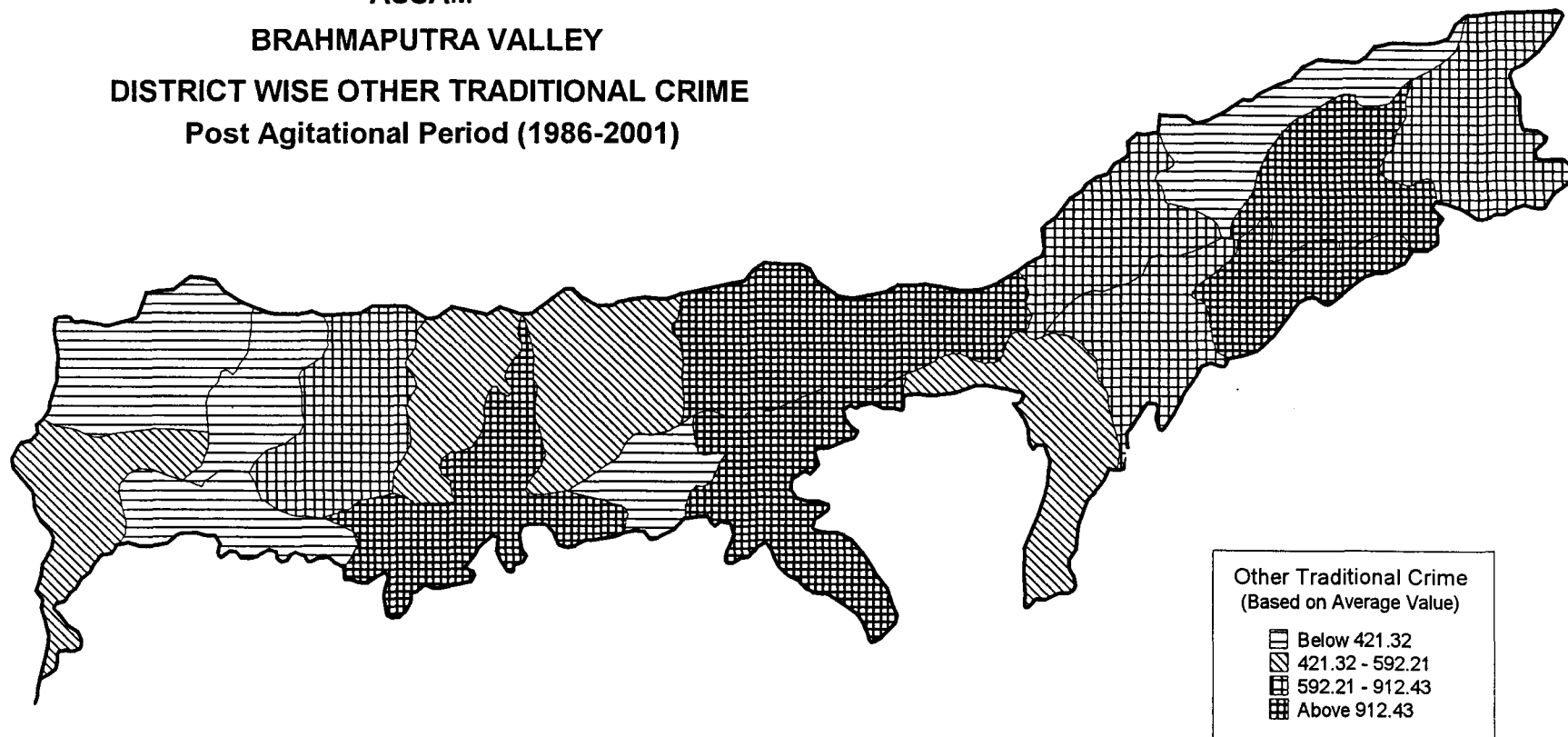


Fig. 6.12

(2) Area of High Concentration

In the pre-agitation period concentration of other Traditional crime has been found in the South bank of plain i.e. district of Nagaon and in the Central part of the Upper Brahmaputra Valley having high average score value of this two area have different economic activities and environment. In the Upper Brahmaputra Valley, economic activity, Trade, Commerce and Service are very. So occurrence of Traditional crimes such as CBT and CF also shows very high. Again Nagaon district, which has different kind of population composition as well as socio-economic environment, with high score of unemployment and immigrant population, also occurred incidence, such as counter fighting and breach of trust in high rate percentage. In the agitation period, high percentage of concentration of other traditional crime has been notice in Darrang 1903.86) district and Upper Brahmaputra Valley, comprising the district of Lakhimpur (1179.86), Dibrugar (1412.57), because during agitation period, this area were affected, an entire law and order was fail for which incidence of other Traditional crime such as CBT, CF and other IPC crime concentrated high. In the post-agitation period, other Traditional crime is highly concentrated in the district of Barpeta, in the Western part of the middle Brahmaputra Valley. Western part of Central plain of the Upper Brahmaputra Valley and Eastern Plain of Upper Brahmaputra Valley which includes the district of Barpeta (866.94), Lakhimpur (710.50), Sibsagar (1095.25) and Tinsukia (601.31). This district shows a increasing trend of economy with both Homogeneity and Heterogeneity population composition. But in spite of increase of economic activities in the upward trend, the areas also witness the problem of insurgency by ULFA, and NDFB, BLT etc. So, concentration of crime such as

CBT, CF shows high. And this type of crime generally is associated with the area of complex socio-economic area, where all kinds of activities with high economic advantages are prevailed (see Fig. 6.10, 6.11 & 6.12 for pre-agitation, agitation and post-agitation period and see Appendix 6.I for average score value for which density map for the violence crime has been prepared).

(3) Area of Medium Concentration

Moderate concentration of other Traditional crime has been noticed in the North bank Plain with a moderate average score value, i.e. district of Darrang (1166.5) in pre-agitation period, it shows same pattern or concentration of other traditional crime mainly because of the same belt i.e. Sonitpur and Nalbari. In the post-agitation period too, other traditional crime shows medium concentration in the North Bank plain that is district of Darrang (460.75) and Nalbari (501.94). These areas are basically backward and have very less economic opportunity, developmental activity almost stagnant, people are illiterate and almost dominated by the Scheduled Tribe, such situation commit crime, such as, CBT and CF. As there show less economic activities so, concentration of Traditional crimes CBT and CF also shows medium and low (see Fig. 6.10, 6.11 & 6.12 for pre-agitation, agitation and post-agitation period).

(4) Area of Low Concentration

Traditional crime concentration shows very scanty with low average score value in the Lower Brahmaputra Valley in the pre agitation period i.e. present district of Goalpara, Dhubri and Bongaigaon (929.52) and same trend has also been exist for both agitation and post agitation period. Because, these districts exhibit of very low economic development, mainly dominated by the Scheduled Tribe population, with low literacy rate, high non-worker and cultivators engaged in the agricultural activities. These areas have less Infra-structural development and high economic activities. Growth of economy almost stagnant. So people of such environment do not have such knowledge to commit such professional high economic crime and these area have very less opportunity to commit such type of crime i.e. CBT and CF as well as other IPC crime because of poor economy. Through these area hit by the insurgency, but commit such type of crime shows very scanty by, insurgent group too, they concentrate activities such as Trade, Commerce, Service are concentrated high, so these area shows very low concentration of Traditional crime, such as CBT and CF (see Fig. 6.10, 6.11 & 6.12 for pre-agitation, agitation and post-agitation period and see Appendix 6.I for average score value for which density map for the violence crime has been prepared).

From the above analysis of density of crime in the Brahmaputra Valley for three period of crime changes with the changes of socio-economic environment, Political situation, as well as changes of time in the study area. This can be examined as follows:-

Violence crime in the pre-agitation period mainly dominated in the entire Lower Brahmaputra Valley, comprising in the district of Kamrup, Nagaon, Sibsagar and Darrang while, these pattern had changes during agitation period. During agitation period, pattern

of crime showed shift to the North Bank Plain up to the district of Lakhimpur i.e. belt extending from the district of Goalpara, Kamrup, Darrang, Nagaon, Jorhat, Sibsagar and up to Lakhimpur. Because, during these period, entire spectrum of Socio-economic and Political environment was deteriorated and war like situation was prevailed due to the popular student movement by the All Assam Student Union (AASU) and (AAGSP) through out the valley. Again, in the post agitation period, the pattern of violence crime shows almost haphazard and shifted to the North Bank Plain. Density of violence crime showed high and very high concentration mainly extending from Kokrajhar to the Lakhimpur district. Except Bongaigaon, Nalbari and Dhemaji district entire parts of the North Bank Plain shows high density of violence crime because, after the agitation period, another phase of agitation had started from the separate homeland by the All Bodo Student Union (ABSU) and also witness problem of insurgency i.e. by BLT and NDFB for the same cause. So, the area dominated by the 'Bodo' population had been affected badly, both economically and politically because of the frequent riot, killing, bombing and road blocked because those area appears high concentration of violence crime. This shows that pattern of crime changes with the changing Socio-economic and political stability and instability of a region. It is also depends upon the changing level of Socio-economic development of an area too.

In respect of property crime, it has been observed from the above analysis that, the entire central part and Southern Bank Plain of the Upper Brahmaputra Valley have showed high and very high density of property crime. This implies that, this area can be termed as property crime prone zone, which compromises the districts of Kamrup, Nagaon, Sibsagar

and Darrang district. Most of these districts are economically well off. So, the property crime shows high concentration. On the contrary, property crime with medium and low density concentrated up the Tinsukia in the agitation period. A zone extending from Kamrup to the Tinsukia district, both central and Upper Brahmaputra Valley shows a high density area of property crime. At the same time, in the agitational period, property crime pattern scenario had changed. Kamrup district on the other hand, always appeared high concentration for four categories of crime in all three period. During the agitation period, density of property crime shows high and very high in the North Bank Plain and South Bank Plain, which includes the districts of Sonitpur, Lakhimpur in the North Bank and Jorhat, Sibsagar, Dibrugarh and Tinsukia in the South Bank Plain, except district of Dhemaji and Golaghat. This two district i.e. (Dhemaji and Golaghat) shows medium and low crime pattern. After agitation period there had been a sharp changes in the pattern of crime in the Brahmaputra Valley. In respect of Social crime, entire Upper Brahmaputra Valley areas affected or have high density of Social crime including district of Kamrup. Except Kamrup district Middle and Lower Brahmaputra Valley shows moderate and Low density of Social crime during the pre-agitation period. In the area of very high concentration of social crime, people engaged in secondary and Tertiary sector showed high economic activities in those area also expected to be very high, as compared to the other district. It has been observed that, these area witness high degree of Urban growth and day today economic activities, producing Urban slum, over crowding having high percentage of well do family. So, after whole day work, people of these area get free time at evening and they go for the enjoyment at night club, bar etc and there by commit social

crime. Again, in the North Bank Plain, where Social crime concentration shows high are dominated by the Scheduled Tribe population; having high percentage of non-workers, primary worker, Agricultural labour and low percentage of literacy rate, high percentage of sex ratio, medium and low percentage of tertiary workers, low percentage of population density, indicates almost low level of development and agrarian economy.

Industrial development Trade and Commerce, economic activities in those area during the pre-agitation period was very slow and stagnant which indicate a high percentage of unemployed person. As they do not have work to busy themselves, accept agriculture and some extent, they busy with service at day time, they get enough time to enjoy. So they go for alcoholism and ultimately commits social crime. It has been observed from the fact that, Social crime also committed in those area, where people are having hectic life and economically well off and go for enjoyment in the night club, bar and ultimately commit social offence. Again, in those areas, where the people remain idle, because of not having work, where economic activities less, people of the area are economically backward, having excess free time, because of Not having work to be busy themselves also observed high occurrence of Social crime. Thirdly in those area, which have not witness immigration and have only indigenous population composition with primary and Tertiary working of the people shows easy going also witness occurrence of Social offence. Same situation had prevail during the agitation period too. Because, those areas are the areas, where agitation has affected mostly and pattern of social crime shows almost same in all the three period, in the Upper Brahmaputra Valley. Whereas, most of the districts of North Bank Plain of Lower Brahmaputra Valley had medium and very low

social crime pattern in all the three period, accept Kamrup district because, these are the backward area, dominated by the Scheduled Tribe population with agrarian economy. People of those areas mostly engaged in agriculture and had no other option then this they are peace-loving people, they are busy with the agriculture. The area of Lower Brahmaputra Valley, basically backward, totally neglected from the economic point of view. These areas also witness large scale of immigration due to the low density of population and large area of vacant cultivates land. It has been observed that, after pre-agitation period, pattern of social crime had show shift in those areas where immigration population was very high. This shows that, pattern of social crime also changes with the changes of population composition too.

In respect of Traditional crime, it has been observed from the analysis that, the area/districts, where high percentage of Secondary and Tertiary worker concentrated with high economic activities shows high density of Traditional crime, e.g., Kamrup, Nagaon, Jorhat, Sibsagar and Dibrugarh district. Because, crime such as CBT and CF are high class professional crime linked with high socio-economic situation. So the pattern of other Traditional crime showed high concentration mostly in the South Bank plain. But, in the district where agrarian economy associated, shows very low concentration of other traditional crime, in all the three phase. As because, these areas are the backward area and knowledge of the people to commit such a high professional crime is very less. At the same time immigration of population shows such as unemployment, over crowding, a situation of people commits crime (CBT and CF), as it has already been mention in the previous chapter.

6.5 Thana wise Comparative Study of Spatio-Temporal Pattern of Crime

Analysis of Thana wise comparative study of spatio-temporal pattern of crime felt necessary, to get a clear picture of crime phenomena in the Brahmaputra valley. A heel full analysis will highlight the inner truth of the socio-economic, cultural and political parameter, which has influences in the occurrence of crime and patters of crime in the study area. It will also depicts a vivid scenario of the smallest unit, i.e., 'Thana' that has been taken for the study. (Fig- 6.13) For this, 41 (Forty-one) major Thana out of 7 (Seven) districts has been selected for the study. These Thana will represent lower Brahmaputra Valley, central Brahmaputra Valley and Upper Brahmaputra valley Assam, as refers in the earlier chapter.

Density Maps has been prepared by the researcher, by taking the average score value of crime data's of each Thana (see Fig. 6.13 to 6.24). This density maps will display crime pattern and zone of concentration of crime over the space and time frame. It will also depict a clear picture of Thanas, where concentration of crime, high, medium and low over the period of time. It is also evident from the fact that, disparity in density of crime has also been observed between district and Thana, when comparison of crime pattern has been carried out for three period, in the Brahmaputra Valley, Assam.

6.6 Violence Crime

(1) Violence Crime in the Lower Brahmaputra Valley

It has been observed from the maps of violence crime (Fig- 6.13, 6.14 & 6.15) that, major Thanas of higher concentration of violence crime in the selected district with high average value of violence crime.(Goalpara and Kokrajhar) are - Goalpara and Lakhimpur Thana. Dudhnoi Thana, Goalpara, Gossaigaon and Kokrajhar Thana have disclosed medium density, in the pre-agitation period. Whereas, Kokrajhar and Runikhata (study part) Thana, shows insignificant and mile in the occurrence of violence crime in the pre-agitation period. But, the then district of Goalpara represented wide dispersion. During undivided Goalpara pattern of crime showed high concentration. It may be due to large area that covered by the district during the period. But, while collecting dates of Thana as a separate entity, it shows its own individuality in the occurrence of crime. Again, the Thanas that shows very low & absences of violence crime in the pre-agitaional period, are the isolated and under developed area in the scene of modern development consideration. These area had economic problem as well as socio-cultural and political; due to engulfing of large-scale immigration. Present district of Kokrajhar as basically backward, mostly dominated by the Scheduled Tribe population, having low literacy rate, low density and had agrarian economy. So, occurrence of violence crime was supposed to be very low. Therefore crime density also shows low where as Thanas such as, Goalpara and Lakhimpur of the Goalpara, shows very high density. This depicts of idea that, during the pre-agitation period, Goalpara was the core centre of economic activities in the Lower Brahmaputra valley. As already explain in the previous chapter that, these district witnesses immigration from neighbouring countries, because of having high potentialities and scope for survival, for which occurrence of violence crime was very high in these district, in the pre-agitation

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE VIOLENCE CRIME
Pre Agitational Period (1975-78)

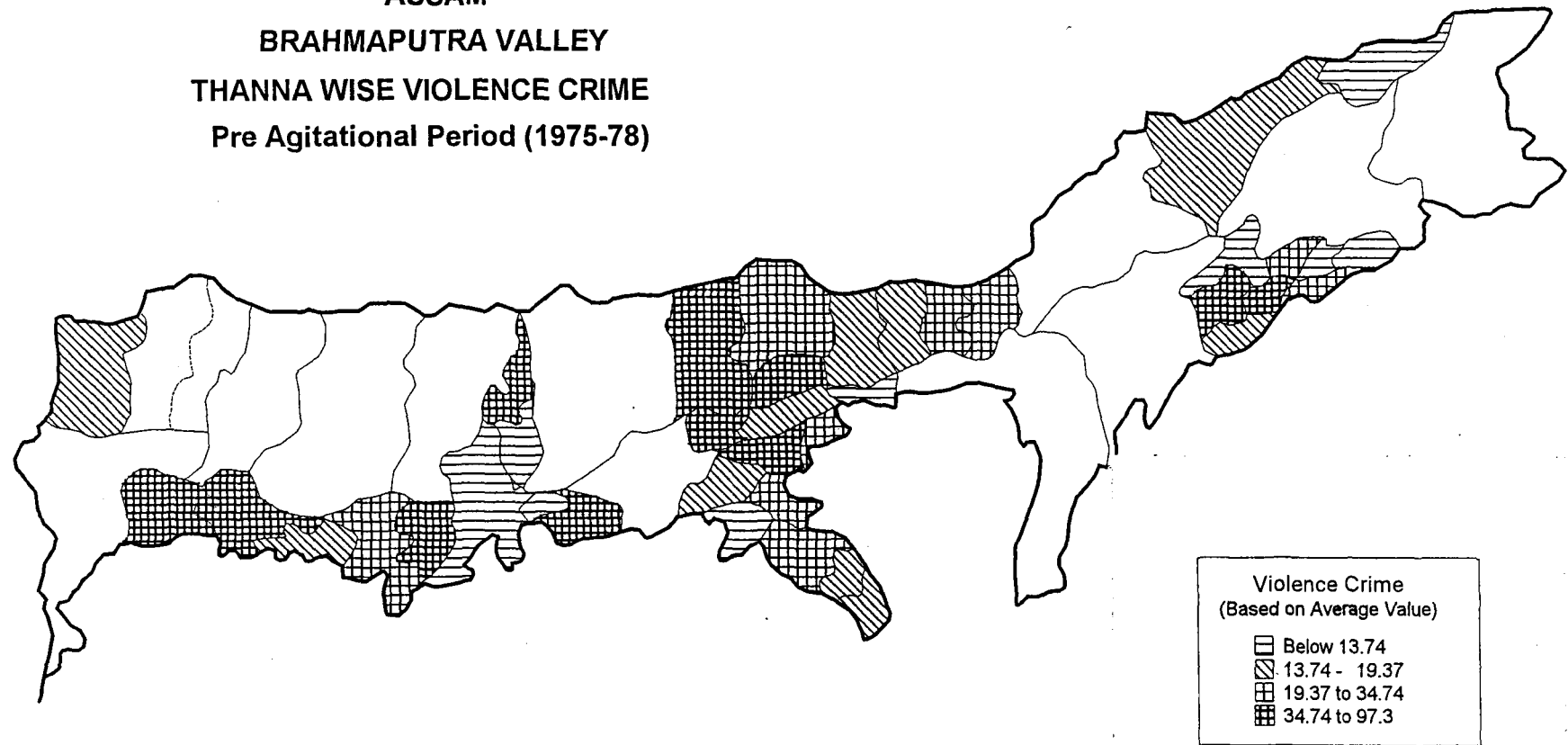


Fig. 6.13

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE VIOLENCE CRIME
Agitational Period (1979-85)

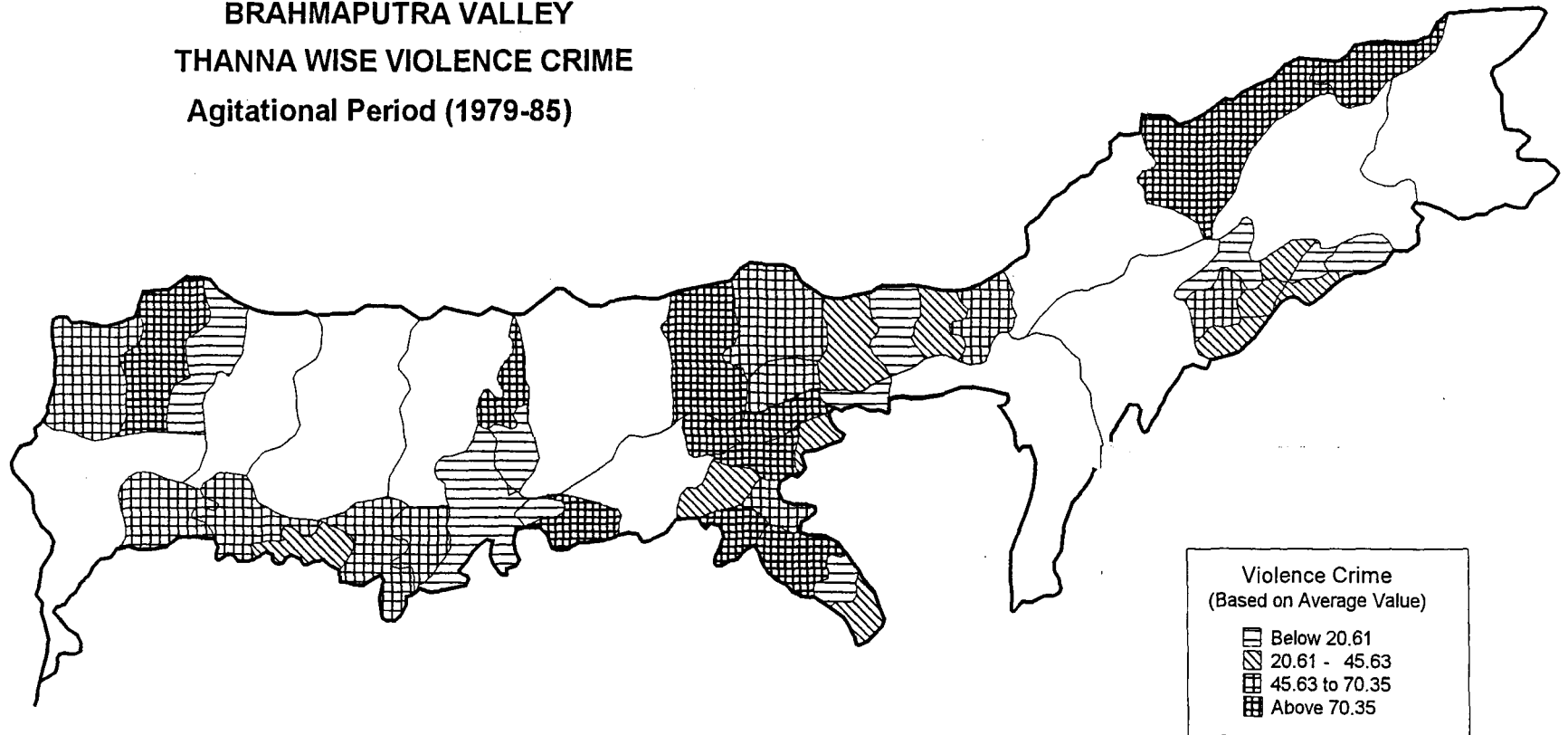


Fig. 6.14

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE VIOLENCE CRIME
Post Agitational Period (1986-95)

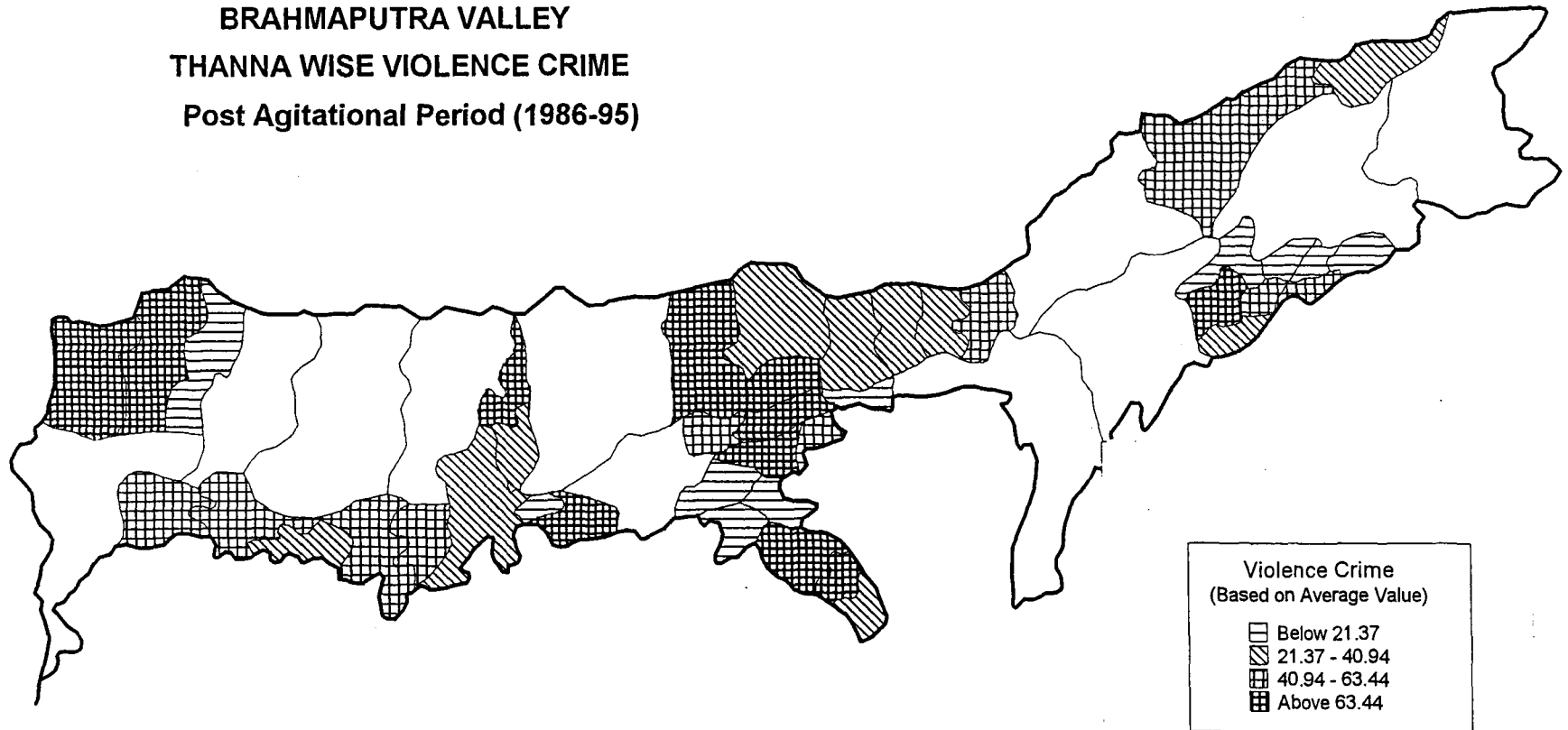


Fig. 6.15

period, i.e., South bank plain of Lower Brahmaputra Valley. So, the Thanas of these areas shows high concentration of violence crime then North plain of Lower Brahmaputra Valley in the period. Thanas that show Low density of violence crime in that period is Dudhnoi, it is because, compared to the other two Thana, i.e., Goalpara and Lakhimpur, both immigration force and economic activities was very low in this Thana area, i.e., Dudhnoi. In the agitation period, Thana such as, Kokrajhar shows very high density of violence crime. Where as, Gossaigaon, Goalpara, Lakhimpur and Dudhnoi Thana shows high concentration has been observed in the Runikhata (Sidly part) Thana. This trend shows that, pattern of crime changes with the changes of time, space as well as political decision. It has also found from the correlation of crime variable that, Runikhata Thana (sidly part) has positive correlation at 1 percent level of significance with murder, which is a prosperity crime; not the violence crime. So, Runikhata Thana shows low-density of violence crime. But, Gossaigoan and Kokrajhar shows positive correlation with kid/abduction, Robbery with murder. So, this Thana shows very high density instead of very high density of violence crime in the pre-agitation period. This provide two ground, i.e., after bifurcation of district, there shows little stagnation of economy as well as the Bodo Language movement also submerged, improvement of situation. So, occurrence of crime also decreases. Again, affect of Assam agitation was very low in that area. The Thana that shows high density of violence crime in the agitation period, are the area of high concentration of Tribal population rather than non-tribal and are the area of high economic problem.

In the post-agitation period, Thanas with high average score value of violence crime such as, Gossaigoan and Kokrajhar had very high concentration of violence crime and high concentration has been observed in the Lakhipur, Goalpara and Dudhnoi Thana of the Goalpara district. Where as, Lowest density has been noticed in Rumikhata Thana (Sidly part) in the Kokrajhar district. Thanas such as, Gossaigoan and Kokrajhar disclosed high density in this period. It is because, Lower Brahmaputra Valley was badly affected by the Boroland movement which has started 1987 onward. It is a fact that, these districts had very high concentration of Bodo population. So, during this period, law and order situation was totally deteriorated, economic activities were stagnant. There was frequent Riot, kid/abduction etc. So, the Thanas of this area shows high concentration of violence crime in post-agitation period. But, in respect of Thanas of Goalpara, there shows a medium concentration of violence crime, because these areas are predominantly dominated by Rabha Linguistic community. So, pattern of crime shows low than the Thanas dominated by Bodo population.

(2) Violence Crime in the Middle Brahmaputra Valley, Assam

Examining Thana wise maps of violence crime (Fig. 6.13, 6.14 & 6.15) in the middle Brahmaputra Valley for three districts (Kamrup, Nagaon and Sonitpur) in the pre-agitation period, it has found that, a very high concentration of violence crime has been noticed in the Thanas of Palasbari, Boko and Panbazar, Dhing, Nagaon Dhekiajuli and Tezpur which also shows high average score value of violence crime in the middle Brahmaputra valley. A high concentration emerged in the Thanas such as, Chamuguri,

Jamunamukh, Hojai, Chhaygaon, Dhekiajuli and Gohpur. Where as, medium concentration has been observed in 6 (six) Thana, i.e., Biswanath Charali, Bihali, Rupahihat, Kampur and Boko. Again, lowest density has been notice in Kampur, Kamalpur and Jalukbari. By examining the above density pattern, it has been found that, Thanas that indicates very high concentration of violence crime were basically town area, where all kinds of activities was there at the pre-agitation period. Not only that, but the Thanas in the North Bank of the Central Brahmaputra Valley, which shows very high concentration of violence crime, also due to the affect of the Bodo language movement, by which, entire North bank was badly affected and law and order situation was deteriorated. While observing the crime correlation analysis, it has found that, the Thana that shows high and very high density shows significant correlation at 1 percent level of significance in the same direction with violence crime, i.e., Dhekiajuli, Sonitpur, Gohpur positively correlated with murder, riot, kid/abduction and robbary. Panbazar Thana significantly correlated at 1 percent level of significance with rioting, kid/abduction. Nagaon and Chamuguri significantly correlated at 1 percent level of significance in the same direction. So, it proved that, these Thana are associated with violence crime. The Thanas that was affected by Bodo language movements are - Dhekiajuli, Rangia, Rangapara, and Gohpur. In these areas, concentration of Bodo linguistic groups of population is very high. Again, in South Bank of Central Brahmaputra Valley, Thanas that shows very high concentration, it is because, these Thanas are in the high economic zone. So, in such area violence crime always depicts very high and high. As has already explain in the preceding correlation analysis that, in such area, all categories of crime significantly and positively correlated each other's. In Sonitpur

district, Thana such as, Sotia and Biswanath Chariali shows medium crime pattern, its because, in these areas affect of Boro language movement was very low and occurrence of violence incidence was also low. So, density of violence crime shows very low. In the south bank of Central Brahmaputra valley, Thanas such as, Kamalpur, Kampur Ruparihat and Raha depict medium and low density. It is because of the locational factors. During pre-agitation period, these Thanas were rural Thana, so, they shows low density of violence crime.

In the agitation period impact of violence crime depicts very high in the Thanas of Panbazar, Rangia, Dhekiajuli, Tezpur, Sonitpur, Dhing and Nagaon. A high density of violence crime observed in the Thanas of Rangapara, Gohpur, Jamunamukh, Palasbari and Chayagaon. Because, these areas are the areas, where violence crime such as murder rioting, kid/abduction etc occurred high and very high during the agitation period; due to mass movement by AASU and AGSP whereas Thanas of Biswanath chariali, Bihali, Sotia, Chamuguri, Raha and Boko had medium density. This may be due to the diverse linguistic groups that existed in there police station area, where involvement of the people in the mass movement was less. Bihali and Sotia Thana area mainly dominated by Tea tribe, Boko by Scheduled Tribe population with low level of economic development. So, peoples participation in the agitation in those areas was very scanty. It may be due to poor condition, low literacy rate etc. So, occurrence of violence crime was not so high; for which, medium concentration has existed. But Thanas such as, Kamalpur and Lanka shows very low during agitation period. All above fact indicates that, agitation had direct effect in the occurrence of crime in the Central Brahmaputra Valley, Assam. Majority of Thana in

the area, during this period shows high or very high concentration of violence crime as compared to the pre agitation period, But in the post agitation period situation has improved. But shows very high and very high concentration in the Thana. Area, where Bodo population has been dominated specially in the central north bank plain, i.e., Thanas of Dhekiajuli, Rangia, Tezpur, Gohpur, Boko and Chaygaon etc. In the south, high and very high concentration has been notice in the Thanas of urban area, i.e., Panbazar, Nagaon and Ruparihat. At the same time, area where non-indigenous population concentration shows high and very high, violence crime also shows high, i.e., Thana such as, Hojai and Lanka. It has been observed in the preceding chapter of socio-economic base of Thana wise crime correlation that Scheduled caste population, non worker, Secondary worker, Density of population, Muslim population, Jain population and enrolment of the student shows positive correlation with violence crime. The Thanas of Nagaon districts such as, Hojai, Lanka, Rupahihat and Jamugari has all the above phenomena, for which violence crime shows high and very high. It is because, these are the areas, which provides early accommodation to a considerably high number of immigration from (east while east Pakistan) mostly in un-habited Charland and Marshey tract, which created above mention situation and causes high concentration of violence crime.

(3) Violence Crime in the Upper Brahmaputra Valley

In the Upper Brahmaputra Valley, districts taken for Thana wise study are:- (Dhemaji and Sibsahar). This two districts are the contrast district in respect of socio-economic and cultural phenomena, it has already explain in the earlier chapter that in the

pre-agitation period, as high and very high violence crime was observed in the Thana of Sibsagar, Demow, Moranhat and Sonari because area covered by these Thana are highly Urbanised, where economic activities such as, Trade and Commerce are high, primary, Secondary and tertiary activities were also high in those Thana area, during the pre-agitation period. As already explain in the socio-economic base crime correlation that, these are the areas, where property crime, social crime and violence crime shows positive correlation each other, in all the time. So, occurrence of violence crime shows high. In this district literacy rate, person engaged in secondary and tertiary sector was also very high during the period. Overall development in those area was first as compared to the other district of the valley. Economic activities and growth of economy in those area has been witnessing upward trend, where occurrence of property crime shows significant correlation each other. With rape and kid/abduction in the Thanas of Sibsagar, Sonari, Demow, Moranhat, Dhemaji and Junai Thana with property crime. So, the above Thanas of Sibsagar district shows high concentration of violence crime with medium average value of violence crime whereas Dhemaji and Junai shows medium concentration of violence crime. It is because, these two Thana are highly correlated with property crime. In the Upper Brahmaputra Valley, medium concentration of violence crime has been observed in the Thana of Dhemaji, Amguri. Rest of the Thana such as, Jonai, Dimow, Borhat, Kakotibari because there are the Rural Thana during the pre-agitation period where occurrence of violence crime shows low. Thanas of Dhemaji and Juani shows very low concentration of violence crime having low average score value of violence crime because, these areas are Mishing Population majority area having higher concentration of tribal

population rather than non-tribal population and are relatively problem free area. These area have economic problem, rather than problem of socio-cultural and political nature. So, occurrence of violence crime shows low.

Again in the agitation period, two Thana, i.e., Junai and Dhemaji indicate very high concentration of violence crime. It is because, during these periods, entire area were affected. Economy of those district were derailed law and order situation was deteriorated. Similarly, in the district of Sibsagar, violence crime shows high concentration in the Thanas of Sibsagar. It is because, during the period, high violence incidence was occurred in the Sibsagar area. Again, as this Thana also the Thana of district headquarter, so, the occurrence of crime always shows high.

In the pre-agitation period, Thana that depict high and very high density of violence crime were the main area of high economic activities. Those areas were also had better economic condition and had been the centre of attraction. But, those Thanas that indicate medium and low violence crime density, were the less developed area during the pre-agitation period. During the post agitation period, patter of crime in the Thanas of Upper Brahmaputra valley shows changing scenario. There had been a decreasing trend in the occurrence of violence crime, accept Sibsagar eg. Dhemaji and Junai of the Dhemaji district. This may be due to improvement in the law and order situation and overall improvement in the socio-economic condition of the area (see Fig. 6.13, 6.14 & 6.15 for pre-agitation, agitation and post-agitation period).

6.7 Property Crime

(1) Property Crime in the Lower Brahmaputra Valley

By thorough examining the maps of property crime that has been prepared from the average score value (Fig. 6.16, 6.17 & 6.18) in the Lower Brahmaputra Valley (Kokrajhar and Goalpara district), it has been found that, a high concentration of property crime indicated in the Thanas of Goalpara and Gossaigaon and medium concentration has been notice in the Lakhimpur and low in the Dudhnoi. Rest of the Thanas such as, Kokrajhar and Runikhata (Sidly part) indicates almost nil in the occurrence of crime during pre-agitation period. As already explain in the preceding chapter that, these are the areas of very high concentration of Tribal population, usually isolated and under developed in the sense present developmental process, economic activities also very low. So, concentration of property crime represented very low. Thanas that represents high property crime in those periods are the areas, which had developmental activities with mixed population. In the Lower Brahmaputra Valley, Goalpara Thana always indicated high and very high concentration of all four major categories of crime. It is because, it was the than of district head quarter in the pre-agitation period and also urban areas with Heterogeneous population, having slum and over crowding engulfed by immigrant, mostly agricultural all around.

In the agitation period, Thanas such as, Kokrajhar represent very high density of property crime. Where as, Gossaigaon and Goalpara shows high density of property crime. And rest of the Thana indicate medium and low density of property crime.

Thanas of Kokrajhar and Gossaigoan of the Kokrajhar district, represent high density property crime areas. This reflects the fact that, property crime in the lower

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE PROPERTY CRIME
Pre Agitational Period (1975-78)

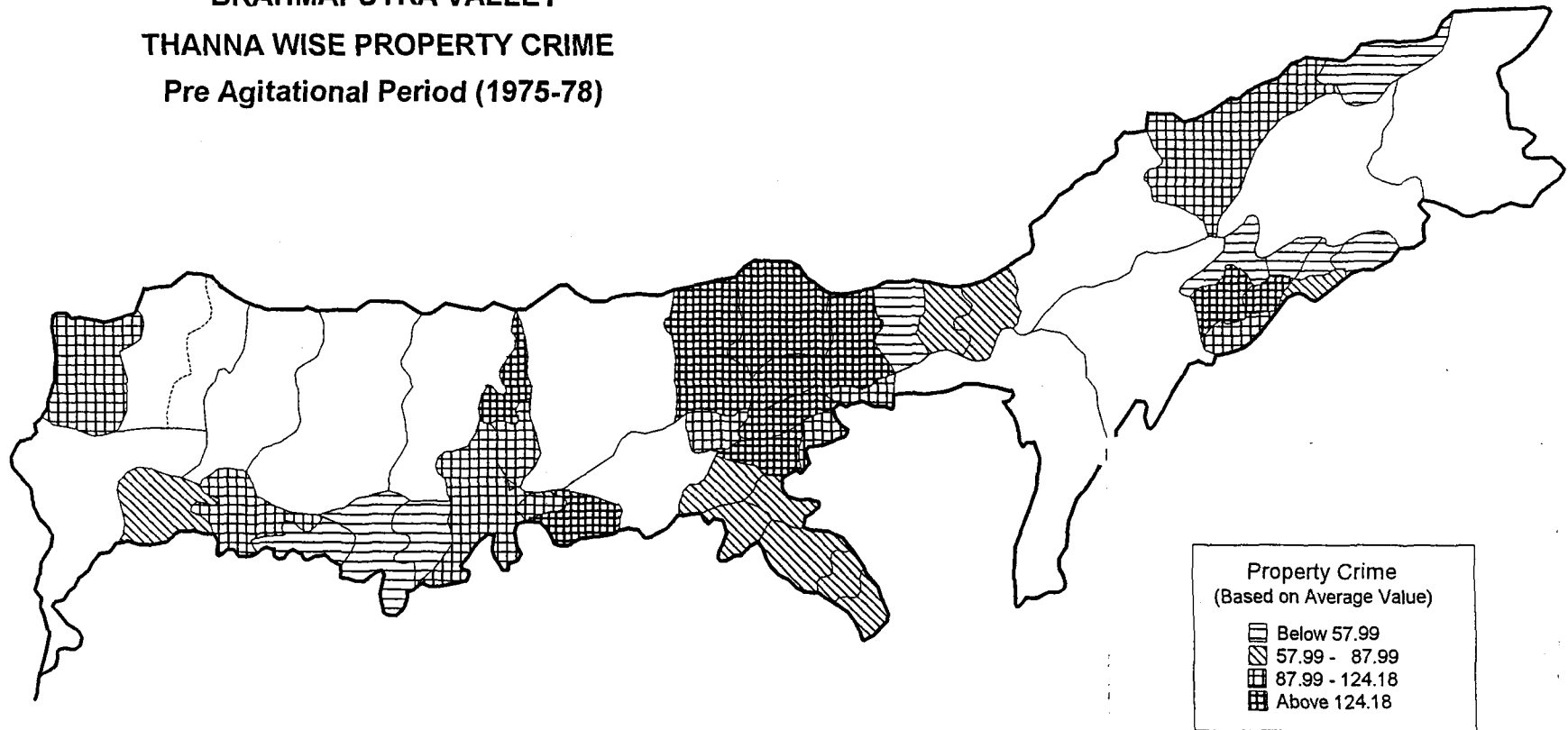


Fig. 6.16

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE PROPERTY CRIME
Agitational Period (1979-85)

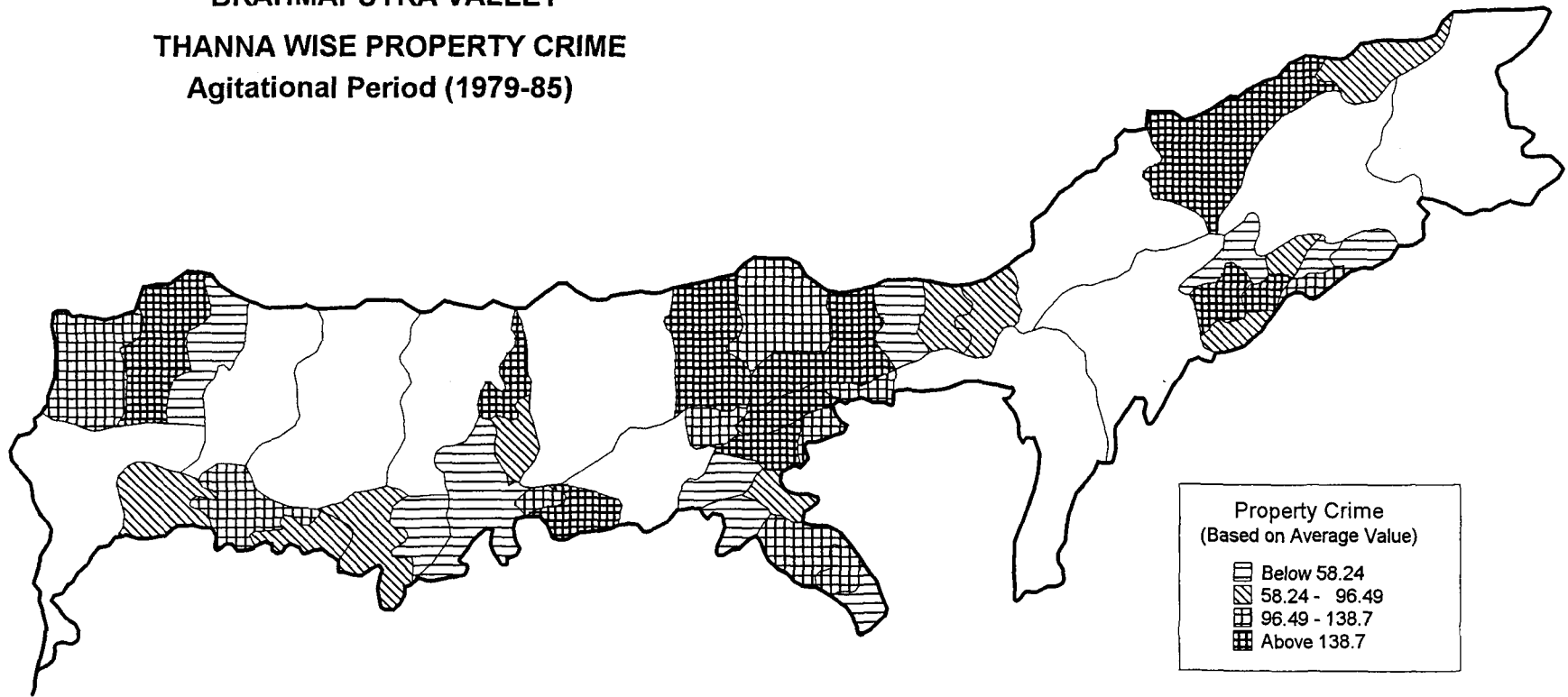


Fig. 6.17

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE PROPERTY CRIME
Post Agitational Period (1986-95)

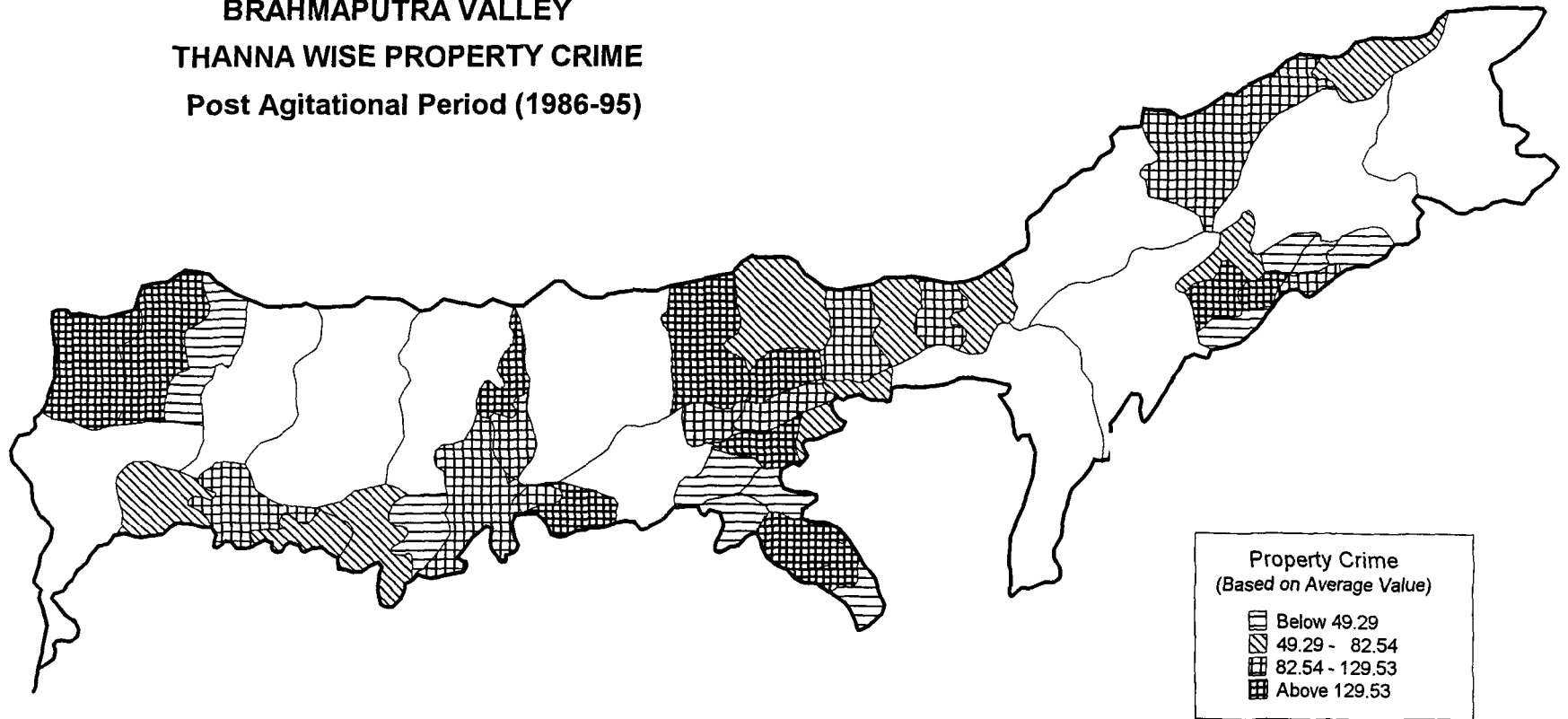


Fig. 6.18

Brahmaputra Valley in all the three period concentrated high in urban area only. Rural Thana of the Lower Brahmaputra Valley indicates low or medium density of property.

(2) Property Crime in the Middle Brahmaputra Valley

In the districts of Kamrup, Nagaon and Sonitpur, the property crime concentration (Fig. 6.16, 6.17 & 6.18) depicts a picture of very high concentration. This is found in the thanas of Rangia, Panbazar, Dhekiajuli, Rangapara, Tezpur, Sotia, Nagaon and Rupahihat in pre-agitation period and a high average score value. Thanas of Central North Bank Plain that shows very high density of property crime. These were the areas of moderate economic area dominated by agrarian economy. It had mixed population with high number of primary workers, non-workers, and agricultural labourer.

Again, Thanas of Panbazar, Nagaon, and Rupahihat shows very high density of property crime, because these are located in urban areas and are district headquarters. The area thus has concentration of all developmental activities, high percentage of literacy rate, secondary workers, and tertiary workers. As noted earlier in the present analysis, these indicators are indicators of high association of property crime. Thanas of Kamalpur, Jalukbari, Dhing, Kaliabor and Lumding are located in urban fringe in pre-agitation period shows high concentration of property crime; whereas, rural Thanas such as Gohpur, Bihali, Boko, Chhaygaon, Palasbari, Lumding, Chamuguri, Hojai, Kampur and Jamunamukh with moderate and low economic activities and also with mixed population showed moderate and low density of property crime.

In the agitation period, density of property crime changed. Some of the Thanas which were not affected by property crime earlier were affected in the agitation period such as, Jalukbari and Hojai. Whereas, A change of crime density was evident in the thana of Rangapara, from very high density to high density. It is because the area was dominated by tea tribe (see Fig. 6.16, 6.17 & 6.18 for pre-agitation, agitation and post-agitation period).

(3) Property Crime in the Upper Brahmaputra Valley

While observing the maps of property crime (Fig. 6.16, 6.17 & 6.18) pattern of the Upper Brahmaputra Valley (Dhemaji and Sibsagar district), Thanas such as Sibsagar and Nazira shows very high-density property crime and Dhemaji and Amguri than shows high density. Rest of the Thanas, i.e., Junai, Demow, Moranhat, Kakotibari, Borhat shows medium and low density. It is because in the pre-agitation period Thanas shows very high and high density were remained the area of high economic activities and these area also had better economic condition and had been the centre of attraction for the growth of economy. But those Thanas, which had medium and low density of property crime, were less developed area during the pre-agitation period occurrence of crime reflected very low and low in those Thana.

During the agitation period Thana of Dhemaji, Sibsagar, Nazira depict very high density of property crimes because in these Thana areas there had been large-scale violence and extortion. These thana areas were also located in urbanised areas. Here the level of development shows a increasing trend. These areas have high density of

population, high literacy rate and both secondary and tertiary activities also shows upward trend. So the Thanas of these areas give a picture of high density of property crime. But the rural Thana such as Junai, Borhat, Kakotibari, and Amguri shows very low density as they are located in the backward areas of the district.

In the post-agitation period same pattern that existed in the agitation period except Dhemaji Thana. Dhemaji Thana indicated high density of property crime instead of very high in the agitation period. This shows that as the socio-economic and political scenario improved in an area. There also shows change in the pattern of crime from very high-to-high.

6.8 Social Crime

(1) Social Crime in the Lower Brahmaputra Valley

In the Lower Brahmaputra Valley, the pre-agitation period, indicated (see Fig. 6.19, 6.20 & 6.21), Goalpara Thana shows very high density of social crime where as, high density has been observed in the Gossaigaon Thana. Again, medium concentration has been noticed in the Thanas of Lakhimpur and Dudhnoi. But social crime shows nil in the Thanas of Kokrajhar and Runikhata (Sidly part) . Examination of the district wise correlation, density of social crime in the pre-agitation period, areas of this Thana shows very low density but examining crime. The Thanas of present district, it has been observed that, only two Thana district high and very high densities. Thanas that shows high and very high concentration of social crimes are basically urban area, but majority of the Thanas shows very low density. So, while observing districts level, it shows very low

ASSAM
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THANNA WISE SOCIAL CRIME
Pre Agitational Period (1975-78)

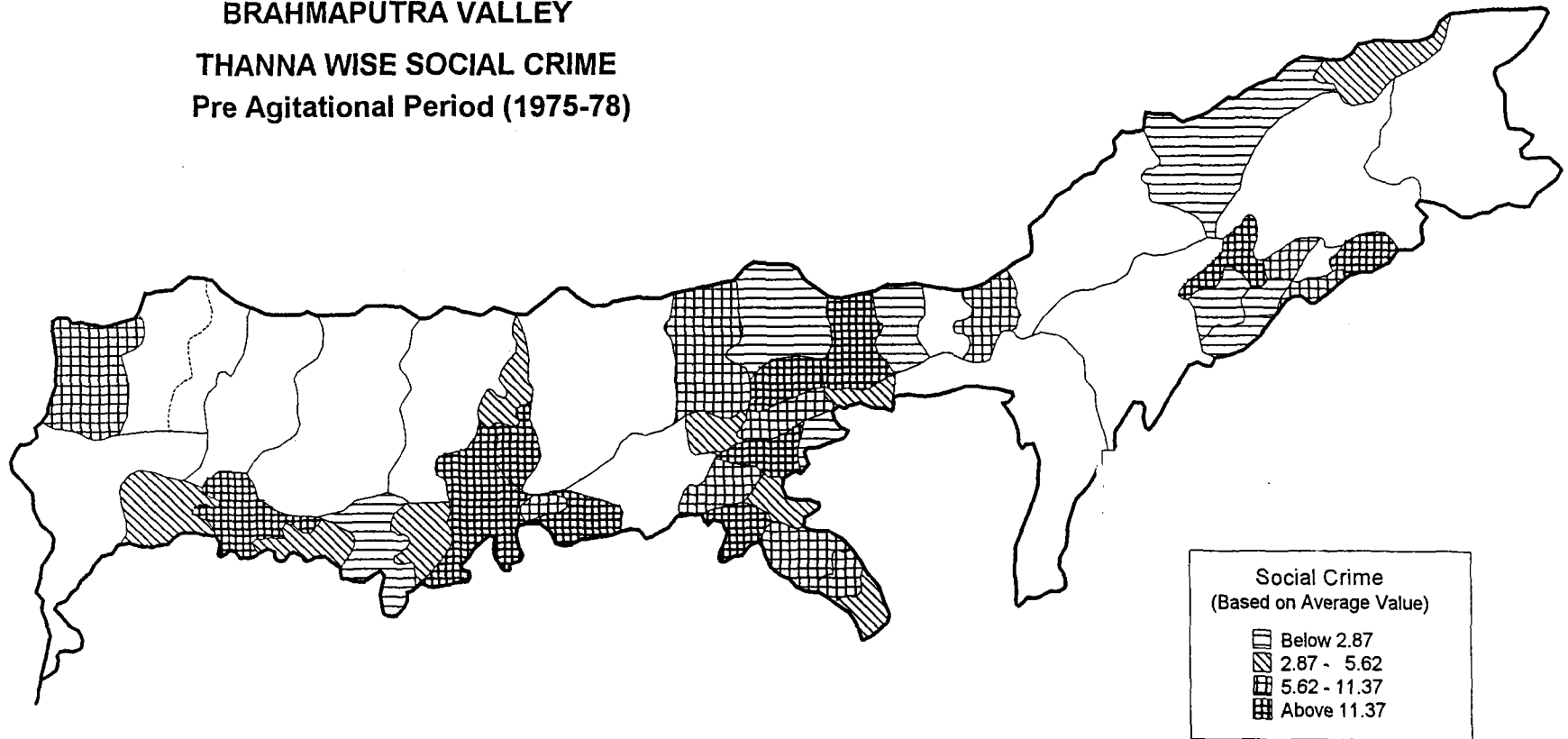


Fig. 6.19

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE SOCIAL CRIME
Agitational Period (1979-85)

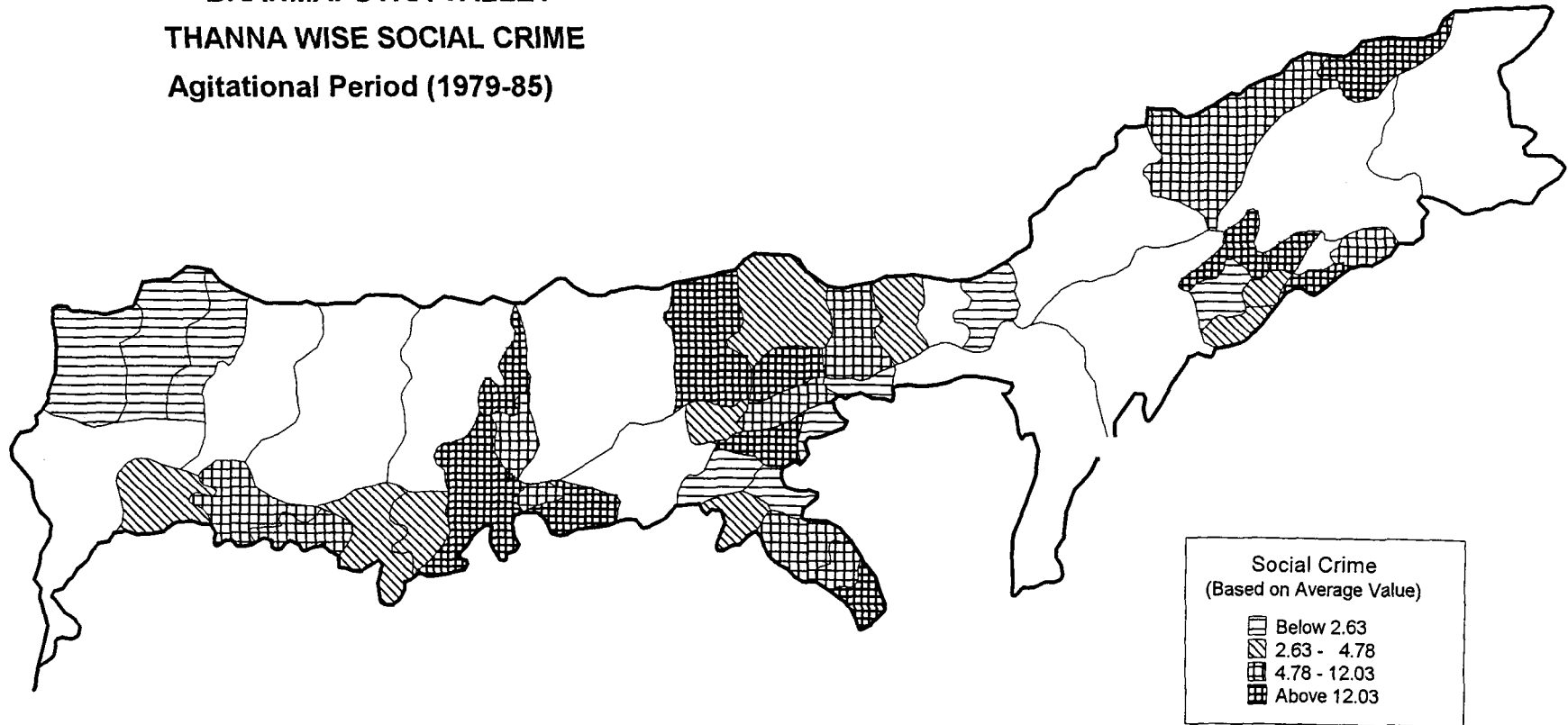


Fig. 6.20

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE SOCIAL CRIME
Post Agitational Period (1986-95)

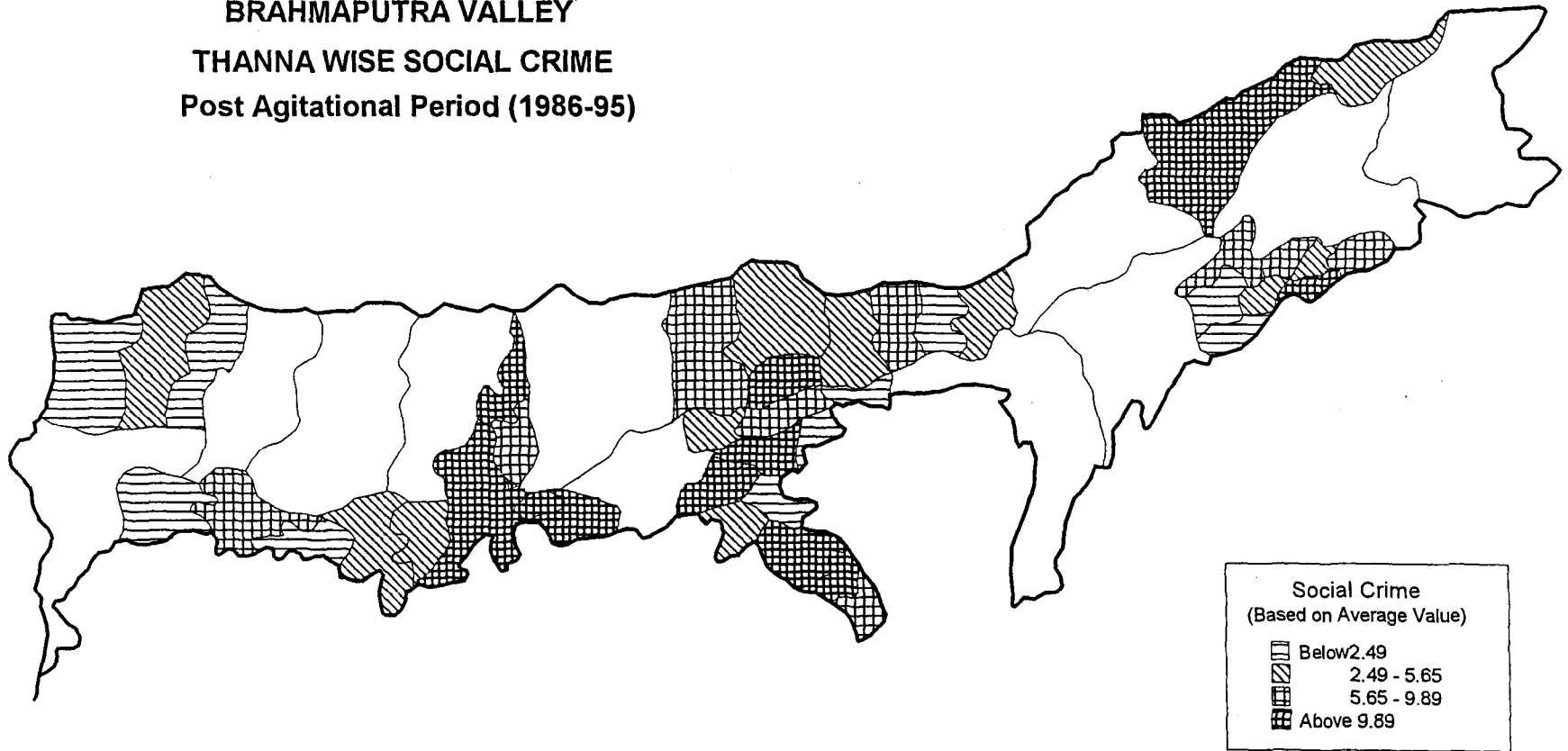


Fig. 6.21

concentration. It is a fact that, there were basically economically backward area and also the Boarder district, having high percentage of non-workers, Agricultural labour, and primary worker. And had less economic development, low literacy rate, and high sex ratio. This area had high percentage of Scheduled Tribe population; by which, social crime shows very low. It has also been, examine from the correlation of crime (chapter-V) that social crime shows very low correlation in Dudhnoi, which has been even proved by density maps. It has also been proved from the Thana wise crime correlation that, majority of Thanas such as, Kokrajhar, Runikhata, Dudhnoi are shows high correlation between violence and property crime, but not with social crime.

(2) Social Crime in the Middle Brahmaputra Valley

While examining the density maps of social crime (Fig. 6.19, 6.20 & 6.21) and average score value of social crime, it has been observed that, Thanas of Panbazar, Kamalpur, Palasbari, Sotia, Tezpur, Kampur, Nagaon display very high density during pre-agitation period. High density had been notice in the Thana of Dhekiajuli, Gohpur, Rupahihat, Raha, Hojai and Lanka. It has been also been observed that, these Thanas are basically correlated each other with violence, property and social as well as traditional crime. It is because; these areas had relatively developed economy, the density of this type of crime was high in the pre-agitation period.

Thanas that were located in the areas of low economic area and rural areas shows very low social crime i.e. (Rangapara, Bihali, Dhing, Samuguri, Kaliabor, Jamuna, Mukh, Boko, Chaygaon, Jalikbari, and Rangia. During the pre-agitation period in those areas,

economic activities were low. Scheduled Tribe and Scheduled caste and tea tribe population, e.g., Bihali, Rangapara, Boko, Chhaygaon, Rangia and Sotia Thana, also dominated these areas. Again, Biswanath Charali Thanas shows negligible occurrence of social crime. This was primarily an administrative area, having high literacy rate, low secondary activity. So, it shows absence of social crime. But, in the agitation period, there had been a change in the crime pattern. Most of the Thanas that had low and medium density during pre-agitation period shows high and very high density in the agitation period, e.g., Rangia Thana, Lumding Thana. It was because of the deteriorating socio-economic and political condition and law and order condition in those areas. Interestingly, the Thanas that existed in the area dominated by the tea tribe and Scheduled tribe were remaining medium and low in the density of social crime. Because, these are the areas of low economic area and have little or no industrial activity as well as trade and commerce, and low literacy rate. In the post-agitation period, there was a sea change in the pattern of social crime in some of the Thanas such as Dhekiajuli because, this may be law and order situation and socio-economic condition of the area.

(3) Social Crime in the Upper Brahmaputra Valley

From the maps of social crime (Fig. 6.19, 6.20 & 6.21) in the Upper Brahmaputra Valley (Dhemaji, Sibsagar) it has been observed that, during the pre-agitation period Thana such as Demow and Borhut had very high density of social crime and also shows very high average score value of social crime. Rest of the Thanas in the Upper Brahmaputra valley shows very low and medium concentration of social crime. It has been observed from the

correlation of crime chapter that social crime shows positive significant with tertiary workers, literacy rate, student enrolment that means, Sibsagar district poses high tertiary worker, literacy rate as well as enrolment so, it may be of this region that this district shows high occurrence of social crime. While observing the pattern of occurrence of social crime in the Sibsagar district it has been observed that, social crime are occur in those Thanas that located in the rural area and urban fringe, through out the three phase. It reveals that fact that social crime was not reported in these areas. While observing the Thanas of Dhemaji district it has been noticed that, during pre agitation period (undivided Dhemaji) social crime pattern was very low. But after bifurcation, the area indicated high and very high density of social crime. In the agitation period, it shows very social crime was high, as the Assam Agitation engulfed the district. Consequently in the post-agitation period only Dhemaji shows very high social crime, because, Dhemaji as District head quarter, shows increased economic activity, higher literacy rate, and higher growth rate of population.

6.9 Other Traditional Crime

(1) Other Traditional Crime in the Lower Brahmaputra Valley

By observing the density maps of traditional crime (Fig. 6.22, 6.23 & 6.24) it has been observed that high concentration of other traditional crime has been noticed in the Thanas of Goalpara, and Gossaigoan in the pre-agitation period with high average score value of other traditional crime. Traditional crime is highly correlated with secondary worker, tertiary worker, density of population. It has also been found from the crime

ASSAM
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THANNA WISE OTHER TRADITIONAL CRIME
Pre Agitational Period (1975-78)

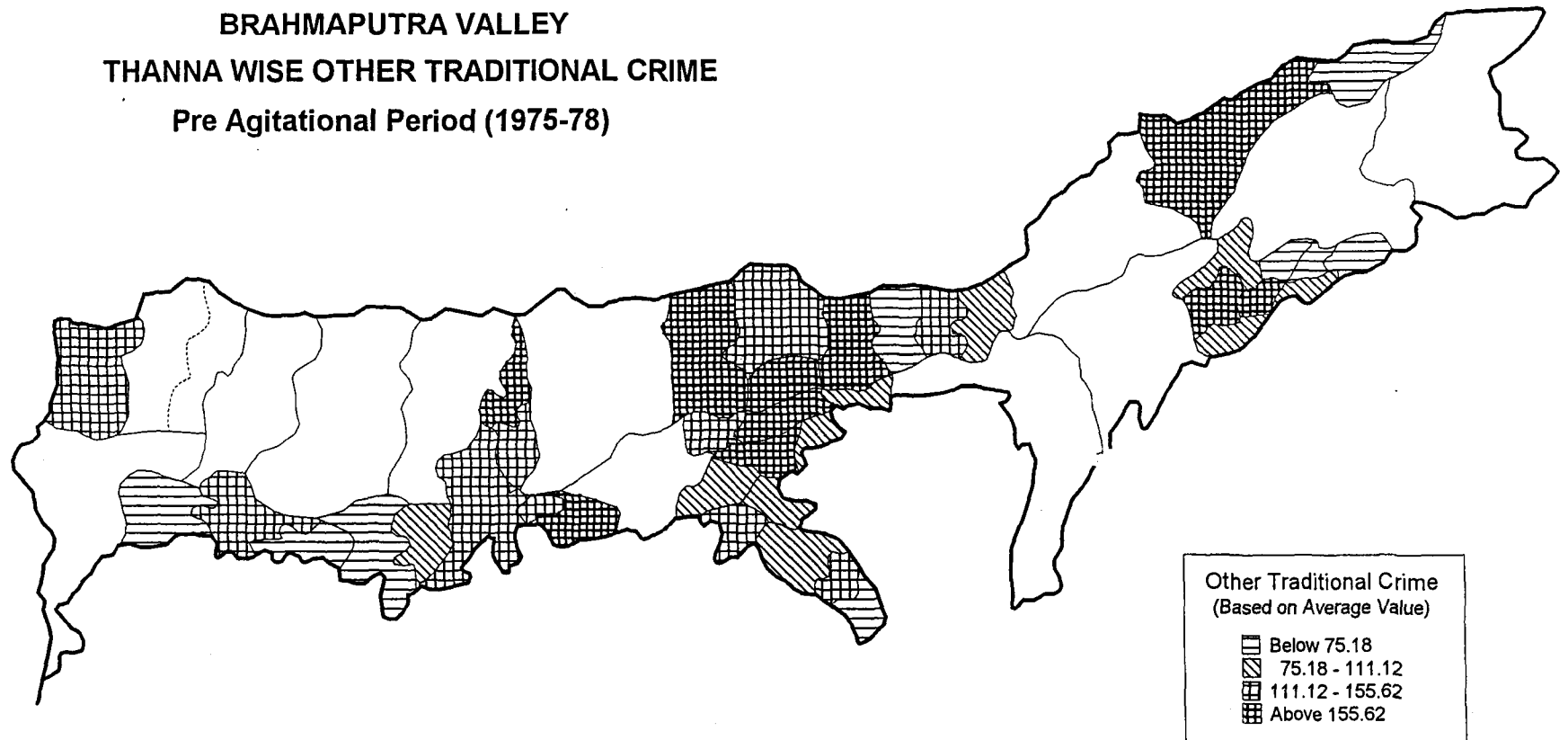


Fig. 6.22

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE OTHER TRADITIONAL CRIME
Agitational Period (1979-85)

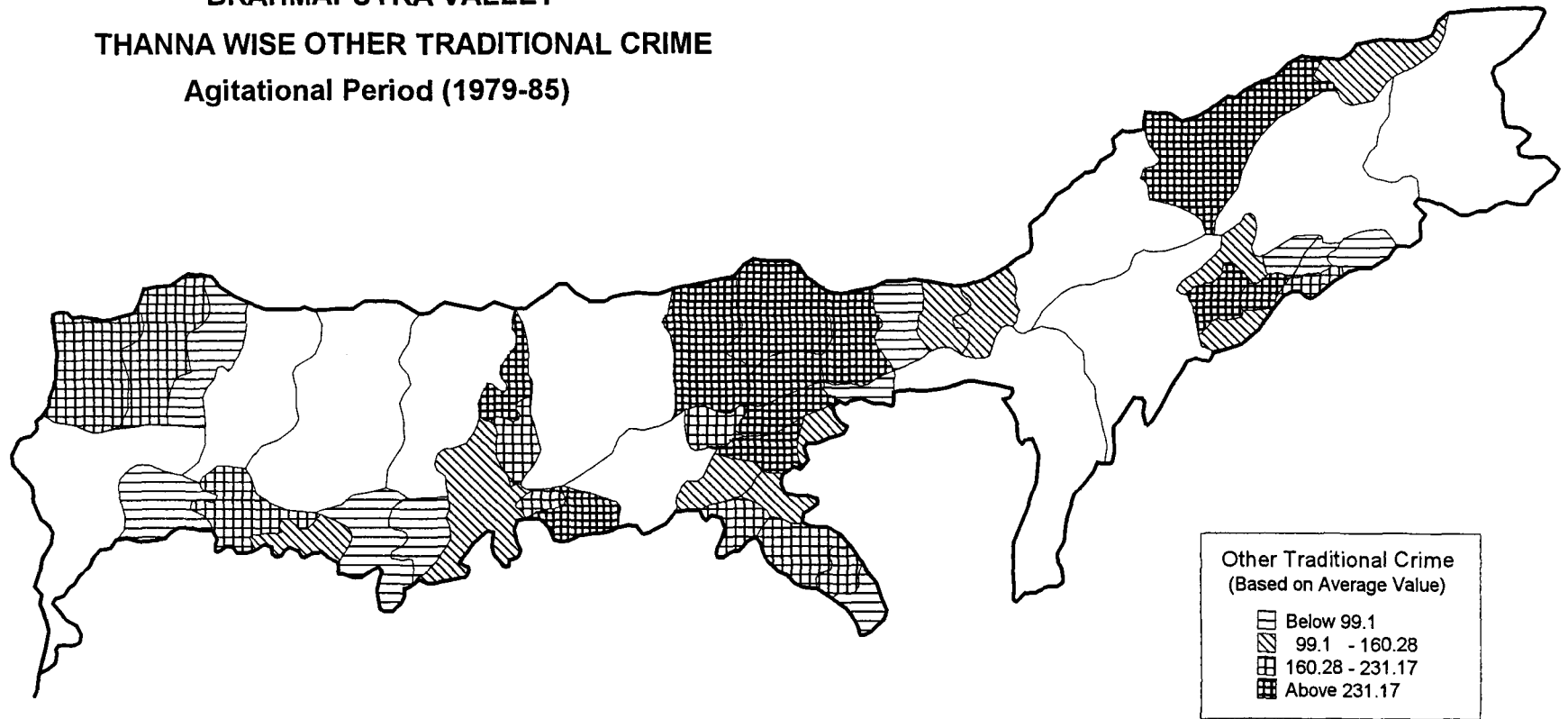


Fig. 6.23

ASSAM
BRAHMAPUTRA VALLEY
THANNA WISE OTHER TRADITIONAL CRIME
Post Agitational Period (1986-95)

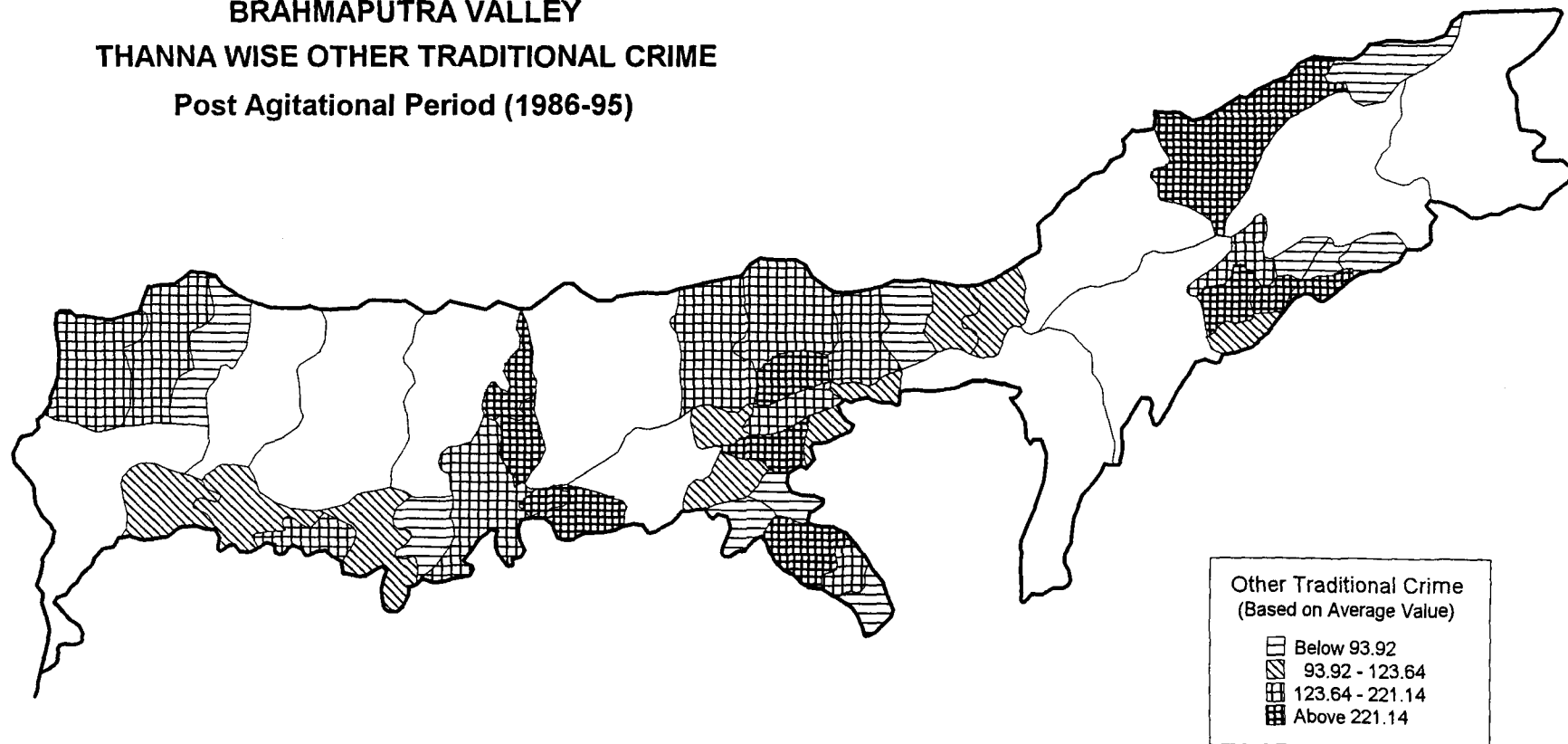


Fig. 6.24

correlation that other traditional crime positively correlated with property crime. So the area where the property crime are high other traditional crime were also high. The other traditional crime such as CBT and C F are professional crime, related with property and always associated with high economic activities. These crimes are committed in urban area and are associated with high economic activities, trade, commerce etc it shows less concentration in the under develop area. So, in the lower Brahmaputra Valley in all the three period, occurrence of other traditional crime shows during very in the Thana such as Lakhimpur, Dudhnoi, Runikhata (Sidly part). Traditional crime always concentrated high in those there were property crime concentrate high, these two are highly correlated in has been evident from the earlier correlation (Chapter-IV).

(2) Other Traditional Crime in the Middle Brahmaputra Valley

From the density maps of Thana in the middle Brahmaputra Valley, it has been observed that very high density of other traditional crimes has been noticed in the Thana Rangia, Dhekiajuli, Rangapara, Tezpur, Palasbari, Panbazar, because these area are the area, which has been the old town and occurrence of property crime always shows high. In addition the thana areas of Rangapara, Gohpur, Bihali, Hojai, Lanka, Chhaygaon shows high other traditional crime It has been observed that, these Thana areas are predominantly dominated by the Schedule Tribe, Schedule caste and tea tribe and back ward area. Economy of these areas was poor, in the pre-agitation period. So where such conditions prevails CF, CBT and other IPC crime shows high. Urban fringe shows low and medium

other traditional crime in Kamalpur, Jalukbari, Biswanath Charali, Sotia, Lumding, Kampur, and Rupahihat thanas.

Very high concentration of traditional crime has been noticed in the Thanas of Kamrup. Except Boko and Chhaygaon entire Thana were dominated by high and very high other traditional crime. So, the Thana of Sonitpur such as Dhekiajuli, Tezpur, Sotia shows high other traditional crime. Most of the district dominated by Assamese and Muslim linguistic group has been affected by agitation and shows high crime pattern.

Thanas of Muslim and Tea tribe, Schedule Tribe dominated area shows low, medium concentration of other traditional crime during agitation as because these Thana area are less affected by Assam movement then the Thana of other area, e.g., Gohpur, Biswanath Charali, Bihali, Raha, Jamunamukh, Jhamguir, Dhing, Rupahihat etc. Again in the post-agitation period north plain shows high density and includes Thanas of Rangia, Kamalpur, Dhekiajuli, Tezpur, Rangapara, Sotia. It is evident from the density maps that the Thana such as Palasbari, Biswanath Charali have very less Bodo People (see Fig. 6.22, 6.23 & 6.24).

(3) Other Traditional Crime in the Upper Brahmaputra Valley

By Examining the maps of other traditional crime and also the average score value of other traditional crime, it is found that only two Thana shows very high concentration of other traditional crime i.e. Nazira and Sibsagar Thanas. Two Thanas of Sonari and Moran also show high concentration of other traditional crime in the pre-agitation period. Dhemaji Thana show medium density, because during those period only Dhemaji was the only area

of significant developmental activity, crime rate tended to be high. But the Thana of Rural area: such as Junai, Borhat, Kakotibari, Dimow- were had very low economic activities with agrarian economy at that time, and population composition also most homogenous.

In the post-agitation period, an inverse relationship becomes apparent. It is because, property crime shows positive significance with other traditional crime. So where the property crime shows high CIT other traditional crime also appear to be high i.e., as in Dhemaji, Sibsagar, Nazira, Sonari. But the Thana such as Junai, Borhat, Kakotibari, and Moranhat are almost rural Thana. So, occurrence of CBT, CF, always low. So density also shows low (see Fig. 6.22, 6.23 & 6.24 for pre-agitation, agitation and post-agitation period).

6.10 Observation

- (1) Violence crime concentration was vary in the district of Kamrup in the pre-agitation period; indicating very high score of actual average value of crime, i.e., Kamrup (1025.5), Nagaon (816.25) and high concentration was in the district of Goalpara (789.25), Sibsagar (617.75). Analysis revealed the fact that district having high economic activities and high percentage of secondary and tertiary workers, high literacy rate, high density of population indicates high concentration of violence crime eg Kamrup district. Again, Goalpara district with low economic activities, low literacy rate, low density, high percentage of agricultural worker, non-worker, primary worker, sex-ratio and high percentage of Scheduled tribe

population as well as large number of influx of immigration along with political uprising in the pre-agitation period cause high concentration of violence crime.

- (2) High percentage of non-worker, low literacy rate, high percentage of student enrolment, high percentage of density and immigration in the area i.e. Nagaon district shows high density of violence crime in the pre-agitation period.
- (3) Central north bank plain and Upper Brahmaputra valley disclosed medium and low concentration of violence crime that has average score value, i.e., Darrang (504), Lakhimpur (271.76) and Dibrugarh (328) in the pre-agitation period indicating high percentage of Hindu population, low percentage of secondary and tertiary worker and primary worker.
- (4) Pattern and concentration of violence crime shifted to the North bank plain during agitation period, which includes district of Lakhimpur (638.00) indicating high concentration, instead of low in the pre-agitation period. Because during this period entire spectrum of socio-economic and political environment was deteriorated.
- (5) Pattern of violence crime in the post-agitation period indicated haphazard. There was a shift to the North bank plain with very high and high concentration, extending from Kokrajhar to Lakhimpur. Except Bongaigaon, Nalbari and Dhemaji district entire parts of the North bank plain had high concentration having average score value, i.e., Barpeta (663.88), Sonitpur (472.50), Darrang (393.69), Lakhimpur (309.88), Kokrajhar (367.63). It is because Bodo land movement started just after Assam movement, years, i.e., 1985 had affected these area badly, by frequent riot, kid/abduction, murder etc.

- (6) Pattern of violence crime change with the changes of average score value in the district of Dhemaji (130.77), Morigaon (165.02), Golaghat (247.80), Sonitpur (472.50), Jorhat (261.81) from high to medium and low in the post-agitation period. Because during the agitation period, these district were affected. But just after the agitation period, law and order have improved for which occurrence of crime also slowed down and concentration of violence crime also shows from high to low and medium.
- (7) Concentration of property crime was very high and high having high average score value mostly in the Central and South bank plain district of Sibsagar in the Brahmaputra valley in pre-agitation period and post-agitation period, i.e., Kamrup (4581.25), Darrang (2330.25), Nagaon (22.41) and Sibsagar (30.25) in pre-agitation period to Kamrup (3254.00), Jorhat (2002.33), Darrang (1922.29), Sonitpur (1525.67) in the agitation period.
- (8) A Sharpe changes has been observed in the concentration of property crime in the district of Tinsukia and Dibrugarh in between pre-agitation and agitation period i.e. Dibrugarh (1602.25) in the pre-agitation period (1952.71) in the agitation period. This fluctuation was due to Assam movement where murder, kid/abduction, rioting with property crime was very much highly correlated.
- (9) Property crime concentration indicates low and medium with medium and low average score value of property crime in the pre-agitation and agitation period in the district of Lakhimpur in the Upper Brahmaputra valley and the district of Lower Brahmaputra valley, i.e., Lakhimpur (748.5), Goalpara (2096.26) in the pre-

agitation period to Lakhimpur (906.00), Kokrajhar (490.00), Dhubri (587.00), Goalpara (1477.86) in the agitation period.

- (10) A very high and high concentration of property crime revealed in the post-agitation period with very high and high average score value of property crime in the district where economic condition as well as growth shows upward trend with high literacy rate, high secondary worker and tertiary worker, student enrolment, i.e., district such as Kamrup (1325.25), Nagaon (1325.25), Sibsagar (849.94) and Dibrugarh (886.38).
- (11) Very low concentration of property crime has been found in the district of Upper Brahmaputra valley and Lower Brahmaputra valley, i.e., Dhemaji (208.23), Kokrajhar (468.75), Bongaigaon (357.92), Goalpara (450.31).
- (12) Degree of concentration of social crime in the Brahmaputra valley was very high and high in the Upper Brahmaputra valley and also in the district of Kamrup through out the three phase which indicate average score value i.e. Kamrup (199.5), Sibsagar (415.75), Dibrugarh (260.5), Lakhimpur (117.25) in the pre-agitation period and Kamrup (255.00), Sibsagar (535.14), Jorhat (417.00), Dibrugarh (308.71), Lakhimpur (174.25) in the agitation period to Kamrup (123.00), Sibsagar (95.44), Jorhat (56.25), Dibrugarh (63.00), Lakhimpur (62.69), Tinsukia (27.23) and Dhemaji (16.54) in the post-agitation period.
- (13) Pattern of social crime changes in the district of Central Brahmaputra valley during the agitation period when it compared with three period in the valley, i.e., Sonitpur district indicated high concentration of social crime in the agitation period instead

of medium in the pre-agitation period i.e. with average score value of (28.67) in agitation period to (16.19) in the post-agitation period.

- (14) Concentration of social crime indicated medium and low in the Lower Brahmaputra valley thorough out the three periods.
- (15) Concentration of traditional crime was high and very high with very high and high average score value of other traditional crime in the South bank plain of Central Brahmaputra valley in the pre-agitation period and agitation period, i.e., Kamrup (1746.25), Nagaon (1263), Sibsagar (16.72), Dibrugarh (1202.25). In the pre-agitation period to Kamrup (1917.71), Nagaon (1653.00) percent, Sibsagar (1759.43) and Dibrugarh (1412.57) in agitation period.
- (16) Other traditional crime concentration indicates high with high average score value of other traditional crime in the agitation period, instead of medium and low in the district of Darrang and Nagaon in the post-agitation period, i.e., Darrang (1166.05) in pre-agitation to (1403.86) in Darrang and (1179.86) in Lakhimpur in the agitation period to Darrang (460.75), Dhemaji (307.38) in the post-agitation period.
- (17) Very low concentration of other traditional crime was found in all three period in the district of Goalpara having low average score value of other traditional crime, (929.5), Lakhimpur (498.75) in pre-agitation period and Dhubri (516.33), Kokrajhar (296.67), Barpeta (551.67) in agitation period to Dhemaji (307.38), Morigaon (337.23), Kokrajhar (362.69), Bongaigaon (347.00), Goalpara (406.19) in the post-agitation period.

- (18) Pattern of violence crime in the Thana of Lower Brahmaputra valley changes in each period. Number of Thana that shows high and very high concentration was increased in all three period showing very high average score value of violence crime, i.e., Goalpara Thana (53.5) in pre-agitation and Kokrajhar (85.65), Goalpara (56.86), Gossaigaon (56.43) in agitation period to Kokrajhar (93.89), Gossaigaon (102.00), and Goalpara (60.30). Thana of Runikhata shows low violence crime in three period, i.e., (14) in pre-agitation (5.67) in agitation period and (20.90) in post-agitation period. This change of crime concentration is due to the changes of socio-economic and political environment in the study area.
- (19) A very high and high concentration of violence crime in the Middle Brahmaputra valley has been observed in the Thana of Urban area through out three period.
- (20) Changes in the pattern and number of Thanas of high concentration to very high concentration had been observed in the agitation period in the Central Brahmaputra valley which had high average score value of violence crime, i.e., Kamrup (10.25), Hojai (28.75), Dihing (91) in the pre-agitation period and Dihing (160.14), Kamrup (247.14), Hojai (98.14) in the agitation period to Kamrup (10.20). Dihing (57.10), Hojai (141.30) in the post-agitation period. This change in the pattern is due to the deterioration of law and order situation in the study area in that period, where large scale violence such as rioting, murder, kid/abduction was committed.
- (21) Violence crime in the Upper Brahmaputra Valley indicated an increasing trend in the Thanas of Dhemaji and decreasing trend in the Thanas of Junai. Variation in the concentration of violence crime was disclosed in the Thanas of Sibsagar, Sonari

and Nazira while observing pre-agitation period, agitation period and post-agitation period, i.e., average score value of Dhemaji (18.5) and Junai (10.25) in the pre-agitation period and Dhemaji (94.29), Junai (75.86) in agitation period to Dhemaji (44.40) percent and Junai (27.90) percent in the post-agitation period. Again in the case of Thanas of Sibsagar district such as Sibsagar (44.25), Sonari (20.75), and Nazira (37.75) in the pre-agitation period to Sibsagar (50.71), Sonari (37.86) and Nazira (42.00) in the agitation period to Sibsagar (70.80), Sonari (55.60), and Nazira (60.00) in the post-agitation period.

- (22) Property crime in the Lower Brahmaputra valley was highly concentrated in the Thanas of city area though out the three period and indicated similar trend for the post-agitation period.
- (23) Trend of concentration of property crime in the Lower Brahmaputra valley shows a change in the Thanas of Kokrajhar district, i.e., Gossaigaon in the post-agitation period which depict high concentration in the pre-agitation period to very high in the post-agitation period (97.75) in the agitation period. This is due to the Bodo Land movement which had affected the area during the period.
- (24) Low concentration of property crime disclosed in the Thanas of rural area in the pre-agitation, agitation and post-agitation period which indicated by average score value, i.e., Kokrajhar (NIL) Runikhata (NIL) in the pre-agitation period and Runikhata (8.33) in agitation period to (16.90) Runikhata in the agitation period.
- (25) Trend of concentration and pattern of the property crime in the Central Brahmaputra valley indicates a changing scenario in the Thanas of North bank

plain in pre-agitation, agitation and post-agitation. Because these area mainly dominated by the Bodo tribal and tea tribe with mixed population and had to face consecutive political imbalances since 1974 onwards to till date. So, variation in the occurrence and concentration of property crime revealed high in the Thanas of this area.

- (26) Majority of the Thanas that indicated very high concentration of property crime are the Thanas of old town, which existed since pre-agitation period, where growth of economy was in an increasing trend since then. So concentration of property crime also indicated high.
- (27) Property crime in the Upper Brahmaputra valley show a changing scenario in the Thanas of Dhemaji district through out three period, from high in the pre-agitation period to very high in agitation period to high in the post-agitation indicated very high property crime concentration in the Thanas of city area only.
- (28) Changes in the pattern and concentration of social crime in the Lower Brahmaputra valley has been observed in the Thanas of Goalpara, Gossaigaon, Kokrajhar in pre-agitation, agitation and post-agitation period having average score value of social crime, i.e., Gossaigaon (7.75) in pre-agitation period to 2.14 in agitation and post-agitation period, Goalpara (1.3 to 5.86) in agitation and post-agitation. Kokrajhar (NIL) in pre-agitation; and Kokrajhar (2.00) in agitation to (5.00) in post-agitation period.
- (29) Pattern and concentration of social crime in the Central Brahmaputra valley was very high in the Thanas of town and low concentration has been indicated in the

Thana, where Scheduled tribe and tea tribe population dominated high as such as Bihali, Rangapara, Boko and Chhaygaon.

- (30) A through analysis of maps of social crime indicated a fact that, in three periods, social crime mainly dominated high and very high in the Thanas of town. But a high and very high density of social crime observed in the Thanas of Kamrup district accepts Boko, Chhaygaon which is a Thanas of rural area with less economic activity.
- (31) Social crime concentration in Thanas of Sibsagar district indicates of very high in the Demow, Moranhat and Borhat in the pre-agitation and agitation period. But was high in post-agitation, indicating that improvement in law and order situation in valley also reduce in the occurrence of social crime those that.
- (32) Thanas of the city area in the valley indicated high and very high concentration of other traditional crime in lower, central and upper Brahmaputra valley through out three period.
- (33) Pattern of concentration of other tradition crime showed high in the Northern bank plan Thana of lower, central and upper Brahmaputra valley in three period, But indicated very high concentration in Thanas of central north bank plain in the agitation period as compared to the pre-agitation and post-agitation period which showed average score value of other traditional crime, i.e., Rangia (157.50), Panbazar (1114.00), Dhekiajuli (219.00), Tezpur (418.75), Sotia (235.25), Nagaon (459.00), Rupahihat (171.50) in pre-agitation to period. Rangia (301.29), Panbazar (1158.29), Dhekiajuli (365.14), Tezpur (837.14), Sotia (271.67), Nagaon (576.43),

Rupahihat (231.57) in the agitation period to Rangia (378.30), Panbazar (1308.40), Nagaon (464.10), Hojai (411.90), Tezpur (377.40), in the post-agitation period in the central Brahmaputra valley.

CHAPTER – VII

SUMMARY AND CONCLUSION

In summary, one can state that the outlines of the causes of crime are always artificial. This is more so in the case of the Brahmaputra Valley. It is a melting pot of diverse races, languages and economies. One can never do more than point to conditions whose impact is subject to everything else that is happening. Since everything else that happens occurs uniquely in each historical instance, it becomes impossible to assign weights to each of the criminogenic conditions. These conditions can be listed, but they cannot be ranked in importance. This is why each proposition in an inventory of criminogenic conditions requires the deadening qualification “other things being equal”. Consequently, effort has been made to provide the summary conclusion and recommendation.

Summary

Since, last five decades, the Brahmaputra Valley, Assam, is heading towards complex and unprecedented imbalances in racial, linguistic, socio-economic and political relations. Present analysis on the changing pattern (space and time) of crime in the Brahmaputra valley, clearly reflects this complexity at the Thana, district, valley (region)

and at the state level. Hence, this attempt is a study of causal relations that has influenced the occurrence of crime in the Brahmaputra valley. The natural growth of population and continuing large-scale influx of immigrants from Bangladesh in the char land and marshy areas of the Lower Brahmaputra valley and North plain of Central Brahmaputra valley destabilised the socio-economic, cultural and political environment. It also inflated the demography of the valley and state. Many of the parameters have now assumed crisis proportion and have begun to undermine the efforts towards developing strong economy.

In the process, predicaments like unemployment, over crowding, youth unrest, student movements (by All Assam Student Union AASU, Assam Ganasangram Parishad AGSP) and so on over the issue of foreign nationals (Foreigners) lasted for six years. These movements from 1987 onwards, encouraged and paved way for spatial expansion of Boroland movement and Boro insurgency for separate homeland for the plain tribal population. Both these student movements were superseded by insurgency initiated by more hardliners from these movements. Political uncertainty, insurgency and lack of realistic social and economic development undermined the social fabric of the Valley. These encouraged crime and crime rates to increase in geometrical proportions all over the valley. Law enforcing agencies found them at the crossroads as to whether tackle insurgency and law and order problems or deal with socio-economic and other policing problems. They found themselves with lack of adequate manpower as well out dated technology. This study is significant not only to the social scientist, but also to the law enforcing agencies in the Brahmaputra Valley. The analysis depicts a clear picture of changing pattern of crime.

Thus, the main aim and objective of the present study of crime over the space and time is to identify the area of crime concentration or crime prone zone and also to discover irregularities, fluctuation of each categories of crime in relation to the changes of time, socio-economic and political situation of the study area. Such a study provides adequate base to understand the phenomena of crime.

This study carried out base on socio-economic, occupational structure and demographic structure of the society, which changes over time. If it reveals that the occurrence of crime was associated with these attribute, then pattern of crime should also have to change with the changes of time and society. The purpose of this study therefore is to explore the changing spatio-temporal pattern of crime scenario that varies across space in terms of Rural and Urban area.

Chapter I, contains an outline of the problem, methodology and organization of the work. For this purpose Brahmaputra valley's has been divided into eighteen districts, with 41 major thana's (After clubbing 94 thana's base on 1975) out of 7 (seven) district, which represent- Lower Brahmaputra valley, Central Brahmaputra Valley and upper Brahmaputra valley, Assam. Thanas has been taken for the study to identify the Rural and Urban differences in the occurrence of crime as a smallest unit of the study.

Chapter II deals with geographical personality of the Valley. The Brahmaputra Valley or the Assam Valley is an important physiographic unit and constitutes major portion of the state of Assam. It is the eastern continuation the great plain of India. Meghalaya plateau and the hills of Karbi Anglong gently slope down to the Valley. While lesser Himalaya on the north drops above to the valley and dotted with occasional hillocks (locally known as tila). It is a well-demarcated natural region within the griddle formed by

the eastern Himalaya, Patkai, Naga Hills, and Garo-Khasi- Jaintia hills. The valley has got its own significance to the whole North east India, due to its strategic location in the length from East to West and its width varies from 130 km in the western and central part to about 80 km in the eastern extremity. The valley covers an area of 55,694 sq km with the population of 22651096 in 2001 with a density of 403 Sq Km.

While analysing scenario of the level of development in the valley, it has found that, the district such as Kamrup, Nagaon, Morigaon and Barpeta shows highly developed district. While oil-tea base district shows moderate development. This zone has got high literacy rate then the other district in the valley. The districts of Lakhimpur and Dhemaji fall under the categories of under developed region.

In Chapter III, an in-depth analysis has been carried out on the differentiation of crime and criminology. It is a methodological explanation to the analysis carried out in the present study. Crime has been divided into the following categories: (1) Violence crime (2) Property crime (3) Social crime (4) other traditional crime. This classification has been done under section 511 (A) IPC. A broad explanation of Geography of crime and its relevance and importance in the Brahmaputra valley also been highlighted. The long historical process of the Brahmaputra valley, in respect of socio-economic, cultural and political situation that has created a social problem such as 'crime' in an increasing trend in the valley in space and time, has been explained.

In Chapter IV is devoted towards the understanding and description of the process of urbanisation, urban pattern and dimension in the Brahmaputra valley. An attempt to correlate urbanisation with the pattern of crime has also been made here.

Chapter V, In order to ascertain the ground reality, a detail analysis of the socio-economic variable and their distribution in the Brahmaputra valley and relationship with each other has been carried out with the help of co-identification of generalizations. These generalizations became the parameters on which the intensity and type of crimes were related with the geographical personality of the Brahmaputra Valley. Further, one can infer that the analysis of the socio-economic correlates revealed that the slums (at the Thana level) were having a direct impact over the juvenile, violence and property crimes, while the literacy was negatively correlated. There was a moderate influence of scheduled caste and schedule tribes over the spatial pattern of property crimes. However, schedule tribe populations are moving increasingly towards social crimes.

Chapter VI is a comparative study of socio-economic variables and concentration of crime. This chapter included the spatio-temporal pattern of crime and its relationship with socio-economic variable.

Conclusion

Physical and social mobility may be desirable in themselves. Certainly many people say so and behave as if this were so. Furthermore, some level of density is required if there is to be social activity and excitement; many people feel bored and lonely in sparse settlements. Similarly, the sense of relative deprivation is justified morally and politically. Criminal actions that are taken in the name of reduction of deprivation are considered by some citizens to be excusable. This excuse is applied to a wide range of crimes, including even rape.

Mothering may once have been a virtue beyond reproach, but today it is argued that the weakening of the bonds of family and wider kinship, through which children have been acculturated, is justified because it is “liberating.”

The mass media are also valued despite their prices. They provide pleasure and information. They teach other lessons than criminal ones, and not all their heroic models break laws. The comforting chemicals have their costs, and sometimes very high ones, but their existence throughout history and across cultures tells us that they are not likely to be abandoned. We can work most effectively for moderation in their use and for control of their public consequences. A similar prudence is recommended in the denigration of authority and in the passage of laws without force.

There are limits. This is clear from the ancient civilisations. We proceed ahead with uncertainty, since we do not know what these limits are. We do not know how much abrasion of the social fabric leads to its dissolution. In such circumstances, one conclusion is certain that is we destroy cultures at our peril. Culture is an acquisition, not an endowment. It is transmitted, not invented. The best hope for containing the damage that our self-interests “naturally” inflict on each other lies in the continuity of a culture.

The correlation analysis results have shown that the independent variables such as secondary workers, religious composition, etc., have contributed significantly towards the variation in the affecting values; while literacy, tertiary workers and primary workers have shown a negative effect over crime, and density and proportion of scheduled caste and schedule tribes population have the moderate effect.

After analysing the socio-economic bases of crimes and the spatio-temporal changes at the district and thana levels, the consequent crime prevention policies and

strategies, which may go a long way in reducing the occurrence of crime in the Brahmaputra valley, have also been succinctly presented. It is known that the evils of crime cannot be completely eradicated from the society; yet, efforts have been made to suggest spatial scenario to minimise the fear of crime from the mind of people. For the reduction of crimes it has been felt necessary to define and describe the environment of a crime. For any individual, the environment is the totality of the objects, people, places and things that he or she comes in contact with and the relationships that influence his or her behaviour. Thus, the environment of the criminal act is the totality of the objects and relationships that influence the commission of that criminal act. Criminogenic is categorised as physical setting, social setting, psychological setting, legal setting and cultural setting.

Crime occurrence within the micro-environment of a city. Thana area is highly patterned which can help to formulate the crime reduction policies. Potential criminals do not search through a whole city for targets; they look for targets within their more restricted awareness space.

The present study, thus, gives certain clues of factors, which are related to the occurrence of crime environment; these are the environment of administration, physical environment, economic environment, individual's environment and social environment. These five major aspects directly affect the mind and psychology of the criminals and the spatial pattern of crime.. Thus, the crime is directly related to the five major units, viz., victims, offenders, police administration, and courts and jails administration.

It has been found that criminals are not born but made. Thus, the individual becomes an offender because of certain socio-economic conditions in which he feels maladjusted. When unemployment creates the condition of inadequate income, an

individual feels the economic crisis. This condition produces stress and strain in the mind of an individual. He then starts drinking, gambling, using drugs and even prostitution to reduce the stress and strain. To fulfil his demand, his needs increased which further increase stress and strain. Consequently, he commits the crimes against person. On the other hand, some phases are crossed to commit the economics, but in it, when he has sufficient time to think about the fulfilment of his fundamental and perceived needs, his mind becomes the house of devils and commits crime.

These suggest four elements, i.e., the police, the citizens, the government and modern technology. It has been found that when there is no single cause of the crime, then there might not be a single thumb rule to prevent and reduce the crime. The modus operandi of the crime, easy targets, easy access, loose administration, judgement delay, unawareness of the society and lack of knowledge about the modern technological devices increase the criminality. Therefore, the efforts of the police, the government, the public and the use of the technological devices can altogether be effective to prevent and reduce the crime. The government policies to educate the people, increasing the awareness of people and the police, and improving the social and economic condition of the people can certainly reduce the criminality and the criminals' behaviour. These in turn will lead to better rapport between the people and the law enforcement agencies as well as better compliance of law.

Further research needs to be carried on in two directions. Firstly, there is a need to develop and test more explanatory variables to increase the understanding the areal socio-economic variations. Criminogenic variables like opportunity, ethnicity, attitude, mentality, income, type of house, insanity conditions, means of amusement can be included in the future studies. Secondly, the models related to predictions can also be used to make the

future planning for investigation, interpretation and enforcement: (a) correlates of crimes, (b) ecological aspects of crime, (c) urban ecology and crime, (d) sustainability of urban ecosystems and crime, (e) aspects of crime reduction, (f) crimes and housing planning, and (g) clinical aspects of crimes, (h) the major contribution of the present effort is mapping of the various crimes from 1975-2001. By doing so, an attempt has been made to establish the fact that socio-political and economic transactions have performed impact on the spatial pattern of crime in Brahmaputra Valley.

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LIST OF APPENDIX

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Appendix 2.I: (1971)

	SC	ST	Literate Rate	Worker	Non-Worker	Primary	Secondary	Tertiary									1000*F/M	Enrolment
	%	%	%	%	%	%	%	%	density	H	M	C	S	B	J			
GOALRARA	5.39	13.85	22.0	26.91	73.09	79.94	3.92	16.14	215	53.92	42.25	3.59	0.04	0.03	0.18	927	15.41	
KAMRUP	5.77	10.44	28.8	26.09	73.91	71.15	5.92	22.93	289	69.95	28.93	0.88	0.09	0.04	0.10	890	19.46	
DARRQANG	4.44	10.6	22.8	29.11	70.89	78.95	4.22	16.83	198	78.45	16.19	5.07	0.06	0.17	0.07	888	14.65	
NOWGOAN	9.95	7.44	28.9	27.12	72.88	80.49	3.09	16.42	126	59.70	39.39	0.71	0.10	0.01	0.08	899	16.62	
SIBSAGAR	4.69	6.82	36.8	30.16	69.84	75.72	4.60	19.67	204	92.22	5.27	2.09	0.12	0.24	0.06	886	23.16	
LAKHIMPUR	5.77	28.78	28.9	28.48	71.52	84.24	2.23	13.52	302	89.56	7.54	2.60	0.03	0.22	0.04	888	24.97	
DIBRUGARH	2.6	5.77	30.5	26.94	73.06	67.72	7.50	24.79	201	92.47	3.09	3.51	0.19	0.64	0.09	859	15.36	

1971																
	Assamese	Bengali	Gujarati	Hindi	Kannada	Kashmiri	Malayalam	Marathi	Oriya	Punjabi	Sindhi	Tamil	Telugu	Urdu	Others	
GOALRARA	63.70	14.70	0.00	3.27	0.00	0.00	0.00	0.00	0.38	0.02	0.00	0.00	0.03	0.03	17.85	
KAMRUP	76.68	12.34	0.01	2.73	0.00	0.00	0.04	0.01	0.09	0.09	0.01	0.02	0.09	0.02	7.87	
DARRQANG	62.84	13.31	0.01	6.05	0.00	0.00	0.04	0.01	2.32	0.07	0.00	0.03	0.10	0.04	15.18	
NOWGOAN	73.72	19.31	0.00	3.54	0.00	0.00	0.01	0.02	0.45	0.05	0.00	0.01	0.05	0.01	2.85	
SIBSAGAR	85.77	3.73	0.00	3.56	0.00	0.00	0.03	0.01	1.45	0.13	0.00	0.05	0.14	0.06	5.06	
LAKHIMPUR	61.16	5.95	0.00	3.83	0.00	0.00	0.00	0.00	0.47	0.03	0.00	0.00	0.02	0.07	28.45	
DIBRUGARH	63.79	11.05	0.01	11.28	0.00	0.00	0.06	0.01	3.14	0.30	0.00	0.03	0.63	0.15	9.54	

% of enrolment = Enrolment upto Higher Secondary/Population

Appendix 2.II

[illegible]

1991	Enrolment	Assamese	Bengali	Gujarati	Hindi	Kannada	Konkani	Malayalam	Manipuri	Marathi	Nepali	Oriya	Punjabi	Sindhi	Tamil	Telugu	Urdu	Others
Barpeta	18.07	62.66	28.51	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.19	0.01	0.01	0.00	0.00	0.00	0.00	7.79
Bongaigaon	2.33	48.80	27.76	0.01	3.19	0.01	0.00	0.02	0.01	0.01	0.81	0.07	0.07	0.00	0.01	0.13	0.01	19.09
Darrang	5.82	66.94	14.01	0.00	2.50	0.00	0.00	0.00	0.01	0.00	2.43	0.65	0.01	0.00	0.00	0.00	0.00	13.45
Dhemaji	4.54	48.98	8.11	0.01	2.62	0.00	0.00	0.01	0.06	0.00	4.74	0.12	0.03	0.00	0.00	0.00	0.03	35.29
Dhubri	6.52	75.74	17.68	0.00	2.51	0.00	0.00	0.01	0.00	0.00	0.20	0.02	0.01	0.02	0.00	0.00	0.00	3.81
Dibrugarh	8.88	82.45	5.62	0.08	7.42	0.00	0.00	0.03	0.07	0.01	1.54	0.62	0.21	0.00	0.01	0.19	0.02	1.73
Goalpara	1.88	54.94	22.49	0.00	1.06	0.01	0.00	0.01	0.01	0.03	0.31	0.01	0.01	0.02	0.00	0.00	0.01	21.09
Golaghat	2.00	84.10	2.79	0.00	2.60	0.00	0.00	0.00	0.16	0.01	2.30	0.79	0.06	0.00	0.00	0.04	0.01	7.14
Jorhat	7.75	84.86	3.37	0.00	2.64	0.00	0.00	0.02	0.04	0.01	0.35	0.21	0.13	0.00	0.01	0.10	0.01	8.25
Kamrup	17.71	72.41	13.61	0.02	4.76	0.01	0.00	0.06	0.25	0.03	1.25	0.11	0.16	0.01	0.03	0.23	0.02	7.04
Kokrajhar	2.59	22.07	19.70	0.00	2.50	0.00	0.00	0.00	0.01	0.00	2.45	0.17	0.00	0.00	0.00	0.00	0.01	53.09
Lakhimpur	8.90	64.94	9.82	0.01	3.44	0.00	0.00	0.01	0.01	0.00	2.45	0.40	0.04	0.00	0.00	0.02	0.01	18.85
Morigaon	6.82	82.73	10.65	0.00	1.90	0.00	0.00	0.01	0.01	0.00	0.27	0.03	0.01	0.00	0.00	0.03	0.00	4.36
Nagaon	12.95	68.23	24.77	0.01	2.82	0.00	0.00	0.00	0.62	0.00	0.59	0.33	0.05	0.00	0.00	0.06	0.00	2.52
Nalbari	6.24	71.61	8.03	0.00	1.16	0.00	0.00	0.00	0.01	0.00	2.26	0.16	0.00	0.00	0.00	0.00	0.00	16.77
Sibsagar	7.82	92.38	2.00	0.02	2.09	0.01	0.00	0.02	0.08	0.01	0.60	0.57	0.07	0.00	0.01	0.07	0.02	2.05
Sonitpur	10.01	54.73	13.16	0.02	6.75	0.00	0.03	0.02	0.01	0.00	6.43	2.83	0.06	0.00	0.01	0.05	0.03	15.87
Tinsukia	3.33	58.36	10.83	0.31	13.43	0.00	0.00	0.02	0.07	0.00	7.91	3.90	0.22	0.01	0.02	0.94	0.13	3.85

Appendix 2.III: (2001)

	Hindu	Muslim	Christian	Sikh	Buddhist	Jain	Other	Lit Rate	SC	ST	Ag Lab	Culti	HH Indust	Other Workers	Work	Non- Work	Sex Ratio (F/M)	Density	Enrolment
2001																			
Barpeta	40.26	56.07	0.26	0.01	0.01	0.04	3.35	57.3	18.94	23.07	16.20	40.70	5.30	37.90	31.40	68.60	941	506	23.76
Bongaigaon	64	32.74	2.22	0.06	0.03	0.12	0.83	60.3	6.68	10.90	17.90	38.60	2.80	40.60	32.50	67.50	945	361	24.22
Darrang	60.53	31.98	6.31	0.02	0.1	0.05	1.01	55.9	6.17	21.58	15.90	45.50	2.90	35.70	36.00	64.00	943	432	18.62
Dhemaji	93.87	1.49	1.02	0.03	2.38	0.04	1.17	66	3.50	24.14	8.00	73.00	2.20	16.80	44.30	55.70	936	176	31.28
Dhubri	28.73	70.45	0.57	0.01	0.01	0.17	0.06	49.9	7.95	3.99	23.80	37.10	3.60	35.50	28.90	71.10	944	584	20.04
Dibrugarh	91.3	4.49	3.42	0.19	0.35	0.08	0.17	71.2	2.94	5.82	7.90	29.10	2.40	60.60	40.40	59.60	923	347	19.86
Goalpara	39.89	50.18	7.89	0.01	0.01	0.07	1.95	58.6	1.84	5.75	18.40	36.70	4.60	40.40	33.30	66.70	955	451	26.74
Golaghat	86.11	7.11	6.27	0.1	0.3	0.04	0.07	70.4	2.44	4.49	10.70	46.80	2.60	39.90	41.60	58.40	929	270	21.92
Jorhat	93.58	4.32	1.53	0.15	0.24	0.06	0.12	77.9	6.52	10.36	8.00	37.50	4.00	50.40	41.60	58.40	903	354	27.29
Kamrup	74.32	23.38	1.59	0.17	0.05	0.28	0.21	74.7	18.64	26.50	9.40	25.00	5.40	60.10	32.60	67.40	894	579	25.44
Kokrajhar	66.38	19.33	9.82	0.01	0.1	0.09	4.27	52.6	2.17	23.78	23.10	42.50	3.30	31.10	37.10	62.90	945	294	20.11
Lakhimpur	79.69	14.51	4.05	0.05	1.63	0.03	0.04	69.6	7.27	21.39	7.20	67.90	2.30	22.60	56.10	43.90	952	391	32.05
Marigaon	54.56	45.31	0.02	0.01	0	0.08	0.02	59.5	11.73	13.10	20.30	52.60	3.00	24.20	33.90	66.10	945	455	28.15
Nagaon	51.73	47.19	0.83	0.12	0.04	0.07	0.02	62.3	29.65	10.92	20.20	38.30	3.20	38.30	31.40	68.60	939	604	24.15
Naibari	77.48	19.94	1.08	0	0.08	0.11	1.31	68.1	6.73	13.56	14.60	36.90	5.50	42.90	33.70	66.30	937	504	31.89
Sibsagar	89.26	7.63	2.32	0.14	0.33	0.05	0.27	75.3	3.56	3.80	7.20	36.10	2.80	54.00	40.90	59.10	926	395	27.94
Sonitpur	80.2	13.33	6	0.07	0.22	0.09	0.09	60.3	12.12	22.82	13.40	33.60	2.70	50.40	37.60	62.40	942	315	17.28
Tinsukia	90.17	3.13	4.94	0.2	1.31	0.08	0.17	63.3	2.61	5.35	6.20	31.20	1.50	61.00	40.80	59.20	909	303	16.92

Appendix 5.I: District wise Mean and Standard Deviation

			Murder	Rape	Kid/ obd	Dac	Robb	Burg	L. H/ H B	Theft	Rioting	CBT	Cheat	CF	Juvan	Gamb	Alco	Other IPC	Violence	Property Crime	Social Crime	Other Trad Crimes
		M	34.33	11.67	30	26.33	21.33	178.33	108.67	254	418.67	17.67	19.67	0.67	407.67	6.33	0	498	516	587	6.33	516.33
Agit	Dhubri	SD	5.44	11.32	1.41	4.78	1.25	28.78	24.39	31.16	48.61	5.44	4.5	0.94	287.88	1.7	0	38.4	50.41	69.29	1.7	42.68
		M	49.38	32.19	55	27.63	14.56	146.75	72.44	252.44	485.25	17.81	30.69	1.69	87.09	10.69	2.81	563.63	636.38	518.87	11.57	544.67
Post-Agit	Dhubri	SD	21.01	7.92	12.69	21.79	6.07	78.76	46.68	140.2	319.05	13.98	6.54	2.78	54.94	7.67	4.77	107.81	336.99	249.46	7.12	152.14
		M	26	7.67	16.33	30	21	140	75.67	235.33	190.33	7	9	0	54.33	4.67	0	289.67	261.33	490	4.67	296.67
Agit	Kokrajhar	SD	2.83	7.04	6.02	15.12	6.48	21.95	44.15	37.26	27.21	4.32	6.38	0	30.92	1.25	0	62.11	25.77	60.42	1.25	60.73
		M	71.31	16.88	34.06	48.75	35.31	117.5	65.88	221.44	210.06	11.19	15.19	16.36	107.5	2.81	2.29	337.19	367.63	468.75	4.81	362.69
Post-Agit	Kokrajhar	SD	42.31	4.77	13.73	37.91	20.86	116.86	25.7	91.45	289.89	15.2	6.74	56.22	132.75	2.74	2.49	108.18	295.76	182.42	3.24	112.82
		M	44	14.92	30.38	24	26.15	89.31	43.85	188	110.31	11.46	12.77	0.92	1.29	8.67	7.08	334.69	225.77	357.92	14.54	347
Post-Agit	Bongaigaon	SD	15.5	5.66	8.65	17.1	7.62	22.75	16.42	57.87	41.9	8.9	5.19	0.86	2.05	8.06	7.63	74.31	45.63	89.19	14.57	77.79
		M	31	9	32.33	29.67	21	187	124.33	305.33	249.33	13.67	20.33	0	18.33	9	0	538	342.67	666.67	9	551.67
Agit	Barpeta	SD	3.56	6.68	5.31	3.4	4.97	44.97	62.58	44.5	117.21	4.03	2.87	0	4.11	2.94	0	81.11	124.72	52.66	2.94	82.43
		M	52.94	31.06	55.31	41.25	49.31	173.69	194.44	278.56	415.25	16.56	31.5	0.75	17.2	14.06	10.13	851.63	603.88	719.44	24.19	868.94
Post-Agit	Barpeta	SD	18.41	13.7	20.49	19	19.22	62.06	68.81	94.87	254.52	10.42	13.08	0.83	36.14	8.9	10.55	307.57	228.32	146.12	14.92	307.14
		M	56.63	18.25	43.88	63	43.56	123.69	96.19	211.06	117.63	13.38	13.53	1.21	53.3	5.73	4.8	487.5	279.94	506.63	9.88	501.94
Post-Agit	Nalbari	SD	29.5	6.77	13.03	21.62	13.5	42.56	43.62	96.19	73.2	13.08	6.01	1.21	79.2	14.01	7.94	119.29	60.23	116.1	15.42	119.89
		M	63.2	30.6	71.6	31	31.6	764	459.4	1098.6	349.6	47.8	52	6.6	228.8	38.6	45	1193.2	546.6	2405	83.6	1247.6
Pre-Agit	Darrang	SD	10.65	3.07	6.22	8.46	11.57	56.53	108.93	107.22	75.96	9.35	9.65	12.22	42.91	14.28	52.36	182.05	91.31	175.99	59.49	174.65
		M	67.67	20.2	55.83	72.5	60.5	538.17	311.17	816.17	457.67	34.83	54	0.5	194.83	18.17	0.17	1340.5	658.5	1792	18.33	1375.83
Agit	Darrang	SD	25.75	12.98	25.97	22.93	22.76	266.48	302.82	526.14	223.22	23.68	51.71	1.12	76.88	7.45	0.37	778.8	271.63	1072.02	7.25	796.21
		M	84.38	40.06	59.94	65	60	145.5	79.31	255.75	149.31	20.25	17.06	2.27	50.6	11.88	4.25	438.38	393.69	562.63	16.13	460.75
Post. Agit	Darrang	SD	39.29	53.17	69.21	71.6	28.17	34.74	48.37	50.62	136.76	13.42	7.69	3.86	73.43	12.61	6.01	157.88	210.18	158.77	15.99	157.75
		M	68.67	15.67	51	42.33	55.33	322.67	390.67	740.67	208	22	29.33	0	369.67	11	17.67	944	398.67	1525.67	28.67	966
Agit	Sonitpur	SD	31.41	11.44	5.35	5.31	18.87	13.57	31.63	194.07	70.88	7.87	11.79	0	100.9	3.56	12.5	291.16	8.96	235.87	14.2	296.71
		M	97.13	44.75	70.19	55.75	60.94	238.63	179.63	540.5	199.5	27	33.75	2	82.7	9.63	6.56	897.94	472.5	1048.25	16.19	926.94
Post-Agit	Sonitpur	SD	42.01	12.7	22.88	22.63	22.48	45.45	97.55	230.91	104.86	16.49	7.78	2.85	112.08	4.31	7.26	221.58	149.18	306.33	7.75	220.4

		M	40.2	31.8	73.8	38.8	43.2	797.4	236.4	1001.2	618.8	68.2	65.6	0.4	214.4	27	52.8	1208	807.8	2139.4	79.8	1276.6
Pre-Agit	Nowgaon	SD	5.27	6.94	5.91	6.43	9.81	122.37	57.79	114.04	52.32	3.31	16.66	0.49	143.89	12.41	63.86	66.56	51.97	273.3	58.74	68.94
		M	181.83	44.5	120.5	62.5	168	629.17	449.83	1157.5	1262.83	63.67	64.5	72.4	196.5	43.83	0.6	1582.67	1777.67	2363.5	44.33	1706.67
Agit		SD	251.48	28.94	64.29	23.19	244.97	157.56	307.55	177.64	1148.91	19.2	35.85	141.8	164.28	29.8	1.2	244.35	1302.32	231.32	29.58	263.52
		M	81.63	37	118.13	69.38	52.88	370.13	296.44	545.06	520.5	63.13	44.25	2.38	98.6	32.38	2	1351	810.13	1325.25	34.38	1416.5
Post. Agit	Nowgaon	SD	17.4	10.06	20.11	39.43	25.35	97.28	68.32	159.91	360.45	68.88	18.89	2.67	136.32	20.59	3.95	263.74	356.24	306.48	20.21	248.87
		M	48.67	24.47	52.73	26.4	42	104.4	104.87	238.13	79.93	15.13	18.13	2	35.56	5.21	7.07	502.2	247.8	491.93	11.47	519.07
P. Agit	Golaghat	SD	11.93	6.52	14.09	14.11	31.52	31.12	39.13	94.65	32.93	20.01	6.59	3.21	57.01	4.16	17.19	187.77	45.78	144.79	18.1	185.91
		M	81	31.6	104.8	30.8	120.6	886.4	493.4	1514	324.2	59	56.2	1	233.2	48.2	427.2	1695.6	662.2	2980.8	475.4	1755.6
Pre-Agit	Sibsagar	SD	10.53	6.65	2.32	5.34	11.46	149.57	56.99	155.8	78.11	16.69	13.59	0.89	69.65	14.5	245.19	225.89	97.15	333.11	253.95	213.76
		M	68.67	32.67	77.33	25	114.67	458.5	497	946.83	283	38.83	37.83	30.17	315.67	33.17	566.6	1635.33	576.33	1965.17	505.33	1704.33
Agit	Sibsagar	SD	34.89	17.12	46.86	14.87	59.81	312.09	244.85	693.18	168.79	28.17	29.11	64.79	319.74	16.87	482.13	916.47	288.6	1258.2	503.69	906.8
		M	59	35.5	73.25	20.56	47.56	115.25	238.25	453.06	92.75	35.44	22.81	1.67	57.6	10.88	90.2	1058.25	308.06	849.94	95.44	1095.25
Post. Agit	Sibsagar	SD	16.9	12.05	16.46	17.88	18.9	43.08	86.27	106.8	40.84	77.18	5.38	1.85	95.73	7.93	110.49	422.56	32.37	170.69	114.27	416.92
		M	93.67	28	96	29.67	97.33	407.67	453.33	1067.3	298.67	43.33	44.33	0	478.67	30.33	386.67	1471.33	613.67	2002.33	417	1514.67
Agit	Jorhat	SD	2.62	20.07	22.55	9.98	54.2	227.31	212.17	520.91	82.87	10.87	16.82	0	258.04	15.41	214.7	376.41	168.75	982.68	203.12	383.64
		M	52.13	22.38	53.56	11.06	48.38	129.69	168.25	355.56	85.38	19.47	20.31	1.53	48.64	6.75	48.5	638.63	261.81	684.88	55.25	658.31
P. Agit	Jorhat	SD	17.83	8.48	21.61	8.59	17.45	61.23	94.07	126.5	36.82	7.3	4.7	1.82	95.48	6.53	153.35	159.47	68.6	233.06	158.2	160.04
		M	28.2	11.2	43.4	10.6	28	239.6	162.6	360	206.6	17.4	17	0	287.8	38.2	84	535.8	317.4	789.8	122.2	553.2
Pre-Agit	Lakhimpur	SD	8.8	6.88	5.95	2.15	12.25	55.93	59.75	23.89	97.35	4.67	4.43	0	129.85	32.46	59.27	132.48	114.63	132.56	90.54	131.41
		M	80.17	28.4	57.17	19	54.67	269.83	150.17	434.17	445.33	29	27	0	460.33	21.33	158.33	1219	661	900.17	179.67	1248
Agitation	Lakhimpur	SD	85.48	7.79	3.8	4.62	22.22	59.29	44.73	47.84	344.83	10.94	7.44	0	379.68	10.45	211.63	591.65	434.21	144.57	213.4	587.37
		M	37.69	40.38	74.88	20.25	43.25	145.56	163.88	264.31	113.63	29.13	37.75	0.13	45.7	9.69	53	681.25	309.81	631.75	62.69	710.5
P. Agit	Lakhimpur	SD	11.48	10.79	22.57	8.68	36.42	36.9	61.13	77.82	53.46	40.94	16.37	0.5	82.42	10.34	46.35	233.73	85.6	149.02	45.49	218.94
		M	79.6	17.8	64	13.2	52.4	384.4	423.2	853.4	159.4	46	45.4	0.8	155	99.8	178.6	1286.2	373.2	1719.6	278.4	1333
Pre-Agit	Dibrugarh	SD	12.24	6.11	20.89	2.32	9.58	100.46	130.94	354.64	88.79	9.06	5	0.75	60.23	20.1	47.16	491.82	95.59	439.17	51.11	492.56
		M	116	17.33	69.83	23.17	60.5	415.33	414.17	1031.7	299	34.83	33.67	0.17	182.33	58.33	243.5	1303.67	562.67	1918	301.83	1338.67
Agit	Dibrugarh	SD	12.25	10.11	39.57	4.14	21.12	88.68	123.33	229.49	104.29	7.92	12.32	0.37	127.68	19.17	53.28	96.53	137.69	355.08	62.54	101.7
		M	116.25	26.06	51.5	22.81	70.25	146.44	179.19	520.56	69.81	24.94	17.38	0.8	67.4	29.19	33.81	971.63	333.88	886.38	63	997.31
P. Agit	Dibrugarh	SD	28	9.75	19.52	11.05	37.13	85.49	101.22	216.66	56.66	30.34	9.63	1.11	91.51	34.38	116.36	327.15	96.96	373.1	134.7	331
		M	51.4	26.2	45.6	67.4	57.8	700	358.2	901.6	527	57	50.4	0.4	161.2	35.4	1.8	1034.4	708	2077.6	37.2	1091.8
Pre-Agit	Goalpara	SD	10.21	9.37	10.52	13.79	12.8	36.01	67.8	57.99	202.89	7.24	12.29	0.49	108.3	9.97	2.4	335.39	207.26	59.1	9.13	333.99

		M	50.83	20.17	42.5	40.33	42.5	354.67	304.5	651.5	649	50.67	39.67	3.33	304.83	9.33	7.67	857.33	805	1390.67	17	911.33
Agit	Goalpara	SD	13.85	11.65	15.56	24.13	24.74	192.24	167.31	307.12	323.39	17.63	20.6	5.28	162.34	6.8	15.84	356.76	381.54	664.75	15.24	373.82
		M	36.63	17.94	30.19	15	29.94	96.81	85.81	237.06	186.31	17.5	15.63	0.67	41.6	7.63	3.13	390.06	301	450.31	10.75	408.19
P. Agit	Goalpara	SD	20.25	10.85	13.86	7.14	40.81	30.62	27.03	75.62	234.94	20.16	9.55	0.94	72.03	7.46	5.01	165.52	229.11	111.05	11.86	167.56
		M	58.2	34.6	78.2	39.4	37.2	1529.4	666.4	2209.4	941.2	127	159.6	0.6	568.6	99.2	119.4	1731.6	1149.4	4604.2	218.6	1859.2
Pre-Agit	Kamrup	SD	6.21	14.26	18.02	11.46	8.73	272	122.47	176.8	260.57	6.99	28.44	1.2	281.77	33.44	59.79	369.16	281.24	449.41	58.96	372.36
		M	82.83	21.67	81.33	58	36.83	809.17	427.17	1609	989.83	99.33	110.33	1.33	485.5	107.67	140.67	1751.5	1212.5	3013.67	248.33	1852.17
Agit	Kamrup	SD	34.96	14.76	11.83	17.23	13.79	279.29	226.61	699.75	609.99	30.69	35.41	1.37	549.09	75.31	100.89	757	645	1095.15	169.01	785.15
		M	63.63	38.69	101.44	66.69	100.88	409.5	601.75	1038.8	410.38	114.31	92.13	7.75	47.8	48.19	74.81	1532.38	715	2208.81	123	1654.44
P. Agit	Kamrup	SD	17.93	11.68	39.54	30.46	56.91	229.46	117.9	624.22	231.75	149.63	51.73	13.88	25.54	25.6	73.49	591.72	277.6	948.32	78.25	623.57
		M	104.38	30.08	46.08	31.62	56	159.23	126.46	405.77	71.15	40.08	42.77	0.46	3.13	24.46	2.77	560.77	307.69	765.85	27.23	601.31
P. Agit	Tinsukia	SD	14.69	8.46	9.68	18.27	19.58	61.68	80.32	89.51	59.64	75.77	47.55	0.84	1.69	22.58	5.31	212.87	71.52	137.08	25.33	198.78
		M	19.23	16.54	28.85	18.23	12.38	81.00	75.77	127.69	88.92	20.33	14.62	1.18	19.33	8.31	6.70	317.46	165.92	317.31	13.46	337.23
P. Agit	Morigaon	SD	3.98	5.17	7.84	7.40	6.11	36.98	35.55	46.36	33.26	40.17	6.03	0.72	20.01	8.19	6.72	70.62	32.88	92.24	8.50	54.67
		M	19.69	24.46	29.00	17.69	20.38	42.46	33.46	105.23	37.23	17.85	9.38	2.75	13.25	3.15	13.38	287.00	130.77	208.23	16.54	307.38
P. Agit	Dhemaji	SD	5.04	9.41	7.77	11.37	5.58	13.36	15.83	13.13	28.51	39.22	6.55	7.06	17.89	2.03	23.36	79.86	30.02	28.98	23.10	85.34

M – Mean, Dac – Dacoity; Robb – Robbery; Burg – Burglary; Cheat – Cheating; Juvan – Juvenile; Gamb – Gambling;
Alco – Alcoholism; CF – Counter Feighting; Kid/Obd – Kidnapping/Abduction;
LH/HB – Lurking House Trespasses/House Breaking

Appendix 5.II: Police Station wise Mean and Standard Deviation

P.S.		Murder	Rape	Kid/obd	Riot	Robbery	Violent	Dacoity	Burglary	L.H./ HB	Theft	Cheating	Property Crime	Gambl ing	Alcohol	Social	CBT	CF	Other IPC	Other Traditional Crime
Kokrajhar	Mean	16.17	4.00	6.00	57.75	8.25	91.83	15.50	44.25	1.20	78.33	3.27	142.08	2.00	2.75	4.25	1.44	-	189.17	190.61
	SD	9.22	1.73	3.72	28.42	6.44	32.67	12.00	20.94	1.14	24.34	1.95	41.94	2.29	3.49	5.26	1.51	-	40.42	41.93
Gossaigaon	Mean	10.67	5.67	7.25	39.24	9.60	70.81	16.30	42.19	3.13	80.19	5.20	145.24	0.74	2.38	3.05	0.50	0.00	186.95	186.95
	SD	8.46	3.73	4.82	23.38	5.76	37.54	11.55	10.92	3.93	27.06	3.07	41.21	0.99	3.26	3.92	0.73	0.00	53.79	53.79
Runikhata	Mean	5.23	0.15	1.08	8.15	2.77	17.38	4.62	1.85	0.77	7.62	0.08	14.92	0.15	1.92	2.08	0.31	0.00	22.00	22.31
	SD	4.87	0.38	1.38	10.64	3.90	17.70	7.32	1.72	1.01	4.70	0.28	9.18	0.38	1.55	1.50	1.11	0.00	7.97	8.25
Goalpara	Mean	4.90	3.14	5.71	36.81	7.62	58.19	3.14	34.05	11.57	66.14	5.81	120.71	2.24	4.95	7.19	1.40	0.00	132.29	133.62
	SD	2.76	2.22	3.74	13.74	10.50	14.95	1.77	6.66	4.50	24.86	2.58	23.47	2.51	3.71	4.90	1.64	0.00	33.56	33.15
Dudhnoi	Mean	4.48	1.86	3.95	8.24	5.05	23.57	4.05	19.10	0.29	38.57	2.10	64.10	0.62	2.76	3.38	1.24	0.00	112.05	113.29
	SD	3.04	0.91	3.29	5.30	5.58	8.92	3.98	6.34	0.46	10.47	2.02	15.87	1.24	3.14	3.34	1.61	0.00	41.93	41.31
Lakhipur	Mean	5.24	2.05	3.19	33.00	3.76	47.24	3.14	27.33	4.24	36.95	2.76	74.43	1.76	1.43	3.19	2.95	0.00	90.19	93.14
	SD	2.32	1.16	1.99	14.25	4.82	14.50	2.39	9.16	2.32	11.37	2.10	10.43	1.00	1.99	2.56	3.04	0.00	29.57	31.38
Tezpur	Mean	10.33	5.14	16.05	28.38	12.33	72.24	6.33	98.71	58.33	196.33	12.05	371.76	16.05	30.05	46.10	9.62	1.91	460.33	471.86
	SD	3.72	2.74	8.42	11.63	6.41	22.86	5.69	31.86	30.45	81.66	5.70	106.63	17.56	29.12	43.37	6.00	2.57	198.19	196.95
Biswanath Chariali	Mean	3.38	1.57	3.38	9.71	2.71	20.76	3.14	17.86	0.00	34.43	0.91	56.33	0.71	4.19	4.91	0.67	0.00	84.14	84.81
	SD	2.78	1.17	2.52	4.95	2.94	8.16	3.15	6.78	0.00	12.22	1.48	16.22	0.85	6.63	7.27	1.16	0.00	19.64	19.98
Sotia	Mean	7.38	3.05	6.48	9.24	6.38	32.52	4.81	44.19	0.14	72.14	2.81	124.10	2.29	5.10	7.38	1.48	0.00	196.00	197.48
	SD	3.91	1.94	3.61	7.48	6.73	15.34	3.86	16.24	0.36	37.85	2.18	52.33	3.54	5.64	8.08	1.97	0.00	87.11	88.23
Bihali	Mean	7.38	3.71	4.81	6.76	3.48	26.14	4.38	25.95	0.19	49.57	1.52	81.62	0.05	0.48	0.52	1.14	0.05	130.62	131.81
	SD	3.12	2.74	2.91	3.19	1.91	8.39	2.73	5.53	0.51	11.39	0.81	12.58	0.22	1.21	1.21	1.35	0.22	23.84	23.75
Rangapara	Mean	7.76	2.19	4.67	18.00	7.38	40.00	6.05	23.81	0.00	70.38	1.38	101.62	1.05	3.29	4.33	0.86	0.00	170.38	171.24
	SD	3.70	1.99	1.71	18.56	5.96	18.80	3.85	10.38	0.00	27.41	1.72	31.26	1.07	2.81	2.85	1.53	0.00	66.64	66.61

Dhekiajuli	Mean	13.62	5.38	9.19	27.57	14.10	69.86	13.52	72.62	0.81	124.14	4.95	216.05	4.29	6.43	10.71	3.52	0.00	262.43	265.95
	SD	6.09	2.77	4.59	26.02	8.40	30.17	8.83	31.10	2.14	38.60	3.20	63.33	3.52	8.10	10.64	2.64	0.00	99.97	99.68
Gohpur	Mean	8.86	5.00	5.76	22.00	3.43	45.05	2.43	29.00	1.33	44.05	3.24	80.05	1.24	2.38	3.62	2.10	0.48	122.00	124.57
	SD	14.21	6.98	3.11	18.91	2.73	34.34	2.11	12.81	1.62	12.86	2.59	18.60	1.73	2.50	3.09	2.05	1.50	53.95	53.55
Jalukbari	Mean	1.14	0.71	5.48	1.29	2.14	10.76	0.57	29.91	0.67	75.38	4.15	110.48	5.48	3.57	9.05	0.50	0.00	196.14	196.62
	SD	1.35	0.85	4.12	1.52	2.44	5.67	1.54	11.49	1.11	24.34	3.80	33.75	4.30	2.14	5.77	0.76	0.00	76.70	77.00
Panbazar	Mean	24.33	15.48	37.57	77.00	56.67	211.05	30.48	349.48	34.13	777.00	61.52	1242.86	40.19	65.38	105.57	42.71	5.67	1174.24	1221.81
	SD	14.84	12.88	22.87	15.99	43.65	95.61	22.81	75.99	7.54	224.46	25.34	306.79	20.98	39.53	52.41	13.53	5.89	318.48	318.53
Boko	Mean	7.43	3.67	3.29	26.19	1.95	42.52	2.33	19.95	7.19	27.71	4.95	62.14	1.52	2.48	4.00	2.14	0.14	91.05	93.33
	SD	16.56	2.75	2.15	28.77	2.91	44.90	1.32	5.83	4.00	8.13	3.51	12.84	2.02	2.84	4.42	1.80	0.36	35.40	36.03
Chayagaon	Mean	5.95	6.24	9.81	15.05	6.24	43.29	4.33	7.38	1.14	26.86	4.19	43.91	1.14	3.52	4.67	2.33	0.05	81.67	84.05
	SD	3.31	2.12	4.31	4.88	2.61	10.31	1.49	2.75	1.32	5.81	1.44	8.75	1.24	2.14	2.75	0.91	0.22	29.09	29.22
Palasbari	Mean	4.38	2.67	3.76	5.86	2.24	18.90	2.43	24.14	8.86	53.19	3.38	92.00	5.90	11.81	17.71	1.24	0.00	165.10	166.33
	SD	2.75	1.80	3.36	5.38	2.17	10.32	2.71	14.34	5.77	20.04	2.09	34.02	5.10	12.96	15.55	1.09	0.00	43.65	43.85
Kamalpur	Mean	3.38	2.14	5.33	6.57	5.43	22.86	5.14	28.14	2.19	54.76	3.81	94.05	2.90	5.52	8.43	1.48	0.00	205.81	207.29
	SD	2.60	2.29	3.71	6.34	5.53	14.88	4.46	16.70	2.80	15.51	3.09	25.27	3.56	5.16	7.51	1.57	0.00	68.81	69.80
Rangia	Mean	8.62	3.80	11.62	90.24	13.65	127.10	10.43	73.67	26.10	102.00	8.19	220.38	2.81	10.21	12.05	5.20	0.00	305.62	310.57
	SD	5.87	2.86	9.20	53.81	11.29	62.67	7.92	22.36	17.57	28.64	3.20	49.83	1.91	8.57	9.47	2.86	0.00	216.47	216.23
Nowgaon	Mean	9.57	4.67	20.57	79.52	9.24	123.57	7.81	122.57	38.52	196.57	16.57	382.05	9.33	9.43	18.76	9.00	0.24	491.33	500.57
	SD	7.29	3.10	10.57	55.56	10.66	64.90	7.72	27.00	24.73	45.65	16.07	80.80	6.58	12.29	15.13	10.07	0.89	182.33	181.86
Lanka	Mean	3.33	2.00	4.24	3.38	1.95	14.91	3.52	31.24	5.81	34.62	3.43	78.62	1.81	3.10	4.91	2.14	0.00	142.81	144.95
	SD	1.85	1.61	2.36	3.03	1.66	4.58	2.34	19.89	8.51	21.04	2.32	49.93	1.63	3.06	3.75	2.27	0.00	67.65	69.38
Dhing	Mean	8.67	2.24	5.43	79.71	1.86	97.91	11.19	36.14	10.86	38.38	2.52	99.10	1.86	1.52	3.38	13.05	0.00	142.00	155.05
	SD	4.18	1.51	2.82	50.93	1.93	54.55	7.11	8.55	5.53	9.11	1.86	22.81	1.15	1.12	1.91	7.57	0.00	69.37	72.28
Raha	Mean	3.71	1.38	3.43	12.05	1.05	21.62	0.95	17.00	1.33	24.91	1.62	45.81	1.00	6.29	7.29	1.19	0.00	100.86	102.05
	SD	6.49	1.07	1.54	17.16	1.77	23.53	1.36	10.94	6.11	9.35	1.86	17.30	1.38	21.13	22.29	1.21	0.00	23.91	24.41

Lumding	Mean	2.81	0.71	3.24	14.57	2.86	24.19	2.57	17.05	0.00	21.19	0.52	41.33	2.00	8.05	10.05	0.62	0.00	0.00	0.62
	SD	2.29	0.78	2.55	6.55	2.03	8.65	2.25	8.86	0.00	8.81	0.87	16.07	3.07	8.29	9.31	1.20	0.00	0.00	1.20
Kampur	Mean	4.71	2.05	3.29	78.52	0.62	89.19	3.19	17.71	3.38	19.00	1.91	45.19	2.10	3.95	6.05	1.95	0.00	113.95	115.91
	SD	4.13	1.66	1.95	349.78	0.87	353.34	2.11	9.41	1.88	10.14	1.95	19.04	2.10	3.54	4.85	1.43	0.00	91.31	91.10
Jamuna-mukh	Mean	2.14	0.86	2.52	24.62	1.57	31.71	2.95	16.95	0.91	25.43	1.57	47.81	0.95	1.62	2.57	1.52	0.00	87.48	89.00
	SD	3.99	1.20	1.40	45.72	1.40	48.99	2.27	12.59	1.45	11.21	1.91	24.07	1.16	2.25	3.09	1.54	0.00	63.13	63.32
Kaliabor	Mean	3.95	1.00	4.91	5.95	2.71	18.52	2.24	22.05	12.29	48.14	3.57	88.29	0.57	1.29	1.86	1.43	0.33	99.95	101.71
	SD	3.38	0.84	3.46	3.64	2.03	6.46	1.64	8.24	7.21	13.57	1.75	15.94	0.93	2.05	2.35	1.72	0.97	22.57	22.08
Rupahihat	Mean	6.81	1.76	5.90	42.05	6.57	63.10	7.19	17.14	42.10	65.10	4.95	136.48	5.38	2.43	7.81	1.43	0.00	187.05	188.48
	SD	2.75	1.61	4.04	27.43	4.21	32.97	3.70	13.67	33.94	29.26	3.40	49.65	2.94	1.89	3.78	1.40	0.00	57.94	58.47
Hojai	Mean	9.81	3.00	8.67	77.29	6.71	105.48	12.10	53.81	7.76	77.29	4.00	154.95	3.24	5.90	9.14	3.24	0.05	289.10	292.38
	SD	10.86	3.90	8.52	141.03	7.53	155.84	12.85	22.32	5.50	41.70	4.18	75.27	2.34	3.92	4.96	4.39	0.22	225.12	225.56
Samaguri	Mean	5.05	2.15	5.33	24.48	6.90	43.81	2.40	33.00	0.05	45.05	1.81	82.19	1.52	0.00	1.52	1.14	0.00	109.19	110.33
	SD	3.49	1.73	2.97	13.48	20.79	26.37	2.06	21.69	0.22	15.95	1.81	35.17	1.66	0.00	1.66	1.39	0.00	28.22	28.59
Dhakuwa-khana	Mean	2.43	1.24	3.19	2.81	2.81	12.48	1.48	8.57	0.00	16.62	1.10	27.76	0.90	3.52	4.43	-	-	68.43	68.43
	SD	1.72	2.02	2.18	2.46	5.12	7.15	1.75	4.01	-	7.58	1.00	9.48	1.04	3.44	3.60	-	-	22.01	22.01
Junai	Mean	2.90	2.19	4.57	27.52	3.33	40.52	3.57	10.80	18.95	18.67	1.95	53.43	1.86	5.57	7.43	1.95	0.25	63.14	65.33
	SD	2.41	2.09	3.54	63.35	2.82	66.46	4.40	5.60	8.00	7.93	1.80	17.82	1.88	5.46	5.84	4.47	1.12	49.57	50.10
Dhemaji	Mean	9.95	5.67	10.10	20.62	9.76	56.10	5.00	37.24	1.90	59.86	3.48	107.48	1.38	8.76	10.14	1.33	0.05	320.95	322.33
	SD	8.54	3.38	5.37	82.42	6.42	91.16	2.81	16.08	2.61	17.70	2.79	32.77	1.80	9.40	9.15	2.01	0.22	295.82	295.57
Amguri	Mean	3.29	2.14	4.38	6.33	5.67	21.81	2.14	21.38	0.10	36.29	1.10	61.00	1.62	0.76	2.38	0.76	0.00	101.14	101.91
	SD	2.35	2.13	2.42	4.81	2.67	7.53	5.58	19.32	0.44	18.80	1.04	36.81	2.11	3.49	3.75	1.38	0.00	34.50	34.71
Demow	Mean	5.10	1.91	5.57	2.91	3.67	19.14	2.76	12.81	0.24	39.81	1.10	56.71	0.76	10.43	11.19	0.52	0.00	121.43	121.95
	SD	1.92	1.84	2.99	6.24	2.24	8.30	4.09	6.52	0.54	15.54	1.04	16.47	1.00	9.84	10.54	0.81	0.00	43.79	43.91
Borhat	Mean	3.05	1.57	1.52	3.81	2.67	12.62	1.10	8.57	0.00	22.10	0.76	32.52	0.86	9.10	9.95	0.29	0.00	59.67	59.95

	SD	1.50	1.81	1.50	2.58	1.68	3.96	1.14	5.36	0.00	6.14	1.04	8.80	1.24	8.95	9.11	0.56	0.00	14.13	14.19
Nazira	Mean	9.29	3.81	9.71	18.38	8.57	49.76	2.33	40.00	0.10	124.05	3.14	169.62	2.19	0.29	2.48	3.52	0.00	231.05	234.57
	SD	4.11	3.47	5.21	8.44	5.57	13.37	3.93	23.91	0.30	38.25	2.76	42.65	2.27	0.96	2.64	2.94	0.00	69.00	68.97
Sivasagar	Mean	4.10	4.00	19.67	21.81	9.86	59.05	2.27	50.38	0.31	130.52	5.86	188.57	1.67	0.00	1.67	9.00	0.00	319.05	328.05
	SD	3.10	3.54	9.74	8.41	9.29	23.83	2.55	17.28	0.63	38.78	3.94	51.82	2.06	0.00	2.06	6.36	0.00	65.37	66.86
Moranhat	Mean	4.29	2.59	3.62	8.05	4.05	21.14	2.39	14.33	2.00	38.43	1.94	56.29	1.50	12.05	11.91	1.93		68.24	69.62
	SD	1.98	1.42	1.66	5.25	2.33	5.19	1.04	6.47	1.27	14.18	1.06	17.22	0.76	12.40	12.62	1.16		18.91	19.11
Sonari	Mean	9.14	4.62	9.05	12.86	7.75	43.05	3.60	29.19	1.60	73.43	4.24	111.81	3.19	25.71	28.14	1.78	0.00	178.00	179.52
	SD	5.02	2.67	4.36	6.22	4.12	16.46	2.68	8.35	1.67	27.01	4.11	32.56	3.31	21.71	23.08	1.48	0.00	77.14	78.10
Kakatibari	Mean	2.33	1.38	1.50	1.33	1.43	3.67	2.00	3.00	-	10.62	-	13.24	3.57	-	1.19	-	-	26.95	26.95
	SD	1.56	0.52	0.89	0.58	0.54	2.78	0.93	2.31	-	5.56	-	6.10	1.81	-	1.99	-	-	13.30	13.30

Appendix 5.III: Thana wise Correlation Kokrajhar and Goalpara District (Lower Brahmaputra Valley)

(n=12)

[illegible]

Appendix 5.III: Thana wise Correlation Kokrajhar and Goalpara District (Lower Brahmaputra Valley)

(n=12)

[illegible]

(n=13)

[illegible]

(n=21)

[illegible]

(n=21)

[illegible]

n=21

[illegible]

Appendix 5.IV: Thana wise Correlation Sonitpur, Kamrup and Nagaon District (Central Brahmaputra Valley) (n=21)

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Appendix 5.V: Thana wise Correlation Dhemaji and Sibsagar District (Upper Brahmaputra Valley) (n=21)

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[illegible]

[illegible]

[illegible]

[illegible]

(n=21)

[illegible]

(n=21)

[illegible]

(n=21)

[illegible]

[illegible]

[illegible]

Appendix 6.I: District wise Scores

Pre-Agitation Period (1975-78)

	DISTRICT	Violence		Crime Against Property		Social Crime		Other Traditional Crimes
1	LAKHIMPUR	271.75	LAKHIMPUR	748.5	GOALPARA	39.25	LAKHIMPUR	498.75
2	DIBRUGARH	328	DIBRUGARH	1602.25	NOWGONG	90	GOALPARA	929.5
3	DARRANG	504	GOALPARA	2096.75	DARRANG	94.5	DARRANG	1166.5
4	SIBSAGAR	617.75	NOWGONG	2241	LAKHIMPUR	117.25	DIBRUGARH	1202.25
5	GOALPARA	789.25	DARRANG	2330.25	KAMRUP	199.5	NOWGONG	1263
6	NOWGONG	816.25	SIBSAGAR	3024	DIBRUGARH	260.5	SIBSAGAR	1672
7	KAMRUP	1025.5	KAMRUP	4581.25	SIBSAGAR	415.75	KAMRUP	1746.25
	Q1	416	Q1	1849.5	Q1	92.25	Q1	1048
	Q2	617.75	Q2	2241	Q2	117.25	Q2	1202.25
	Q3	802.75	Q3	2677.125	Q3	230	Q3	1467.5

Agitation Period (1979-85)

	DISTRICT	Violence		Crime Against Property		Social Crime		Other Traditional Crimes
1	NALBARI	174.00	KOKRAJHAR	490.00	KOKRAJHAR	4.67	KOKRAJHAR	296.67
2	KOKRAJHAR	261.33	NALBARI	571.00	DHUBRI	6.33	DHUBRI	516.33
3	BARPETA	342.67	DHUBRI	587.00	BARPETA	9.00	BARPETA	551.67
4	SONITPUR	398.67	BARPETA	666.67	NALBARI	18.00	NALBARI	570.00
5	DHUBRI	516.00	LAKHIMPUR	908.00	GOALPARA	18.71	SONITPUR	966.00
6	DIBRUGARH	561.43	GOALPARA	1477.86	DARRANG	21.43	GOALPARA	1029.86
7	JORHAT	613.67	SONITPUR	1525.67	SONITPUR	28.67	LAKHIMPUR	1179.86
8	SIBSAGAR	614.00	DARRANG	1922.29	NOWGONG	43.57	DARRANG	1403.86
9	LAKHIMPUR	638.00	DIBRUGARH	1956.71	LAKHIMPUR	174.29	DIBRUGARH	1412.57
10	DARRANG	666.86	JORHAT	2002.33	KAMRUP	255.00	JORHAT	1514.67
11	GOALPARA	744.71	SIBSAGAR	2085.57	DIBRUGARH	308.71	NOWGONG	1653.00
12	KAMRUP	1274.29	NOWGONG	2273.43	JORHAT	417.00	SIBSAGAR	1759.43
13	NOWGONG	1634.29	KAMRUP	3254.00	SIBSAGAR	535.14	KAMRUP	1917.71
14								
15	Q1	398.67	Q1	666.67	Q1	18.00	Q1	570.00
16	Q2	613.67	Q2	1525.67	Q2	28.67	Q2	1179.86
17	Q3	666.86	Q3	2002.33	Q3	255.00	Q3	1514.67
18								

Post-Agitation Period (1986 - 2001)

	DISTRICT	Violence		Crime Against Property		Social Crime		Other Traditional Crimes
1	DHEMAJI	130.77	DHEMAJI	208.23	KOKRAJHAR	4.81	DHEMAJI	307.38
2	MORIGAON	165.92	MORIGAON	317.31	NALBARI	9.88	MORIGAON	337.23
3	BONGAIGAON	225.77	BONGAIGAON	357.92	GOALPARA	10.75	BONGAIGAON	347.00
4	GOLAGHAT	247.80	GOALPARA	450.31	GOLAGHAT	11.47	KOKRAJHAR	362.69
5	JORHAT	261.81	KOKRAJHAR	468.75	MORIGAON	13.46	GOALPARA	408.19
6	NALBARI	279.94	GOLAGHAT	491.93	DHUBRI	13.50	DARRANG	460.75
7	GOALPARA	301.00	NALBARI	506.63	BONGAIGAON	14.54	NALBARI	501.94
8	TINSUKIA	307.69	DHUBRI	529.94	DARRANG	16.13	GOLAGHAT	519.07
9	SIBSAGAR	308.06	DARRANG	562.63	SONITPUR	16.19	DHUBRI	583.13
10	LAKHIMPUR	309.81	LAKHIMPUR	631.75	DHEMAJI	16.54	TINSUKIA	601.31
11	DIBRUGARH	333.88	JORHAT	684.88	BARPETA	24.19	JORHAT	658.31
12	KOKRAJHAR	367.63	BARPETA	719.44	TINSUKIA	27.23	LAKHIMPUR	710.50
13	DARRANG	393.69	TINSUKIA	765.85	NOWGONG	34.38	BARPETA	868.94
14	SONITPUR	472.50	SIBSAGAR	849.94	JORHAT	55.25	SONITPUR	926.94
15	BARPETA	603.88	DIBRUGARH	886.38	LAKHIMPUR	62.69	DIBRUGARH	997.31
16	DHUBRI	636.38	SONITPUR	1048.25	DIBRUGARH	63.00	SIBSAGAR	1095.25
17	KAMRUP	715.00	NOWGONG	1325.25	SIBSAGAR	95.44	NOWGONG	1416.50
18	NOWGONG	810.13	KAMRUP	2208.81	KAMRUP	123.00	KAMRUP	1654.44
	Q1	266.34		474.55		13.47		421.33
	Q2	308.94		597.19		16.36		592.22
	Q3	452.80		828.91		50.03		912.44

Appendix 6.II: Thana wise Scores

Pre-Agitation (1975-78)

Police Station	Violence	Police Station	Property	Police Station	Social	Police Station	Others
Kokrajhar		Kokrajhar		Kokrajhar		Kokrajhar	
Kakatibari	1.75	Kakatibari	6.5	Bihali	0	Lumding	0.25
Jalukbari	5.25	Junai	31.5	Kakatibari	0	Kakatibari	12.50
Kamalpur	6.25	Dhakuwakhana	33	Boko	0.5	Junai	24.75
Palasbari	7	Chhayagaon	35.25	Nazira	0.5	Borhat	53.50
Kampur	10.25	Borhat	39.5	Samaguri	1.5	Boko	57.25
				Biswanath			
Junai	10.25	Dudhnoi	43.5	Chariali	1.75	Lakhipur	58.25
Dhakuwakhana	11.25	Biswanath					
		Chariali	46.75	Dhemaji	1.75	Dhakuwakhana	62.50
Borhat	12.25	Boko	48.75	Sivasagar	1.75	Dudhnoi	63.75
Demow	12.75	Demow	55	Amguri	2.25	Moranhat	64.25
Kaliabor	13	Moranhat	56.5	Rangapara	2.5	Biswanath	
Ruhihat	14	Lumding	58.5	Dhakuwakhana	3	Chariali	64.50
Biswanath						Gohpur	78.75
Chariali	15.5	Kampur	61.25	Junai	3.25	Kaliabor	82.75
Lanka	16	Raha	66	Chhayagaon	4	Chhayagaon	83.50
Dudhnoi	16.75	Bihali	68.75	Kaliabor	4.25	Amguri	89.75
Raha	17	Lakhipur	69.75	Dhing	4.5	Demow	90.00
Sotia	17.25	Jamunamukh	80.5	Dudhnoi	4.75	Raha	90.50
Gossaigaon	18	Gohpur	84	Rangia	5	Sonari	93.25
Lumding	18.5	Hojai	85.5	Jamunamukh	5.25	Hojai	102.75
Dhemaji	18.5	Lanka	86.5	Lakhipur	5.5	Jamunamukh	104.25
Amguri	18.75	Sonari	86.5	Lumding	5.5	Samaguri	111.00
Bihali	20	Kaliabor	89.5	Raha	5.75	Goalpara	111.25
Moranhat	20	Jalukbari	93.75	Lanka	6.5	Kampur	113.75
Sonari	20.75	Gossaigaon	97.75	Gohpur	7.25	Jalukbari	118.00
Boko	21	Amguri	102.75	Jalukbari	7.25	Gossaigaon	120.50
Jamunamukh	21	Goalpara	107	Gossaigaon	7.75	Bihali	128.25
Hojai	28.75	Kamalpur	107.75	Dhekiajuli	8.5	Kamalpur	134.50
Gohpur	32	Dhemaji	107.75	Ruhihat	10	Palasbari	141.75
Samaguri	33.5	Samaguri	113.25	Hojai	10.75	Lanka	142.50
Rangapara	34	Dhing	117.5	Moranhat	11.25	Dhing	153.00
Lakhipur	34.75	Palasbari	123.25	Sonari	11.25	Rangapara	155.00

Dhekiajuli	34.75	Rangapara	127	Kamalpur	11.75	Rangia	157.50
Chhayagaon	35.5	Ruhihat	156.75	Kampur	11.75	Ruhihat	177.50
Nazira	37.75	Sotia	167.25	Nowgaon	12	Dhemaji	191.00
Sivasagar	44.25	Nazira	170.25	Goalpara	13	Nazira	216.50
Nowgaon	52.75	Rangia	200.5	Demow	14.5	Dhekiajuli	219.50
Goalpara	53.5	Sivasagar	204.25	Borhat	15.25	Sotia	235.25
Rangia	55.75	Dhekiajuli	244.5	Sotia	16.25	Sivasagar	259.75
Tezpur	60.25	Tezpur	433.25	Palasbari	17.25	Tezpur	418.75
Dhing	91	Nowgaon	438.5	Panbazar	60.5	Nowgaon	459.00
Panbazar	97.25	Panbazar	1063.75	Tezpur	86.25	Panbazar	1114.00
Q1	13.75	Q1	58.00	Q1	2.88	Q1	75.19
Q2	19.375	Q2	88.00	Q2	5.63	Q2	111.13
Q3	34.75	Q3	124.19	Q3	11.38	Q3	155.63

Appendix 6.III: Thana wise Scores

Agitation Period (1979-85)

Police Station	Violence	Police Station	Property	Police Station	Social	Police Station	Others
Kakatibari	2.29	Runihata	8.33	Bihali	0.00	Lumding	1.14
Runihata	5.67	Kakatibari	14.57	Kakatibari	0.00	Runihata	21.67
Jalukbari	7.86	Borhat	30.57	Sivasagar	1.00	Kakatibari	30.29
Dhakuwakhana	7.86	Dhakuwakhana	32.14	Runihata	1.33	Borhat	61.29
Borhat	9.71	Lumding	37.57	Kokrajhar	2.00	Lakhipur	77.57
Kamalpur	16.14	Chhayagaon	44.29	Gossaigaon	2.14	Dhakuwakhana	80.71
Biswanath Chariali	16.57	Raha	44.86	Kaliabor	2.14	Biswanath Chariali	85.14
Palasbari	17.43	Demow	46.43	Samaguri	2.14	Moranhat	88.29
Lanka	17.71	Biswanath Chariali	55.86	Raha	2.43	Boko	92.14
Kaliabor	17.86	Palasbari	56.00	Gohpur	2.57	Kaliabor	98.29
Demow	20.00	Kampur	58.00	Jamunamukh	2.57	Chhayagaon	98.57
Dudhnoi	22.43	Jamunamukh	59.00	Dhakuwakhana	2.86	Junai	100.71
Lumding	22.43	Junai	62.43	Nazira	2.86	Raha	102.86
Bihali	23.14	Amguri	64.71	Lakhipur	3.29	Dudhnoi	107.43
Amguri	23.43	Dudhnoi	66.43	Biswanath Chariali	3.57	Jamunamukh	111.57
Moranhat	25.14	Boko	67.86	Dhing	3.57	Amguri	115.00
Raha	28.86	Moranhat	69.71	Kampur	3.57	Demow	122.29
Sotia	32.14	Lakhipur	70.86	Rangapara	3.86	Samaguri	123.14
Sonari	37.86	Kamalpur	74.86	Chhayagaon	4.14	Palasbari	129.43
Nazira	42.00	Bihali	87.29	Boko	4.29	Bihali	147.00
Samaguri	44.43	Gohpur	96.00	Amguri	4.29	Gohpur	159.14
Chhayagaon	46.86	Samaguri	97.00	Dudhnoi	5.29	Goalpara	161.43
Sivasagar	50.71	Kaliabor	97.86	Goalpara	5.86	Sonari	168.43
Jamunamukh	53.29	Dhing	103.71	Lanka	6.14	Gossaigaon	180.00
Boko	54.14	Sonari	108.00	Kamalpur	6.71	Kamalpur	180.43
Gohpur	54.86	Jalukbari	112.43	Hojai	6.71	Jalukbari	189.57
Rangapara	55.14	Rangapara	114.71	Dhemaji	7.00	Kampur	196.29
Gossaigaon	56.43	Goalpara	124.86	Jalukbari	8.00	Kokrajhar	205.67
Goalpara	57.86	Gossaigaon	127.57	Sotia	9.29	Dhing	207.86
Lakhipur	58.00	Lanka	128.71	Ruhihat	9.29	Lanka	225.86
Tezpur	62.00	Hojai	138.29	Borhat	10.86	Hojai	230.00
Ruhihat	73.14	Dhemaji	138.86	Demow	12.43	Ruhihat	231.57

Junai	75.86	Sotia	145.43	Junai	12.71	Nazira	245.00
Kokrajhar	85.67	Sivasagar	161.00	Nowgaon	14.14	Rangapara	247.71
Dhemaji	94.29	Kokrajhar	162.00	Dhekiajuli	15.14	Sotia	271.57
Dhekiajuli	97.57	Nazira	164.57	Rangia	15.43	Rangia	301.29
Hojai	98.14	Ruhihat	179.86	Lumding	16.00	Sivasagar	311.43
Rangia	153.14	Rangia	256.86	Moranhat	19.00	Dhekiajuli	365.14
Nowgaon	154.43	Dhekiajuli	269.86	Palasbari	26.14	Dhemaji	497.14
Panbazar	157.71	Nowgaon	379.00	Sonari	29.57	Nowgaon	576.43
Dhing	160.14	Tezpur	390.00	Tezpur	71.00	Tezpur	637.14
Kampur	247.14	Panbazar	1141.29	Panbazar	105.29	Panbazar	1158.29
Q1	20.61	Q1	58.25	Q1	2.64	Q1	99.11
Q2	45.64	Q2	96.50	Q2	4.79	Q2	160.29
Q3	70.36	Q3	138.71	Q3	12.04	Q3	231.18

Appendix 6.IV: Thana wise Scores

Post-Agitation Period (1986-1995)

Police Station	Violence	Police Station	Property	Police Station	Social	Police Station	Others
Kakatibari	5.40	Kakatibari	15.00	Kaliabor	0.70	Lumding	0.40
Kampur	10.20	Runihata	16.90	Bihali	1.10	Runihata	22.50
Borhat	14.80	Dhakuwakhana	22.60	Samaguri	1.10	Kakatibari	30.40
Jalukbari	15.00	Jamunamukh	26.90	Amguri	1.10	Junai	56.80
Dhakuwakhana	16.20	Kampur	29.80	Dudhnoi	1.50	Moranhat	58.70
Raha	18.40	Borhat	31.10	Jamunamukh	1.50	Kampur	60.50
Moranhat	18.80	Lumding	37.10	Gossaigaon	1.80	Borhat	61.60
Runihata	20.90	Raha	38.40	Sivasagar	2.10	Dhakuwakhana	62.20
Jamunamukh	20.90	Amguri	41.70	Lakhipur	2.20	Jamunamukh	67.10
Demow	21.10	Moranhat	46.80	Runihata	2.30	Chhayagaon	74.10
Kaliabor	21.20	Chhayagaon	47.10	Sotia	2.50	Biswanath	
Amguri	21.90	Junai	55.90	Kakatibari	2.50	Chariali	92.70
Palasbari	24.70	Samaguri	59.40	Dhing	2.80	Amguri	97.60
Biswanath		Biswanath				Samaguri	101.10
Chariali	25.80	Chariali	60.50	Gohpur	2.90	Raha	106.10
Dudhnoi	27.10	Boko	63.50	Nazira	3.00	Boko	108.60
Lumding	27.70	Demow	64.60	Kokrajhar	5.00	Kaliabor	111.70
Junai	27.90	Gohpur	67.30	Boko	5.20	Lakhipur	118.00
Bihali	30.70	Dudhnoi	70.70	Chhayagaon	5.30	Gohpur	118.70
Rangapara	31.80	Lakhipur	78.80	Rangapara	5.40	Dhing	118.90
Kamalpur	34.20	Kaliabor	81.10	Junai	5.40	Bihali	122.60
Sotia	38.90	Rangapara	82.30	Kampur	5.50	Goalpara	123.10
Boko	43.00	Bihali	82.80	Goalpara	5.80	Rangapara	124.20
Gohpur	43.40	Dhemaji	85.40	Ruhihat	5.90	Sotia	130.50
Chhayagaon	43.90	Dhing	88.50	Dhakuwakhana	6.10	Demow	134.50
Dhemaji	44.40	Sotia	91.90	Biswanath			
Lakhipur	44.70	Ruhihat	98.00	Chariali	7.10	Dudhnoi	137.20
Samaguri	47.50	Kamalpur	102.00	Borhat	7.20	Ruhihat	162.70
Sonari	55.60	Palasbari	104.70	Moranhat	7.20	Kokrajhar	185.11
Dhing	57.10	Jalukbari	115.80	Lumding	7.70	Palasbari	202.00
Nazira	60.00	Goalpara	123.30	Kamalpur	8.30	Lanka	210.40
Goalpara	60.30	Sonari	124.60	Dhekiajuli	8.50	Dhekiajuli	215.10
Dhekiajuli	64.50	Lanka	131.19	Demow	9.00	Gossaigaon	219.20
Sivasagar	70.80	Kokrajhar	135.44	Hojai	10.20	Sonari	221.80
				Lanka	10.28	Jalukbari	233.00

Ruhhat	75.70	Dhekiajuli	167.00	Jalukbari	10.50	Nazira	234.50
Tezpur	84.20	Nazira	172.90	Raha	11.30	Dhemaji	252.50
Lanka	88.29	Gossaigaon	176.60	Palasbari	12.00	Kamalpur	255.20
Kokrajhar	93.89	Hojai	194.40	Rangia	12.50	Sivasagar	367.00
Gossaigaon	102.00	Sivasagar	201.60	Tezpur	12.60	Tezpur	377.40
Nowgaon	130.30	Rangia	202.80	Dhemaji	15.70	Rangia	378.30
Rangia	137.40	Tezpur	334.40	Nowgaon	24.70	Hojai	411.90
Hojai	141.30	Nowgaon	361.60	Sonari	33.90	Nowgaon	464.10
Panbazar	293.90	Panbazar	1385.60	Panbazar	123.80	Panbazar	1309.40
Q1	21.38	Q1	49.30	Q1	2.50	Q1	93.93
Q2	40.95	Q2	82.55	Q2	5.65	Q2	123.65
Q3	63.45	Q3	129.54	Q3	9.90	Q3	221.15

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