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Crime Pattern Analysis of Brahmaputra Valley during and around the Period of Assam Agitation

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Abstract

For the last three decades the Brahmaputra valley of Assam has marched through a series of problems such as, immigration, insurgency, economic stagnation and so on. This has resulted in population problem, problems of unemployment and increasing fear among the indigenous people for losing their own socio-cultural identities. Despite having huge potential and exploitable natural resources, valley continues to be economically backward, consequent lack of job opportunity, lack of infrastructural development and so on have worsened the social relations. Industrial development in the valley has also reflected stagnation. This has resulted in student unrest, group tension and ethnic cleansing. These also added to the problems of insurgency in various forms. In due course of time problem of crime and violence such as kidnapping/ abduction, murder, rioting, rape, etc. indicated an upward trend in the Brahmaputra valley. The present paper will highlight the spatio-temporal pattern of violent crime from 1975 to 2001 in the Brahmaputra valley which is the peak period of crime

and disturbances in the valley. Factors of occurrence of crime and some measures to reduce criminality in the society in a manageable level will also be analysed.

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 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. Crime becomes a social problem in the Brahmaputra valley which is increasing day by day. This is true in the both urban and rural areas. The present society is confronted with a big question whether the valley society is either moving forward to a more advanced cultural stage or backward only for materialistic short-term gains. Of late, the Brahmaputra valley has become more crime prone.

In this paper an attempt has been made to analyse the spatio-temporal pattern of violent crime and associated changes in crime concentration in the Brahmaputra valley. This analysis highlights the changing pattern of crime in space, time and dimension, in order to ascertain ground reality of occurrence of crime. This also depicts a clear picture of the changing socio-economic as well as political environment in the valley having transformed the pattern and dimension of crime.

There are number of instances of studies related to crime in different corners of the globe in the past history. It is found that a study was conducted towards the crime pattern of Chicago city in early 1920. In another attempt, crime pattern of the city of London was also examined around the year of 1930, and it was found that crime had decreased away from the centre of the city. Although it was only in the 1970s that researchers began to develop a serious interest in this field (Scott[1], 1972 and Herbert[2] 1976), spatial scholars had pursued analysis from other backgrounds.

A lot of works have been done on the factors responsible for the occurrence of various crimes. 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 norms can check the deviation or criminal acts. It is, when an individual fails to learn appropriate social rules of behaviour (Trasler[3], 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 Mckay[4], 1969; Reiss and Rhodes[5], 1961; Hirschi[6], 1969).

Very few attempts have been made in Indian context to examine the spatio-temporal patterns of crimes. Venugopal Rao[7] (1967) put affords to examine the socio-economic factors and their effects of crime in a small scale. Shivamurthy[8] (1981) assessed the ecological aspects of crime patterns, of occurrence of crime and residents of criminals in Madras city. An analysis of the inter-city patterns of crime in India using data for 14 different types of crime was made by Dutt and Venugopal[9] (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.

The present study reveals to identify the spatio-temporal pattern of crime at district level of Brahmaputra valley comprising of 18 plain districts. The Brahmaputra valley occupies 71 per cent of the total geographical area of the state of Assam. It accommodates 88.03 percent of the population of the state; 87.11 per cent is rural and 12.89 per cent 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 2001[10]. At present there are 108 urban centres and Guwahati as a cosmopolitan city in the study area.

Types of Crime

There are eight major categories of crime and law breaking have been identified by Jullan and Kornblum[xi] (1983), viz., (1) violent personal, (2) occasional property, (3) occupation (white collar), (4) political, (5) public order, (6) conventional, (7) organised, and (8) professional. The latest addition to these groups is (9) juvenile delinquency[11]. But still we can categorise all above crimes in three principal types of crimes, i.e.,

A. Traditional Crimes

B. Organised Crimes

C. White Collar Crimes

A. 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

This type of crime includes murder, aggravated assault, rape, robbery, vandalism, weapons carrying and possessing, prostitution, narcotic drugs law, gambling, kidnapping, driving under the influence of intoxication and drunkenness.

(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. Burglary, theft and larceny, auto-theft are some example of this type of crime.

(c) Other Types of Traditional Crime

The other types of traditional crime include arson, forgery and counterfeiting, fraud, embezzlement, stolen property and so on.

B. Organised Crimes

Organised crime is committed on a greater organisational level. It is rather on illegal enterprise, which continues over a certain amount of time and develops a hierarchical structure of boss, lienteneries and operators. Organised crime occupies a position on social system or 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, bar and hotels,

transport companies, food companies and factories. This type of crime is predominant in developed countries.

C. White Collar Crimes

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 potent, trademark copyright, violation of labour law and breach of trust of various types. These types of crime are committed in upper socio-economic level.

The study of the typology of crime reveals the facts 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 has got its own unique characteristics and are product of their own peculiar situations. Integrating all these types the crime can be grouped into violent crime (murder, rape, kidnapping, rioting) property crime (burglary, theft and larceny, house breaking, robbery, cheating), social crime (gambling and alcoholism) and other traditional crimes (criminal breach of trust, forgery and counterfeiting, other IPC).

Method and materials

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), Guwahati, and Guwahati CID Office. The data on socio-economic variable such as density of population, literacy rate, proportion of 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 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 and Census of India Report of 1971, 1991 and 2001 are also dealt.

Methods

The present work is based on 18 recognized administrative districts of 1983 and also includes the newly created districts of 1989 as the standard spatial unit i.e. Brahmaputra valley, Assam. 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 1991[12]. 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.

Objective

(i) To identity spatio-temporal patterns of violent crime in the Brahmaputra valley during pre, post and Assam agitation periods.

(ii) To asses the relationship between socio-economic parameters and crime.

(iii) To find out important causes in the occurrence of violent crime.

Result And Discussions

Socio-economic base of crime correlation in the Brahmaputra valley of Assam, dimension of linkage between predictor sets of variables (socio-economic) and criterion sets of variable (crime) have been carried out because, the crime, its types and magnitude depends on their types of socio-economic condition and geography of study area. This will also highlight the causes of variation in the intensity of crime in the valley.

It has been found that socio-economic base of crime of the violent crime is significantly correlated at 1 per cent level of significance in the positive direction with scheduled caste population (0.74), non-worker (0.59), and density of population (0.78). Muslim population

(0.54), Jain population (0.48), student enrolment (0.77) and secondary workers (0.48) also show at 1 per cent level of significance in the Brahmaputra valley of Assam. Violent crime also shows significant correlation at 1 per cent level but in negative direction with worker (-0.59), primary worker (-0.51), Hindu population (-0.48) and other population (-0.45). In 2001, it has been observed from the correlation analysis that, violent crime in the valley correlated with Muslim population (0.52), agricultural labourer (0.57), density of population (0.47), but indicated inverse correlation with literacy rate (-0.55), student enrolment (0.45), Hindu population (-0.55) (Appendix 21.II). From the correlation analysis, it has been highlighted the fact that both in 1991 and 2001, violent crime shows significant and positive correlation with scheduled caste and Muslim population. However, violent crime shows negative correlation with Hindu population, literacy rate, Buddhist population and student enrolment. It has revealed the fact that low economic class, slum and over crowding were the areas where the tendency of occurrence of such violent crime is high.

Again, correlation analysis also indicates the fact that violent crimes are negligible in those areas where literacy rate is high, high school going children, low level of unemployment, high percentage of worker, primary worker, Buddhist, Jain and Hindu population. It has been found that all the crimes i.e., murder, rape and kid/ abduction indicate positive and significant co-relation in 1991 and 2001 in the valley.

Different violent crime density maps (Fig. 21.1, Fig. 21.2 and Fig. 21.3) of pre Assam agitation (1975-79), during agitation (1979-1985) and post agitation period (1979-2001) have been prepared based on the quartile score values (Appendix 21.II).

In the pre-agitation period, Kamrup district with high literacy rate, low density of population, high student enrolment, high economic activity and high percentage of primary (72.15%), secondary (5.92%) and tertiary workers (22.93%) highlighted high concentration of violent crime, because all kinds of industrial activities such as trade, commerce, service indicates upward trend in these district. The Bodo language movement from 1974 also has affected this district onwards, for which violent crime concentration shows high.

Nagaon district, which had high percentage of non-worker, primary worker, high sex-ratio, high percentage of rural population,

high percentage of immigration population engaged in the agricultural and secondary sector shows very high concentration of crime. It is because, this phenomena produce over crowding, unemployment and slum which is a germinating factor for the violent crime.

While in the agitation period violent crime concentration has found very high in the district of Goalpara in the Lower Brahmaputra valley extending up to Nagaon in the south bank plain of central Brahmaputra valley and parts of Kamrup and Darrang districts. This is primarily due to the popular student movement, which has lasted for about 6 years. In these periods entire fabric of the valley was affected. The economic and political scenario was deteriorated with frequent riot, lathi charge, killing, dharna and road blocked for which occurrence of violent crime indicates very high. Again in the post-agitation period violent crime appears very high pattern in south western part of lower Brahmaputra valley, i.e., Dhubri district and central Brahmaputra valley which includes districts of Barpeta, parts of Kamrup and Sonitpur. Due to successive move of immigration in the area, increases the population and this has caused over crowding, increase of unemployment, high density of population, low literacy rate, high non-working population and high competition for the survival and thereby occurrence of violent crime. Again just after Assam agitation by All Assam Student Union (AASU), Assam had also witnessed Bodoland movement by All Bodo Student Union (ABSU) for Bodo plain tribal of Assam for separate identity. This movement also affected entire Brahmaputra valley, particularly the districts dominated by Bodos such as Kokrajhar, Barpeta, Darrang, Sonitpur, Lakhimpur and parts of Kamrup by violent crime. Mostly northern bank of the valley has been highly affected for which concentration of violent crime appears very high in this period.

Area of Very High Concentration

A very high concentration of violent crime (Fig. 21.1) (murder, rape, kidnapping, rioting, and robbing) has been observed in the pre-agitation, agitation and post agitation period in the Brahmaputra valley. It has been observed that the major areas of very high concentration of violent crime (with very high average score value given in the 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) districts. In

the pre-agitation period, Kamrup was an urbanised district with high literacy rate, high density of population, high enrolment and high economic activity having high percentage of primary workers (71.15), Secondary workers (5.92) and tertiary workers (22.93). This is due to increased manpower requirements for various types of economic activities in those areas. Besides, Kamrup district the centre of various agitations and movements that rocked the state for the last 50 years. This is one of the reasons for high concentration of violent crime in this district. The district of Nagaon followed Kamrup. Nagaon district was characterised by large number of non-workers, primary workers, low literacy rate, high sex ratio, high percentage of rural population and high percentage of immigrants. This brought about a very high population density in predominantly rural areas of the district. This was followed by over crowding in the towns. These were conducive for occurrence of violent crime. It has been observed that in this district, property crime shows positive correlation with violent crime. This is because economic activities show very high correlation.

Fig. 21.1: Map showing the d ensity of violence crime in Brahmaputra valley during pre agitation period

During the agitation period, concentration of very high violent 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 districts in the north bank, the average score value of violent crime was high. It has been observed that these districts were badly affected during agitation period. Nagaon and Goalpara districts with high percentage of immigrant Muslim population prevailed 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 Movement. It was in this period that the socio-economic and political situation in the valley deteriorated. Most of the educational institutions were suspended. Postponement of examination in schools, colleges and university became the order of the day.

Various scholars attempt to critically analyse the reasons for the movement in detail. Suffice it to say here that rising population aspirations, stagnant economy and other related issues acted as the 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.

Nagaon, Goalpara and Darrang districts indicated high concentration of violent crime due to high percentage of primary workers, non-workers and low urban population also had very high concentration of violent crime. This district has also been affected by agitation (Fig.21.2).
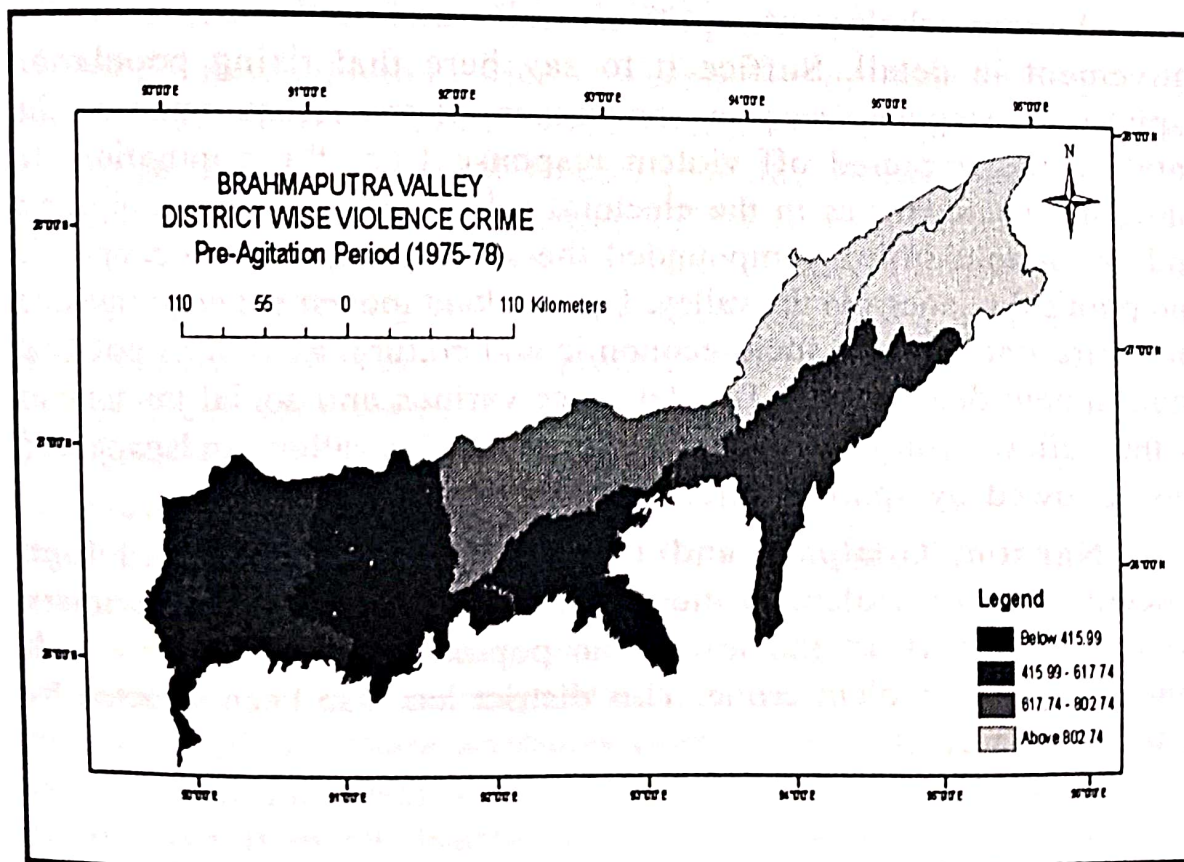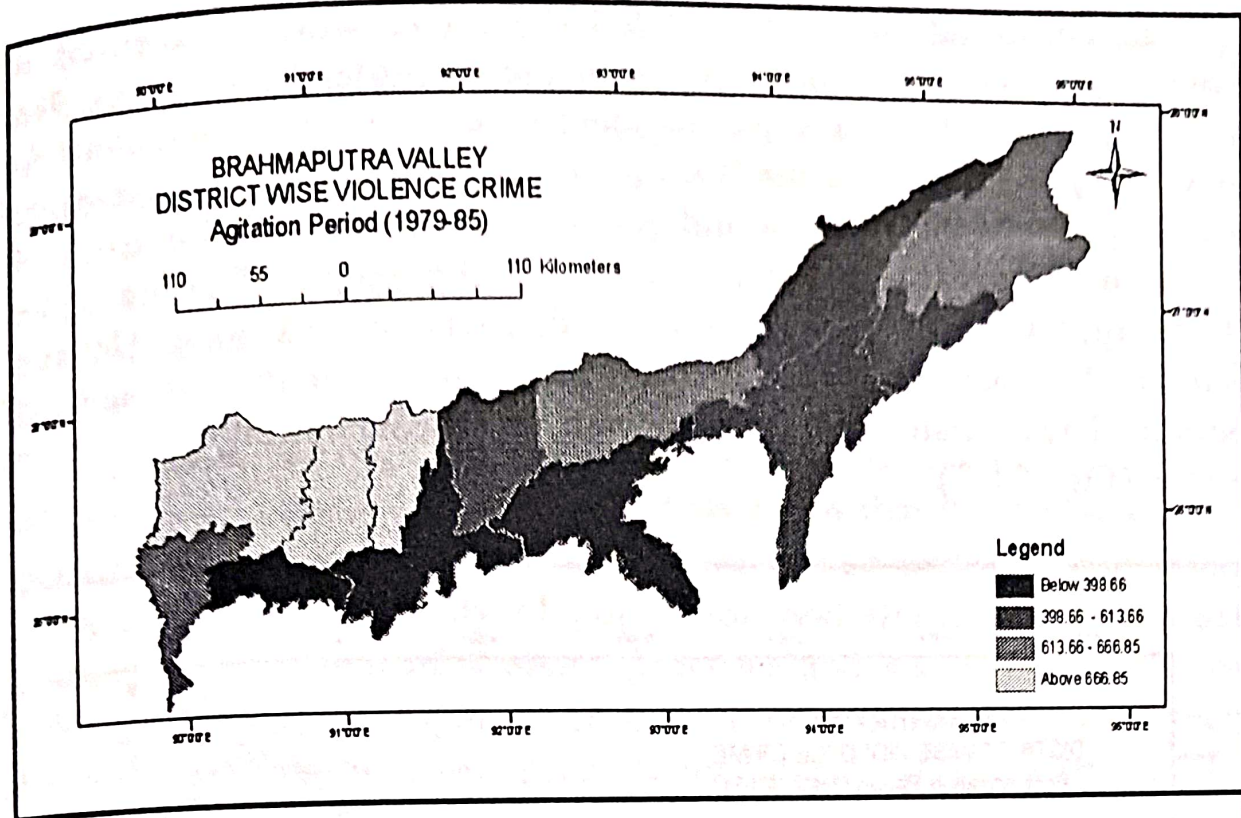
Fig. 21.2: Map showing the density of violence crime in Brahmaputra valley during the Assam agitation period

In the post agitation period, concentration of violent crime 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 (472.50) districts. Districts of Barpeta, Nagaon and Dhubri in the post agitation period indicated high score of violent 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. Such situations encourage higher incidence of violent crime. The district of Kamrup, as compared to other districts in the Central and Lower Brahmaputra valley, is a highly urbanised districts 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 a focal point for the immigrants to converge from all directions. These cumulatively resulted 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 violent 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 violent crime (Fig. 21.3).
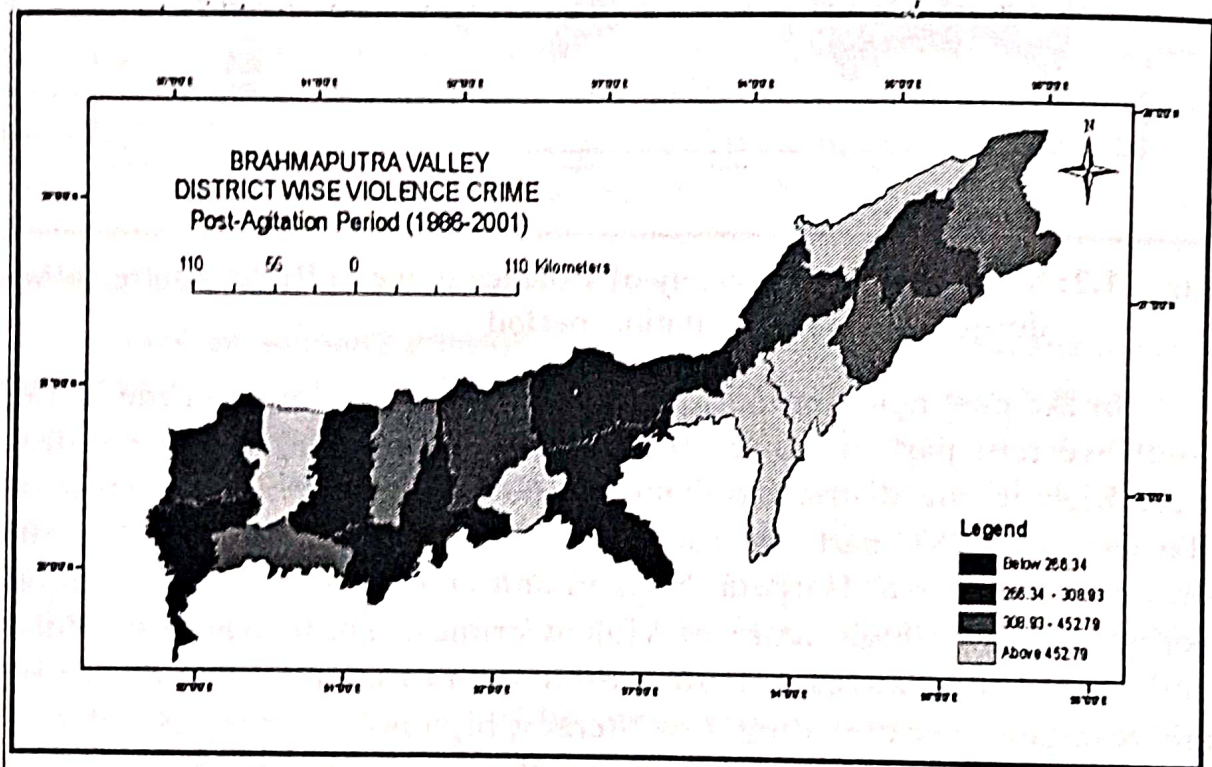
Fig. 21.3: Map showing the density of violence crime in Brahmaputra valley during post Assam agitation period

Area of High Concentration

Violent crime shows high concentration with high score average value in the Lower Brahmaputra valley and south bank plain of Upper Brahmaputra valley in the pre-agitation period. This includes present district of Dhubri, Kokrajhar, Bongaigaon, Goalpara (789.25), Golaghat, Jorhat and Sibsagar (617.75). Districts of Kokrajhar, Bongaigaon and Goalpara show high concentration of violent crime as this region had

confronted simultaneously agitation of Bodo language of lingual riot. Murders were rampant in the entire North Bank Plain including districts of Darrang, Sonitpur, Lakhimpur, and Goalpara. Entire socio-economic and political relations were at low and different from other parts of the valley during this period. As a result the occurrence of violent crime was high. There was high concentration of violent 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, and 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 slums tend to indicate positive significance of violent, property and social crime. Violent crime shows positive significance with property crime in those districts. So, violent crime in those districts was due to the property crime.

Violent crime during agitation period shows high concentration with high average value in the Upper Brahmaputra valley except the districts of Dibrugarh and Tinsukia. Increase in the incidence of violent crime in this area, was the result of the general socio-political scenario and insurgency in the state in 1979-1985. Assam agitation was mainly concentrated in the middle and upper Brahmaputra valley, i.e., area is mainly dominated by Assamese linguistic groups of population and high concentration of Hindu population dominated area. In the post-agitation period, violent crime shows high concentration in the north bank plain, having high average value score of violent 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 districts had direct influence with the Boro Movement. Districts with high percentage of Boro population during the agitation period, were worst affected by violent 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 coincide with degree of economic activity in the district. As a consequence, the district displays high incidence of property crime and positive correlation.

Area of Medium Concentration

Medium concentration of violent crime has been observed in the North Bank of the Central Brahmaputra valley, i.e., Darrang district in the pre-agitation period. Parameters in this area indicate high percentage of the Hindu population, pre-dominantly agricultural economy, i.e., primary worker (78.95%), non-workers show high percentage (70.89%), scheduled tribe population are higher than scheduled 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 violent crime.

In the agitation period, medium occurrence of violent crime had been observed in the Eastern Central plain of Upper Brahmaputra valley. This area had medium score average value of violent crime, and included districts of Dibrugarh and Tinsukia (661.43). These districts indicated high Hindu population; high primary workers and tertiary workers, low sex ratio, 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. Moreover, these areas are highly developed and with high urban population. In this post agitation period, medium concentration of violent crime 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).

Area of Low Concentration

It has been found that the entire north bank Plain of the Upper Brahmaputra valley, which includes the districts of Lakhimpur and Dhemaji, shows very low concentration of violent crime. 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 workers. This shows that, people are predominantly engaged in agriculture and have negative significance of violent crime. These are reinforced by factors like low literacy rate, low density of population and low enrolment. This shows that the area is mostly backward and has low socio-economic zone.

The areas occupied by the Bodo population group (they straddle both banks of the Brahmaputra river) show very high concentration

of violent crime, because of the Boroland movement. This was followed by a period of low occurrence of violent crime. This clearly indicates that political stability and instability of a region has direct influence on the fluctuation of crime. In addition, these areas were characterised by low economic activities. The schedule tribe, having agrarian economy and low percentage of person engaged in the secondary and tertiary sectors, dominated 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 violent.

Conclusion

From the above analysis of density of violent crime in the Brahmaputra valley for three periods of crime changed with the changes of socio-economic environment, political situation, as well as changes of time in the study area. Violent crime in the pre Assam agitation period mainly dominated in the entire among the districts of Kamrup, Nagaon, Sibsagar and Darrang. This pattern had changed during agitation period and crime showed shifting to the North Bank Plain up to the district of Lakhimpur i.e. belt extending from the districts of Goalpara, Kamrup, Darrang, Nagaon, Jorhat, Sibsagar and up to Lakhimpur. Because, during these period, entire spectrum of socio-economic and political environment deteriorated and war like situation prevailed due to the popular students' movement by the All Assam Student's Union (AASU) and All Assam Gana Sangram Parishad (AAGSP) throughout the valley. Again, in the post agitation period, the pattern of violent crime indicates almost haphazard and shifted to the North Bank Plain. Density of violent crime showed high and very high concentration mainly extending from Kokrajhar to the Lakhimpur districts. Except Bongaigaon, Nalbari and Dhemaji districts, entire parts of the North Bank Plain shows high density of violent crime because after the agitation period, another phase of agitation had started for the separate homeland by the All Bodo Students' Union (ABSU) and also witnessed 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. As a result of that frequent riot, killings, bombings and road blockages were common phenomena due to high concentration of violent crime. This shows that pattern of crime changes with the changing socio-economic and

political stability and instability of a region. It also depends upon the changing level of socio-economic development of an area too.

The analysis of maps of violent crime clearly suggests change in the pattern of violent crime. These maps permit one to enter as to their causes and occurrences of violent crime in the districts of Brahmaputra valley, Assam. The above analysis clearly suggests that the crime in the valley is closely associated with environment of administration, (includes police and political administration), physical environment (which includes floods, weather, presence of numerous river), economic environment (that includes low per-capita income, low wages, slow economic development, unemployment, poverty, growth of slum and increasing urbanization), social environment (negligible social mobility, immigration, school and college under stress condition and impact of socio-political movement), political environment (political uncertainty and rise in alternative centres of power) and individual environment (that includes attitude, opportunity and level of competition). So, the efforts have to be towards achieving balance between imbalances among this element in the society.

The modus operandi of crime in the society closely related to the easy target, easy asses, loose administration and judgement delay, unawareness of the society and lack of knowledge about modern technological devices. Therefore, the efforts of the police, the government, the police-public co-operation, and use of modern technological devices can altogether be effective to prevent and reduce the crime. The government policies to educate the people, to increase the awareness of the people and the police, improving socio-economic condition of the people, expedite implementation of developmental programs in rural and urban areas, strengthening of infrastructural facilities, creation of employment opportunity and so on will certainly reduce the criminality and criminal behaviour in the society.

APPENDIX - 21.I(a)

Table 1 (a) : Correlation of Socio-Economic Base of Crime, 1991 (n=18) r>, 55 sig at 1%

1991	Violent	SC	ST	Literacy	Worker	Non-Worker	Primary	Secondary	Tertiary	Density	H	M	C	S	B	J	Others
Violent	1	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
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

Table 1 (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
Violent	-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
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

	1000*F/M	Enrolment	Assamese	Bengali	Gujarati	Hindi	Kannada	Konkani	Malayalam	Manipuri	Marathi	Nepali	Oriya	Punjabi	Sindhi	Tamil	Telugu	Urdu	Others
1000*F/M	1	-0.33	-0.29	-0.29	-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		1	0.48	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
Kannada							1	-0.13	0.52	0.03	0.78	-0.33	-0.22	0.11	0.33	0.45	0.01	-0.04	-0.05
Konkani								1	0.11	-0.12	-0.16	0.49	0.53	-0.01	-0.12	0.13	-0.06	0.11	0.05
Malayalam									1	0.08	0.62	0.05	0.13	0.7	0.23	0.9	0.38	0.29	-0.28
Manipuri										1	0.11	-0.13	-0.04	0.19	-0.08	0.14	0.08	-0.04	-0.3
Marathi											1	-0.33	-0.24	0.3	0.47	0.48	0.02	-0.06	-0.11
Nepali												1	0.86	0.33	-0.08	0.27	0.59	0.78	0.21
Oriya													1	0.51	0.03	0.41	0.75	0.84	-0.18
Punjabi														1	0.04	0.8	0.77	0.66	-0.43
Sindhi															1	0.17	0.21	0.19	-0.13
Tamil																1	0.65	0.55	-0.3
Telugu																	1	0.94	-0.29
Urdu																		1	-0.1
Others																			1

Table 2: Socio-Economic Base of Crime Correlation (2001) (n=18) r > .45 sig at 5%, r > .55 sig at 1%

2001	Violent	Hindu	Muslim	Christian	Sikh	Buddhist	Jain	Others	Lit Rate	SC	ST	Ag Lab	Cultivator	HH Indust	Other Workers	Worker	Non-Work	Sex Ratio (F/M)	Density	Enrolment
Violent	1	-0.55	0.52	0.06	-0.14	-0.33	0.22	0.23	-0.55	0.43	0.07	0.57	-0.23	0.1	-0.05	-0.36	0.36	0.22	0.47	-0.45
Hindu	.	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
Muslim	.	.	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
Christian	.	.	.	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
Sikh	.	.	.	.	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
Buddhist	.	.	.	.	.	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
Jain	.	.	.	.	.	.	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	-0.5	0.68	0.03
ST	.	.	.	.	.	.	.	.	.	.	1	0.02	0.33	0.23	-0.34	0.1	-0.1	0.42	-0.05	0.12
Ag Lab	.	.	.	.	.	.	.	.	.	.	.	1	-0.08	0.29	-0.4	-0.7	0.7	0.07	0.45	-0.2
Cultivators	.	.	.	.	.	.	.	.	.	.	.	.	1	-0.36	-0.88	0.57	-0.57	0.61	-0.4	0.52
HH Indust	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.11	-0.55	0.55	0.46	0.63	0.3
Other Workers	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	-0.17	0.17	-0.09	0.55	-0.43
Work	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	-1	-0.7	-0.7	0.12
Non-Work	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.7	0.7	-0.12
Sex Ratio(F/M)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.06	0.1
Density	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0.05
Enrolment	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1

Appendix 21.II

DISTRICT WISE QURTILE SCORE OF VIOLENT CRIME OF BRAHMAPUTRA VALLEY, ASSAM (1975-2001)

Sl No.	Pre-Agitation Period (1975-78) District	Violent	Agitation Period (1979-85) District	Violent	Post-Agitation Period(1986-2001) District	Violent
1	Lakhimpur	271.75	Nalbari	174	Dhemaji	130.77
2	Dibrugarh	328	Kokrajhar	261.33	Morigaon	165.92
3	Darrang	504	Barpeta	342.67	Bongaigaon	225.77
4	Sibsagar	617.75	Sonitpur	398.67	Golaghat	247.8
5	Goalpara	789.25	Dhubri	516	Jorhat	261.81
6	Nowgong	816.25	Dibrugarh	561.43	Nalbari	279.94
7	Kamrup	1025.5	Jorhat	613.67	Goalpara	301
8			Sibsagar	614	Tinsukia	307.69
9			Lakhimpur	638	Sibsagar	308.06
10			Darrang	666.86	Lakhimpur	309.81
11			Goalpara	744.71	Dibrugarh	333.88
12			Kamrup	1274.29	Kokrajhar	367.63
13			Nowgong	1634.29	Darrang	393.69
14					Sonitpur	472.5
15					Barpeta	603.88
16					Dhubri	636.38
17					Kamrup	715
18					Nowgong	810.13
19	Q1	416	Q1	398.67	Q1	266.34
20	Q2	617.75	Q2	613.67	Q2	308.94
21	Q3	802.75	Q3	666.86	Q3	452.8

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