4.0 INTRODUCTORY STATEMENT:

In the pre-partition days, mortality from fever was the most important factor for the retarded growth of population. In the post-independence period, partition of the country became the most important factor for the growth of population, while the second most important factor was general improvement in health condition of the people. All these had pronounced effects on the settlements of the study area. Many new settlements in the form of hamleted or compact types came into existence. In the following analysis, factors affecting settlement growth and the characteristics of settlements in the post-independence period have been studied.

4.1 FACTORS OF SETTLEMENT GROWTH:

4.1.1 Influx of population - The region is situated near the international boundary and as such, after the partition of the country large number of people belonging to the East Pakistan, had moved on to the Indian side. This movement became pronounced after the riots of 1950, 1964 and genocide in 1970. Table IV.1 shows immigration of population in the years of 1946-51. It also shows that the maximum immigration was in the year of 1950. Nadia experienced a tremendous onrush
Table IV.1: Immigration of population from 1946 to 1951.

<table>
<thead>
<tr>
<th>District</th>
<th>1946</th>
<th>1947</th>
<th>1948</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murshidabad</td>
<td>223</td>
<td>11,434</td>
<td>15,475</td>
</tr>
<tr>
<td>Nadia</td>
<td>5,654</td>
<td>47,808</td>
<td>74,786</td>
</tr>
<tr>
<td>24-Parganas</td>
<td>5,875</td>
<td>103,631</td>
<td>114,507</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>District</th>
<th>1949</th>
<th>1950</th>
<th>1951</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murshidabad</td>
<td>9,109</td>
<td>22,090</td>
<td>398</td>
</tr>
<tr>
<td>Nadia</td>
<td>65,619</td>
<td>226,402</td>
<td>6,638</td>
</tr>
<tr>
<td>24-Parganas</td>
<td>69,270</td>
<td>223,510</td>
<td>6,420</td>
</tr>
</tbody>
</table>

of migrants in comparison to the other two districts.

According to 1961 census, the people born in East Pakistan comprise about 30 per cent of the total population of the district. In Murshidabad district, this figure is 1.46 per cent. Another spell of immigration took place during the liberation war in East Pakistan in 1970. These immigrations caused a tremendous growth of population in the police stations of the study area. Table IV.2 shows that there are some P.S. in Murshidabad district where growth rate of population during 1951-81 was low compared to the other police stations. This was due to the facts that those P.S., viz., Raghunathganj, Lalgola, Bhagwangola, Beldanga and
Murshidabad, were predominantly inhabited by the Muslims (Appendix I.1, Chapter I) and there had been less influx of the Hindu population (Plate 11). Moreover, some of these P.S. are located near the Padma which by its treacherous nature had restricted influx of population along its course. All over the study area, exodus of Muslim

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### Table IV.2

<table>
<thead>
<tr>
<th>Name of the police station</th>
<th>Percentage growth rate</th>
<th>Name of the police station</th>
<th>Percentage growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raghunathganj</td>
<td>79.40</td>
<td>Kaliganj</td>
<td>149.38</td>
</tr>
<tr>
<td>Lalgola</td>
<td>75.00</td>
<td>Nakasipara</td>
<td>140.83</td>
</tr>
<tr>
<td>Bhagwangola</td>
<td>111.68</td>
<td>Krishnaganj</td>
<td>136.44</td>
</tr>
<tr>
<td>Raminagar</td>
<td>118.68</td>
<td>Krishnagar</td>
<td>123.37</td>
</tr>
<tr>
<td>Murshidabad</td>
<td>156.47</td>
<td>Nabadwip</td>
<td>76.84</td>
</tr>
<tr>
<td>Jiaganj</td>
<td>188.62</td>
<td>Santipur</td>
<td>143.47</td>
</tr>
<tr>
<td>Beldanga</td>
<td>105.39</td>
<td>Hanskhali</td>
<td>185.96</td>
</tr>
<tr>
<td>Berhampur</td>
<td>159.89</td>
<td>Banaghat</td>
<td>124.75</td>
</tr>
<tr>
<td>Hariharpur</td>
<td>155.94</td>
<td>Chakdaha</td>
<td>178.61</td>
</tr>
<tr>
<td>Nawda</td>
<td>122.92</td>
<td>Haringhata</td>
<td>243.57</td>
</tr>
<tr>
<td>Domkal</td>
<td>135.56</td>
<td>Bagdah &amp;</td>
<td>187.69</td>
</tr>
<tr>
<td>Jalangi</td>
<td>142.40</td>
<td>Bangaon</td>
<td></td>
</tr>
<tr>
<td>Karimpur</td>
<td>178.19</td>
<td>Gaighata</td>
<td>239.42</td>
</tr>
<tr>
<td>Tehatta</td>
<td>165.15</td>
<td>Swarupnagar</td>
<td>149.51</td>
</tr>
<tr>
<td>Chapra</td>
<td>132.60</td>
<td>Habra</td>
<td>113.46</td>
</tr>
</tbody>
</table>
population had been minimal particularly from where concentration of this community was high\(^2\). It may, therefore, be concluded that exodus of Muslims and influx of Hindus had been uneven in terms of numbers. Field investigation shows that there is high concentration of Hindus in rest of the police stations. Establishment of government colonies (Appendix II.1) had also an impact on the growth of population. Usually growth rate has been high in these P.S. having such colonies.

4.1.2 **Demographic condition** - A glance at the vital statistics and age pyramid structures of 1951 and 1961 Census reveals that there have been a fall in (i) death rate as well as (ii) infant mortality and (iii) an increase in the number of persons remaining unmarried.

(i) Death rates (registered) in Nadia district was 23.1 per cent in the decade of 1941-50 and 7.4 in the decade 1951-60, a fall of 15.7 per cent. In Murshidabad district, the death rates for the same periods were 23.8 per cent and 9.4 per cent respectively. This appreciable fall in death rate was due to adoption of measures against malaria and cholera. Moreover, from the First Five Year Plan, measures taken by the government for public health had their positive effect. The

\(^2\) For instance, there are no displaced persons in the Beldanga, Mirzapur, Janpur, Bikalnagar, Kasipur, Bhabta, Gangapur, Salidanga, Baninathpur and Baruipur villages under Beldanga P.S. More than 80% of population of these villages belong to Muslim community.
State Government succeeded in organising, on a self-help basis, the spraying of insecticides in rural areas. Insecticides and equipments were supplied free of cost by the government. The training of volunteers and technical supervision were arranged by the Directorate of Health Services and the local people actively participated in this scheme. Jungles and marshes were reclaimed by the immigrant displaced persons. All these measures helped to lower the malarial death rate. Similarly, deaths from cholera had been lowered due to the growing habit of drawing drinking water from wells and mass vaccination.

(ii) A fall in infant mortality rate and a rise in birth rate also caused an appreciable increase in the number of children in the 0-4 age group.

(iii) Another remarkable feature of the civil condition in 1961 was a decrease in the proportion of married persons in comparison to that of 1951. In Nadia district, 41.74 per cent of the total male population returned as married in 1951; the figure was 38.14 per cent in 1961. In Murshidabad district, these figures

3: On the smaller rate of cholera disease in the period 1946-50 in Nadia district, Mitra contends the view: "considering the general insanitary condition inevitable on such a large exchange of population such as happened in the district, the incidence of cholera has been really very small, such smaller than what was feared, thanks primarily to the sinking of a generous number of tubewells throughout the district (Mitra, A., 1953 : Census 1951, West Bengal District Census Handbook, Nadia, Government of India, Cal., p. xxvi).
were 44.08 per cent and 39.65 per cent respectively during the same period. This proportion was higher in case of females. The figure was 49.57 per cent of the total female population in 1951 Census and 39.72 in 1961 Census in Nadia district. During the same period the figures were 49.53 per cent and 41.75 per cent respectively in the Murshidabad district.

4.1.3 Effect of agricultural development on population mobility - In 1954-55, zemindary abolition act was implemented. It gave the raiyat a permanent possession over the land. In the sixtees, agricultural infrastructures like high yielding seeds, fertilisers and irrigation were made available through the Block Development Offices. In the 1970s', some agricultural institutions like Comprehensive Area Development Corporation (C.A.D.C.), Small Farmers' Development Agency (S.F.D.A.) and Co-operative Land Development Bank, in addition to the Nationalised Banks, came to help the farmers. The effects were an improvement in production, assurance

4. It is also true that not every class has been benefited. In fact, people having little land (0.70 ha - 0.84 ha) have not been benefited much due to lack of capital and agricultural inputs. Some of the villagers of Chandpur have purchased shallow tubewells, yet they are in debt because of low productivity of sandy soil (Sen, S., 1981: A Study of Two Settlements in the Nadia District, West Bengal, Landscape Systems, Cal., Vol. 4, No. 1, pp. 41-43).
of agricultural output and high intensity of cropping. Due to these, economic condition of agricultural labourers is at present better than in earlier years. Moreover, due to cultivation of multiple crops, farmers remain engaged in jobs more or less throughout the year. It is because of this that at the time of the severe flood of 1978, most of the flood-stricken people took temporary shelter along the high roads and did not emigrate from the village permanently. Because of the same reason mentioned above, five landless families of Manikdihi who previously owned land, but at present are landless have not left the village.

4.1.4 Effects of gang robbery on settlement - Very recently, particularly after the creation of Bangladesh (1971), gang robbery and theft have been common not only in the border villages but also in the

5. This will be clear when we look at the trains of Ranaghat - Lalgola section of the Eastern Railway. The down train (Lalgola-Sealdah Passenger) No. 302 Dn. at 5.42 a.m. carries about 5,600 labourers from Baharampur station to Dhubulia station and up train (Sealdah-Lalgola Passenger) No. 365 Up around 4 p.m. from the reverse direction carries back the labourers. Partly this is because of shortage of labourers and consequent higher wage rate in Nadia district than in Murshidabad district. The whole belt is thickly inhabited by Goala caste who mainly carry on their traditional profession i.e., sale of milk and therefore appoint labourers for their fields.

Theft of bullocks is a very common problem in the border areas. It was reported during the field work (1979), that owing to repeated gang robbery, villagers of Arabpur mauza (J.L.No. 132) of Karimpur P.S. had shifted their residences from thinly settled areas to the thickly settled areas along the roads. It was reported from many villages, viz., Baliadanga (Karimpur P.S.), Chandpur (Chapra P.S.) that the members of a family had to keep vigil every night by rotation. It may be assumed that in the absence of any remedial measures, there would be emigration of the villagers, particularly of the solvent people.

The same problem is also being faced by the solvent people in the interior villages. Villagers of Matchpota (Nakasiga P.S.) were forced to take shelter at Bethuadahari, a non-municipal town. The residents of Basirhati (Habra P.S.) reported to the author that dacoity usually took place from the months of November to March.

4.4.5 Political factor - The Government distributes vested land among landless people. There have been cases

Here are some of the instances: i) Due to theft, Mr. Joygopal Adhikari of Manikdihi, Karimpur P.S. lamented to the author by saying that if he were in a position to build homestead in suburb, he would gladly do it. (ii) Mr. Satinath Mukherjee of Malipota (Santipur P.S.) was forced to shift his residence to Ranaghat. (iii) Mr. Swapan Chatterjee of Sibnibas built a pucca house at Krishnaganj, the headquarters of the P.S. of the same name.
of displaced persons forcibly occupying vested land for habitation. Several such colonies have sprung up in this manner. Instances are Hathat Colony of Sibpur (Berhampur P.S.) in 1965, Kalabagan and Salbagan colonies of Amulia (Ramaghat P.S.) mentioned later in Chapter V.

In some cases the refugees were given free land as well as building materials for construction of cottages. Such places are close to Dhubulia and Taherpur railway stations, in Sibhibas mauza, Ramjetia (Berhampur P.S.), Sammysitala (Jiagamj P.S.), Barhjamla (Lalgola P.S.).

So far the factors affecting growth of settlements have been studied. It may be observed that the pre-independence period recorded depopulation, but the post-independence saw a huge growth of population.

Depopulation followed by overpopulation had pronounced effects on rural settlements which were manifested in siting of settlements, spatial distribution of settlement, morphology of the villages and the socio-economic landscape. The following is an attempt to study these effects.

4.2 EFFECT ON SITING OF SETTLEMENTS:

One of the conspicuous features of the present

Map 4.1 Comparative study of settlements (1916-17 to 1968-69) in the Tehatta locality.
day settlements is its concentration near the communi-
cation lines like the roads, railways rather than the
river courses, because in earlier days the rivers were
used for communication as well as mercantile intercourses
with the upper provinces of India and Eastern Bengal
(Chapter III) and that the road transport was neglected by
the administration. Importance of maintaining connec-
tions between the different parts of the border areas
and the district headquarters was seriously felt after
the creation of East Pakistan. It was only in the 1960s
that progress in road communication was conspicuous.
Almost simultaneously, the rivers lost their importance,
although it is true that maintenance works to keep the
'Nadia Rivers' open for navigation service came to an
end from 1931.

A comparative study of Survey of India's topogra-
phical sheets, based on surveys in 1916-17, 1950-52 and
1968-69 (Map 4.1,4.2,4.3 4.4,4.5) shows higher concen-
tration of settlements along roads and railways in the
1950-51 than in the 1916-17. Thus, ribbon like growth of
settlements along the roads and railway lines is notice-
able not only nearer the urban centres but also in the

10. Lack of bridges over the rivers were partly responsible
for poor communication. At present, except the water-
logged pockets and the char areas of the Padma, almost
every part of the study area is within the reach of the
bus route (Bagchi, K., and K. N. Mukherjee, 1978: Diag-
nostic Survey of Deltaic West Bengal, C.U., Cal., p. 45).
Map 4.2 Comparative study of settlements (1916-17 to 1950-51) in the Samtipur locality.

Topographical sheet no. 79

- 1km - 2km

88° 25' 15' 23°

1917-18

Nutan Bil
Mathura pur
Bhorodanga
Tengridanga

23°

15°

23°

15°

88° 25'

1950-51

Bahirchara
Mathurapur
Tengridanga

Kalinagar
Nutan Pamer
Haripur

Pythagoras
Raghunathpur

Kaleltary

Bhojpur
Surguna

Bhaladanga

20°

20°

88° 25'
Map 4.2: Comparative Study of Settlements (1966-1971)
but also in the interior villages. The 1968-69 edition of the Survey of India Map clearly brings to light that there had been a huge influx of population in this study area after the riots of 1964 (Chapter IX). These displaced persons had chosen places along roads and railways for residence, because lands adjoining roads and railways are public property and as such, they could avoid clashes with private landowners. Most of these people illegally occupied such vested land for building huts in many villages. Such settlements are found in Chunakhali (Murshidabad P.S.), Bethuadahari (Nakasipara P.S.), Kamgachhi, Bera Kamgachhi and Sim Aistala (Ranaghat P.S.) etc. New settlements along new roads are found at Nutan Arbetai, Barea Nutanpara, Barea Mathpara, Abhaynagar, Nutanpara, Nutan Bilkumari, Nutan Betai – all under Tehatta P.S. (Map 4.1). Some new settlements in Santipur P.S. (Map 4.2) having easy access to communication lines also grow up along the Hugli riverine belt. A contrasting character of settlements, i.e., high concentration along railway lines and their habitation in char areas is observed in Nakasipara P.S. (Map 4.3). The forcible occupation of land along railway lines became pronounced after the genocide of 1970 in the then East Pakistan. Everywhere near the railway lines of the Dum Dum Cantonment-Bangaon section (Twenty-four Parganas) of the Eastern Railways, settlements in
Map 4.6 Comparative study of settlements (1916-17 to 1968-69) in the Kalantar locality.
the form of ribbons developed. This is also found near Birnagar, Taherpur, Krishnanagar and Bethuadahari railway stations of Ranaghat-Lalgola section.

But such a development was not confined to only the displaced persons. The original inhabitants, in many cases, have also built new homesteads along the roads. The growth of settlement in Beldanga and its neighbourhood (Map 4.4) may be explained by the fact that this region is predominantly a Muslim area. In other areas, such as in Kaliganj P.S. (Map 4.5), and Kalantar locality (Map 4.6), there has been no influx of displaced persons and the changes in settlement pattern is least.

4.3 EFFECT ON SPATIAL DISTRIBUTION OF SETTLEMENTS:

The density and distribution of settlements have been unequal over the area. This unequal distribution is not only due to physical and economic factors but also a resultant feature on the culture of the region and political motivation.

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11. This is to mention here that due to growth of settlements, several railway stations have come into being since independence. They are Subarnamrigi and Pirtala of Murshidabad, Kalyani, Taherpur, Jalalkhali, Kalinarayanpur, Palpara, Naba Raynagar of Nadia and Akai-pur, Satberia, Thakurnagar, Asokenagar Road of Twentyfour Parganas.

12. In the rural areas, usually 4 katthas (0.02 ha) of land are required for construction of a homestead. The homestead includes granary, cowshed, spacious courtyard for working etc.

13. For details, vide appendix I.1, chapter 1.
4.3.1 Cultural factors - Specific cultural backgrounds of different areas are responsible for unequal distribution of population both at P.S. level (Appendix IV.I) and anchal\(^{14}\) level (Appendix IV.II). In Murshidabad district, percentage of Muslim population (Appendix I.I, Chapter I) in the total population is high (45-50 per cent), while in the rest of the two districts, percentage of Hindu population is higher (about 30 to 35 per cent). At the time of partition of the country, the region had experienced both immigration of the Hindus and emigration of the Muslims, but the processes have been uneven in strength. Exodus of the Muslims has been nil or the least where Muslim population is high. It may also be noted that the Muslims who had deserted one Muslim minority village \(\ldots\) settled later in another Muslim majority village. For instance, Hekampur village of Berhampur P.S. The Muslims of Sibpur, Madapur and a number of other villages had left those villages and settled in Hekampur.

Prior to the partition, Nadia was a big district, comprising 5 subdivisions\(^{15}\). After the partition, it now

\(^{14}\) Several mauzas constitute an anchal.

\(^{15}\) The subdivisions are Krishnagar, Ranaghat, Meherpur, Chuadanga and Kusthia. The last 3 are now in Bangladesh.
Map 4.7 Note high growth rate of population in border villages.
consists of only three subdivisions, the recent subdivision of Kalyani been created in December, 1982. Many of the Hindus of the Nadia district of the then East Pakistan migrated to the Indian portion of the Nadia district. Psychological background has played its role in this respect. Perhaps Nadia is the only district where influx of population has been highest among the districts of West Bengal. It is because of the fact that some of the border villages contain high population. Tehatta P.S. is an instance (Map 4.7).

Secondly, low caste Hindu population have usually resettled in villages while high castes, especially of the middle-income group, have settled in towns and their suburbs. This may partly be due to the differences in their cultural background, the advantages of higher education and of office employment in towns.

Thirdly, high density of population (Appendix IV.1) in the police stations of Raghunathganj, Beldanga and Nabadwip\(^1\) (Map 4.8) are mainly due to their tradition. The population of Raghunathganj is to a great extent composed of "Shershabadia Muslims among whom mortality is low and health is generally good" which

\(^1\) The recent fall in rural density (1981) of population of Nabadwip P.S. is due to an increase in urban area which has carved out of rural areas.

 personas/Sq.km

- 451-550
- 551-650
- 651-750
- > 751
has helped to make this P.S. "a highest density zone".17
Besides agriculture, the people here make bidi, work in
rice mills, flour mills and are engaged in cottage indus-
try, like weaving of woolen and cotton blankets. The
high density zone of Beldanga P.S. is partly due to its
fertility enhanced by the Bhagirathi and the fertile
clayey soil of kalantar. Beldanga had its prominence
due to the location of sugar mill in this place (1932-
48 A.D.). This P.S. is reputed for its cultivation of
vegetables catering to the needs of the Calcutta Metro-
politan District (CMD) and also for mulberry cultivation.
Nabadwip is sui-generis. It is a great centre of the
Vaishnavas.

Fourthly, since 1977, some new settlements in
the form of compact or hamleted, have come into being.
The origin of such villages, leaving aside the border
villages, may be traced to repeated dacoity. For reasons
of safety, more and more inhabitants are taking shelter
in towns or big villages. When the head man (leader) of
a village leaves it, other families follow him. For ins-
tance, there were 28 Hindu families and 7000 Muslim
families at Bara Naldaha village of Tehatta P.S. Due to
repeated dacoities in the house of a well-to-do Mahishya
family, this gentleman left the village and other fami-
lies (22 in number) of this caste followed him and

18. Recently the State Government has acquired this mill
for reopening it.
settled within the interior of the village Chhota Naldaha. The rest of the Hindu population have purchased land in the latter village and will soon be shifting there. Thus a compact village grows more compact at the cost of hamleted settlements. Instances are Arabpur (Karimpur P.S.), Matchpota (Nakasipara P.S.) etc.

4.3.2 Physical factors - In some places, physical features have been permanent barriers to influx of population, for instance, char areas of the river Padma and the marshes (Map 4.5).

Secondly, irrespective of the soil character an approximately uniform density distribution is observed in almost all the police stations at present (Appendix IV.1). Immigration of population after partition caused an almost equal density of population.

Thirdly, importance of waterways for drinking purposes, easy communication for trade and commerce and irrigation facilities have always been a criterion for settlement concentration along the riverine axes. This is shown by the high concentration of population along the riverine axes of the Bhagirathi and its gradual decrease away from the riverine axis. Jiaganj, Murshidabad and Berhampur police stations, situated along the

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19. A few cases of resettlement in the char area of Jalangi P.S. came to notice during field investigation of 1979, e.g., Udypagar Colony, Surya Colony of Jalangi P.S. This char is settled by Chai-Mondal, a Scheduled tribe of Bihar who immigrated in Murshidabad district. Their profession is fishing.
riverine axis constitute a high density zone. In these police stations, people have subsidiary occupations of weaving and spinning, making of brass metal pots (Khagrachi utensils) besides agriculture.

Fourthly, suburban locations of some of the police stations, viz., Ranaghat, Chakdaha, Bangaon, Gaighata and Habra are responsible for high concentration of population. Calcutta's vegetable supplies come from these areas (Plates 13, 14). All of them have high connectivity with Calcutta. Nearness to urban centres and wider scope for various occupations have made these high density zones.

4.3.3 Economic factors - Economic conditions of the displaced persons have, to some extent, governed distribution of population. Firstly, there has been few or no immigration of displaced persons to big villages. This is due to the fact that these villages had already reached saturation in respect of their carrying capacity. Because of many amenities which these villages enjoy, land values are usually higher in these villages than in the smaller ones. These high-priced lands are usually beyond the buying capacity of the displaced persons. Moreover, there is practically no vested land (khas jamil) in these villages where the government can rehabilitate these persons.

Secondly, uneven distribution of population is also due to the fact that one section of the displaced
population, driven by despair, forcibly occupied large masses of land which remained in jungly water-logged areas. Bagchi noted that, "suddenly the mosaic of dispersed villages with intervening stretches of depopulated hamlets overgrown with wild vegetation gave place to reversal conditions in which the massive immigrant population filled in the gaps in such high density that the earlier villages looked thinner in comparison." It is because of this that some small villages with high growth rates of population are observed in this region (Table IV.3). This is also corroborated from statistical analysis of absolute population and area of the mauza.

Thirdly, choice of sites for settlements of the immigrant people was also a manifestation of the economic pursuits of the various communities. The Jelia community settled mainly along the riverine villages, e.g., Goalsalua, Anulia, Raghunathpur (Ranaghat P.S.), Sibnibas (Krishnaganj P.S.), Gopinathpur (Bhagwangola P.S.). The Tanti and Goala communities settled in or near the towns for convenience of their trades. The Goalas supply milk to the towns, parti-

22. The Government has established a number of cotton weaving industries. For details, see chapter 1.
cularly the CMD area. Milk chilling plants at Phulia, Bethuadahari, the Bhagirathi Co-operative Milk Producers' Union at Beldanga and its numerous collection centres have helped the Goala caste a lot. Train services also help this caste to supply milk products like whey to the towns. The displaced Tanti caste settled down in the char area as well as in the towns of Nabadwip, Santipur, Phulia and Ranaghat and their neighbourhoods. Of these, the high skilled weavers from Dacca, Tangail and Mymensingh settled in Phulia. Santipur was originally a seat of weaving. An augmentation in population of Santipur was due to influx of weavers from neighbouring settlements like Sibnibas as well as of displaced weavers.

Fourthly, agricultural population had settled anywhere. Communication has not been a barrier in this respect. Many such agricultural villages located away from roads or railways are found in the police stations of Karimpur, Tehatta, Chapra, Krishnaganj, Hanskhali, Bagdah, Bangaon. But those persons who practise different professions like cottage industry trade and commerce and miscellaneous secondary activities have settled near the communication lines. Instances are Sonatikri near Chandpara, Narikela, Chandpara, Amkola and Baghna villages of Gaighata P.S., Banbania, Kayadanga, Khosdelpur and Khorda Bamonia
### Table IV.3

Area of the mauza, population and percentage growth rate of selected mauzas

<table>
<thead>
<tr>
<th>Name of the mauza</th>
<th>Name of the P.</th>
<th>Area (in ha)</th>
<th>Population, 1951</th>
<th>Population, 1971</th>
<th>Percentage growth rate</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patharghata (113)</td>
<td>Tehatta</td>
<td>1483.94</td>
<td>3992</td>
<td>6629</td>
<td>66.06</td>
<td>Big and old village</td>
</tr>
<tr>
<td>Aztullanganagar (77)</td>
<td>, ,</td>
<td>162.72</td>
<td>128</td>
<td>1088</td>
<td>750.00</td>
<td>Refugee settled village</td>
</tr>
<tr>
<td>Tetia (86)</td>
<td>Krishmagar</td>
<td>308.86</td>
<td>163</td>
<td>1324</td>
<td>712.27</td>
<td>Refugee settled village near National Highway</td>
</tr>
<tr>
<td>Chougachha Hansdanda (35)</td>
<td>, ,</td>
<td>317.70</td>
<td>1396</td>
<td>2100</td>
<td>50.43</td>
<td>Very old village, a part inhabited by the Muslims</td>
</tr>
<tr>
<td>Matiari (89)</td>
<td>Kaliganj</td>
<td>619.17</td>
<td>4822</td>
<td>7037</td>
<td>45.93</td>
<td>Very small village &amp; adjacent to border area</td>
</tr>
<tr>
<td>Chak Sari-shadanga (101)</td>
<td>Ranaghat</td>
<td>98.44</td>
<td>57</td>
<td>498</td>
<td>773.68</td>
<td>, ,</td>
</tr>
<tr>
<td>Malsadaha (80)</td>
<td>Hanskhali</td>
<td>92.20</td>
<td>86</td>
<td>371</td>
<td>331.40</td>
<td>Very small village</td>
</tr>
<tr>
<td>Magurkona (6)</td>
<td>Bagdah</td>
<td>81.06</td>
<td>82</td>
<td>387</td>
<td>321.95</td>
<td>, ,</td>
</tr>
<tr>
<td>Harindanga (119)</td>
<td>Bangaon</td>
<td>175.50</td>
<td>322</td>
<td>754</td>
<td>134.16</td>
<td>Influx of agricultural population from Bangladesh</td>
</tr>
</tbody>
</table>
The above factors have contributed to the differential distribution of settlements and to their growth rates. A statistical analysis by standard deviation method for comparative study of growth rates of population (1951-71) of the mauzas (police station-wise) shows that incidence of high influx rate, i.e., above 200 per cent growth rate in a mauza is comparatively low in Murshidabad district except its some police stations, viz., Berhampur, followed by Jiaganj, Beldanga (Map 4.9), Murshidabad, Hariharpara and Nawda, whereas it is high in Nadia (Map 4.10) and Twentyfour Parganas. In Murshidabad district, almost half the cases of high growth rates of population are related to the shifting of settlements from the char areas of the Padma to roadsides. In the rest of the mauzas high growth rates are usually related to the immigration of population. The above factors of population distribution have been discussed (appendix IV.2) at micro-level (anchal-wise) and presented here through a map (Map 4.11).

4.4 EFFECT ON MORPHOLOGY OF VILLAGES:

We have noted two phases of depopulation in the study area. Often, a village experienced both these phases. In other cases, an uninhabited village was turned into an inhabited one by the newcomers. Sometimes, it had so happened that when the village site became
Map 4.11 Anchal-wise density of population (1971).
Plate - 1: Temporary structures of settlements along the Padma river.

Plate-2 : One of the many baors (Chanda baor) of Twentyfour Parganas.
Plate - 3: Settlement characteristics of Kalantar. Note the existence of houses on mounds. Ditches are common and boats become the convenience during rainy season.

Plate - 4: Cultivation on the bed of the river Churni.
Plate - 5: Mathabhanga off-take. Note the Jalangi river in the background.

Plate - 6: Confluence of the Churni with the Bhagirathi. Note the importance of rivers in local transport.
Plate - 7: Date Palm trees are numerous in Nadia district.
Plate - 8: Vishnu idol discovered at Anulia village.

Plate - 9: Site of a vault of Pathan rule - Anulia.
Plate - 10: Vallaldhipi - a high mound, probably a remnant of royal palace of Vallalsena - Bamanpukur in Santipur P.S.

Plate - 11: A transit camp of the refugees before rehabilitation - Banpur.
Plate - 12: Cultivation of vegetable in the char area of Churni river; a village in Chakdaha P.S.

jungly and unfit for habitation, the villagers had chosen a new site. Instances are Dolaimolla under Krishnagar P.S., Paraspur under Jalangi P.S. etc. Parts of Chhatai (J.L.No. 123) and Dakshin Sahar (J.L.No. 124) under Murshidabad P.S. were depopulated due to growth of jungles and malaria. In the former case, Harirampur Chhatai village came into being along the bank of the Bhairab. In the latter case, two hamlets, viz., Dihipara and Diarapara were established along the road. Thus, two hamleted settlements sprang up from disintegration of the above two compact settlements. Table IV.4 shows that in some of the police stations number of compact settlements, in which the houses form a close arrangement of habitation units in varying shapes and sizes, had decreased owing to depopulation. On the contrary, depopulated compact settlements of Settlement Survey had increased the number of semi-compact settlements in the Revisional Survey. However, an increase in the number of compact settlements is due to growth of new settlements (Table IV.4) as in Nabawlp, Jalangi, Bagdah, Bangaon, Gaighata and Habra police stations. Semi-compact settlements, in which there are partially consolidated units of houses which have small compact nuclei surrounded by scattered houses in villages, had increased, partly because of scattered dwellings by the newcomers. The decrease in the number of hamleted
### TABLE IV. 4.

Changes in the morphology of the villages (mauza-wise)

<table>
<thead>
<tr>
<th>Name of the Police Station</th>
<th>Type of Settlements</th>
<th></th>
<th>Compact</th>
<th></th>
<th>Semi Compact</th>
<th></th>
<th>Scattered</th>
<th></th>
<th>Hamleted</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>Jalangi</td>
<td>5</td>
<td>x</td>
<td>3</td>
<td>x</td>
<td>29</td>
<td>26</td>
<td>x</td>
<td>x</td>
<td>4</td>
<td>x</td>
</tr>
<tr>
<td>Karimpur</td>
<td>33</td>
<td>33</td>
<td>14</td>
<td>21</td>
<td>38</td>
<td>38</td>
<td>37</td>
<td>10</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Nakasipara</td>
<td>42</td>
<td>42</td>
<td>6</td>
<td>8</td>
<td>60</td>
<td>60</td>
<td>8</td>
<td>8</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Chapra</td>
<td>42</td>
<td>42</td>
<td>6</td>
<td>9</td>
<td>35</td>
<td>35</td>
<td>12</td>
<td>4</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Nabadwip</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>x</td>
<td>15</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Haringhata</td>
<td>15</td>
<td>15</td>
<td>6</td>
<td>4</td>
<td>44</td>
<td>44</td>
<td>9</td>
<td>5</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Bag dah</td>
<td>30</td>
<td>30</td>
<td>15</td>
<td>x</td>
<td>63</td>
<td>63</td>
<td>11</td>
<td>5</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Bongaon</td>
<td>44</td>
<td>44</td>
<td>7</td>
<td>x</td>
<td>112</td>
<td>112</td>
<td>2</td>
<td>x</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Gaighata</td>
<td>30</td>
<td>30</td>
<td>7</td>
<td>1</td>
<td>82</td>
<td>82</td>
<td>1</td>
<td>3</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Habra</td>
<td>55</td>
<td>55</td>
<td>15</td>
<td>1</td>
<td>117</td>
<td>117</td>
<td>3</td>
<td>4</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Swarupnagar</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>x</td>
<td>35</td>
<td>35</td>
<td>3</td>
<td>1</td>
<td>55</td>
<td>55</td>
</tr>
</tbody>
</table>

(Source: compiled from mauza maps of selected police stations)

Note: a = Settlements in Settlement Survey, b = Original settlements of Settlement Survey that continued to exist in Revisional Survey, c = New settlements in Revisional Survey, d = Abolished settlements of Settlement Survey.)
settlements, in which three or four huts form a village, has been due to the following reasons: i) The settlement was abolished by natural catastrophies and the surviving population migrated to some other big settlement. ii) Because of growth of population, there was an increase in the number of homesteads and a hamleted settlement had been converted into semi-compact or compact settlement.

These changes between previous Settlement Survey and the Revisional Survey had been presented in Table IV.A (Table: IV.5.1 to Table IV.5.3). This table has been constructed in the following manner. The vertical columns of this table would indicate from what type of settlement of Settlement Survey, the pattern of settlement during Revisional Survey has taken shape, whereas the horizontal rows would explain what has happened to the settlement after the Settlement Survey was completed. For instance, there were 5 settlements in Jalangi P.S. during Settlement Survey. In the Revisional Survey, it was found that 2 of them had been turned into scattered settlements, while the remaining 3 were abolished. The recent 3 compact settlements of 1950s have come into being from the growth of 2 new settlements and transformation of one semi-compact settlement into compact

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settlement. Similarly, there were 29 semi-compact settlements in Jalangi P.S. in Settlement Survey. During Revisional Survey, 1 of them was turned into compact and 2 into hamleted. The remaining 26 settlement remained unaffected. An increase of settlements (7 during Revisional Survey) had taken place from growth of 1 new settlement, transformation of 2 and 4 scattered and hamleted settlements respectively of Settlement Survey into semi-compact settlements during Revisional Survey and the present figure of 33 settlements was thus obtained.

Table IV.5

Changes in the morphology of villages
(Settlement Survey to Revisional Survey)

IV.5.1: Jalangi P.S.

<table>
<thead>
<tr>
<th>Compact</th>
<th>Semi-compact</th>
<th>Scattered</th>
<th>Hamleted</th>
<th>Abolished settlements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Semi-compact</td>
<td>1</td>
<td>26</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Scattered</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Hamleted</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>New settlements</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

| Total of 1950s | 3 | 33 | 3 | 4 | 5 |
### IV.5.2: Nabadwin P.S.

<table>
<thead>
<tr>
<th></th>
<th>Compact</th>
<th>Semi-compact</th>
<th>Scattered</th>
<th>Hamleted</th>
<th>Abolished settlements</th>
<th>Total of 1920s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>nil</td>
<td>3</td>
</tr>
<tr>
<td>Semi-compact</td>
<td>1</td>
<td>15</td>
<td>1</td>
<td>-</td>
<td>nil</td>
<td>17</td>
</tr>
<tr>
<td>Scattered</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>-</td>
<td>nil</td>
<td>6</td>
</tr>
<tr>
<td>Hamleted</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>nil</td>
<td>2</td>
</tr>
<tr>
<td>New settlements</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>nil</td>
<td></td>
</tr>
<tr>
<td><strong>Total of 1950s</strong></td>
<td>7</td>
<td>19</td>
<td>5</td>
<td>1</td>
<td>nil</td>
<td></td>
</tr>
</tbody>
</table>

### IV.5.3: Baedah P.S.

<table>
<thead>
<tr>
<th></th>
<th>Compact</th>
<th>Semi-compact</th>
<th>Scattered</th>
<th>Hamleted</th>
<th>Abolished settlements</th>
<th>Total of 1950s of 1920s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact</td>
<td>30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30</td>
</tr>
<tr>
<td>Semi-compact</td>
<td>4</td>
<td>63</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>68</td>
</tr>
<tr>
<td>Scattered</td>
<td>4</td>
<td>-</td>
<td>28</td>
<td>-</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>Hamleted</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>New settlements</td>
<td>7</td>
<td>9</td>
<td>5</td>
<td>-</td>
<td>nil</td>
<td></td>
</tr>
<tr>
<td><strong>Total of 1950s</strong></td>
<td>45</td>
<td>74</td>
<td>33</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
The factors discussed above have their effects on spatial distribution of villages. Map no. 4.8 is an attempt in this direction. It shows micro-level (ancestral-wise) distribution of density of villages.

4.4.1 Density of villages, 1971 - A study of village density map (Map 4.12) shows some relation with
i) physiographic condition, ii) socio-economic character of the region and iii) rural density of population (Map 4.8).

(a) - i) A very low density of villages (less than 10.00-25.00 per sq. km) is found along the Padma riverine tract, kalantar region and the marshy area of Swarupnagar P.S. Here rural density of population is also low. ii) A large part of the study area contains low density of villages (10.01 to 25.00 per sq. km). It includes parts of Kaliganj, Nakasipara, Chapra, Beldanga, Hariharpara, Domkal police stations that cover the central part of the region. In some cases, this belt has been interspersed by very low density of villages (less than 10.00 per sq. km). iii) Large belts of medium density, 50.01 - 75.00 to 75.01 - 100.00 per sq. km. are found in southern Nadia and its adjacent Twentyfour Parganas districts, except an interruption in the neighbourhood of Bira. iv) High to very high density of villages viz., 150.01 to more than 175.00 per sq. km are found along the Bhagirathi valley in the police stations of Lalgola.
and Murshidabad.

(b) In the border areas of Nadia district, medium low density of villages is found. Here, some of the anchals, i.e., Dighalkandi, Murutia have 25.01-50.00 density of villages per sq. km with population density of 200.01 to 250.00 per sq. km. (c) Anchals like Harekrishnapur, Hogulbari, Madhugari, Nandanpur, Rahamatpur, Hatidanga have densities of villages varying from 10.01 to 25.00 and corresponding population densities from less than 200.0 to 300.0 per sq. km. In this class may be included Biharia, Palsunda and Choa anchals. Contrary to these, there are anchals like Bali, Kapasdanga, Rukunpur, Andulberia, Khidiferpur, Patikabari, Chandpur where densities of villages range from less than 10.01 to 25.00 per sq. km, but rural population densities vary from 401 to 750 per sq. km which indicate that these sparsed villages support more population per unit area.

4.5 EFFECT ON CASTE SYSTEM:

The impact of huge immigration in the post-independence days was felt on the caste system. It affected the caste-based economy, spatial distribution of caste pattern and rigidity of caste system. Mark stated that "Family communities were based on domestic industry, in that peculiar combination of hand-weaving, hand-spinning and hand-tilling agriculture which gave
them self-supporting power. English interference having placed the spinner in Lancashire and the weaver in Bengal or sweeping away both Hindu spinner and weaver, dissolved these small communities by blowing up their economical basis. In fact, "Function and function only......was the foundation upon which the whole caste system of India was built up". Writing about sixty years later, Mitra noted that "It is only in the course of the last eighty years, with the rapid and preternatural destruction of traditional skills, designs, techniques, markets and patrons, with nothing in their place to offer to castes so long employed in them who suddenly found themselves cast-off their moorings, obliged to take to vocations other than their own, that caste lost whatever significance it had in the organisation of production". Still, caste-based occupations are primarily followed by several castes, viz., (i) Tanti, (ii) Goala and (iii) Jelia.

1) Government help, both monetary and establishment of some handloom industries, have helped the first community. This profession has been remunerative and it was observed during field work that some people belonging to


other castes like Jelia and even Brahmin have taken to this profession. ii) Establishment of milk farms at Beldanga, Haringhata, milk chilling plants at Bethuadahari, Phulia, collection of milk from a number of sub-centres and government loan to purchase milch cows have helped the second caste. iii) The river is the source of fishing and as such, governs the habitation of the Jelia caste. For instance, the habitation of Chai Mondal, a tribal caste of Bihar who emigrated from there and settled along the river Padma. The displaced Jelias also choose river sites for settlement. In some cases, the government helped in the rehabilitation of this caste. For instance, Majher Char under Kalyani P.S. is an area where this caste had been rehabilitated. It is found that the shift of the river and consequent lesser availability of fish from rivers have either forced this caste to shift elsewhere along the river or abandon their profession. Instances are Kaliganj village (Kaliganj P.S.) and Sibnibas etc. In fact, this caste is hard hit by the natural depletion of fishes. These three castes, in fact, are more or less still following traditional profession.

The same is true for the Barui (betel leaf seller) and the Muchi (shoe-maker) castes who follow their traditional occupations. In all the surveyed villages, it was seen that a person belonging to the Barui caste
either possesses a betel vine or if not, he purchases betel leaf and subsequently sells it. The Muchi caste pitches drums, makes baskets, mats and in off-time work in agricultural field.

Certain interesting cases of caste-based occupations may be cited here. The Bayan caste (instrument preacher) of Kaliganj abandoned their title in favour of Chumari (chum, i.e., lime maker), because the previous profession became less profitable. Faced with competition from cheap chemical lime, they again gave up this profession and now they are making mats and also work as day labourers. The second instance is reported from Giria mauza of Raghunathganj P.S., where almost all the people, irrespective of their previous caste-belongings, are now known as Mahishya caste. The following features emerge from a study of the caste system:

1. Caste-based occupations are still followed only by some castes. Some professions followed by particular castes are still remunerative. It is expected that liberal loans from the government will help the other castes. This may solve many economic problems as well as the unemployment problem.

2. Caste system based on function has lost most of its significance. It was found that because of less remuneration from caste-based products, people had
emigrated to distant places in search of employment. The movement of population in the Hugli industrial belt in the pre-independence days may be mentioned as an example. At present, improvement in agricultural activities has brought about some stability in the economy of the villages and the people, irrespective of their belongings to castes, have adopted it as their main profession.

3. During field study, it was reported that people prefer to belong to higher castes. For instance, the villagers of Basirhati of Habra P.S. who previously belonged to Chasa-dhona caste, a section of Scheduled Castes who till land, identify themselves as Satchasi caste, also a cultivating caste but higher in caste hierarchy than the former. Similar case was reported from Chunakhali village in Murshidabad P.S. where the people belonging to Chasa-dhona caste had abandoned it in favour of Moyra caste (confectioner), although most of them now cultivate land.

4. Caste segregation had largely been almost abolished. This became pronounced during resettlement of the displaced persons. All the castes are living together. This is because of necessity of security from dacoities, common fellow-feelings among the displaced persons who previously belonged to the same district and loss of importance of caste as a basis of social
function.

4.5 EFFECT ON AGRICULTURE:

It was noted that emigration, mortality, high rent of land and physical constraints like low productivity of soil, uncertain rainfall adversely affected agriculture in the pre-independence days. After the independence, the situation changed gradually. Both natural growth and immigration from the then East Pakistan caused high pressure of population and this induced the farmers to cultivate land more intensively. Skill of the displaced persons and government help (Plates 15, 16) in kinds and through establishment of a number of agricultural agencies brought about a modification in the existing agrarian landscape. This was noticeable in land use, crop pattern, yield of crops and crop rotation.

4.6.1 Land use - Table IV.6 shows the trend of land utilisation within a span of about fifty years. It reveals that during Settlement Survey and even after that, there were considerable sizes of orchards, fallow lands, waste land and jungle. It was only after the influx of


27. A detailed study of % growth rate of population and total cropped area during the last fifty years has been given in appendix IV.3.
displaced persons that such waste land were brought

Table IV.6
Trend of land use
(% of total geographical area)

<table>
<thead>
<tr>
<th></th>
<th>Net sown area</th>
<th>Orchard</th>
<th>Current fallow</th>
<th>Cultivable and available</th>
<th>Jungle</th>
<th>Area not available for cultivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement Survey, 1918-26/1924-32/1924-33</td>
<td>64.26</td>
<td>5.52</td>
<td>6.51</td>
<td>9.64</td>
<td>1.85</td>
<td>12.22</td>
</tr>
<tr>
<td>Present period, averages of 1977-78 to 1980-81</td>
<td>70.89</td>
<td>2.61</td>
<td>0.33</td>
<td>0.59</td>
<td>0.15</td>
<td>25.43</td>
</tr>
<tr>
<td>Variation</td>
<td>+6.63</td>
<td>-2.91</td>
<td>-6.18</td>
<td>-9.05</td>
<td>-1.70</td>
<td>+13.21</td>
</tr>
</tbody>
</table>

under tillage. Presently, grazing ground is scarce. Even within an orchard, considerable land is being devoted to the cultivation of mustard, sugarcane and pulses. Increase in net sown area may thus be explained. Growth of new settlements, public works and riverine action are the reasons behind an increase in unculturable land. However, the latter category of land has not increased proportionately because of reclamation of some marshy tracts.

29. A detailed study of changes in crop pattern has been given in appendix IV.4.
4.6.2 Changes in crop pattern 30 - It has been noted that the age-old economic pattern was subsistence in nature. Agricultural products were locally consumed, i.e., cotton and mulberry for clothes, tobacco for hooka (Indian tobacco pipe) smoking and sugarcane for gut. There was some trade in silk goods. But gradually this 'use economy' was changed into 'exchange economy'. 31 Formerly, cotton and mulberry were the main crops, but later on, indigo and sugarcane came to occupy this position following new trade policy. A profile of crop pattern during the last fifty years (Table IV.7) shows that

Table IV.7
Changes in crop pattern (% of the total cropped area)

<table>
<thead>
<tr>
<th>Period</th>
<th>Aus</th>
<th>Aman</th>
<th>Boro</th>
<th>Wheat</th>
<th>Pulses</th>
<th>Oilseeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement</td>
<td>31.47</td>
<td>26.56</td>
<td>0.09</td>
<td>2.54</td>
<td>24.17</td>
<td>5.70</td>
</tr>
<tr>
<td>Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ishaque's</td>
<td>33.83</td>
<td>24.73</td>
<td>0.05</td>
<td>1.71</td>
<td>19.61</td>
<td>1.22</td>
</tr>
<tr>
<td>Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>19.82</td>
<td>17.52</td>
<td>6.43</td>
<td>12.76</td>
<td>17.28</td>
<td>5.76</td>
</tr>
<tr>
<td>day figures, averages of 1977-78 to 1980-81</td>
<td></td>
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</tbody>
</table>

(Continued p/124).

30. "For centuries India's agricultural economy had a leavening of manufactures. But British policy, British skill and British enterprise brought about a commercial revolution, established a new economy and bound India's economy to the heels of the British economy (Sinha, N.K., op. cit., p. 1).

31. For detailed study, vide appendix IV.4.
indigo has totally disappeared while cotton and tobacco have lost their importance. Paddy crops like aus and aman have lost their share and replaced by jute. At present, farmers get good returns from sugarcane (Plates 17,18), vegetables and jute, although the prices of these commodities vary depending on the market situation. Wheat and boro paddy as food crops have become popular.

4.5.3 Yield of crops - In the pre-independence days, recurring short supply of river-borne silt, lack of irrigation water, and manures adversely affected production of crops. The Census Report of 1911 said that the average yield of winter rice (aman) of the Nadia district was lower than that of Jessore and Twentyfour Parganas.

districts. This report further maintained that it was becoming necessary to allow the land to remain fallow for longer periods between croppings. Table IV.8 reveals

Table IV.8

Comparative study in crop production
(Yield in kg per hectare)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Aus</td>
<td>1399</td>
<td>875</td>
<td>737 to 1658 (L)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1105 to 3409 (H)</td>
</tr>
<tr>
<td>Amani</td>
<td>2144</td>
<td>1059</td>
<td>276 to 1106 (L)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>737 to 3224 (H)</td>
</tr>
<tr>
<td>Gram</td>
<td>419</td>
<td>921</td>
<td>276 to 1043</td>
</tr>
<tr>
<td>Mustard</td>
<td>349 to 698</td>
<td>461</td>
<td>553 to 737</td>
</tr>
<tr>
<td>Wheat</td>
<td>469</td>
<td>369</td>
<td>1750 to 3593 (H)</td>
</tr>
</tbody>
</table>

N.B. : L= Local variety, H= High yielding variety

lesser production of crops between 1860 and Settlement Survey and an improvement in recent years. The wide range in production of crops in recent years depends on the availability or non-availability of irrigation, fertiliser, agricultural demonstration etc.

4.6.4 Crop rotation - The "varied and colourful" crop pattern was brought about by fallowing a land for longer


period for reasons already cited. During this period, another field of the village was cultivated. The previous field was used for grazing. Excreta of the animals helped to maintain soil fertility. Quick growing babla (*Acacia babool*) trees were also planted for selling at high price. A common practice during the fallowing period was to take only a light crop of pulses instead of rice. Formerly, "indigo used to be alternated with rice, oilseeds now frequently succeed jute, and the pulses rice". Noteworthy was that though rice covered by far the larger portion of the cultivable land, production of second or cold weather crops of pulses, oilseeds grown on aus land were usual crop patterns.

Following are the present crop rotation of this area. In areas growing cane, such as in Kaliganj P.S.,
green manuring – sugarcane – ratoon – green manuring – sugarcane is a good rotation. Other usual rotations are aus/jute, lentil/black gram – aus/jute, aus/jute-gram-aus/jute. The crops raised from an irrigated area are aus/jute-wheat-aus/jute, aus/jute-boro-aus/jute, aus/jute-vegetable-aus/jute. The present tendency among the farmers is to grow more food crops and pulses like

37. The two are alternatively cultivated.
kalai (black gram) is sown as an intermediate crop, i.e., 3 crops in a year. As a leguminous crop, it helps to maintain soil fertility. Worth mentioning is that now-a-days the neem trees are not extensively planted as in the past. Similarly, restoration of soil fertility by long fallowing is not practised now. Nevertheless, the negligible proportion of fallow, i.e., old fallow land is due to barren land.  

4.6 CONCLUSION:

The following may be stated in summing up the discussion:

The period witnessed growth of settlements all over the area. Among the factors of growth, influx of displaced persons following partition of the country was most important. Improvement in health condition also contributed to this growth. Agricultural security, gang robbery and forced occupation of the vested land have also affected settlements of the study area. Following are the characteristics of the present day settlements:

The settlements of today are concentrated near the communication lines. The rivers, as highways of commerce, have been less attractive for new growth of settlements.

Physical, cultural and economic factors have governed the distribution of settlements.

Immigration, emigration as well as depopulation have changed the morphology of the villages.

Caste-based occupations are followed only by a few castes who have been given economic rehabilitation. There is noticeable movement of occupations among castes and caste segregation is no longer an important feature in the morphology of settlements.

There has been an expansion in agricultural activities which may be traced due to pressure of population, new technique of crop cultivation and government help. For instance, the farmer refugees started cultivating low lands, reclaimed culturable waste land, so that the net sown area increased appreciably. This improvement in agriculture has given stability to a settlement.

So far, the changes in rural landscape have been discussed in general. Only detailed case studies can reveal the actual picture. For this purpose, case studies based on sample mauzas have been undertaken in the next chapter.