CHAP. III.

Dynamic Balance Between Environment and Population.

A djustment of man to the Socio-economic Environment.

A glance at the population map of Burdwan Division helps us to form a fairly correct idea as to the available resources in the region and their concentration along particular places, for the population too is similarly arranged.* This we saw in the last chapter. We also saw that, besides Natural Resources which are responsible for food and health, there are other elements constituting the Natural Environment, such as climate, physical features, soil, ground-surface, water, plants and animals, technical knowledge and efficiency of the Community. While in the last chapter we tried to discuss any system or uniformity in the manner of population distribution in this region, to find a casual connection or correlation between density and the factors that are supposed to influence density, in the present chapter we propose to study the variation in the abundance of population in this region during the last sixty years.

The adjustment of man to his environment is never a static process, for the environment is ever changing. The rivers for example, advance from infancy to maturity and subsequently to old age and decay; and are again tampered by human activities. The net product of this dynamic process - namely the distribution of population, will be different in different periods even in the same region. This adjustment might have been satisfactory and progressive, or it might have gone in a wrong direction. Whether it has been satisfactory or

* The Ganges Delta - K. Bagchi. 
Calcutta University. Chap.VI.
otherwise in Burdwan Division, it will be presently our purpose to investigate with reference to the conditions obtaining here.

The population of Burdwan Division was about 77 lacs in 1891 and 111 lacs in 1951. There has thus been an increase of 34 lacs of human souls in this region. The growth has been far from uniform. The attached table shows that between 1891 and 1901 and between 1921 and 1931, the increase was to the tune of 6 lacs,

Table No.- 3.1

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1891</td>
<td>73.94</td>
<td></td>
</tr>
<tr>
<td>1891</td>
<td>76.89</td>
<td>2.95</td>
</tr>
<tr>
<td>1901</td>
<td>82.40</td>
<td>5.51</td>
</tr>
<tr>
<td>1911</td>
<td>84.68</td>
<td>2.28</td>
</tr>
<tr>
<td>1921</td>
<td>80.50</td>
<td>-4.18</td>
</tr>
<tr>
<td>1931</td>
<td>86.47</td>
<td>5.97</td>
</tr>
<tr>
<td>1941</td>
<td>102.87</td>
<td>16.40</td>
</tr>
<tr>
<td>1951</td>
<td>111.03</td>
<td>8.16</td>
</tr>
</tbody>
</table>

between 1901 and 1911 the increase was slight; from 1911 to 1921 there was actually a heavy decline, while from 1921 to 1941, there was a spectacular growth of 16 lacs, and from 1941 to 1951 there was a growth of 8 lacs. From five hundred thousand per square mile in 1891, the density rose to 529 in 1901, to 611 in 1911, then it recorded a sharp fall and came down to 581 in 1921. It then began to revive, passed the '618' mark in 1931 and reached the peak point of 728 in 1941.

Birth, death and migration are the means through which the
ecological adjustment is brought about; as exact number of birth, death and migration is not available, we can only observe the chief forces underlying this growth. Forces on the positive side are the extension of cultivation, double-cropping, expansion of irrigational facilities, improvement and development of Sanitary and Public Health measures, establishment of mills and factories, growing industrialization and emergence of towns. On the negative side of the Balance-sheet, we find crop-failures, drought and famine, disease and pestilence, floods and fevers looming large.

Comparison with other Natural Regions of Bengal:

The table No. 3.2 gives the increase in the density of habitation in the four Geographical Divisions or Regions of Bengal.

<table>
<thead>
<tr>
<th>GEOGRAPHICAL DIVISION</th>
<th>1901</th>
<th>1911</th>
<th>1921</th>
<th>1931</th>
<th>1941</th>
</tr>
</thead>
<tbody>
<tr>
<td>West</td>
<td>595</td>
<td>611</td>
<td>581</td>
<td>618</td>
<td>728</td>
</tr>
<tr>
<td>Central</td>
<td>515</td>
<td>541</td>
<td>543</td>
<td>566</td>
<td>781</td>
</tr>
<tr>
<td>North</td>
<td>499</td>
<td>528</td>
<td>538</td>
<td>550</td>
<td>605</td>
</tr>
<tr>
<td>East</td>
<td>513</td>
<td>577</td>
<td>625</td>
<td>688</td>
<td>813</td>
</tr>
<tr>
<td>Bengal</td>
<td>521</td>
<td>563</td>
<td>578</td>
<td>616</td>
<td>742</td>
</tr>
</tbody>
</table>

It is clearly revealed that the growth has been much steadier and faster in the Dacca and Chittagong Divisions in East Bengal. This difference in growth glaringly demonstrates the contrast in the environmental-economical features of West Bengal and East Bengal. West Bengal, that is Burdwan Division is the moribund part of the Gangetic Delta, where the rivers have long stopped their alluvial action, and land-formation and land-fertilization is no longer the
natural process. East Bengal on the other hand is still an active delta, where the rivers continue to flush the fields and deposit rich alluvium on the soil. The annual deposit of silt on the river-bed and shores of the Ganges and its tributaries maintains the natural fertility of the soil and keeps agricultural productivity at a high level. The deltaic distributaries act as natural drainage channels and thus solve to a large extent the problem of sanitation. In West Bengal (as well as in Central Bengal) the distributaries have now ceased to function as drainage channels, the low lands between the high banks of the rivers remain water-logged, and become the breeding place for Malaria, Cholera and other Tropical diseases.

**Economic resources, Health and Population**

The relation between condition of Health and growth of population is obvious. A study of the vital statistics clearly shows that in Eastern Bengal the natural increase of population is faster both because birth-rate is higher and death-rate is lower. The relation between the growth of population and Economic resources though less obvious, is none the less real. The fact seems to be that, the diseases are the instruments of adjustment of population to economic resources. According to Dr. Bently, Malaria manifests itself in Bengal as the instrument of adjustment of growth of population to economical conditions.*

Malariologists have thus attempted to correlate Malaria and economic stress and the invariable accompaniment of the latter—malnutrition. In a special enquiry regarding an epidemic fever in C.F. in 1897, "Almost all the medical officers employed agreed in holding that the fever was ordinary Malaria fever, which though it attacked all classes

more or less, was specially fatal only in the case of those who had suffered from privation."* In his studies of Malaria in the Punjab Christopher observed that the heaviest epidemics occurred among the poorest classes. Of 12 great epidemics of Malaria which devastated the Punjab since the last half of the 19th Century, Seven followed periods of famine or acute scarcity. "Taking the price of food-stuffs as an index of scarcity he found a high correlation between scarcity and mortality from fever; the epidemics of 1870, 1872, 1878, 1881, 1887, 1890, 1892, 1900, 1908 - all occurred during periods of high prices."** The upshot of the whole discussion is that an insufficiency of food and repeated attack of Malaria are so interwoven into the social and economic problems of the people of this region, that it is impossible to separate them out.

Famine, Fever & Flood as factors in the growth of population:

The folklore of Bengal is full of tales of dry season, short crops, insect pest, ravaging fevers, and devastating floods. It will be well therefore to give some considerations to the role of famines, floods and fevers in the growth of population during the last Century. Correct informations are woefully inadequate in this respect. Famines, floods, and fevers were almost annual occurrences in the past in one part of our region or another. A detailed description of these would take us much beyond the scope of our present study. We will mention very briefly only the most important of them in the different districts.

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Birbhum — Famine — 1770 - 1776—Famine

1791 — Crops suffered Heavily.
1800 — Extra-ordinary Drought.
1803 —
1829 — Acute distress.
1837 —
1874 — Famine
1885 — Scarcity.
1787 — High Flood.
1902 —
1870-80 — Burdwan Fever.
1881 — Wide Fever.
1891 — Wide Fever.

Barkura — 1866 — Most terrible Famine.
1874 — Famine.
1885 — Scarcity
1897 — Famine.
1897 — Flood.
1870-1880 — Burdwan Fever.

Midnapur — 1766 — Famine.
1792 — Famine.
1751 — Famine — "Loss of nearly 5/8th of rice harvest."
1866 — Severe Famine.
1897 — Famine. "Only a small tract affected"
1823 — Flood.
1831 — Flood.
1833 — Very Serious Flood.
1834 — Very Big Flood.
1839 — Flood
Midnapur (Continued) - 1840, 1845, 1848, 1850, 1888 - Very Severe Flood.

Storms & Cyclones - 1831, 1832, 1833, 1840, 1848, 1850, 1851, 1876, 1885, 1901.

Very Severe Storms & Cyclones - 1864, 1867, 1874, 1871-80 - Burdwan Fever.

Hughly -

1710 - 11 - Faminas
1769 - 70 - Great Famine
1783 - Famine indirectly affected
1788 - Famine - Great distress

1834
1837 - Scarcity and droughts
1846

1866 - Great Famine
1874 - Famine
1864 - Violent Cyclone
1874 - Cyclonic Storm
1833
1842
1801

1888 - Tornado
1870 - 90 - Burdwan Fever
1896, 1897 - Great Cholera mortality

Howrah -

1737 - Cyclone
1832
1833
1842
1864

1770 - Great Bengal Famine
1788 - Famine
1866 - Famine

Kesari - 1787, 1823, 1833, 1844, 1845, 1864, 1885, 1901
Floods 1905
Variation of density in the districts.

After this brief survey of the ecological adjustment in our region during the last Century, we shall make our study more specific with regard to each of the districts, and investigate into the general and special features that influenced the growth in/during the last 60 years. The table No.3.3 gives the size of the populations in the six districts since 1891. The general trends for all the districts were as follows.

Table No.-2.3

<table>
<thead>
<tr>
<th>Year</th>
<th>Burdwan</th>
<th>Birbhum</th>
<th>Bankura</th>
<th>Midnapore</th>
<th>Hooghly</th>
<th>Howrah</th>
</tr>
</thead>
<tbody>
<tr>
<td>1891</td>
<td>1388</td>
<td>802</td>
<td>1070</td>
<td>1116</td>
<td>1054</td>
<td>764</td>
</tr>
<tr>
<td>1901</td>
<td>1522</td>
<td>907</td>
<td>1139</td>
<td>1261</td>
<td>1049</td>
<td>851</td>
</tr>
<tr>
<td>1911</td>
<td>1534</td>
<td>940</td>
<td>1193</td>
<td>2821</td>
<td>1060</td>
<td>944</td>
</tr>
<tr>
<td>1921</td>
<td>1435</td>
<td>852</td>
<td>1080</td>
<td>2667</td>
<td>1060</td>
<td>944</td>
</tr>
<tr>
<td>1931</td>
<td>1578</td>
<td>946</td>
<td>1120</td>
<td>2799</td>
<td>1048</td>
<td>937</td>
</tr>
<tr>
<td>1941</td>
<td>1691</td>
<td>1048</td>
<td>1112</td>
<td>3191</td>
<td>1067</td>
<td>1060</td>
</tr>
<tr>
<td>1951</td>
<td>2122</td>
<td>1067</td>
<td>1290</td>
<td>3359</td>
<td>1319</td>
<td>1554</td>
</tr>
</tbody>
</table>

Table No.-3.4

<table>
<thead>
<tr>
<th>Year</th>
<th>Burdwan</th>
<th>Birbhum</th>
<th>Bankura</th>
<th>Midnapore</th>
<th>Hooghly</th>
<th>Howrah</th>
</tr>
</thead>
<tbody>
<tr>
<td>1891</td>
<td>517</td>
<td>456</td>
<td>428</td>
<td>521</td>
<td>870</td>
<td>1407</td>
</tr>
<tr>
<td>1901</td>
<td>570</td>
<td>515</td>
<td>428</td>
<td>552</td>
<td>863</td>
<td>1668</td>
</tr>
<tr>
<td>1911</td>
<td>572</td>
<td>534</td>
<td>434</td>
<td>552</td>
<td>915</td>
<td>1850</td>
</tr>
<tr>
<td>1921</td>
<td>582</td>
<td>473</td>
<td>434</td>
<td>528</td>
<td>908</td>
<td>1882</td>
</tr>
<tr>
<td>1931</td>
<td>600</td>
<td>553</td>
<td>389</td>
<td>534</td>
<td>939</td>
<td>2104</td>
</tr>
<tr>
<td>1941</td>
<td>699</td>
<td>601</td>
<td>424</td>
<td>605</td>
<td>1142</td>
<td>2457</td>
</tr>
<tr>
<td>1951</td>
<td>810</td>
<td>612</td>
<td>487</td>
<td>637</td>
<td>1289</td>
<td>2572</td>
</tr>
</tbody>
</table>
A marked growth in the decade 1891 - 1901 was followed by a slow growth in the next. Between 1911 and 1921 all the districts had their population reduced considerably owing mainly to the influenza epidemic that visited all the districts, took a heavy toll of lives and sapped the vitality of the survivors. The only exception to the all-round decrease was Howrah which revealed an increase in its size of population due to its growing industrialization. In the next three decades the population in all the districts went on expanding in varying degrees. Behind this growth of population, different factors played their part - the specific impact of which must now be studied. The adjoining diagram shows the trends clearly.

Two dominant features stand out very clearly from these tables. 1. The growth was more rapid in the industrial-cum-urban districts of Hooghly and Howrah; and more slow in the rural districts of Bankura, Birbhum, and Midnapore.

2. After a slow growth and zig-zag movement upto 1921 the growth became much steadier and faster since that time. This is in harmony with the fact that it was since 1921 that our economic life was to some extent stabilized. Whatever industrialization we have achieved until now began to occur since that time; the transport and communication system having improved considerably, despatch of food during famine years became more prompt and the havoc of famine declined.

**Burdwan District: 1891-1901**

The densities of population in the four sub-divisions of Burdwan Division are revealed in the following table.
VARIATION IN DENSITY IN THE SUB-DIVISIONS.

- BUKUWAN SADAR
- ASANSOL
- KALNA
- KATWA
- SURI
- RAMPURKHAT
- BANKURA SADAR
- VISHNUPUR
- MIDnapur SADAR
- JHAKRANG
- SHITAL
- CONAI
- TAMLUK
- HUSHLY SADAR
- SERAMPUR
- AKRAMBASH
- HOWRAH SADAR
- ULUBERIA

YEAR: 1871, 1881, 1891, 1901, 1911, 1921, 1931, 1941, 1951
In 1891 Saidar Sub-division had the minimum density and Kalna the maximum.

<table>
<thead>
<tr>
<th>Sub-Division</th>
<th>Density in 1891</th>
<th>1901</th>
<th>1911</th>
<th>1921</th>
<th>1931</th>
<th>1941</th>
<th>1951</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burdwan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sadar</td>
<td>489</td>
<td>536</td>
<td>523</td>
<td>450</td>
<td>486</td>
<td>573</td>
<td>623</td>
</tr>
<tr>
<td>Kalna</td>
<td>580</td>
<td>595</td>
<td>542</td>
<td>531</td>
<td>558</td>
<td>643</td>
<td>795</td>
</tr>
<tr>
<td>Katwa</td>
<td>576</td>
<td>616</td>
<td>647</td>
<td>532</td>
<td>655</td>
<td>733</td>
<td>769</td>
</tr>
<tr>
<td>Asansol</td>
<td>502</td>
<td>600</td>
<td>625</td>
<td>661</td>
<td>742</td>
<td>972</td>
<td>1235</td>
</tr>
</tbody>
</table>

At present Asansol has the maximum (1235), and Sadar the minimum (623). From the ravages of the fever-epidemic of which we have already spoken, the district made a rapid recovery and between 1891 and 1901 added 10% to its population. Crops were generally good, cultivation benefited by the rise in prices, and many of the landless labourers obtained remunerative employment in the Coal-fields of Asansol. The increase was the greatest in Raniganj Sub-Division (now Asansol), which was not only the healthiest part of the district but also gained most from immigration. More than half of the total number of immigrants in the Burdwan District were enumerated in the Sub-division.* "The town of Raniganj is a great trading centre and is probably one of the busiest places in Bengal." The increase was also considerable in the Sadar and Katwa Sub-Division where there had been comparatively little immigration excepting certain stray agricultural labourers from Birbhum and Bankura. The growth was most noticeable in the Ausgram and Galsi thanas which with Koksa had formed the focus of the fever. Those thanas

* Census of India Vol. VI. Pt.I, 1901, page-44.
were naturally healthy and disappearance of the epidemic was followed by a rapid recovery. That the improvement was not equally marked in Koksa was due to the poverty of the soil in that thana, and its proximity to the coal mines, where good wages were obtainable and which attracted a part of its population. The only part of the district that did not take a share in the general revival were two of the three thanas of Kalna Sub-division—Kalna and Purbasthali. The soil in these thanas was water-logged—full of hills and jungles and were more unhealthy than any other part of the district.

1901—1911.

In the next decade conditions were generally unfavourable and excess in the recorded number of the deaths over the recorded number of birth was in the vicinity of twenty thousands.* There were repeated epidemics of Cholera, those of 1907 and 1908 being specially virulent, while Malaria continued to levy its annual toll. Some scarcity was felt in 1904 and in the Katwa Sub-Division in 1908. The total population increased by less than 5%; there would actually have been a decrease had it not been for the influx of labourers in the Coal-fields. There was a dull situation in the Coal market, reducing the number of workers in the coal mines from 39.4 thousand to 37.6 thousand,** Asansol Sub-Division grew only by 4.7% as against 30% during 1901—1906. Katwa was the only other Sub-Division where there was any growth in population. Density per square mile increased from 615 to 647 and was the highest in the district. In the Sader and Kalna Sub-Division, the loss was shared in by every thana except Manteswar and Shahibgunj.

* Public Health Reports, Bengal, 1901—1910.
** Census of India Vol.5 Pt.1, pp.43-64.
Reference has already been made to the Influenza Epidemic in the latter part of the decade 1911-21. This was the most important single factor in the variation of population in the decade. All the Subdivisions except Asansol recorded a sharp reduction in the size and density of population. There was a decrease of 12.3% in Koksa, which is purely agricultural, and it was certain that, but for industrial expansion there would have been a decrease in other parts of Asansol Subdivision also. Sadar Sub-division had a heavy fall in numbers - particularly in parts adjoining Bankura district. Urban and Sub-Urban areas suffered less than the rest - in contrast to the experience of 1901-11 when Malaria had taken a heavier toll from the immediate neighbourhood of towns. Areas under Galsi, Khandaghosh, Raona, Shahibganj and Ketugram thanas suffered most from the floods of rivers Damodar, Ajoy and Khari. The water-logged conditions that continued for many months in the year in these areas gave birth to acute Malaria. The vital records reveal an excess of deaths over births to the tune of 115,910 - a greater excess than that shown by any other district. Deaths exceeded births in every year except 1911, 1916 and 1917.

Since the systematic repair of the embankment of the Damodar there was some sign of relief from Malaria and some hope of security from disastrous floods. At the time of the Census of 1931, the construction of the Damodar Canal and another Canal attracted a number of labourers who probably left the place later. This temporary immigration together with the natural increase was offered as an explanation for the increase of population in Burdwan, Raima, Khandaghosh, Galsi, Bhatar and Ausgram Police Stations. In all the police

* Public Health Reports Bengal 1911-1920.
stations of Asansol the collieries and other industrial concerns led to the growth in number. An average increase of over 14% was recorded in the Katwa Sub-Civilisation and was due to a general improvement in the health of the people, and in the economic condition of the agriculturists. In Kalna Sub-Division, an increase of 12.3% in the Manteswar P.S. was attributed to the healthiness of the area. In the Kalna Police-Station the 5.1% increase as against a continued decline since 1891, was possible because of the adoption of Public Health measures, improvement in the supply of pure drinking water, and the opening of the moffussil dispensaries. Malaria continued its havoc in Purbasthali and reduced the increase to 1.9%.

BIRBHUM DISTRICT.
1891-1891

As late as 1891, Birbhum could not recover from the devastation of the Burdwan Fever. The high mortality in the Bolpur and Sakulpur Thanas was responsible for this. Since 1891, recovery started and there was a great improvement in the health of the people. There was occasional Cholera outbreaks, but no serious epidemics. There are evidences of short crops in 1891, 1895 and 1896; but there was no serious distress. In other years, the output was good and the peasants benefitted by rise in prices. Landless labourers, of whom there were and still are a good number in this district, suffered due to this; but they obtained employment in the Coal-pits of Asansol and emigrated. The net result was a 13% increase by 1901 in the district over the population of 1891.
VARIATION IN DENSITY IN THE SUB-DIVISIONS OF THE DISTRICT OF BIRBHUM SINCE THE YEAR 1891.

<table>
<thead>
<tr>
<th>Sub-Division</th>
<th>Density in 1891</th>
<th>1901</th>
<th>1911</th>
<th>1921</th>
<th>1931</th>
<th>1941</th>
<th>1951</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sadar</td>
<td>425</td>
<td>484</td>
<td>492</td>
<td>447</td>
<td>520</td>
<td>549</td>
<td>561</td>
</tr>
<tr>
<td>Rampurhat</td>
<td>509</td>
<td>568</td>
<td>606</td>
<td>546</td>
<td>626</td>
<td>700</td>
<td>707</td>
</tr>
</tbody>
</table>

There was some immigration of Santhals* and up-countrymen for cultivation and railway construction. But the total number of foreign settlers as the Census table shows was only 14000 greater than in 1881.** This was again largely counter-balanced by emigration. The increase was thus mainly due to natural growth. The improvement was most marked in the South of the district. The continued advance of the Rampurhat Sub-Division was attributable by-the-Railways, partly to its fertile soil and partly to the fact that it was tapped by the Railways. The least progressive Thana was Muraroi, where there was a large proportion of unculturable wastes due to comparative infertility of the soil, though it was compensated to some extent by the immigration of Santhals.

1891 - 1911.

Birbhum was and is almost wholly dependent on agriculture. After a fair out-turn up to 1905, the crops were short between 1906 and 1908, leading to some scarcity in 1908-9. The high prices caused suffering among the poorer, middle classes, landless labourers.

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* Cf. Tarasankar Banerjee - "Kalindee". In this famous Bengali novel as in many others, a reference to Santhal immigration in the District of Birbhum is available.

and small cultivators. The Santhals and Semi-aboriginal tribes, who could not find local employment, went away, but were invited back by the return of good crops in the two succeeding years. A serious flood occurred in 1902, overflowing the banks of the Brahmani in Muraroi P.S., the Bahsoli in Nalhati, and the Mor in Suri. Great loss was caused to cultivation. The health of the district was generally good except in 1906-08, when it suffered from a wave of fever and epidemics of Cholera. In these three years, deaths much exceeded births.*

In the decade as a whole, there was an excess of births over deaths and the census of 1911 showed an increase of 3.6%. The growth of population was enjoyed by all the thanas except Suri and Dubrajpur in the west of the Sub-Division. Here the soil is less fertile than in the East, and heavy mortality was caused by Cholera and small pox in 1908. Owing to the loss in these two thanas, the average increase in the Sadar Sub-Division was only 1.5%, while it was 6.73% in the Rampurhat Sub-Division. Muraroi P.S. in the extreme North, which received the largest number of immigrant Santhals, grew most rapidly in contrast to the previous decade, and was closely followed by Rampurhat and Nalhati.

1911-21.

The recorded birth-rate in the district was high at the beginning of the decade, and continued high until 1915, when it fell to 24.1 per mile.** It rose again, and continued at a high level;

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* Public Health Reports, Bengal, 1906, 1907, 1908.
** Public Health Report 1915.
until in 1919 it fell to 23.7. Again it rose to 27.6 in 1920. The death-rate at the beginning of the decade was considerably above the average for Burdwan Division. It rose to 46.7 per mile in 1914, fell steadily to 26.3 in 1917, in 1918 it was 49.6 and in 1919 it reached the staggering figure of 62.3. Deaths recorded in the decade exceeded births by 74553, i.e. as much as 7.96% of the population of 1911. The number of immigrants to and emigrants from this district decreased since 1911.

1921 - 31.

In this decade there has been some apparent increase in some police-stations by accretion of new areas. Some part of the increase in Suri, Dubrajpur, Mohammad Bazar, Khoyrasol, Sainthia, Bolepur, Isambazar, and Labpur P.S.'s was due to the increase of area, which they gained at the expense of Nanpur, and Mayureswar, the only two police-stations in which a decrease was recorded. Immigration of Santhals, Koras and aboriginal labourers from Behar and Orissa partly explain the increase in Rajnagar. Immigration was stimulated in Rampurhat and Nalhati by industrial expansion as well as by the healthiness of the area. The establishment of a Railway Settlement in Rampurhat added momentum to this. The opening of a few rice-mills and development of trading centres in Sainthia and Ahmadpur led to the growth of Sainthia Police Station. In Muraroi there was an increase - the only available explanation being a healthy climate and natural causes like excess of births over deaths.

BANKURA DISTRICT.

1891 - 1901.

The greater part of Bankura district is high and undulating.
The soil is poor, but as the drainage is good, malaria was less frequent. In Vishnupur Sub-Division the land is low and fertile, but the climate is unhealthy and malarious. The Sadar Sub-Division was never subjected to the ravages of the Burdwan Fever, and had its population expanded by 21% between 1872 & 1891. During this very period, the population of Vishnupur, inspite of its superior fertility declined by more than 6%. The district as a whole showed an increase of 7.6% in 1881 and 2.7% in 1891. During the decade 1891-1901, health standard was generally fair, but impact of diseases was felt intermittently. Between 1894-1897 cholera was widely prevalent and mortality was high. The recorded birth rate always exceeded the death rate. With the exception of some scarcity during 1896-97, the crops were generally good.

Table No.- 3.1

VARIATION IN DENSITY IN BANKURA DISTRICT SINCE 1891

<table>
<thead>
<tr>
<th>Sub-Division</th>
<th>Density in the year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1891</td>
</tr>
<tr>
<td>Sader</td>
<td>360</td>
</tr>
<tr>
<td>Vishnupur</td>
<td>539</td>
</tr>
</tbody>
</table>

In view of such generally favourable conditions, population was expected to record a large increase. Actual increase however was only 7% in Vishnupur and 3% in Sadar Sub-Division. Considerable exodus of the people explains this inconsistency. The Census Report of 1901 reveals that the number of immigrants into the district fell by 1300, while that of emigrants increased by 38000*

The emigrants for the most part were hardly aboriginals from the south and east of the district who were attracted by the high pay obtainable on the coal fields of Asansol and Tea Gardens in Assam. Mention must also be made of the labour recruiting activities on behalf of the Tea Gardens. There was some temporary emigration also by the semi-Hinduized tribes, who wanted to supplement their scanty earnings from land by working in the metropolitan district. They left home in December and returned after the Monsoon broke. Thus when the Census was taken they were away. "But for these movements of the people, the growth of the population would have been two or two-and-half times as greater as that recorded at the Census".

1901-1911.

Conditions between 1901 and 1911 were on the whole favourable for a further expansion. Railway was introduced in the early part of the decade and health was good in the first seven years. At the close of 1907, crops failed over a wide area, specially affecting Raipur, Onda and Khatra. Distress was felt acutely and relief was given to a large number of persons. Deaths increased and births fell in the next year.** This state of affairs however did not persist and once again births were seen to outnumber deaths.

While the Sadar Sub-division added 4.3% to its population, the Vishnupur Sub-division suffered a loss of 3%; surprising as it may seem that Vishnupur with its more fertile tracts had been growing

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* Census of India Vol. VI, Pt. I 1901 page-47
** Public Health Report, 1908.
less rapidly or actually declining, while the Sadar Sub-Division with its barren rocks and less fertile soil had been expanding more rapidly. The difference in the health conditions and lesser prevalence of disease among the Semi-aboriginals of Bankura Sader explain this discrepancy. And an additional reason which must be mentioned is that the density had already been higher by about 100 persons per square mile in the plains than in the uplands, and less scope was left for further growth.

1911-21.

Crop failures were quite frequent in the Bankura district. A dry season or an early cessation of the rains would ruin the crop. This happened twice in the decade 1911-21, and brought about acute famine conditions. Comparatively free from Malaria as the uplands were, they suffered very severely from the Influenza Epidemic, coming after the famine had sapped the vitality of the people. Between 1911 and 1921 the Sadar Sub-Division lost 7% of its population. The loss was more than double as high in Vishnupur in the same period, i.e., by 16%. No Sub-division in Bengal had sustained such a loss in one decade since 1872.

The number of both immigrants and emigrants decreased in the present decade leaving the balance of emigration over immigration about the same as twenty years back. The reduced receiving capacity of the districts into which emigration took place, due to stagnant conditions in industry and Trade can be offered as the only explanation for this.

1921-31.

In the previous decade both the Sub-divisions suffered heavily from epidemics and other causes. The present decade showed the
The recuperative power of Nature is specially in the Sadar Sub-division. Vishnupur repeated the old story of having its population reduced. The decrease in all the Police-stations of this sub-division was reported to be due to a steady falling off of the birth-rate owing to the reduction of vitality by diseases like Malaria. In the Sadar Sub-division every police-station showed an increase which was as much as 18.9% in Saltora and 18.7% in Bankura, and over 17% in Khatra and Indupur police-stations. In the Sadar police-station the establishment of some mills and factories attracted many immigrant labourers. In Onda and Chatra police-stations, mills were opened and the manufacture of bell-metal expanded. These industries attracted labourers to Chatra police-station, while the fertile soil of Onda retained the population inspite of prevalence of Malaria.

In Gangajalghati, Saltora, Berjora and Mejhia police-stations, the soil and the climate were improving and some immigration was caused from the neighbouring districts. Preventive works against Malaria, small pox and other epidemic diseases improved the village-sanitation considerably. In Ranibendh, Raipur and Simalpal, a succession of good seasons and improvement of village sanitation made the increase possible whilst in Khatra, Indupur and Taldangra, the increase was due to the natural excess of births over deaths.

**Midnapur District**

1891 - 1901

Midnapur is an extensive district and comprises tracts of varied characteristics. The sub-divisions of Contai and Tamluk are on the Sea-coast and on the estuary of the Hooghly, and contain the mouths of Rasalpur and Haldi rivers. They were in the past...
tively free from Malaria, and produced abundant quantities of rice.
Further North, the Ghatal Sub-division slopes back from the bank of
the Rupnarayan. The soil is a rich alluvium, and much of its area has
been liable to floods, and Malaria has been rampant. The climate is
not bad, but the soil is rather dry and infertile. Towards the East
and the south, the level dips, and a swampy hollow is formed between
the elevated country to the west and the comparatively high ground
along the coast.

After the recovery from the devastations of the Burdwan Fever
the district enjoyed rather good health, Cholera and small pox epidemics
decreased to a great extent, owing to the opening of the Railways
through the district, which carried the crowds of pilgrims to Jagannath,
who previously plodded wearily on foot, and spread diseases in all
directions along their lines of march.

Table No. - 3.8

<table>
<thead>
<tr>
<th>Sub-division</th>
<th>1891</th>
<th>1892</th>
<th>1893</th>
<th>1894</th>
<th>1895</th>
<th>1896</th>
<th>1897</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sadar</td>
<td>374</td>
<td>391</td>
<td>397</td>
<td>373</td>
<td>424</td>
<td>467</td>
<td>514</td>
</tr>
<tr>
<td>Jhargram</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>338</td>
<td>359</td>
<td>399</td>
</tr>
<tr>
<td>Ghatal</td>
<td>881</td>
<td>874</td>
<td>611</td>
<td>737</td>
<td>741</td>
<td>739</td>
<td>844</td>
</tr>
<tr>
<td>Tamluk</td>
<td>819</td>
<td>823</td>
<td>921</td>
<td>833</td>
<td>859</td>
<td>1006</td>
<td>1053</td>
</tr>
<tr>
<td>Contai</td>
<td>642</td>
<td>710</td>
<td>726</td>
<td>733</td>
<td>804</td>
<td>829</td>
<td>811</td>
</tr>
</tbody>
</table>

In the decade 1891 - 1901 there was fair prosperity all round,
price of rice went up because of opening of the Railways in 1897, when
there was the pinch of famine in other places, the peasants, sold their
vast stocks of rice at high prices. On the whole, population increased by 6%. The Contai Sub-division had the largest increase (11%). The Ghatal Sub-division lost nearly 1% of its population. Sabang and Narayanganj thanas in Sadar Sub-division had very small increases, while Debra thana had actually a decrease. These were caused by a movement of a portion of population from the densely populated tracts in the North East, and Centre of the district to the reclaimed Jalpai lands along the Coast and tidal rivers in Contai and Tamluk. From the times of the Mahammadans these lands had been reserved for the accumulation of salt and supply of fuel to boil the brine. The manufacture of salt by Govt. had stopped nearly forty years ago, and people extensively settled on the tracts. Embankments were raised to keep out the salt water, which however caused serious deterioration in the beds of the Tidal rivers and Khals, and rendered more frequent the flooding of the low lying tracts.*

In relation to the size of the population both emigration and immigration was small. The total number of immigrants in this decade was 50,000 and that of emigrants being 134,000, the district had a net loss of about 1% due to these movements.**

1901 - 11.

The net increase disclosed by the next census was 1.15% widespread epidemics of Cholera in 1901, 1902, 1906 and 1907, epidemic of Small pox in 1902 and the extensive fevers in the water-logged areas, occupied coupled with poor cut-turn of crops continuously for a few years, were stated to be responsible for a scanty increase in this

* - Mazumdar - op. cit.
**- Census of India Vol.VI. Pt.1, page-47(1901)
decade. All the sub-divisions had a growth of population except Ghatal, which had been a declining area for quite a long time, owing chiefly to its low level and repeated floods. In 1909, 546 villages were visited with high floods and crops over 85000 bighas were destroyed.

Comparatively free from Malaria, Contai and Tamluk sub-divisions increased at about the same rate. In Sadar Sub-division six thanas had slight gains and six had losses. Fever in the swampy thanas of Midnapur, Kasari and Debra, and Chelora in the upland block of Garbeta, Salbani and Kespur thanas account for this loss. It was Kharagpur thana alone, that showed a big advance - to the extent of 20%, entirely due to the expansion of Kharagpur town - an important Railway Centre containing the workshops of the B.N.Ry.

1911 - 21.

The Influenza Epidemic cut down the population of Midnapur as in other districts. The constant recurrence of floods and lack of drainage caused permanent depreciation in the soil in wide areas. On the except of which influenza caused a heavy mortality and Malaria took its regular toll. All these disabilities combined to sap the vitality and keep down the birth-rate. Recorded deaths exceeded births by 64,000.** A decline by 5.5% in the district population was the net outcome, though the loss was most unequally shared by the different sub-divisions.

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* Bengal District Gazetteer, Midnapur, pp.(94-100)
**- Public Health Reports, Bengal, 1910 - 1920.
Midnapur had always a net loss by migration. The construction of B.N.Railways added momentum to this flow. In the decade under discussion, the number of immigrants residing in the district fell by five thousand, while the number of emigrants rose by six thousand. The continued rise in the emigration figures of Midnapur bears out the conclusion that the pressure on land is great and raises the suspension that the capacity of land in parts of the district was deteriorating.*

1931 - 31.

This was a decade of all-round expansion. But Ghatal and Sadar Sub-division had the smallest increase. Malaria explains the decline in Debra, Sabang and Pingla; but the decrease in Salbani was due to the emigration of the Santhals and the Kurmis elsewhere in search for food. Extensive Malaria led to the falling off of the population in two of the three police-stations of Ghatal Sub-division. Ghatal police-station had a small increase, ascribed to the sinking of a large number tube-wells and to the immigration of Santhals as agricultural labourers. The newly created sub-division of Jhargram had the largest increase. The climate here is healthy, the B.N.Rly., mainline passes through it, a number of immigrants and persons seeking health-resort were encouraged to settle here. A considerable amount of Jungle and waste lands lies in the South and the West of the Sub-division, into which Santhals and other aboriginal tribes were migrating. Tamluk sub-division showed an increase of 7.9%; Sutahat Nandigram police-stations enjoyed good health and had a larger increase. In the rest of the district, it was natural causes that appeared to have caused the increase. There was neither immigration, nor any mentionable expansion of industries.

* Census of India vol v. pt 1. p.41. (1931)
Hughly District has no uplands, but Arambagh Sub-division falls within the water-logged belt below the uplands where the land has suffered permanent depreciation from the frequent floods of Damodar, and the people are sodden with Malaria. Malaria of Arambagh has almost been a proverb, so much so, that Govt. Officers consider it a punishment to be transferred to this Sub-division, and the Authorities of the Departments use the threat of transfer to this area for enforcing discipline and obedience among the staff.

Considerable parts of Sadar and Serampore Sub-division along the Hoo Hoooghly have been largely industrialized, and towns have cropped up as a result. Besides, the area being very near Calcutta, a different pattern of life from the rest of Bengal is fast developing. The rest of the district is characterized by overgrown vegetation, and wears an air of stagnation. Its surface is little above sea-level, drainage is bad, and is yearly getting worse as the silting up of the old stream continues.

Table No. 3.9

<table>
<thead>
<tr>
<th>Sub-Division</th>
<th>Density in the year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sadar</td>
<td>1891  1901  1911  1921  1931  1941  1951</td>
</tr>
<tr>
<td></td>
<td>700  698  711  714  740  895  1019</td>
</tr>
<tr>
<td>Serampore</td>
<td>1166  1205  1345  1457  1823  2096</td>
</tr>
<tr>
<td>Arambagh</td>
<td>800  806  780  711  836  899</td>
</tr>
</tbody>
</table>

The virulence of Burdwan fever was more severe here than in the district of its origin. The district recovered from that in the...
eighties. In the decade 1891-1901, though there were no violent outbreaks of cholera or smallpox, death was maintained at a high level as a permanent feature, thanks to the continued prevalence of malaria, cholera and smallpox. A small increase of population (1%) was recorded in the decade, entirely due to a rise in the number of persons from outside the district who were enumerated in the district was greater by nearly 40,000 than in 1891, while the number of emigrants was less by 33,000. Much of the migration to and from the district was of a temporary nature, rendering it difficult to gauge its effects on the population. The only part of the district which showed a marked advance was the great industrial area of Serampore, where the increase amounted to 17%, the actual addition to its population being about the same as in the district as a whole. Two of the Police Stations, Haripal and Chanditola, showed a nominal increase due in the latter to the importation of coolies to work in the brickfields. Sadar Sub-division had a general decline except in the Pandua Police Station where there was an advance of 4%.

In the next decade there was an increase of 3.9% - the most of which was due to the influx of immigrants rather than to natural growth. Recorded deaths exceeded births, the only years in which births were in excess, being 1904, 1905 and 1910. Fever was rife as an inevitable result of the configuration of the land. Efficient drainage seemed to be an impossibility as there was not sufficient fall.

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** - Emigrants
Immigrants 1891 138,714 Census of India Vol. VI
Emigrants 156,241 122,841 Pt.1(1901) page-41

Tanks, pits and dobas abounded in towns and villages more than in any other district, probably because the building of a house necessitated the excavation of a pit to get the earth necessary for the plinths to raise the house above flood level.*

Together with the mills and factories, needs of cultivation created a periodic demand for immigrant labour. The large industries developed steadily - the average daily number of operatives in registered factories rose by ten thousand in the decade.** The number of persons from outside enumerated within the district was 45,000 more than in 1901. The emigrants consisted to a large extent of clerks and others who went to work in Calcutta and elsewhere, but had kept houses in the district and returned at intervals.

Serampore Sub-Division was the only progressive part in the district. Here the increase by 86,000 exceeded that of the district as a whole. The Dankuni and Rajapur drainage schemes reclaiming the marshes, the branch Railway line from Sheoraphuli to Tarakeswar connecting the E.I.Rly. main line, and the Howrah Shakhala Light Railway (opened in 1897) had their respective parts to play in the increase of population. Sadar sub-division was almost stationary, and Arambagh sustained losses in each of its thanas, the severest loss occurring in Goghat, a marshy tract, difficult of access and infested with fever bearing mosquitoes.

1911 - 21.

The heavy losses inflicted by the Influenza Epidemic in the whole of western Bengal were greatly counter-balanced in this district by the immigration of mill-hands in Serampore, Uttapara, and Bhadreswar

* - Hughly District Gazetteer, page. 127.
Police-stations. Obviously rural areas fared worse than urban areas. Arambagh sub-division lost 10.3% of its population and the rural part of Serampore also showed considerable loss. Chinsurah and Magra thanas had an increase of 7.8%, but still Sadar sub-division as a whole had its population reduced. Average number of daily operatives in the big industrial establishments rose to 72 thousand. The average birth-rate over the decade was lower than in any other district in Burdwan Division.* Compared to the situation in the whole of Western Bengal, death-rate was less severe and the excess of deaths over births by 63,000 was contributed both by a falling birth-rate and increasing impact of the Influenza Epidemic. In this,Hughly district was unique in Western Bengal.

1921-21.

The increase of population was enjoyed by every sub-division in the next decade. Improved measures of Public Health, Supply of pure water, and resistance against epidemics were responsible for the increase in Pandua, Balagarh, Chinsurah and Magra police stations in the Sadar sub-division. The establishment of some Rice mills in Pandua and Magra, invited some Santhal and Bauri immigrants. Malaria was responsible for the decrease in Polba and Dhaniakhali. In Serampore sub-division, Uttarpars P.S. had the largest expansion due to (a) setting up of a large number of brick-fields and (b) its increasing popularity for residence of workers and clerks of Howrah and Calcutta. In Tarakeswar P.S. the inevitable decline by Malaria in the interior villages was counteracted by the immigration of the Santhal harvesters and emergence of Tarakeswar as a growing Commercial

* - Public Health Reports. Bengal, 1911-20.
Town. The same was partly true of Jangipara, but the influx of Santhals here was too inadequate to compensate for the decrease. The decrease of 15.6% in the predominantly urban Serampore P.S. was due to the discharge of mill-hands in the wake of World Economic Depression. Similar would have been the case in Bhadreswar, had it not been for the sanitation and growing popularity for residence by middle-class people working in Calcutta.

In the Arambagh Sub-division the defective outlet and prevalence of Malaria was responsible for the decrease of 5.8% in Goghat Pursure and Khanakul police stations, lying in the spill-area of the Damodar, was less subjected to epidemic and endemic deseases, and showed a higher increase.

HOWRAH DISTRICT.
1891 - 1901

The position of Howrah is unique owing to its proximity to Calcutta, and the growing industrial importance of theadar Sub-division. Even the rural population here is less dependent on agriculture than in any other district. The communication between the rural sides and the city were greatly improved during 1891-1901 owing to the opening of the B.N.Kly. through Begnap, and the constructions of light railways from Howrah to Amta and Howrah to Shiakhala (in Hugly). Howrah had suffered least in the Fever Epidemic, the only thanas that had showed a decrease in 1881 were Jagatballavpur and Amta. The Rupnarsin and the Hugly wash its sides and drainage is not bad.
Variation in the density of sub-divisions of Howrah.

<table>
<thead>
<tr>
<th>Sub-Division</th>
<th>Density in years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1891 1901 1911 1921 1931 1941 1951</td>
</tr>
<tr>
<td>Sadar</td>
<td>2117 2493 2045 1743 8280 4745 5305</td>
</tr>
<tr>
<td>Uluberia</td>
<td>1179 1244 1339 1339 1519 1700 1769</td>
</tr>
</tbody>
</table>

The ten years during 1891 and 1901 were not healthy except in 1897 and 1898, and fever was widely prevalent. Crops were bad in three years owing to deficient rainfall and in two years they suffered from floods. The effect of these was to a certain extent neutralized by the ample offer of employment from the mills; the increase of population was to the extent of 87 thousand, half of which was due to the growth of the Howrah city.

Of real importance was the factor of immigration. The number of immigrants increased by more than 34,000 during the decade.* The Census Superintendent of Bengal, 1901, pointed out that the real increase in the number of immigration might have been the larger real-increase-in that this.** Though a separate district for administrative purposes, Howrah was a sub-division of Hugli in Revenue matters; and the villagers often described themselves born in Hugli. The Schedules were more thoroughly scrutinized in 1901 than in 1891;

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* - Immigrants 1,44,660 1,10,202 Census of India 1901

and the mistakes of this nature were corrected to a such greater extent
In 1901 only 26,000 persons were returned as born in Hughly, as against 34,000 in 1891. The Census Superintendent was definite that the most of the excess in 1891 was due to misdescription of the birthplace, and the real number of immigrants in that year was fewer by 8000 than indicated in the Returns. Two thirds of the total number of persons born outside the district were found in Howrah city alone; the rest were attracted by the prospect of employment in the brickfields or on railway works, specially because of the construction of extensive sidings of the B.N.Rly. at Shalimar at the time of the Census.

1901-11.

The growth was by 11½ in this decade. Agricultural conditions were on the whole favourable and recorded births exceed deaths by 17,000. Immigration was stipulated by the development of commerce and manufactures. The extension of the Tramways from Calcutta and the improvement in the service of the ferry steamers between the two cities might have further induced persons, who formerly resided in Calcutta to cross to this side of the river. The number of persons born in Calcutta but enumerated in Howrah increased by over 7000 since 1901. Net increase in the number of immigrants was 45,000.* The total increase of population was double this figure. There was a loss of 17,000 by emigration. Thus, a considerable part of the population expansion must have been due to the natural growth. The opening of light Railway already referred to, and the execution of new Howrah, Bajora and Rajapur drainage schemes did much to reduce the water

logged and uncultivable areas in Domjur and Jagatballavpur thanas. All parts of the district were progressive, the rate of growth in the Sadar Sub-division was twice as rapid as in the whole district.

1911-21.

After a sustained and rapid progress for a number of decades the increase in this decade was reduced to 5.7%. There was a considerable fall in the rate of growth in the Sadar Sub-division, and a slight falling off in the city, while the increase round Uluberia through industrial development was maintained as formerly. The jute-mills were the largest employer of labour with others following: Cotton Mills, Jute Presses, Iron Foundries, Machinery and Engineering works, Brick-fields, Railway Work-shops, Oil Mills, Flour-mills etc.

One-ninth of the total population was engaged in industrial concerns employing 10 persons or more.

The recorded birth-rate for the first seven years was up to the average for Western Bengal. It fell in 1918 and 1919, though to a much lesser extent than in the other districts. Death-rate remained at a low level as in East Bengal. It rose to 32.2 & 35.1 in 1918 and 1919. During the whole decades, recorded births exceeded deaths by 12,860.*

The number of immigrants seemed less by 8000 in 1921 than in 1911. That did not indicate that foreign elements in the district actually decreased. In the city of Howrah, the descendants of immigrants were taking the place of original settlers, while the number of emigrants increased. Not that Howrah people were going

* Public Health Reports, Bengal, 1911-20.
elsewhere. The fact of the situation was that the bulk of those born in Howrah and found elsewhere, happened to have been born while their parents were temporary sojourners in the district.**

1921 - 1931.

The increase of 11% in this decade was evenly distributed between the two sub-divisions. It was only in the part of Sibpore lying outside the Howrah city and Bowra P.S. that a decrease of population was recorded. Bowra, however, remains the most thickly populated police station in Bengal. Decreases, where they took place, were due to closing down of mills and consequent retrenchment of staff. Increases were due to natural increase and immigration of labour.

**- Census of India, 1931, Vol.V. Pt. I, pp(51-52)