Abstract: As per the census of India 2011, Barddhaman district (22°56' N to 23°53’N and 86°48’ E to 88°25' E) holds 4th position in percentage share of urban population in West Bengal, India. The district shows an increase in rate of urbanisation from 1971-2011. Level of urbanisation is high than the state and national averages. There exists wide intra district variation in level of urbanisation. Interestingly, much of the share comes from Western Barddhaman, comprising Asansol and Durgapur subdivisions. Town spacing is also low here, indicating high concentration. The present work intends to study trend of urbanisation and growth of small towns in Barddhaman district, West Bengal, India. Census of India data (1971 to 2011) have been used for the analysis. There is an uneven development of the small towns and the number of them obviously high in Western one than the Eastern part.

Keywords: urbanisation, level of urbanisation, small town, town spacing, urban growth

I. INTRODUCTION

Census of India, 2011 defines an urban area as: (a) all places with a municipality, corporation, cantonment board or notified town area committee, etc. (statutory towns); and (b) all other places with the criteria of a minimum population of 5,000, at least 75 percent of the male working population engaged in non-agricultural pursuits and a density of population of at least 400 persons per sq. km. (census towns). Interesting fact is number of census towns in India has increased more (2,532) than the statutory towns (242) in 2011. According to 2011 census West Bengal constitutes 780 census towns and is the highest among all the states in India.

As per census of India, 2011 Barddhaman district (22°56'N to 23°53’N and 86°48’E to 88°25’E) holds 4th position (31.16 percent) in percent share of urban population in the state. Level of urbanisation is high (39.87 percent) than the state...
and national averages. Decadal growth rate (2001-2011) of urban population in the district is 20.91. The district has 86 census towns and ranked third in the state (after Haora: 135 and South 24 Parganas: 111). (fig.1).

Possibly the most spectacular feature of the urban scenario as it has emerged in the post-independence period in West Bengal, is the growth of a clustered of the towns in the western part of Barddhaman and the Kolkata-Howrah industrial belt (Lahiri-Dutt, 2001). There exists intra district variation in level of urbanization too. Several small towns have sprung up in Western Barddhaman in recent years.

Fig. 1. Location of study area (Source: Census of India, 2011)
The western part of the Barddhaman is considered as industrial region due to the presence of Asansol-Durgapur urban-industrial complex. Discovery of the coal was the major factor for the development of the town in pre-British period. In the post-colonial era, the development of the DVC leads to the development of the region. Beside this, road-rail communication link with Calcutta and completion of the Durgapur barrage in 1955 lead to emergence of the major industrial complexes. Subsequent to the development of the Iron and Steel industry to the area, other industries such as the manufacturing of the coal mining machinery, cement, boilers, structural steel and the fire-bricks were established (Lahiri-Dutt, 2001).

In Western Barddhaman there is a long continuous process of expansion of the urban settlements along the major transportation route leading to development of a major urban corridor. The major transport routes are the National Highway, NH-2 and Eastern Railway line. Small settlements began to develop along the transport route and with the passage of time due to continuous increase in transport facility, large settlements are developed subsequently.

Presently, the linear urban complex covers roughly 50 sq km stretching east-west along the road and the eastern railway tracks. The NH-2 and Eastern Railway are considered as second major urban corridor of the country along which one of the biggest urban-industrial complexes has been developed (Ramachandran, 1989). (fig. 2).

Small towns occupy an important position in the urban rural continuum of India. It may be compared to a spatial organism with fixed functions, behavioural pattern, growth processes depending upon the nature and extent of the region and linkages in terms of transport and communicational network. A lot of variation
exists regarding identification of small towns. Most researchers have relied on the
use of benchmark population thresholds (Satterthwaite and Tacoli, 2003).

The district level spatial pattern of the census towns in West Bengal gives us a clear pattern of new urban growth outside existing class-I and metropolitan cities. Around 75 percent of new census towns have found in the districts with dominant agricultural economy (Samanta, 2012).

The present work intends to study trend of urbanisation and growth of small towns in Barddhaman district, West Bengal, India. Objectives of the inquiry are to highlight the trend of urbanisation of the Barddhaman district from 1971-2011, to analysis the level of urbanisation in Western and Eastern Barddhaman and to study the growth of small towns in Barddhaman districts. Due to lack of any definite population size to consider as small town researchers often take liberties in this regard. As per census of India, 2001, urban areas with a population of 1 lakh are considered as cities. In Barddhaman district large urban areas have population of over 3 lakh. Therefore, in the present study we restrict the criteria to 50,000 sizes to consider small town in the district.

II. MATERIALS AND METHODS


Quantitative method has been applied here. Several statistical techniques have been applied for data analysis purposes. Level of urbanisation has been calculated by using the formula: Level of Urbanisation = Total number of Urban Population/ Total Population. Nature and degree of town concentration over a region is best explained by measuring urban spacing (Ramachandran, 1989). Spacing of the study region has been worked out by using the formula: \( S = \frac{A}{N} \); where, \( A \) = area of the region, \( N \) = No. of small towns. Maps are prepared by using Arc-GIS (version 9.2) software.

III. RESULTS AND DISCUSSION

III.1 Pattern of urbanisation in Barddhaman District

Barddhaman district is experiencing fast economic growth in the form of developmental activities such as mining, commercial, market development, industry etc (Ghosh and Chakma, 2010). It experiences high in-migration from surrounding districts and states. The district shows an increase in rate of urbanisation during 1971-2011 but the rate of increase is slowly reducing. In 1971-81, rate of increase has found 6.62 percent; in 1981-91, it slightly reduces to 5.69
TREND OF URBANISATION AND GROWTH OF SMALL TOWNS:

percent; in 1991-2001, it becomes 1.86 percent and in 2001-2011, it reaches to 2.93 percent (fig. 3). Interestingly, much of its share comes from Western Barddhaman, comprising Asansol and Durgapur subdivisions.

III.2 Growth of small towns and changes in size categories (1971-2011)

An important aspect of the urbanisation in Barddhaman district is uneven pattern of development of small towns and large cities (fig. 4). When we started analyzing censuses, to study the trend of growth of small towns in Barddhaman district, it has found that due to the continuous changes in town designations in the successive censuses, some towns get disappear while some towns merge with another town.

The civic status of the towns also changed continuously. The non-municipal towns designated as census towns subsequently. This dynamic pattern of change is obvious in an urbanising state (Chakma and Ghosh, 2012).
Class I town, which comprises 100,000 or more population did not existed in 1971 census but its number started to increase in following decadal year due to rapid industrialisation and urbanisation in the western part of the district (Asansol and Durgapur subdivisions). The areal coverage also expanded and the number reaches to six in 2001 census (Table 1). In case of small towns, the total number increases from 18 to 59 between 1971 and 2001. Class II towns shows steady state except in 1991. Class III , IV, V and VI towns (small towns) show much fluctuations unlike Class I town category.

**Table 1. Size categories of towns in Barddhaman District, 1971-2011**

<table>
<thead>
<tr>
<th>Census year</th>
<th>Class I (100,000 or more)</th>
<th>Class II (50,000-99,999)</th>
<th>Class III (20,000-49,999)</th>
<th>Class IV (10,000-19,999)</th>
<th>Class V (5,000-9,999)</th>
<th>Class VI (Below 5,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>1981</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>16</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>1991</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>2001</td>
<td>6</td>
<td>2</td>
<td>11</td>
<td>13</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>2011</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>20</td>
<td>42</td>
<td>20</td>
</tr>
</tbody>
</table>

The censuses often fail to demarcate the urban areas properly. The same towns which got urban agglomeration (UA) status and designated as non-municipality (NM) in 1981, got census town (CT) status in 1991 and 2001 censuses. In 1971 census, Kulti was designated as UA (urban population 44,289) and it consisted of two non-municipality towns (Kulti and Barakar). In 1981 census, three more non-municipal towns are added with Kulti UA. In 2001 census, Kulti appears as a municipality. It repeats in case of Niamatpur, Disergarh and Burnpur units also. Niamatpur and Disergarh existed as NM in 1971 and 1981 censuses, but 1991 and 2001 censuses did not give them any civic status. Durgapur existed as Notified area up to 1991 but it upgraded as Municipal Corporation in 2001. The introduction of CTs in Barddhaman started since 1991 census but West Bengal and India used this concept since 1971.

The scenario of Eastern Barddhaman is apparently different from Western part. Barddhaman, Kalna, Katwa, Dainhat designated as Municipality from the very beginning and they are obtaining the same status till date. Only six more census towns are added in 2001 where the number was only one in 1991 census. Table 2 shows subdivision wise spacing and degree of town concentration in Barddhaman district, 2001-2011. Western Barddhaman comprising Asansol and Durgapur subdivisions has shown less urban spacing than Eastern Barddhaman comprising Barddhaman North, Barddhaman South, Kalna and Katwa.
subdivisions. This indicates more town concentration in Western Barddhaman in the district.

**Table 2** Spacing and degree of town concentration in Barddhaman District  
(Sources: Census of India 2001, 2011)

<table>
<thead>
<tr>
<th>Subdivisions</th>
<th>Area(sq. km)</th>
<th>No. of Small Town</th>
<th>Spacing and degree of town concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asansol</td>
<td>831.9</td>
<td>831.9</td>
<td>18</td>
</tr>
<tr>
<td>Durgapur</td>
<td>1028.6</td>
<td>1028.6</td>
<td>31</td>
</tr>
<tr>
<td>Barddhaman</td>
<td>1701.1</td>
<td>1701.1</td>
<td>1</td>
</tr>
<tr>
<td>North</td>
<td>1410.0</td>
<td>1410.0</td>
<td>1</td>
</tr>
<tr>
<td>Barddhaman South</td>
<td>993.7</td>
<td>993.7</td>
<td>6</td>
</tr>
<tr>
<td>Kalna</td>
<td>1070.5</td>
<td>1070.5</td>
<td>2</td>
</tr>
</tbody>
</table>

**III.3 Dichotomy in the level of urbanisation between Eastern and Western Barddhaman**

In the present study we have considered small towns as all the urban areas with a population up to 50,000. The number of small towns in Barddhaman district in 2001 was 59. In Western part it was 49 and in Eastern part it was 10. The number increases up to 90 in 2011. Western part consisted of 70 while Eastern part consisted of 20. Apart from the small towns, the number of urban centres in whole Barddhaman district in 2001 was 67. In Western part it was 44 and in Eastern part it was 13 which in 2011 increase up to 100. The Western part now consists of 78 urban centres and Eastern part consists of 22 urban centres. It shows that there prevails dichotomy in terms of level of Urbanisation in Western and Eastern part of the district (Table 3).

**Table 3** Change in Level of Urbanisation in Western and Eastern Barddhaman  
(Sources: Census of India, 2001, 2011)

<table>
<thead>
<tr>
<th>Region</th>
<th>Level of Urbanisation (in percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001</td>
</tr>
<tr>
<td>Western Barddhaman*</td>
<td>40</td>
</tr>
<tr>
<td>Eastern Barddhaman**</td>
<td>1.51</td>
</tr>
</tbody>
</table>

*Note: *Western Barddhaman includes: Asansol and Durgapur subdivisions, **Eastern Barddhaman includes: Barddhaman I, Barddhaman II, Kalna and Katwa subdivisions.*
Development in western part began to continue due to continuous development of urban areas, large scale economic activities, import-export scenario, development of large market centers, large scale building infrastructure and development of transport sectors. On the other hand, Eastern part developed slowly. Development of mainly agro-based industry leads to low concentration of urban population here. A sharp contrast in the level of urbanisation between eastern and western part can easily be recognised. To find out the contributions of small towns in urbanisation of the district, the small towns of Western Barddhaman are arranged according to their population size. It is found that Chittaranjan town in Western Barddhaman holds prime position with population size 45,957 (fig. 6).

Fig. 6. Population hierarchy of the small towns of western Barddhaman; (Source: Census of India 2011)

IV. CONCLUSIONS

Urbanisation in Barddhaman district has shown increasing trend from 1971-2011. Level of urbanisation is high than the State and national averages. Wide intra district variation has found in level of urbanisation. Interestingly, much of the share comes from Western Barddhaman, comprising Asansol and Durgapur subdivisions due to corridor development. The main cause behind the development of small towns in Western Barddhaman comprising Asansol and Durgapur Subdivision is the discovery of the coal for mining and manufacturing purpose.

Large industrial estate, high in-migration, rapid investment as well as high economic growth cause high population growth. The rapidly increasing urbanisation causes the growth of the several small towns and they are recognized as census towns by the census of India. The rapid urbanisation in Western Burdwan causes high growth of small towns in Western part. But the low level of urbanisation is not helpful to develop new small towns in Eastern Burdwan. When the population size of small town is studied, it is found that Chittaranjan hold prime position with highest
urbanisation among other small towns. Most of the small towns comprises of high population pressure.

In concluding remarks it can be said that small town growth in Barddhaman district is always high in Western part and dynamic in nature. Proper urban amenities, infrastructure and good governance are needed for the towns’ sustenance. There is strong need of a decentralised policy for the development of the small towns and overall development of the districts in the state.

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Received: 27.01.2014
Revised: 30.05.2014
Accepted: 10.06.2014
Published: 30.09.2014