



# URBAN EXPANSION AND POPULATION GROWTH OF BOLPUR TOWN IN BIRBHUM DISTRICT, WEST BENGAL

Dr. Mahuya Sen  
Assistant Professor

Department of Geography

Birbhum Mahavidyalaya, Suri, Birbhum District, West Bengal, India

*Abstract: Urban growth is considered as one of the essential indicators of economic growth and development of a country. Along with the increase of population, towns have been growing rapidly in physical dimension in the past few decades. Bolpur town is one of the fast growing towns of the Birbhum District of West Bengal. Bolpur town is situated almost in the middle of the Bolpur- Sriniketan C.D. Block, which is the southernmost Block of Birbhum District. It includes world famous Santiniketan, place of Rabindranath Tagore. The objective is to study the pattern of urban expansion and rapid population growth of Bolpur town and analyze the factors behind this urbanization process. The study is based on secondary data. The relevant maps are drawn by using GIS application. Bolpur town has been grown up from a village to a municipal town. Bolpur is the only municipality in Bolpur sub-division. The decadal growth rate in 1991-2001 was 24.1%. Various economic and cultural factors are responsible for the rapid urban expansion. But variation of population growth is also found among the different wards of Bolpur Town.*

*Index Terms - Urban expansion, Development, Population growth, Town, C.D. Block, Economy.*

## I. INTRODUCTION

India is gradually making the shift from 'rural' to 'urban', at a much slower pace than other developed nations, as the urbanisation levels of India has 'low base'. India, in 2011, was 31.2 per cent urban, and 377.2 million people lived in urban India. But India has already 11 per cent of the world's urban population in 2011. Secondary cities and small towns which support sub-regional and sub-national economies are expected to have a greater influence upon the economic development of nations and larger geographic regions in the future. However, many small towns are struggling to administer urbanisation, attract investment and meet the demand for housing, infrastructure and basic urban services. Information regarding the economy, land, finance, infrastructure and governance of this category of towns and cities are very poorly available. This condition is severely affecting their capacity to plan and manage urban development and promote employment and economic growth. Growth of urban area is an important indicator of development. Urban growth primarily takes place through growth of population of an area and its physical expansion. Along with the increase of population, towns have been growing rapidly in physical dimension in the past few decades. Urbanization is the most irreversible and human-dominated form of land use. Economic development is generally associated with the growth of urbanisation. Urban expansion takes place in different ways such as in the form of increasing residential density, development of built-up area, creating new urban lands that were previously non-urban and so on.

## II. Objective

The objective is to study the pattern of urban expansion and rapid population growth of Bolpur town and analyze the factors behind this urbanization process.

## III. Methodology

The study is based on secondary data collected from different primary census handbook and statistical handbook of Birbhum District. The relevant maps are drawn by using GIS application. Urban growth rate is measured by the percentage change in total urban population in the current census year compared to that of the immediately preceding census year. The methodology adopts in their study is detracted in Fig 1

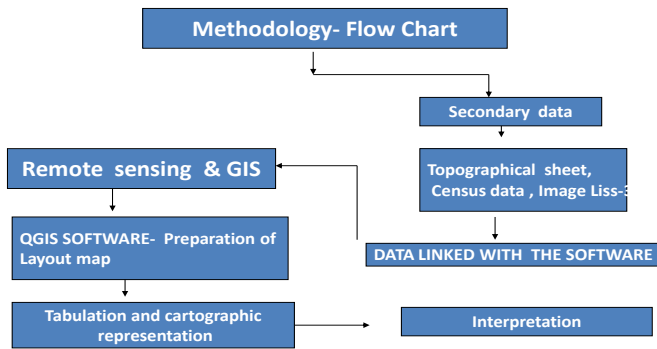
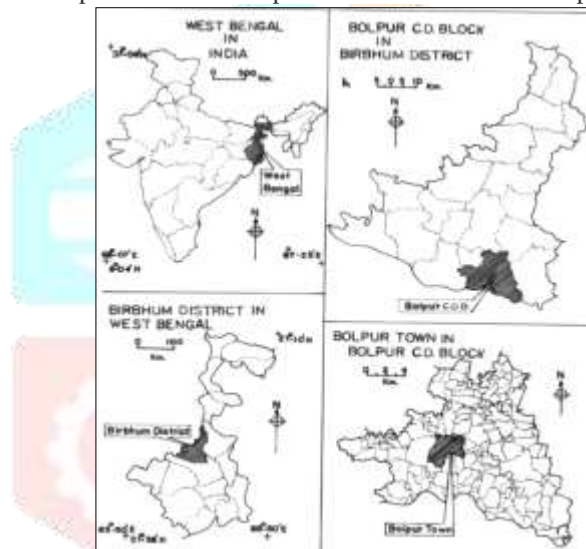


Fig 1

**IV. Location of the Study Area**

Bolpur C.D. Block is the southernmost part of Birbhum District. The Ajoy River flows along its southern border separating it from Burdwan and Kopai flows along the northern border of the C.D. Block. Bolpur is situated almost in the middle of Bolpur C.D. Block. It is conducted by railway, Bolpur- Santiniketan. Bolpur is the sub district head quarter and the district head quarter is Suri which is 35 km away. Kolkata is the state head quarter of the city and is 185 km far from here. Yearly average rainfall of the city is 1474.04 mm. Maximum temperature reaches up to 37°C and minimum temperature goes down to 25°C. Average elevation of the town is 58m.



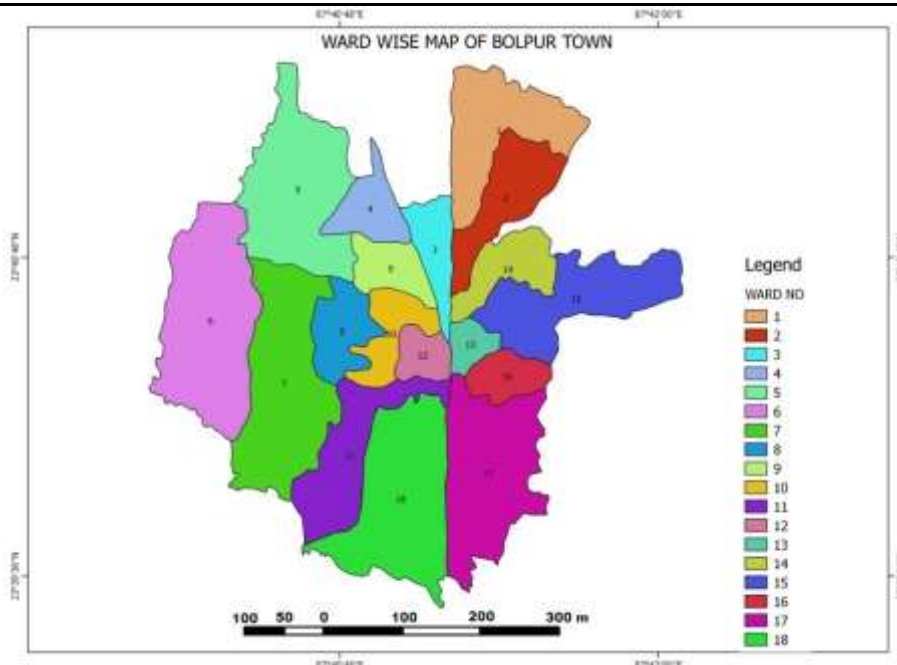
location map of the study area

Fig. No.2



Regional location of the study area

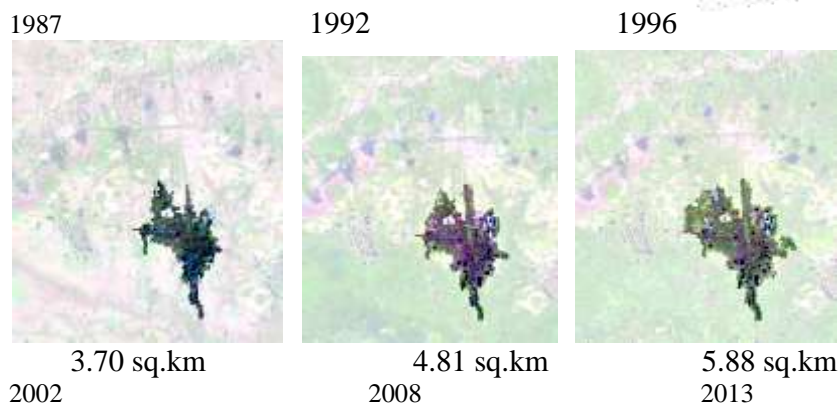
Fig. no. 3



Ward Map of Bolpur Town  
Fig.no.4

**V. History of Urban Growth of the study area**

The name "bolpur" comes from the word "boli-pur". In Bengali "boli" means "slaughter" and "pur" means city. About 150 years ago, Bolpur was a small village under supur porgana. Kalikapur a known place of Bolpur was the origin of the typical village in past. East India company established the first railway line in 1859, when the Sahebganj loopline was extended beyond the river Ajay. Bolpur railway station was established in 1860. Along with this, court, police station, sub registry office, etc., were established in old Bolpur. Then people started residing here. Mission compound was named when a church was founded by Christian missionaries. Maharshi Debendranath Tagore established a centre of religious mediation in Bolpur. Rabindranath Tagore established Visva Bharati Viswavidyalaya. Santiniketan is world famous for its exceptional blend of serenity, natural magnetism and an affluent cultural heritage. These were the main reasons for the huge extension, development and popularity of Bolpur. Bolpur town is one of the growing towns of Birbhum District of West Bengal. Bolpur has grown up slowly from a village to a municipal town. In 1950 the town covered only 5.07 sq.miles and it had 6 wards. In 1951, Bolpur had 14,802 population and there were 9 wards. Bolpur to Illambazar, the first metalled road was constructed in 1952. In 1961, the population of Bolpur reached at 23,355 and in 1963, the number of Municipal Wards increased from 9 to 14. In 2002, the number of Wards increased from 14 to 18. Very recently Bolpur has 19 wards. But the study is based on 18 wards. The growth of the Town started slowly in early 90's but after that it grows constantly from 1992 to 1996. The rapid growth of urban area was experienced for the period 1996-2008. In this period, a total increment of 10 square kms is observed. In 2008 the overall city sprawl was around 16.36 Sq. km. After 2008, the urban growth process became slowe but was continuously increasing. These maps includes the Bolpur municipality and Santiniketan -sriniketan area.





10.99 sq.km  
2015

16.36 sq.km



19.48 sq.km



23.14 sq.km

Source: Revised Land Use &amp; Development Control Plan, SSPA, 2025

### VI. Recent Demographics and other status of the Study area

At present the area of Bolpur town is 13.13 sq. km. In 1991 the population was 52866 whereas in 2001 the population had increased to 65693. So the decadal growth rate in 1991-2001 was 24.1%. and the population is 80210 according to 2011 census. Thus both the area and population of this municipality has increased. population growth is 22.1% from 2001 to 2011. Bolpur Sriniketan block registered a population growth of 15.42 per cent during the 1991-2001 decade. The study area had a high percentage of ok for, Birbhum district and also state.

Bolpur Municipality, with population of about 80 thousand is Birbhum district's the most populous municipality. It is the 2nd biggest town by area in the district. Population density of the city is 6109 persons per km<sup>2</sup>. Among 18 wards No. 14 ward is the most populous with a population of 7224 and Ward No 09 is the least populous with a population of 1877. Hindus contribute 90% of the total population and are the largest religious community of the study area followed by Muslims which contribute 10% of the total population. Sex ratio per 1000 male in Hindus is 983 in Muslims it is 975.

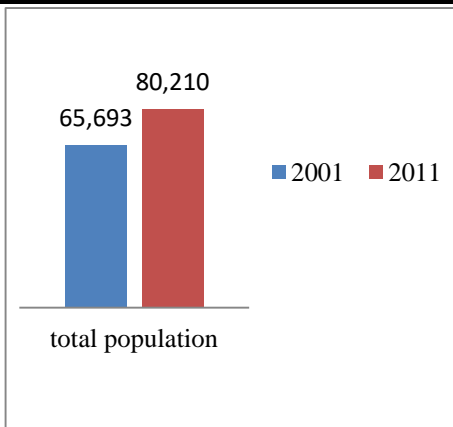
The economy of the study area consists of all three sectors; primary, secondary and tertiary. Primary activity is little bit fishery from ponds and agriculture to some extent. The secondary activity comprises art & craft based household and cottage industries and to some extent other industries like rice milling. The tertiary activity includes tourism, transportation, hospitality business, trade and commerce and other private, Government & semi- Government activities in education and health sector. In recent decades the tertiary sector has seen maximum growth due to increased tourism. Recently construction industry or real state, hospitality sector and marketing are in demand and in these employment opportunities have increased.

Bolpur town is a Class II town according to 2011 census it has a population of 80210 persons.

Table 1  
municipalities of birbhum district

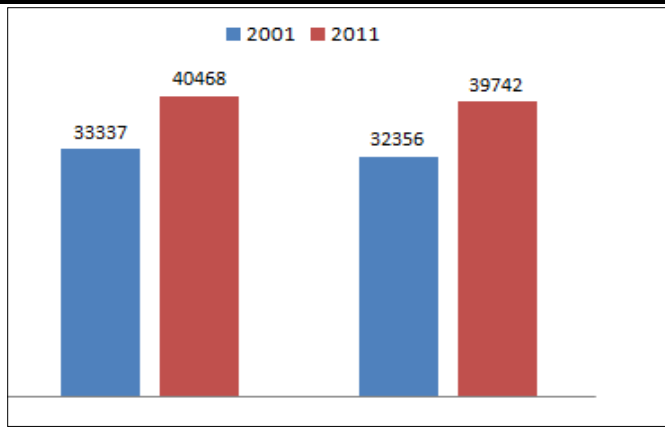
Municipalities	Population	Area (Km <sup>2</sup> )
Bolpur	80,210	13.1
<a href="#">Suri</a>	67,864	9.5
<a href="#">Rampurhat</a>	57,833	6.3
<a href="#">Sainthia</a>	44,601	10
<a href="#">Nalhati</a>	41,534	12
<a href="#">Dubrajpur</a>	38,041	16.8

From above table it is clear that among 6 municipalities of the Birbhum District Bolpur town has the highest population and has the second highest area after Dubrajpur.



Growth of Population of (2001 and 2011)

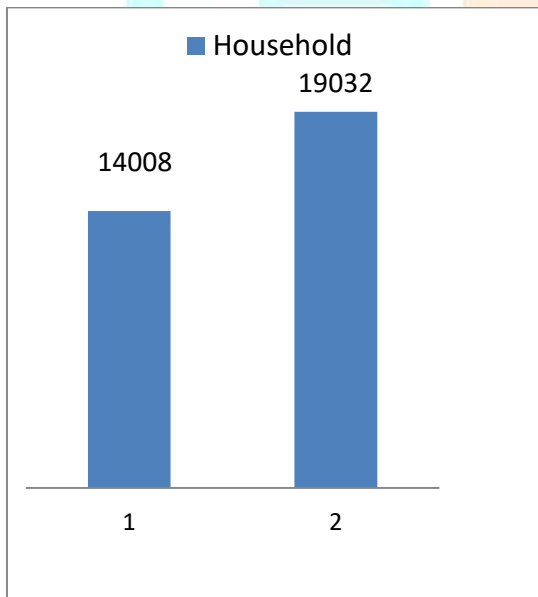
Fig. 5 a



Growth of male and female population from 2001-2011

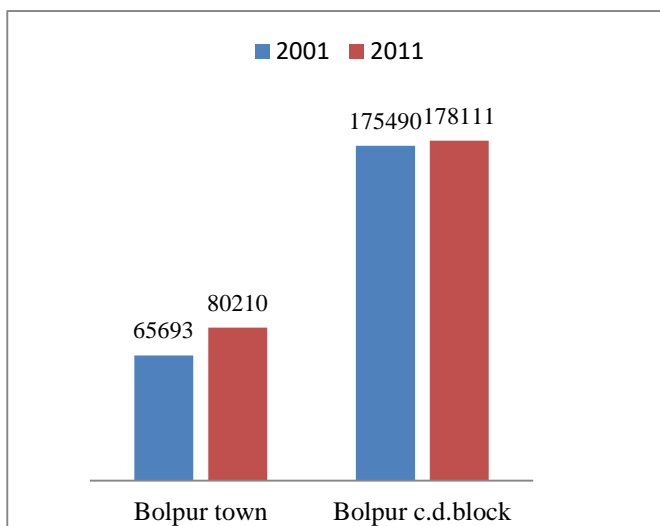
Fig. 5 b

From the Fig no. 5a & 5b it is noticed that total population as well as male –female population have increased during 2001-2011. But the proportion of males and females are almost same. Number of females has increased more than males. From fig.no.5c it is found that the number of households has increased from 2001 to 2011 around 5024 in number. Sex ratio in 2011 is 982 whereas it was 970. From the fig. No. 6 It is found that the total population of the Bolpur town has increased by 14517 from 2001 to 2011. Fig 7 seems the comparative picture of decadal growth rate of our country, state ,district, block and the study area. Decadal growth rate is very high (22.12%) in Bolpur municipality than the others. Population of the town has increased by 22.1% in last 10 years. Female population growth rate of the city is 22.8% which is 1.4% higher than male population growth rate of 21.4%.



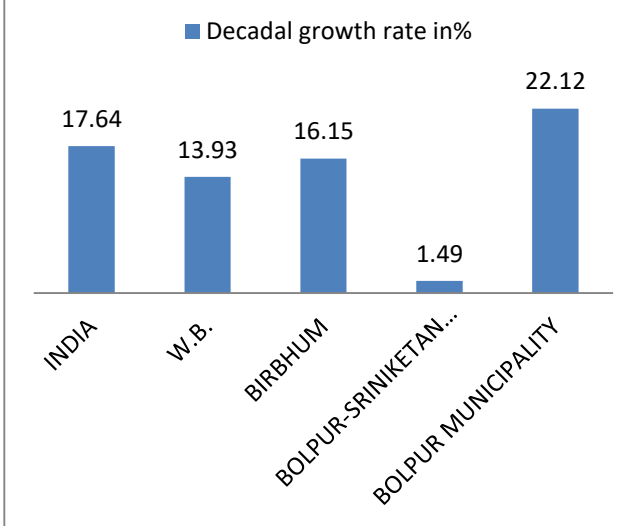
increasing no. of households from 2001 -2011

Fig. No. 5c



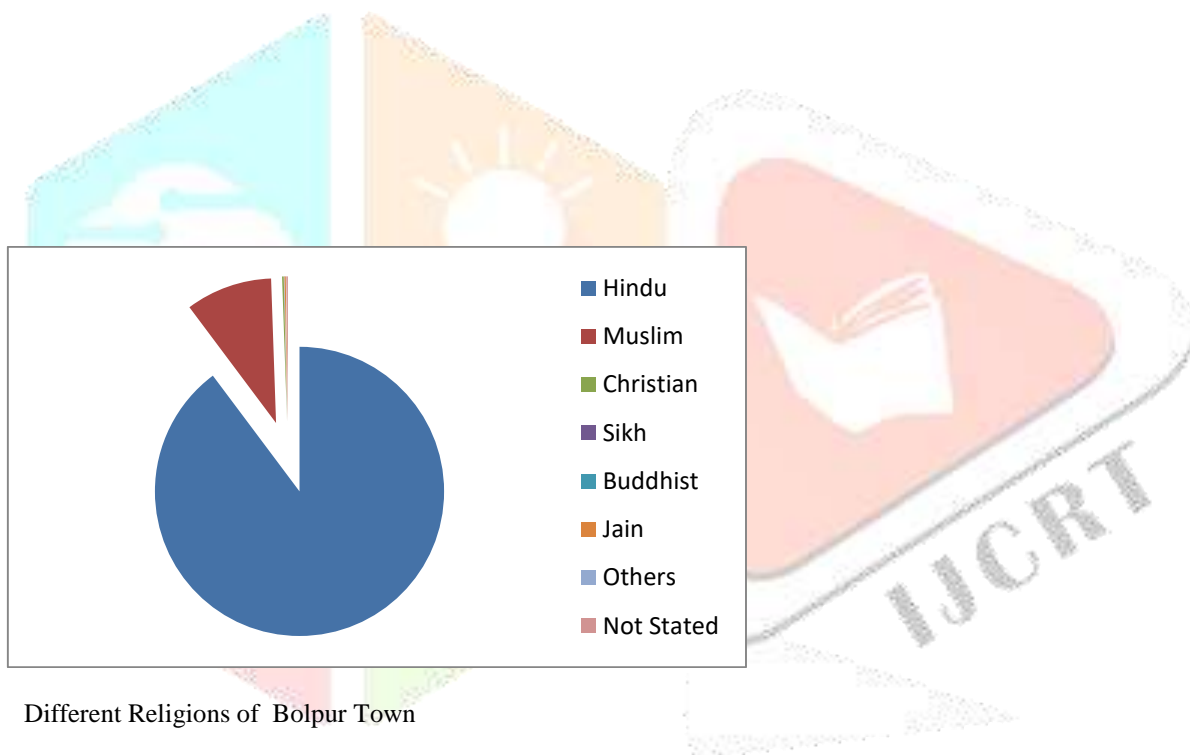
decadal population growth

Fig. No. 6



decadal growth rate in%

Fig. No. 7



Different Religions of Bolpur Town

Source: Indikosh.com

Fig. No. 8

Table 2

bolpur m.c. : religion wise population (2011) - bolpur

	Total	Hindu	Muslim	Christian	Sikh	Buddhist	Jain	Others	Not Stated
Total	80,210	72,005	7,764	149	25	6	110	9	142
Male	40,468	36,305	3,931	76	16	4	55	4	77
Female	39,742	35,700	3,833	73	9	2	55	5	65

Source Indikosh.com

From Fig.08 and Table 2 it is found that the study area is Hindu dominated (90 %) whereas only 9% are Muslims and 1% are other castes.

From Fig.9 and Table 3 and 4 it is observed that in the 2011 census 77% of the total population are general caste, 22% are Scheduled caste and 1% are Scheduled Tribe population. General caste population has increased by 24.1%; Scheduled Caste population has increased by 15.8%; Scheduled Tribe population has increased by 15.7% and child population has decreased by -1.5% in the city since the last census.

Caste Wise Population in Bolpur Town

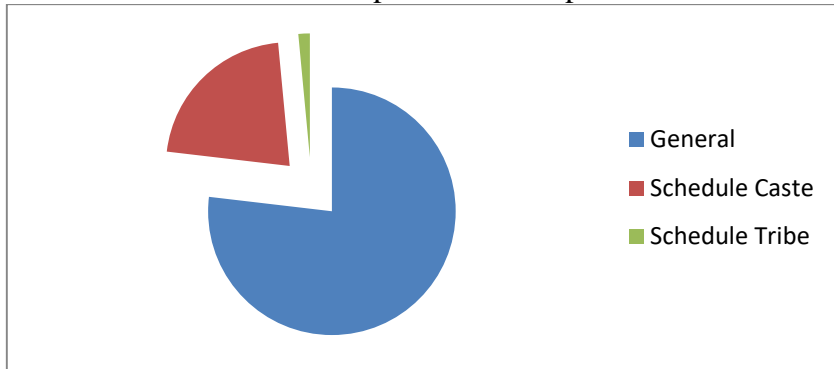


Fig. 9

Table 3

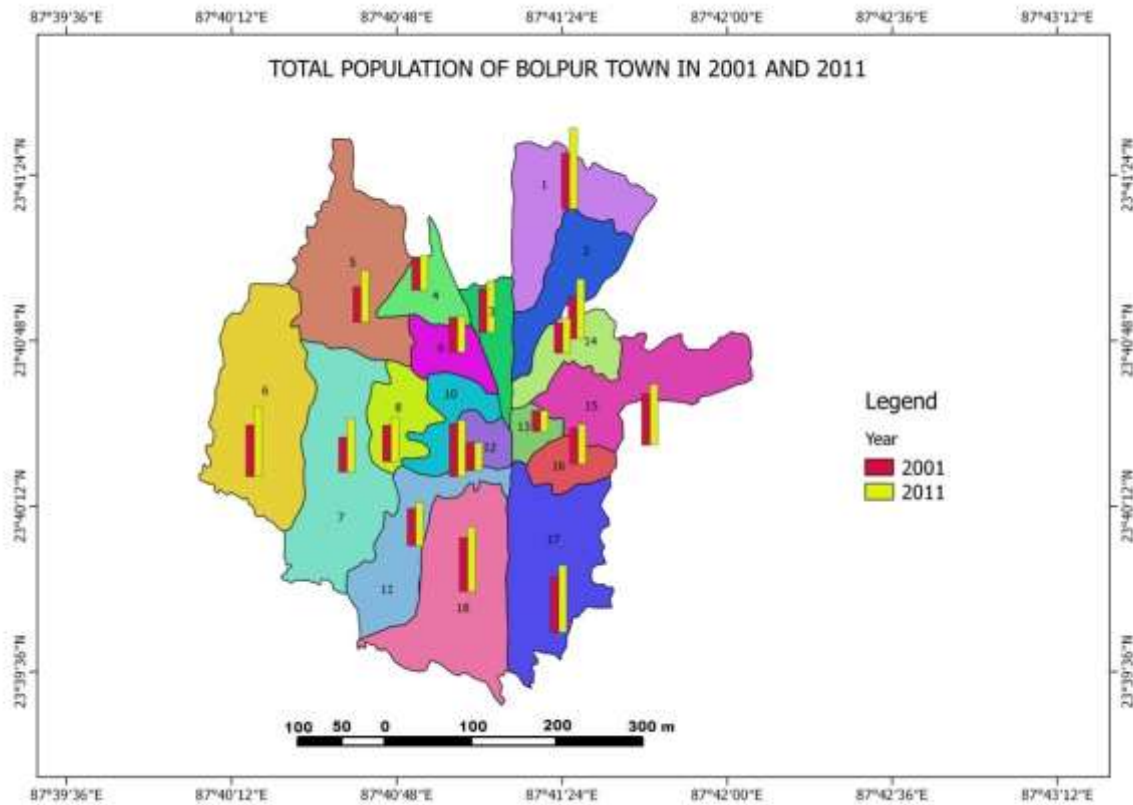
bolpur, m.c : caste wise male female population (2011)

	Total	General	Schedule Caste	Schedule Tribe
<b>Total</b>	80,210	61,647	17,363	1,200
<b>Male</b>	40,468	31,172	8,737	559
<b>Female</b>	39,742	30,475	8,626	641

Table 4

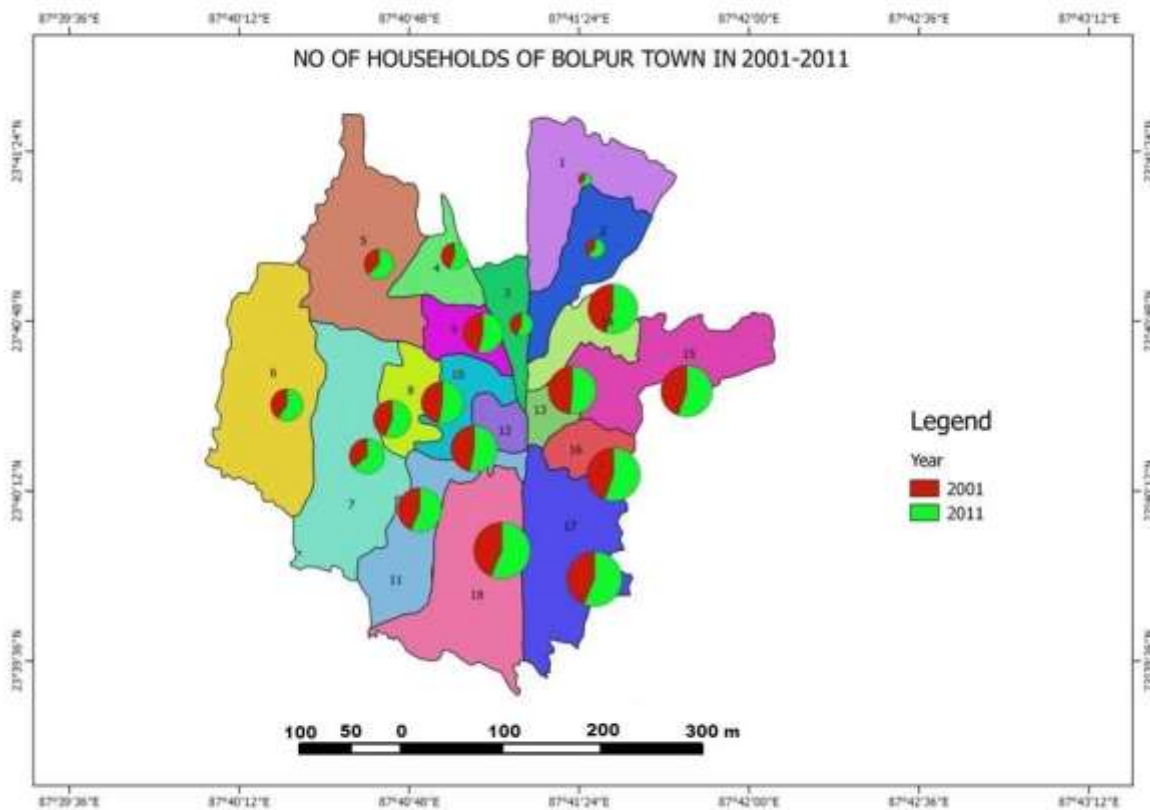
Bolpur, M.C : Caste wise Percentage Male Female Population (2011)

	Total	General	Schedule Caste	Schedule Tribe
<b>Total</b>	22.1%	24.1%	15.8%	15.7%
<b>Male</b>	21.4%	23.1%	16.3%	8.8%
<b>Female</b>	22.8%	25.2%	15.3%	22.6%



Growth of population from 2001 to 2011 – Bolpur  
 Fig. No. 10

From the fig.no 10. It is found that the ward wise total population of bolpur town is increased substantially from 2001 to 2011 in almost all the wards. Maximum increase are taken place in ward nos. 1, 2,5,6,7,17 &18. All are outer wards. That means urban growth is taken place in periphery of the Town. This may be due to migration from surrounding rural area and from urban area or abroad. Migration takes place because of education and employment as the Visva- Bharati, an educational centre is situated here. Migration occurs in search of job or business purpose as Santiniketan is a Tourist spot. Economy of the Town is flourishing as the place is accessible. Again different kinds of opportunities and infrastructural facilities are much more than the other municipalities of birbhum district.



no. of households of bolpur town in 2001-2011  
 Fig. No. 11



From the fig.no.11 it is observed that the no. of households are increased much more from 2001 to 2011 in almost all the wards. Number of households in outskirts wards is more. This is due to more lands are available in periphery area.

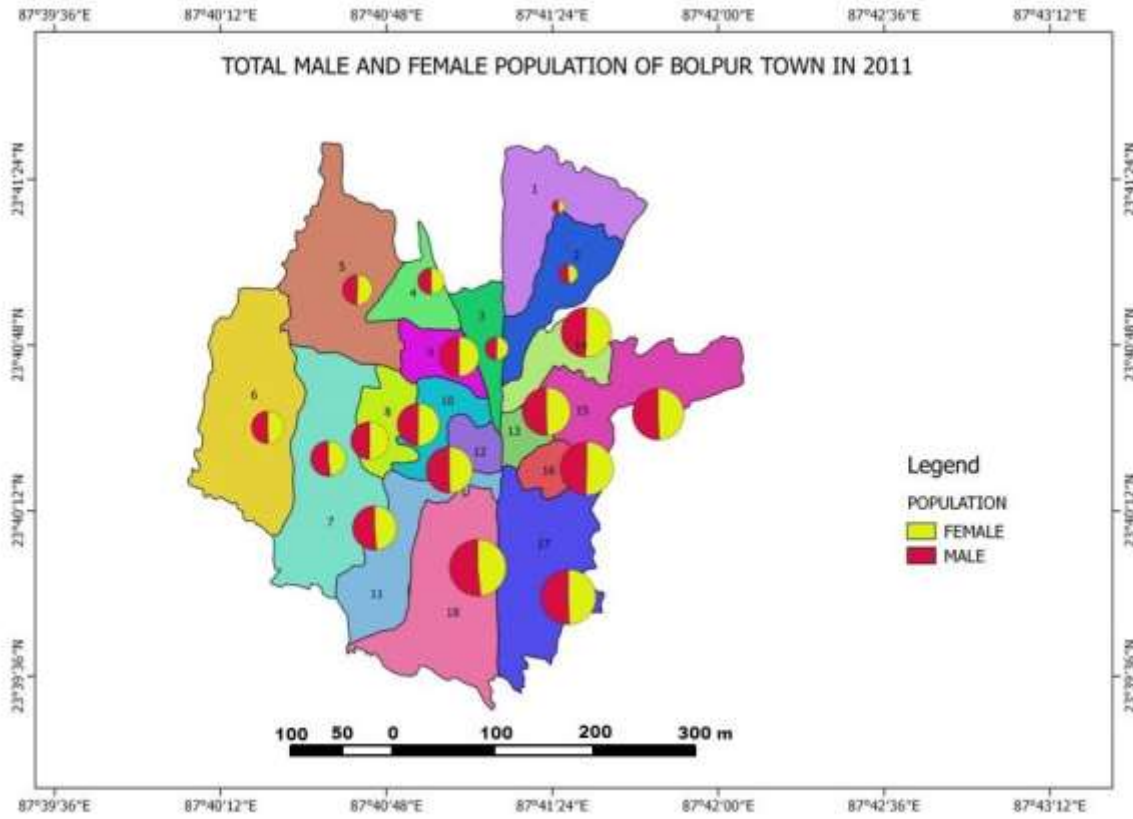


Fig. 12

Fig12 shows that the total male and female populations are almost the same in every ward. As of 2011 census there are 982 females per 1000 males in the town.

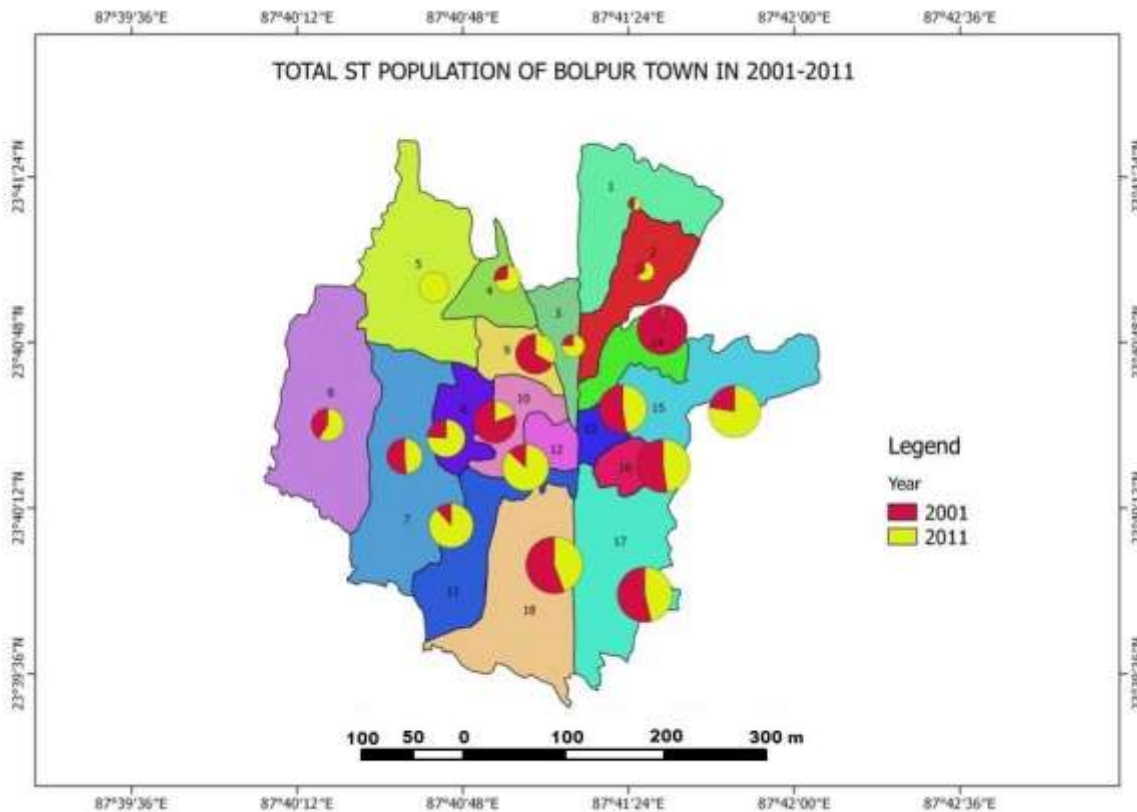


Fig. No. 12a

From fig. No.12a it is noticed that SC and ST population of Bolpur town has increased more in number from 2001 to 2011. This may be due to in migration from surrounding villages in search of employment or due to their children’s education .

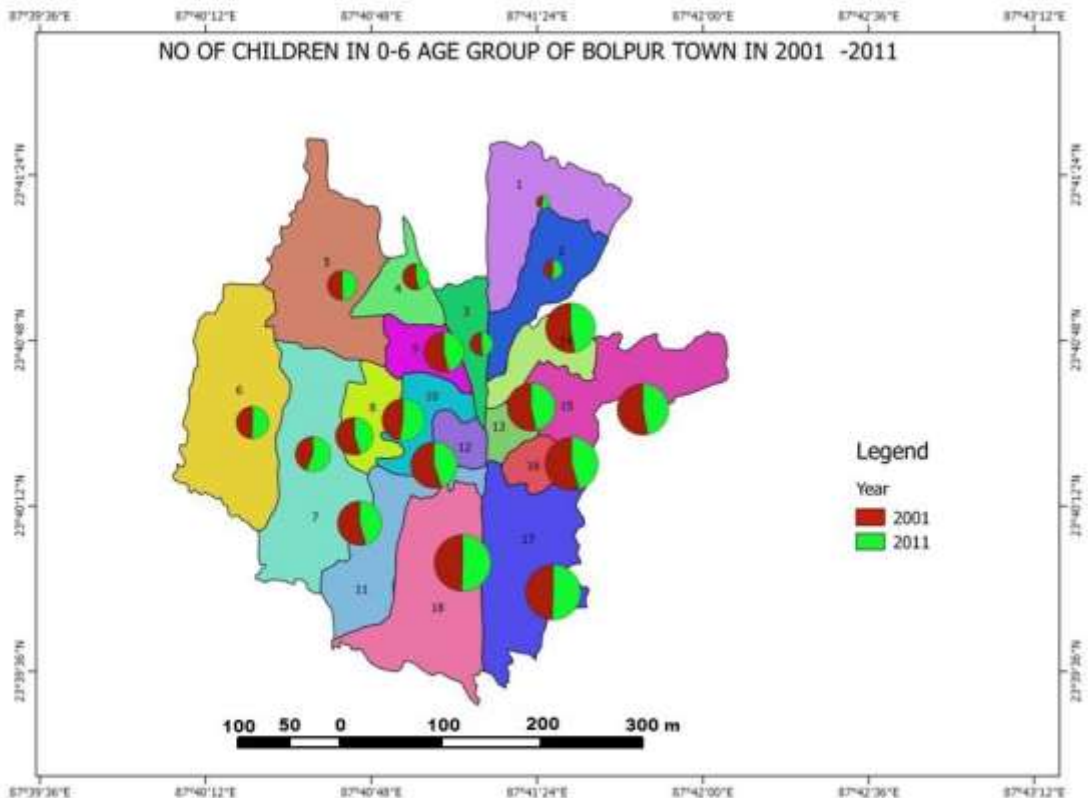
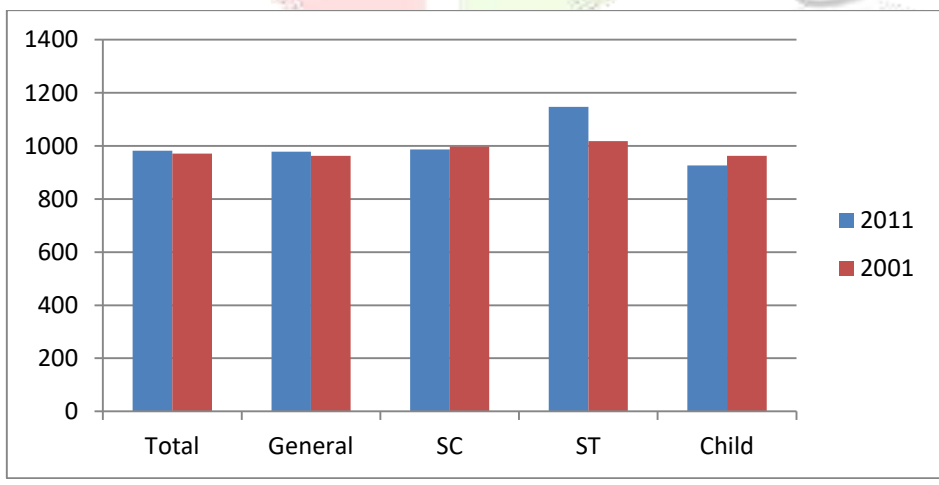


Fig. No. 12b

From fig no. 12b it is found that 0-6 year age group children are increased in some wards. It can be said that the fertility rate is high in some wards so population growth is occurred.

From fig.no.13 and table no.5 it is observed that the Sex ratio in general caste is 978, in Schedule Caste is 987 and in Schedule Tribe is 1147. There are 926 girls under 6 years of age per 1000 boys of the same age in the town. Overall sex ratio in the city has increased by 11 females per 1000 male during 2001-2011. Child sex ratio here has decreased by 36 girls per 1000 boys during the same period.



bolpur, m.c. : change in sex ratio 2001 and 2011

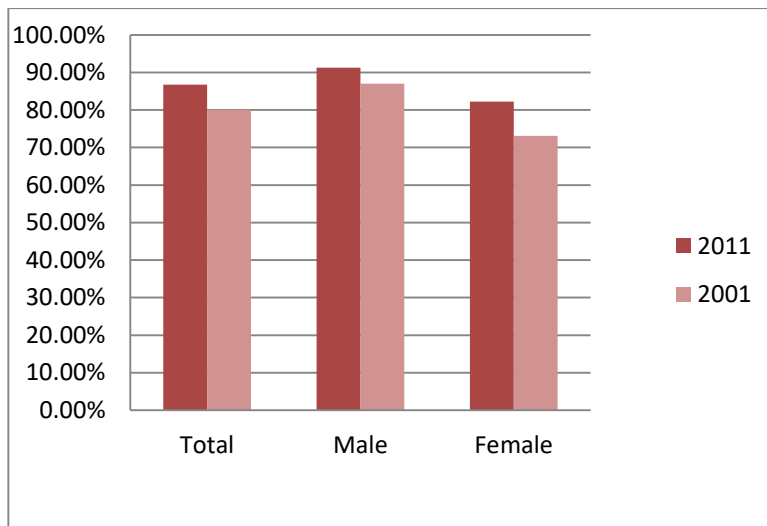
Fig. 13

Table 5

Bolpur: M.C.: Change in sex ratio 2001-2011

	Total	General	SC	ST	Child
<b>Change</b>	11	16	-10	129	-36
<b>2011</b>	982	978	987	1147	926
<b>2001</b>	971	962	997	1018	962

It is also noticed that SC and child sex ratios have declined from 2001 to 2011. But ST sex ratio is very high from 2001 to 2011. Total about 64 thousand people in the Bolpur town are literate, among them about 34 thousand are male and about 30 thousand are female. From fig.no.14 and Table 6 it is seen that literacy rate (children under 6 are excluded) of Bolpur is 87%. 91% for male and 82% for female population are literate here. Overall literacy rate in the city has increased by 7%. Male literacy has gone up by 4% and female literacy rate has gone up by 9% .



Literacy Rate

Fig. 14

Table 6

bolpur, m.c.: change in literacy rate 2001-2011

	Total	Male	Female
<b>Change</b>	6.7%	4.3%	9.1%
<b>2011</b>	86.8%	91.3%	82.2%
<b>2001</b>	80.1%	87%	73.1%

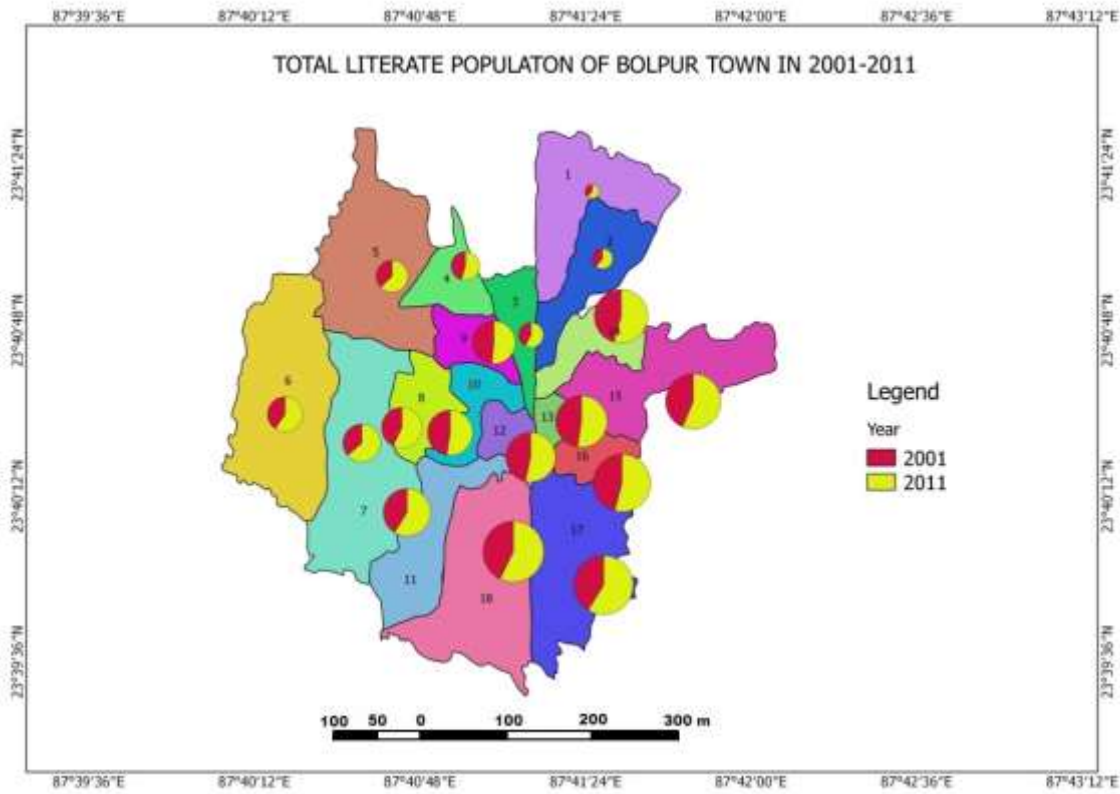
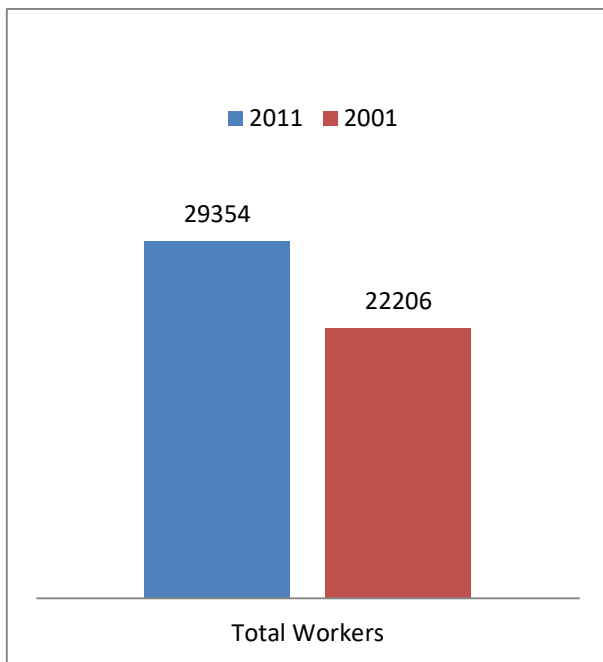


Fig. 15

fig.15 it is observed that the number of literate population have increased in all the wards in the recent decade may be due to the location study area adjacent to a famous educational centre.



Decadal growth of total workers of bolpur town

fig.no.16



Table 7

Year	2011	2001
Total Workers	29354	22206
Total population	80210	65693
% of workers to total pop.	36.59643	33.80269

Fig 16 and Table 7 show the decadal growth of the population of Bolpur town. It is shown that the percentage increase of workers to total population is 3% from 2001 to 2011. The reason behind this increase of workers may be due to tourist spot of Santiniketan and growing small scale industry like artistic handicrafts which are very popular economic activity of the study area. And as the educational centre is situated here many come here for employment purpose.

Fig. 17 and Table 8 show that the Bolpur has 37% (about 29 thousand) population engaged in either main or marginal works. 57% male and 16% female population are working population. 54% of total male population are main (full time) workers and 3% are marginal (part time) workers. For women 13% of total female population are main and 3% are marginal workers.

bolpur, m.c.: percentage of working population (2011)

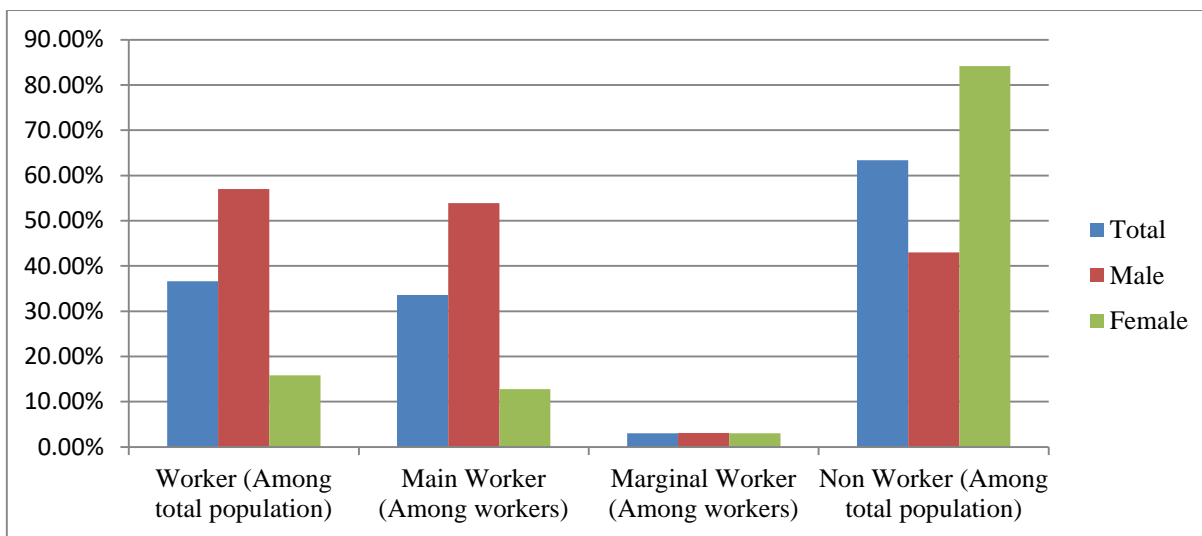


Fig. No. 17

Table 8

bolpur m.c.: percentage of working population (2011)

	Worker (Among total population)	Main Worker (Among workers)	Marginal Worker (Among workers)	Non Worker (Among total population)
<b>Total</b>	36.6%	33.6%	3%	63.4%
<b>Male</b>	57%	53.9%	3.1%	43%
<b>Female</b>	15.8%	12.8%	3%	84.2%

From Fig.17 & Table 8 shows that male workers ( 57%) are much more in number than the female(15.8%) so is the case with main workers. This may be because the study area has a sub –urban status. Therefore females are engaged mainly in household works. Therefore female non workers are maximum ( 84.2%).

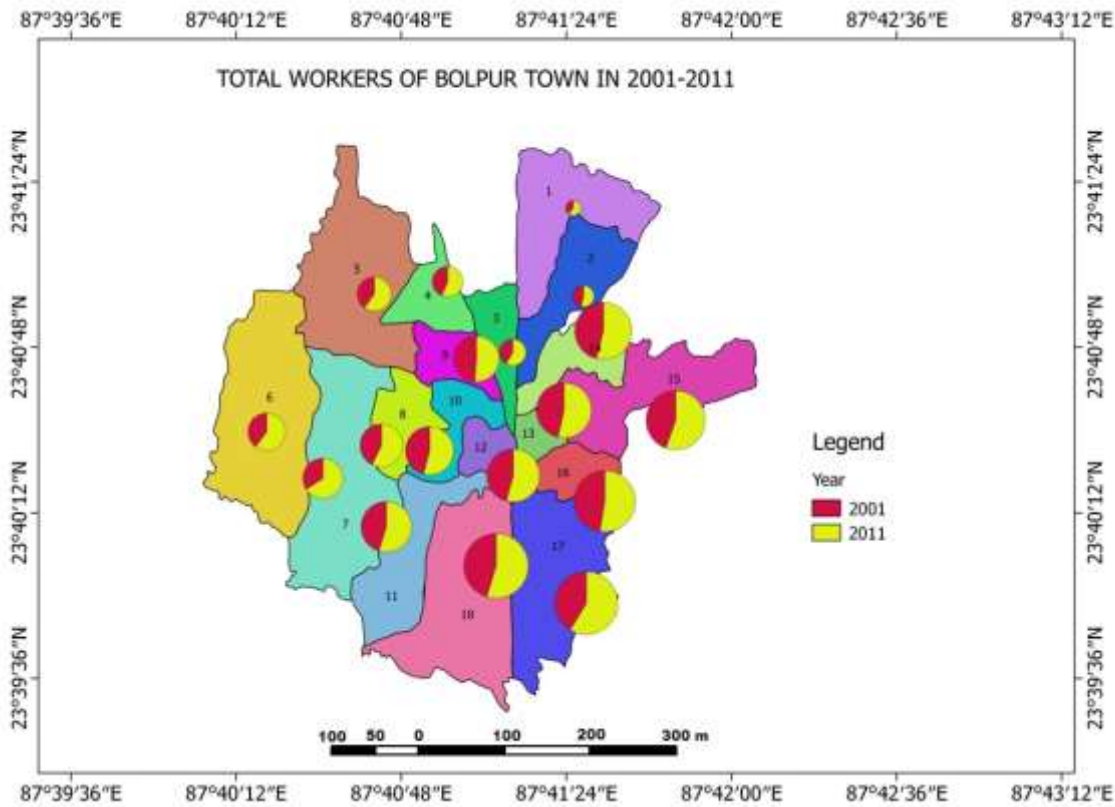


Fig. No. 18

From fig no. 18 it is clear that the number of total workers are increased from 2001 to 2011 in almost all the wards. It is obviously a good sign for the development of the region. It may be due to the location the town. Bolpur is well connected to its surrounding regions. It is continuously flourishes as the time going with the development of educational hub and tourism. So the job opportunity is available here and its surrounding region.

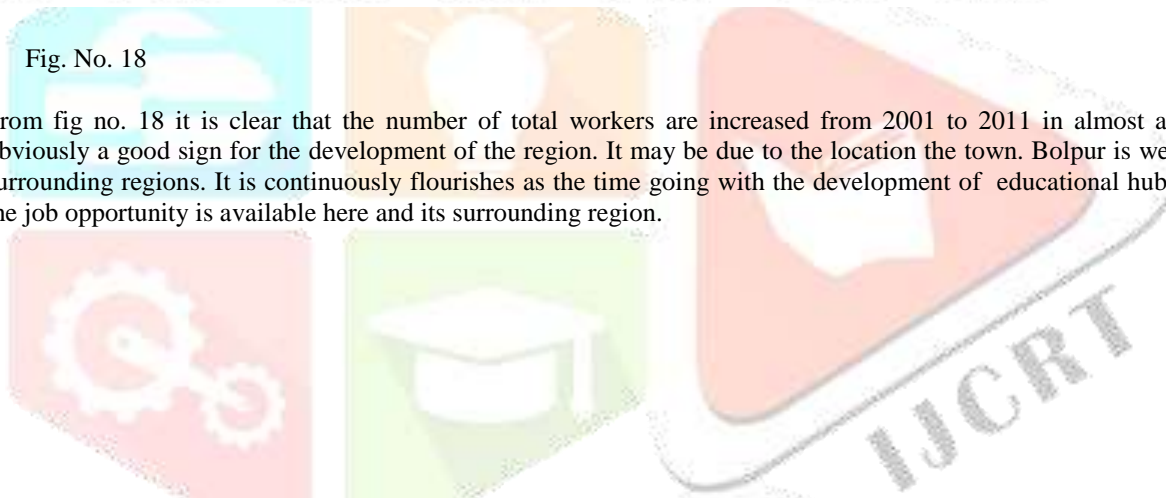


Fig. 19



Fig. 20

Figs 20 and 21 from satellite images It is shown that Bolpur town has expanded and density of houses has increased from 2006 to 2014.

**VII. Prospects of the Study Area**

Recently West Bengal Govt. has announced that a new university namely 'BISWA-BANGLA' will be set up in coming session new railway connection from Prantik( adjacent to Bolpur Town) to Suri (Head quarter of the Birbhum district) will be started. These will must be accelerated the urban growth or expansion or development of the Bolpur Town. Recently the diesel engine is replaced by

electricity/engine in the route of Sahebgonj railway loopline. The electrification of this route makes railway transport and communications easier and that also save time. Tourism industry, construction industry or real state, hospitality sector and marketing have potential to capture better growth if it is properly planned and managed.

### VIII. Problems

Rapid urban growth creates a number of problems in the area. Most critical issue is water level of the study area going down. Bolpur is now facing a water situation that is significantly worse. Bolpur town will soon run out of potable drinking water if current trends continue. Unplanned narrow winding roads hinder the movement of transport. Therefore traffic congestion is day to day problem facing by the inhabitants. Disposal of solid wastes becomes difficult due to improper arrangement as the authority is not prepared to manage huge volume & waste population. Slums or informal settlements are clustered along the railway line. Their living style in most of the cases creates pollution. The study area lacks a proper sewerage system. The haphazard development of this town has emerged as a threat to its environment.

### IX. Conclusion and suggestion

Urban growth is considered as one of the essential indicators of economic growth and development of a country. The Study area is home to about 80 thousand people, among them about 40 thousand (50%) are male and about 40 thousand (50%) are female. 77% of the whole population are from general caste, 22% are from schedule caste and 1% are schedule tribes. Child (aged under 6 years) population of Bolpur municipality is 9%, among them 52% are boys and 48% are girls. There are about 19 thousand households in the city and an average of 4 persons live in every family. Urban growth rate of Bolpur Town in 2011 is 22.098 percent. Density of population was 6122 per sq km in 2001 whereas that is 7475 per sq km in 2011. Variation of population growth is found among the different wards of Bolpur Town. Population has increased number in outer wards of the town during 2001-2011. Maximum population was concentrated in extreme outskirts of the town in 2001. Maximum population is found in extreme west and north. Decadal growth of population is found maximum in western part of the town. Number of households have increased from 2001 to 2011 in almost every ward. Sex-ratio is almost equal in both the census years. It is a good sign from demographic point of view. The number of SC population has increased in Ward No. 1 and 6 prominently between 2001-2011. SC male -female population was almost equal in 2001 and 2011. Number of ST population has increased in most of the wards. In ward No. 5, ST population in 2011 only. In 0-6 age group the population is the same in almost all the wards in 2001-2011. Number of literate population has increased from 2001 to 2011 in Bolpur town. Literacy rate of Bolpur is 86.77% in 2011 higher than state average of 76.26%. Male literacy is around 91.25% while female literacy rate is 82.24%. It is good sign for socio-economic -cultural point of view. Male -female disparity in literacy is found in 2001 whereas in 2011 this gap is quite minimized. Number of total workers has increased in the study area from 2001 to 2011. But female worker percentage is too low. It should be increased. Awareness should be generated. Women empowerment programme can be made to motivate the female to go outside to work. Various economic and cultural factors are responsible for the rapid urban expansion. Santiniketan is an educational and cultural centre and a famous tourist spot. There are many small scale industries making artistic handicrafts which are in great demand. So that the economy of Bolpur Town is flourishing.

### X. ACKNOWLEDGEMENT

I would like to express my special thanks to Academic staff college of B.U. for organizing winter school based on GIS which encouraged me to prepare the paper for presentation. I like to extend my gratitude to Prof. Parbati Nandi and Prof B.R.K. Sinha for encouragement and I am really thankful to Mrs. Rosanne Dasgupta for necessary correction of this paper.

### REFERENCES

1. Buhaug, H., & Urdal, H. (2013). "An urbanization bomb? Population growth and social disorder in cities", *Global Environmental change*, 23, 1-10.
2. *Primary Census Handbook -2001,2011*
3. *Statistical Handbook of Birbhum District,2006*
4. Google image.
5. Smith, D M 1982, *Human Geography : A Welfare Approach*, Edward Arnold . London
6. Arnab Majumder, (2011), *Birbhum; History & Culture*(Bengali), Ashadeep, Kolkata-9
7. Gourihar Mitra, (2012), *History of Birbhum*, Ashadeep, Kolkata-9
8. *Bolpur , Indikosh.com*
9. S.K. Khulshrestha, (2012), *Urban and Regional Planning in India*, Sage, New Delhi
10. R.C. Chandna, (2014), *Geography of Population*, Kalyani Publishers, New Delhi-110002
11. *Revised land use & Development Control Plan-2025 for Sriniketan- Santiniketan planning area, Report, May,2016.*