

Changing Urban Dynamics In and Around Baranagar Municipality, West Bengal

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Abstract : Urbanization is one of the important anthropogenic components in changing the physical and environmental framework in a region. It is the method of understanding the growth of urban areas, the increase of built-up area, change in density of population, and also transformation of the urban way of life of the population. Baranagar Municipality, located in the North 24 Parganas District of West Bengal, has 34 wards spreading in a 7.12 sq. km. area with a population of 245213 persons. It has been found that the built-up area of the municipality increased significantly, and also the areas under water bodies and bare land decreased in the study period to accommodate the huge population. The relationship between urbanization and growth of population had been positive at the eastern part of it, whereas the rate of urbanization was less in its western portion. So, it is clear that urbanization at the eastern part had been more accelerated than the western part due to availability of vacant land, and this also invited many urban problems like haphazard unplanned growth, crowding, poor drainage facilities, and water logging. The research concludes that there is a need for systematic and comprehensive planning for sustainable development with a healthy urban environment and proper conservation of existing natural resources.

Keywords : Urbanization, Urban development and planning, Urban infrastructure, Land Use/ Land Cover change

Introduction

Urbanization is the method of urban area growth, which results in population growth, an increase of built-up area, high density of population, and it also the psychological stage of the urban way of life. Urbanization is one of the important components in changing the demographic characteristics, urban dynamics, and plays an important role in transferring the physical-cultural landscape of a region. The developing countries, located within the tropics are currently facing rapid urbanization at a faster rate (Gupta, 1999). A detailed understanding of the dynamics of urbanization is very much essential for the sustainability of the urban environment.

Urbanization is one of the serious issues at present because uncontrolled urbanization may invite many environmental and urban issues which might have both positive and negative impacts like unauthorized urban sprawl, loss of productive agricultural land, forest, and water bodies, and

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other related problems (Bhagat 2005, 2011). The monitoring of urbanization is very much crucial for regional planning and management of cities for implementing policies to optimize the use of natural resources.

In the Baranagar area, which is located in the northern part of the Kolkata urban agglomeration, it is found that not only the concentration of population has been increased in the last thirty years due to its proximity of Kolkata Metropolis but also there is a spatial shift in population concentration from the western part to the eastern part. The study area is suffered by the immense pressure of population. After Partition in 1947 and the Bangladesh war in 1971, there was a very huge influx of refugees in the Baranagar area due to the proximity of this area and was found that most of the population concentration was confined in the western part only and the northern part and the eastern part were mostly uninhabited. This research finds an interesting character of urbanization to portray the spatial shift of population growth and urbanization in the eastern part from the original western part which invite many urban problems in the region and also needs proper planning in the coming future for sustainable urban development.

The Study Area

Baranagar Municipality situated on both sides of Barackpur Trunk Road is one of the pivotal regions of KMA (Kolkata Metropolitan Region) as it connects three important districts of West Bengal namely Hooghly, North 24 Parganas, and Kolkata (Human Development Report 2010). It is a hub of urbanization in recent years because of its close connectivity and proximity to Kolkata Metropolis and acts as an important center of socio-cultural religious setup. It is located at 22.64°N and 88.37°E and has an elevation of 12 meters (39feet) from Mean sea Level. There are 34 wards in Baranagar Municipality spreading in 7.12 sq. km area with a population of 245213 (Census 2011). It is the fourth-most densely populated city proper in the world. The Municipality is bounded by KMC in its south, Kamarhati Municipality in the east, River Hooghly in its west (*Fig.1*).

Objectives and Methodology

The main objective of this present research work is to assess the population growth between 2001 and 2011 in different wards of Baranagar Municipality and to compare the population growth between the eastern and western parts of the study area and its relation to urban planning for a sustainable urban environment.

The study is based on secondary sources of information. The data relating to areal and population growth of the Baranagar Municipality has been collected from Baranagar Municipality and District Census Hand Book. This study is based on secondary and primary information. Both qualitative and quantitative methods have been applied to this research. The present research work is based on the application of modern as well as a conventional methodology with intensive work. The analytical part of the research is based on the compilation of various secondary data and also an analysis of primary data from field visits to fulfill the objective. Secondary data obtained from the Municipality offices, archival sources, downloaded information through websites, and the

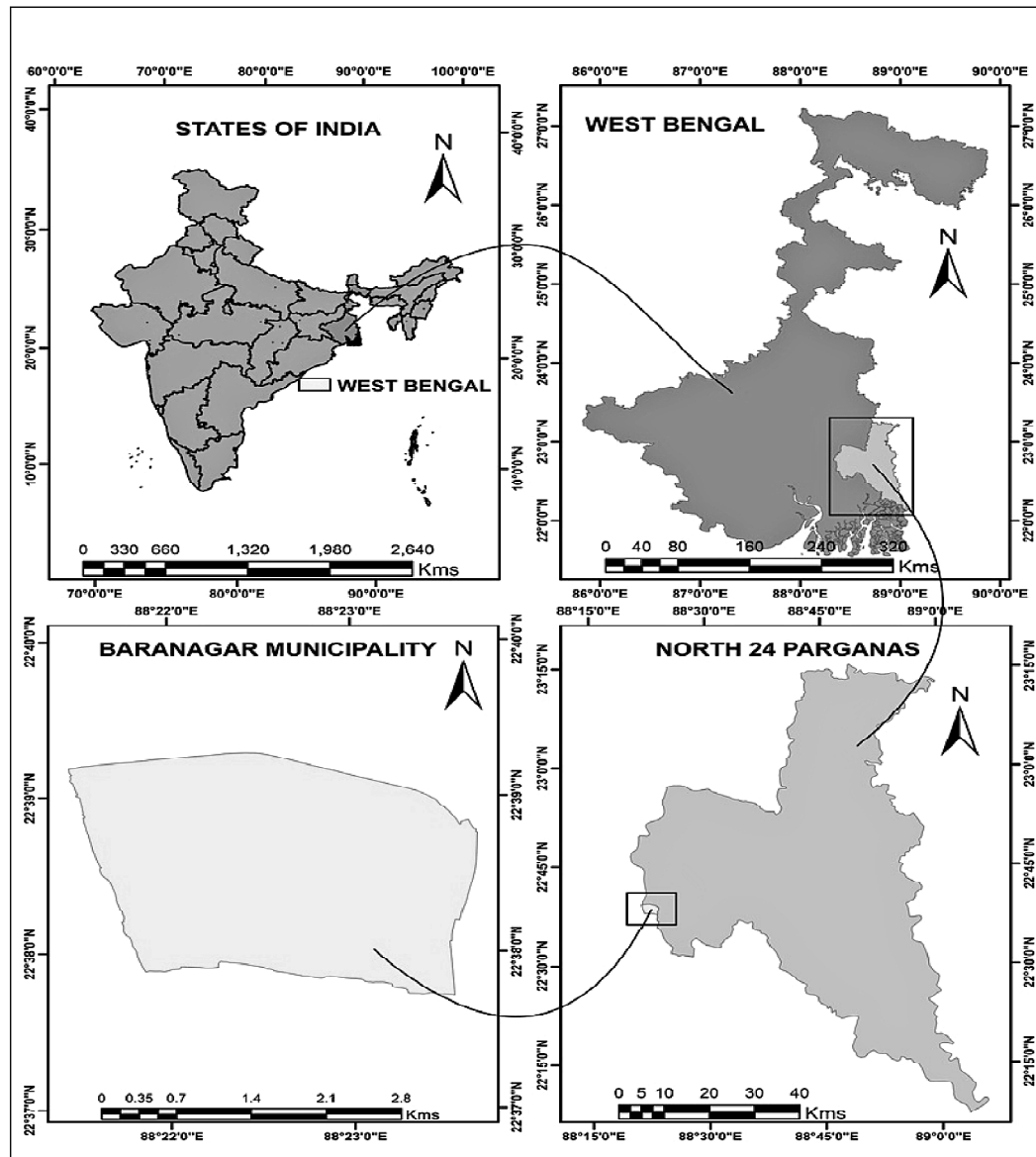


Fig.1: The Study Area

suggestions and recommendations made by interviewing the people who are the residents and also to analyze the research problems. The nature of the present research work is explorative and the whole work has been done by descriptive as well as analytical methods.

Population Growth and Urban Expansion

Baranagar Municipality was established in 1869, is one of the oldest municipalities in India. It became the center for the extensive jute manufacturing gunny bags. M/s. Colvin Cow II Co. was the pioneer of industrial Baranagar (Som 1989). They founded a Sugar mill near Alambazaar. Later George Henderson founded Borneo Jute Factory at that site in 1859 and the factory was renamed Baranagar Jute Factory and till date in existence and it was the first mechanical jute factory in India. During the two world wars many engineering factories were set up in Baranagar and the town became famous as an Industrial city (Paul 2014). To provide the civic amenities North Suburban Municipality was formed in 1869 consisting of Chitpur and Cassipore (presently under KMC), all mouzas of the present Baranagar Municipal area along with Kamarhati, Ariadaha, and Dakshineswar Mouzas of present Kamarhati Municipality. In 1881 North Suburban Municipality was divided into two parts 1. Cassipur-Chitpur Municipality 2. Baranagar Municipality. On 1st August, 1899 Kamarhati Municipality was formed parting Kamarhati and Ariadaha Mouzas from Baranagar. In 1949 Dakshineswar Mouzas was parted from Baranagar and merged with Kamarhati Municipality (Guha 2016; Guin 2016).

1901 Baranagar had a population of 25,435 persons which was increased to 37,050 in 1931, 77,126 in 1951, and 136,842 in 1971 (*Fig. 2*). Between 1901 and 1971 the population of Baranagar increased by more than five times. According to West Bengal District Gazeteer in the decade of 1951-61, the inflow of refugees from East Pakistan was the main reason to increase the huge growth of the population in the Baranagar area (Som 1989). According to West Bengal District Gazeteer, the

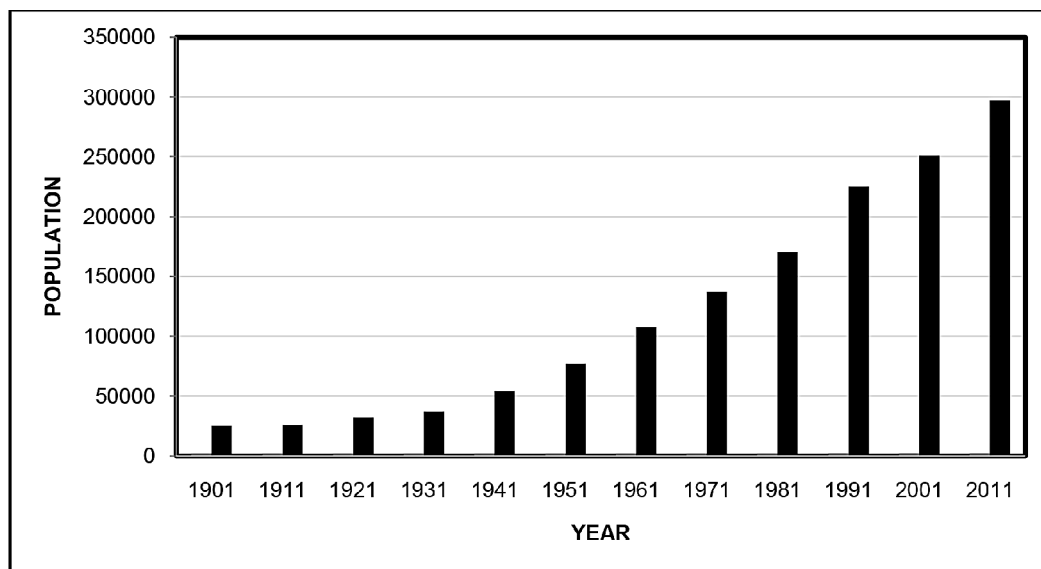


Fig. 2: Population growth in Baranagar Municipality 1901-2011

demographic growth of the North 24 Parganas along with Calcutta began to attract immigrants from the distant parts of India. It highlights the beginning of the large scale of manufacturing units and newly created employment opportunities encouraged the huge inflow from all over India. Immigration from East Pakistan and an increase in birth rate over death rate pushed up the population growth in the region. Between 1950-65 the population of Baranagar Municipality was increasing highly by immigration than that by birth. From *Fig. 2* it is observed that population growth in Baranagar Municipality was inconsistent over the century. After the Partition in 1947 and Bangladesh war in 1971, there was a very huge influx of refugees in the Municipality (Ahmed 2006). Secondly, the proximity of this Municipality in the KMC area is another reason for high population growth.

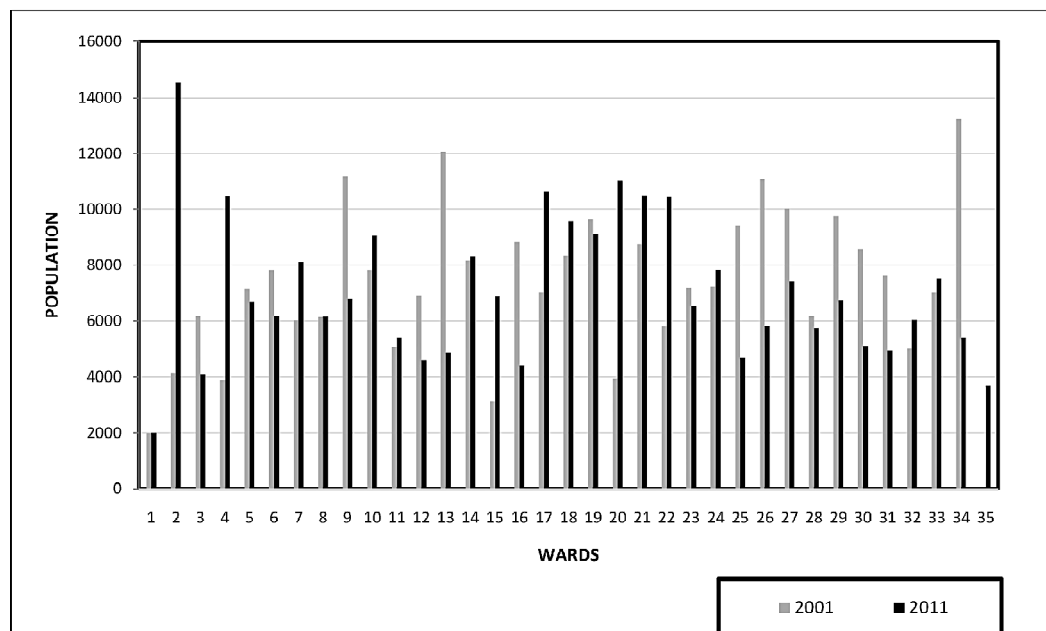


Fig. 3: Ward wise population in Baranagar Municipality 2001&2011

In the early twentieth century, some areas (Ward no. 12,14,17) of the municipality had a low marshy land covered with hola forest. Dr B C. Roy, Chief Minister of West Bengal had planned to reclaim this marshy low land for settling refugees from East Bengal in 1960 (Guha 2016). It was then developed very haphazardly to accommodate large refugee population and government-built Refugee industrial complex, hospitals, tents by filling up this marshy land under Refugee Rehabilitation Programme (*Plate 3*). The region became popularly known as Refugee Colony in the district until 1990 but in the second half of the twentieth century the extension of Metro railway Projects from Dumdum to Barrackpur via Baranagar area and Urban Renewal Programme by West Bengal Govt. has widened the scope of Urbanization in this area.

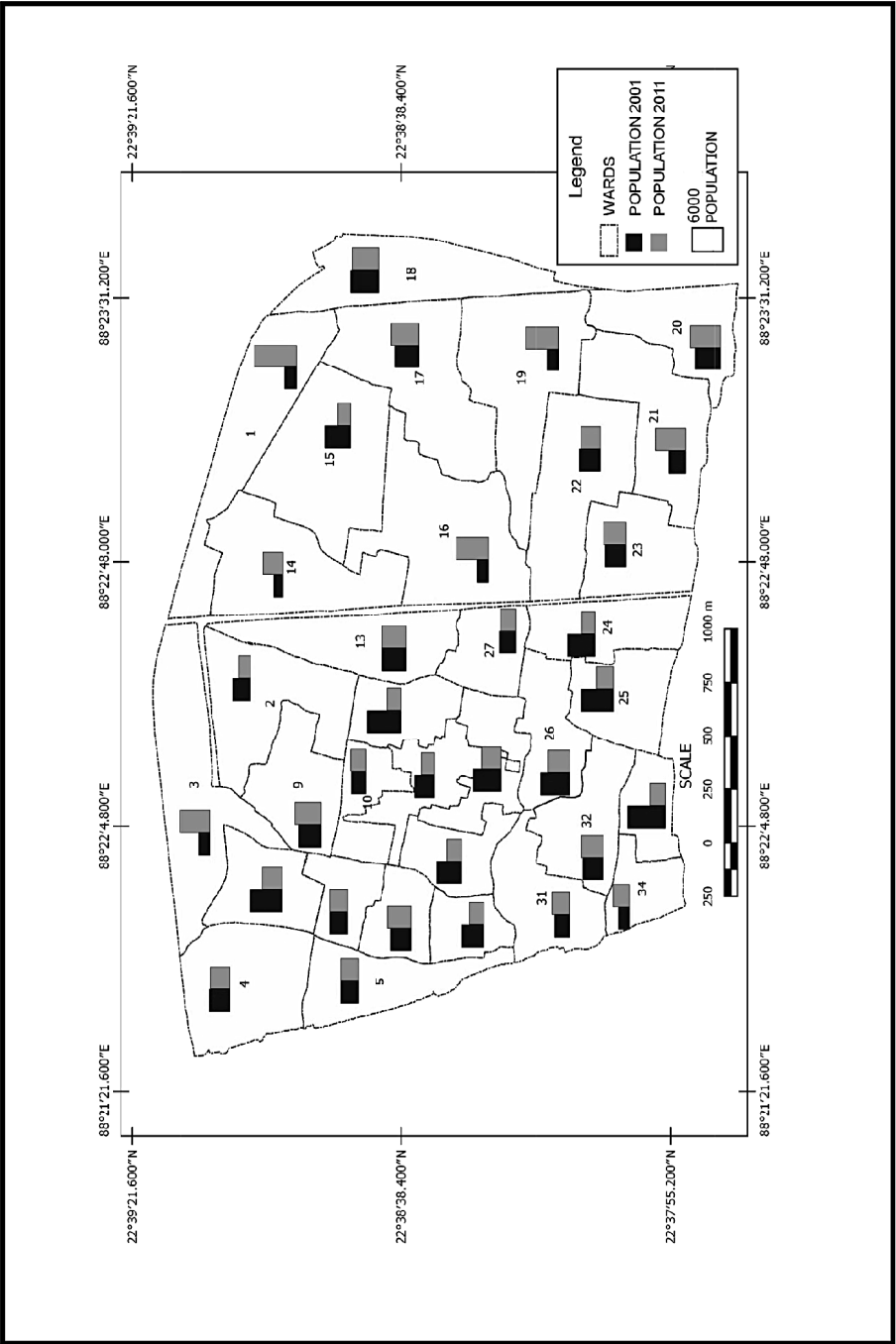


Fig. 4: Ward wise population in Baranagar Municipality 2001&2011

According to the 1991 census, the total population of Baranagar Municipality was 2,24,821 of which the male population was 120134 (53.44%) and the female population was 104687 (46.56%). The highest population was found in ward number 29 followed by ward number 26. Ward no 14, 01, 03 and 10 were under the low population category.

According to the 2001 census, the total population increased to 2,50,768 among which the male and female population was 132559 and 118209 respectively (Census 2001, 2011). The highest population was found in ward 33 followed by wards 12, 25, and 8, and wards 14, 1, 03, etc. are considered under a smaller number of populations. In the 2011 Census, the total population in Baranagar Municipality is 2,45,213 of which the male population was 126187 (53.44%) and the female population was 119026 (46.56%). The highest population was found in ward 1 followed by ward 19, 16, and 20, and ward 34, 11, 12 & 15, etc. are considered under less number of population (*Fig. 4*).

The urban growth in the study area has been greatly stimulated by Industrialization and Commercialization. The establishment of different manufacturing plants especially Baranagar Jute Mill in Baranagar and the concentration of workers in and around the area has triggered the urbanization in Baranagar Municipality (Guha 2016). Development of Transport and Communication is the key factor for the urbanization in the Baranagar Municipality as it is well connected not only with Kolkata City but through developed means of local transportation the different parts of the districts of West Bengal namely Hooghly and North 24 Parganas. At the time the factory was introduced, local transportation facilities were poor. The factory workers were compelled to live near their place of employment. Congestion of housing resulted. The development in modes of transportation and communication and the facilities that cities offer for satisfying the desire for communication also explain urban growth. Industrialization depends upon transportation so that raw material and manufactured goods can be carried in large volumes. Baranagar area is well connected with railways, roadways, metro railways and ferry services with other districts of West Bengal. Baranagar Road Railway Station is one of the oldest railway stations and Belgharia Expressway and Barrackpur Trunk road pass through the Baranagar area which connects Kolkata with northern suburban areas and Howrah and Hooghly.

Modern business and commerce pull young men to Baranagar Area where they are paid munificent salaries. People live here not because they like it as a place of residence but because they can get jobs there. Employment opportunities are one of the main factors that led to urbanization in the study area. Moreover, the Baranagar area is also home to many schools, colleges, educational institutes of national importance, libraries, recreational centers, and health and these have attracted the population to settle here and results in high population growth.

Two data sets (census data 2001 & 2011) have been used to find out the decadal growth rates of the population of different wards in Baranagar Municipality. Among 34 wards 17 wards (2, 4, 5, 8, 11, 12, 15, 18, 22, 24, 25, 26, 27, 28, 29, 30, 33) have negative growth of population whereas rest of the

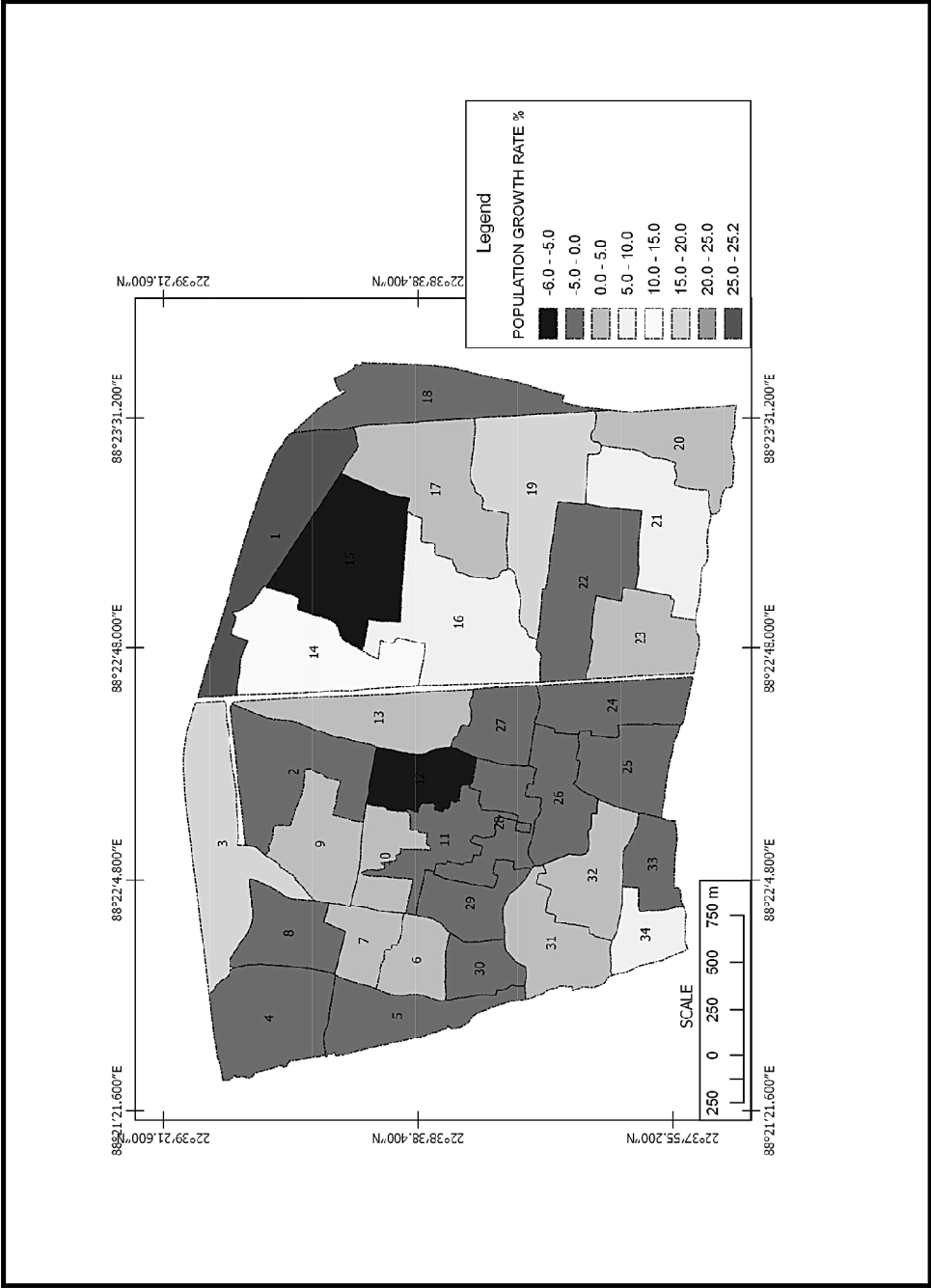


Fig. 5: Decadal growth of population (in per cent) among the municipal wards of Baranagar Municipality



Plate 1: Growth of trees at RIC Abandoned industry



Plate 2: Kumar Engineering works (abandoned industry)



Plate 3: Office of refugees and their rehabilitation

17 wards (1, 3, 6, 7, 9, 10, 13, 14, 16, 17, 19, 20, 21, 23, 31, 32, 34) have positive growth of population (Fig. 5). The lowest growth rate is in ward no 12(-5.95%) and highest growth rate is in ward no 1(25.19%).

Entire Baranagar Municipality is divided into two separate zones, eastern and western. Eastern zone comprises 11 wards (1, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23) and western zone comprises 23 wards (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34). Among 11 wards of eastern zone 8 wards have positive growth rates (1,14,16,17,19,20,21,23) where rest of the 3 wards (15,18,22) have negative growth rates. Ward no 1,14 and 19 have very high growth rates.

Among 23 wards of western zone only 9 wards only have positive growth rates (3,6,7,9,10,13,31,32,34) where rest of the 14 wards (2, 4, 5, 8, 11, 12, 24, 25, 26, 27, 28, 29, 30, 33) have negative growth rates. Ward no 3 have very high growth rates (20-25%).

The present research shows that rapid growth of population with positive growth rates, near about 73% of the municipal wards is present at the eastern zone, whereas only 39 %

municipal wards in the western part have positive growth rates. The rapid growth of population in the eastern zone is due to rapid urbanization at the bare lands. The western zone was mainly occupied by the refugees of Eastern Pakistan at the post-independence time. Now with the closing of industrial activities, the settlement of the labours at the western zone becomes less dense. Only one ward (ward no 3) has the same character of urbanization and population growth as the wards of the eastern zone.

Urban Problems and Planning

As the present research highlights the changing nature of urbanization and population growth in Baranagar Municipality, it encompasses for spatial planning, urban infrastructural development, and improvement of local governance. The people should be made aware of the fact that social, economic, and environmental changes over the years in the area have largely been caused by rapid, unplanned, and haphazard urbanization leading to improper use of natural resources. A number of individual land properties have been converted into high rise apartments which are commonly practiced in the eastern part of the Municipality



Plate 4: Bonorani Market, a new shopping complex at Siddha Lake View project



Plate 5: Siddha Lake View project



Plate 6: High rise building in Eastern part of Baranagar Municipality

as the open spaces and waterbodies are available in this part than the western part of the area.

A very complex pattern of drainage and sewerage line has been developed in this area to accommodate huge concentration of population and the condition of roads are very poor due to a large number of vehicles and congestion. Slum population is also increasing in an alarming rate. Few numbers of small factories are found in the north-western corner of Baranagar and it leads the pollution level in an increasing rate. Residential areas have been developed in an extremely haphazard manner and unplanned way. Another major problem is that there is total absence of fire brigade in this area. So, it is very dangerous to live in this Municipality because there are a number of factories and residential places are also situated in a congested pattern. There are also found a number of roads which have no footpath. The entire area was reclaimed from the marshy land so the waterlogging problem is very acute in this area during monsoon months. Besides the major markets like Baranagar bazaar, Alam bazaar, Palpara bazaar etc. there are a lot of small markets found in almost each and every ward and make area very congested and extremely unfavorable for living.

The huge pressure of population concentration must be decentralized and availability of basic civic amenities like electricity, gas supply, drinking water supply, number of academic institutions and health centres should be increased significantly for living in the urban environment. Fire brigade service must also be provided in this Municipality. After all, it can be said that Baranagar Municipality enjoys an important and very significant place in the territory of North 24 Parganas district because of its historical point of view and its adjacency to Kolkata metropolis. So proper capacity building, awareness programme should be evoked by the state and local government and different NGOs to spread and share information about the adverse effects of rapid urbanization on various socio-economic and environmental aspects.

Conclusions

The present research is a maiden attempt to show the impact of urbanization in the study area and found that Baranagar Municipality has experienced rapid changes in high positive growth of population in the eastern part than that of the western part. The present research shows that rapid growth of population with positive growth rates (near about 73%) of the municipal wards is present at the eastern zone of the Baranagar Municipality and only 39 % of municipal wards have positive growth rates in the western part. The rapid growth of the population in the eastern part had taken place at the bare lands. In early, the western part had high built-up areas as it was developed to accommodate the huge population that came from Eastern Pakistan and small scale to medium scale industries. Now with the closing of these industrial activities, the labour population is shifting from this area and the eastern part attracts new migrants from Kolkata city as Baranagar municipality is very close to Kolkata Metropolis.

The haphazard urban expansion in the study area brings negative consequences to society and on the natural environment. It has posed the most serious livelihood challenge to the original

populations, fishing communities, and the industrial workers of the area. The massive expansion of urban structures has led to an increase in the surface air temperature, increase in pollution level, overcrowding, poor sanitation problem, poor road connectivity, unwanted and haphazard development of some areas, and the adverse ratio of public amenities and population. All leads to the unsustainable urban development of the area.

To overcome this problem, there is a need for systematic and comprehensive planning for sustainable development with a healthy urban environment and proper conservation of natural resources. The monitoring of urbanization is very much needed for planning and management purposes by governmental and non-governmental organizations. It will help implement policies to optimize the use of natural resources and accommodate development at the same time minimizing the impact on the environment.

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