



## Population diversity and demographic characteristics of Contai Municipality in Purba Medinipur District of West Bengal: An analytical overview

Pijush Kanti Tripathi

Associate Professor, Department of Geography, Haldia Government College, Purba Medinipur, West Bengal, India

### Abstract

To describe the demographic characteristics and identify the needs of population diversity are crucial in addressing the issues of population resources and development of a region. Simultaneously, it is very important to highlight different problems and imbalances in population distribution of Contai Municipality in Purba Medinipur district of West Bengal. The prime objective of the study is to understand the diversity in population composition and associated demographic characteristics in the study area with spatio-temporal perspective.

The relevant data for the study have been collected from primary and secondary sources and the data so obtained have been analyzed and presented using various statistics and cartographic techniques.

The municipality has witnessed a substantial population growth gradually with expansion of the urban areas. Out migration is gaining pace in the Contai municipality in the form of rural to urban migration. However the present paper is an endeavor to study the demographic characteristics, composition and population dynamics in the study area in light of cause and effect relationship with the futuristic approach.

**Key Words:** Population diversity, Demographic attributes, Population growth rate, Migration, Population dynamics

### Introduction

Urbanisation occurs mainly because of natural increase in the population and rural to urban migration. Contai is the second oldest town of Purba Medinipur district where the urbanisation is taking place rapidly. The size of urban population is growing faster and there is high density of population. Heterogeneous urban population consists of various shades of people like different castes, classes, ethnic groups, religions etc.

With this growing population of the municipality, other parameters like education occupation, urban amenities, transport, and market structure are also changing and all these changes are affecting the living condition of urban areas. Growth of population is raising the demand of land and this in turn decreasing the open space in urban areas. Vegetation cover and water bodies are being converted into built up areas.

In recent time it has been understood that to avoid the negative impact of urbanisation one need to prioritize the parameters which not only focus on economic development of the town but also help to maintain a good urban social, physical and institutional environment.

### Location of The Study Area

Contai is a multifunctional town and it is situated in the district of Purba Medinipur in West Bengal, India. It is headquarter of the Contai subdivision.

The present geographical dimension of Contai has formally came into existence with the great natural disaster of the third century AD which created "sand-bound reefs or sand walls. The name Contai may thus be English expression of the local jargon meaning "sand heaps". Latitude and Longitude co-ordinates of Contai Municipality area are 21°46'45"N and 87° 44'40"E. Contai is small city with the area of 17.25sq.km. The elevation of Contai Municipality is 6 m. above the mean sea level. Contai is about 31 km. from the beach town Digha and 160 km. from Kolkata.

### Objectives

1. The main objectives of the paper are to study the demographic features viz population structure, composition, distribution and population dynamics of Contai municipality with their cause and active factors over space and in time.
2. Approximation of population scenario in coming decades.
3. To provide suggestions in coping up problems with the increasing population and sustainability in the study area.

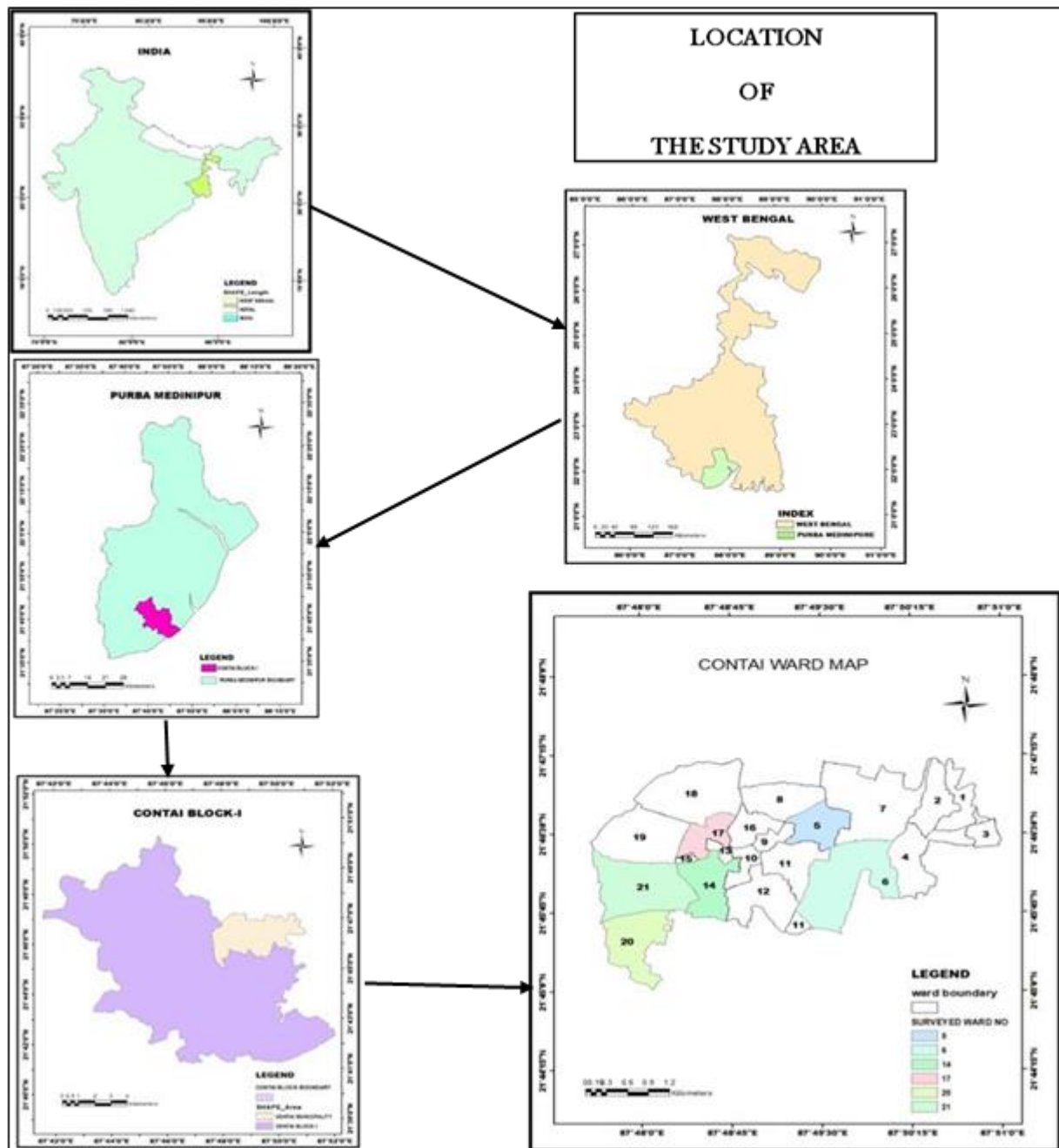


Fig 1

### Database and Methodology

Table 1

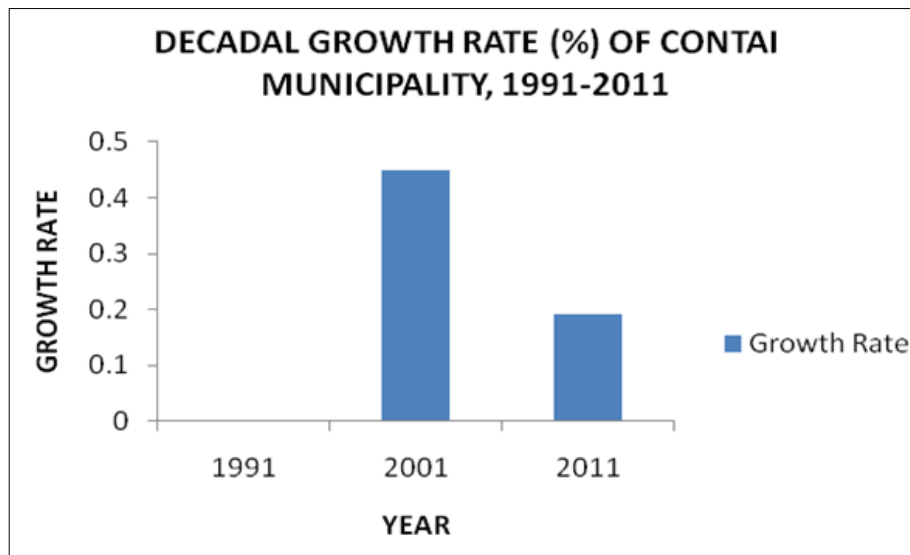
Types of data	Source of data	Data collection method
Primary data	Household survey	Questionnaire and GPS
	GPS survey	
Secondary data	Census of India, 1991, 2001 and 2011	Downloaded from censusofindia.gov.in
	Land sat TM, Land sat OLI	Downloaded from USGS earth explorer

The whole work has been done on the basis of collected primary data through field survey and the maps and data collected from secondary sources. A detailed literature review has been done as well. The wards of Contai municipality have been selected for the field survey on the basis of their time of origin. It would be helpful to understand the temporal change of the Characteristics of urban parameters. Using simple random sampling 25 households from each ward have been selected as samples. For each parameter several quantitative techniques have been applied. Secondary sources like District Census Handbook of Purba Medinipur district, West Bengal

series 1991 and 2011 as well as District Statistical Hand Book of Purba Medinipur district 2001, 2008, 2011 are used to collect the data and maps and information. Explanation and analysis have been adopted to discuss the data. Decadal growth rate, urban population composition, gender and caste sharing of population have been done with the help of appropriate methodologies and statistical formula. Various cartographic techniques have been applied to make the data presentable.

## Research and Discussion

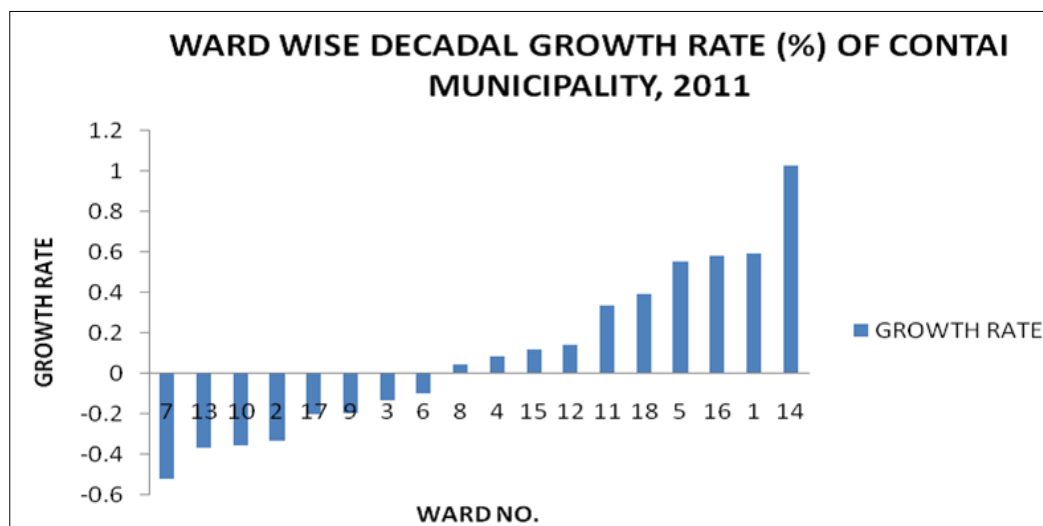
### Decadal growth rate of population



**Fig 2:** Decadal growth rate of Contai Municipality, 1991-2011

The decadal growth rate gives an overview of the percentage of total population growth in a particular decade. During 1991 to 2011 Decadal Growth rate of Contai Municipality area is showing following figure. The Decadal Growth Rate of Contai Municipality is showing a decreasing trend. During 1991 to 2011 growth rate was 44.90% and then during 2001 to 2011 the decadal growth rate is 19.01%.

The ward wise Decadal Growth Rate of population in Contai Municipality showing in the following figure



**Fig 3:** Ward wise decadal growth rate of Contai Municipality

According to 2011 census in Contai Municipality the highest decadal growth is seen in 14 no. Ward is 1.02531 and lowest decadal growth rate is -0.51893 which is shown in 7 No. Ward.

### Spatial Distribution of Population

Measurements of the spatial distribution of population densities have served as an important empirical tool for urban researchers concerned with sub urbanisation. The fact that population has been observed to decrease with distance from CBD. Density of population is an indicator of pressure of population on land which is influenced by factors like accessibility, facilities etc. Higher population density puts more pressure on land and environment.

Contai Municipality, with population of about 92 thousand is the 2nd most populous municipality located in Purba Medinipur district of the state West Bengal in India. Total geographical area of Contai Municipality is 14 sq.km and it is the smallest city by area in the district. Population density of the city as per 2011 census is 6472 per sq. Km.

There were 21 wards in the city and according to 2011 census ward no. 21 has no population record. Ward wise population density map of Contai Municipality is showing below.

The ward wise population density is varies from 0-124300. Contai ward no. 15 is the most populous ward with population 6914 and ward no.6 is the least populous ward with population 2482. As per 2011 census ward no. 21 has no population record. High population density seen in wards with small area and high urban facilities and accessibility. Ward no.15, 13&3 has very high population density.

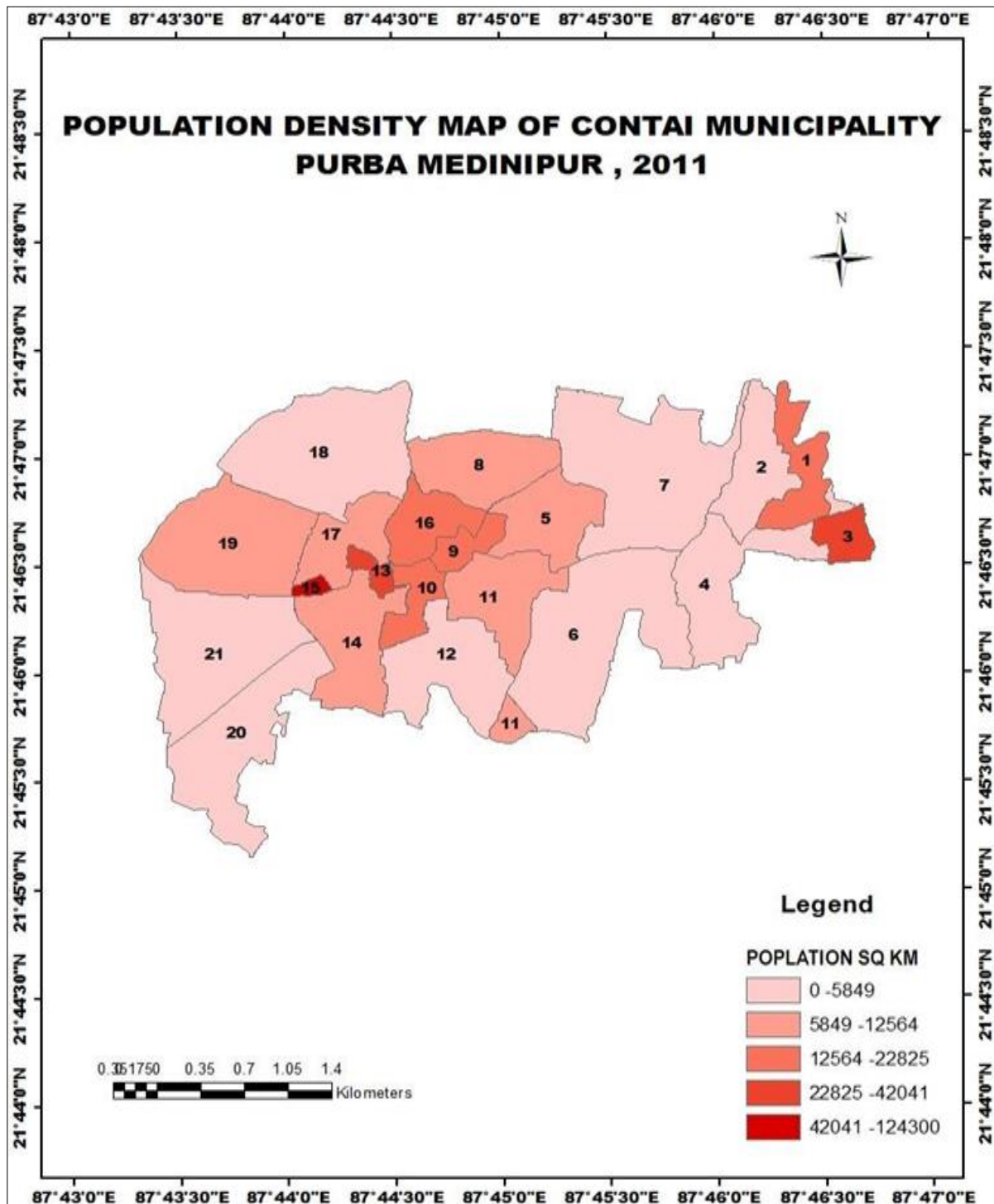


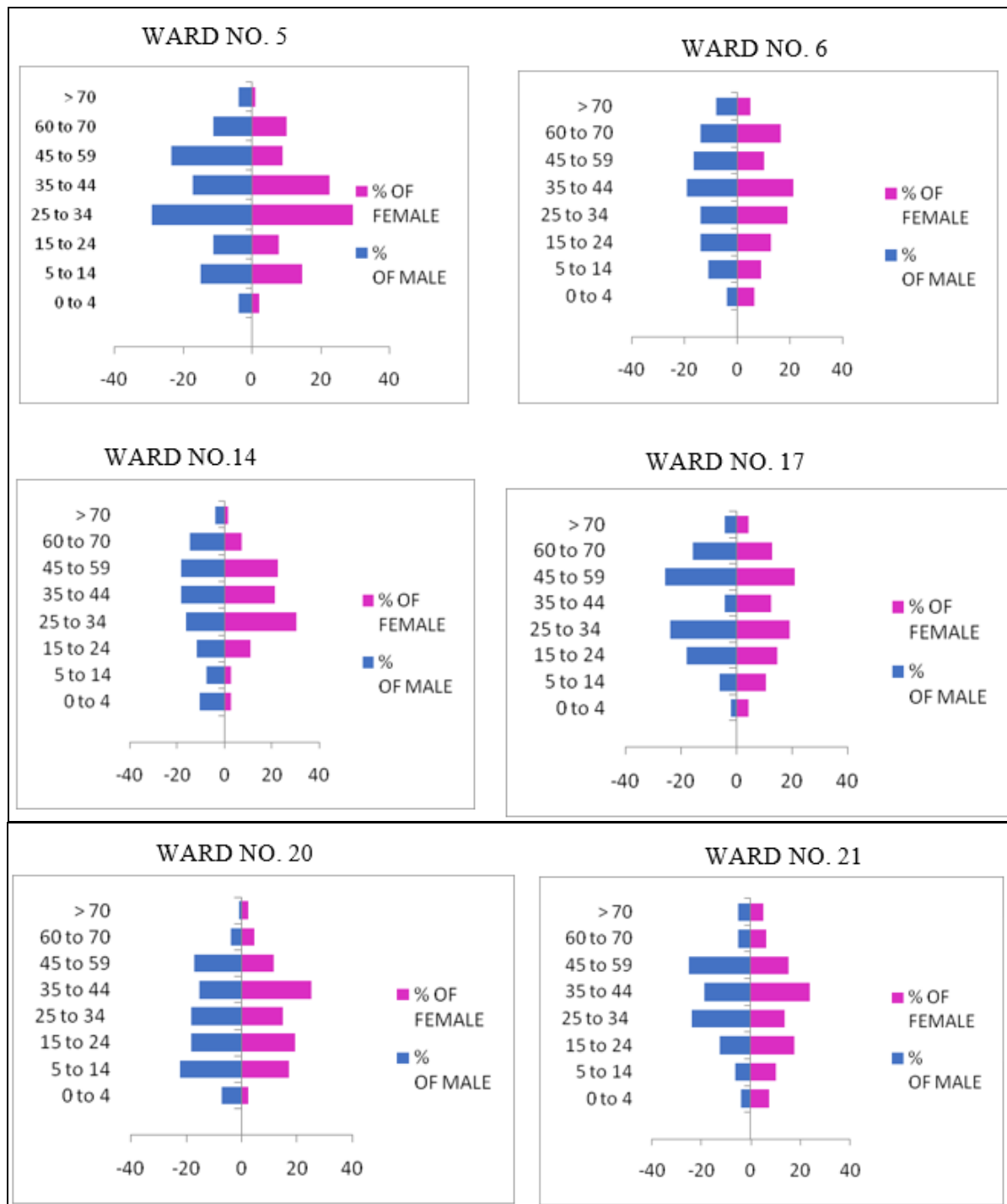
Fig 4

#### Age-Sex Structure of Population

The most important dynamic of a population is its age-sex structure- the distribution of people age and sex in a specific region. The age-sex structure of a population is the cumulative result of past trends in fertility, mortality

and migration. Age-sex pyramid can tell us about how a population changes over time. They can also tell us about the birth rate, death rate, life expectancy rate. Information on age-sex composition is essential for the description and analysis of many other types of demographic data.

Surveyed ward wise age-sex pyramid of Contai Municipality is given below

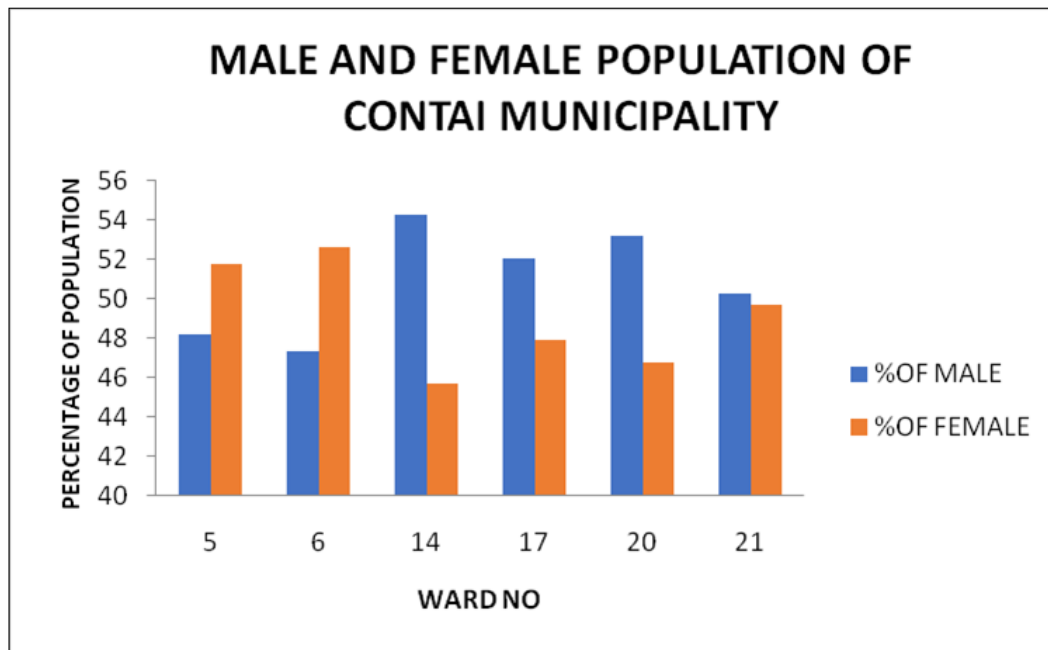


**Fig 5:** Surveyed ward wise Age-sex pyramid of Contai Municipality

The above age-sex pyramids of each surveyed wards shows that low birth rate and death rate. Also life expectancy rate is high wards. Age-sex pyramid of ward no. 5 shows that low birth and death rate of population. Child (0-14) and old (>65) dependency ratio is less than productive population. Which indicate the economic condition of this ward is well. Age-sex pyramid of ward no.6 is a 'coffin' shape which shows the very low birth rate, low death rate and high life expectancy. In ward no.14 the structure of male population is look like as bell shape and female population is very less than male population in ( 0 to 4) age group. Above 70 age group male population is less than female population. Ward no. 17 shows the birth and death rate is low and dependency ratio is less. In ward no. 20 &21 birth rate and death rate are low. Productive populations are more than dependent population.

### Male and Female Population

Percentage of male and female population in our surveyed wards showing in following figure



**Fig 6:** Surveyed ward wise Male and Female population of Contai

Highest male population and lowest female population seen in ward no.14 and lowest male and highest female population seen in ward no.6. The gap between male and female population is very less in ward no. 21.

### Ethnic Composition of Population

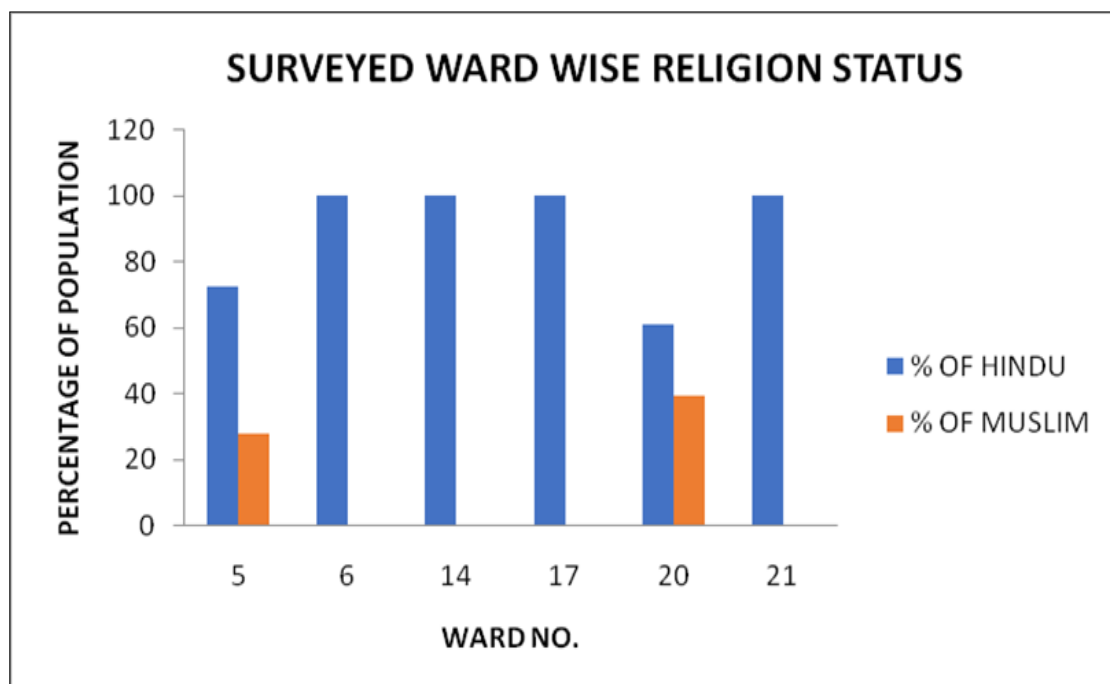
An ethnic composition or ethnicity is a group of people that have similarities with each other with respect to culture, language, history or society. They often share similar rituals, religion, dressing style etc.

Ward wise religion status of Contai Municipality is given below

### Ethnic Composition of Population

An ethnic composition or ethnicity is a group of people that have similarities with each other with respect to culture, language, history or society. They often share similar rituals, religion, dressing style etc.

Ward wise religion status of Contai Municipality is given below

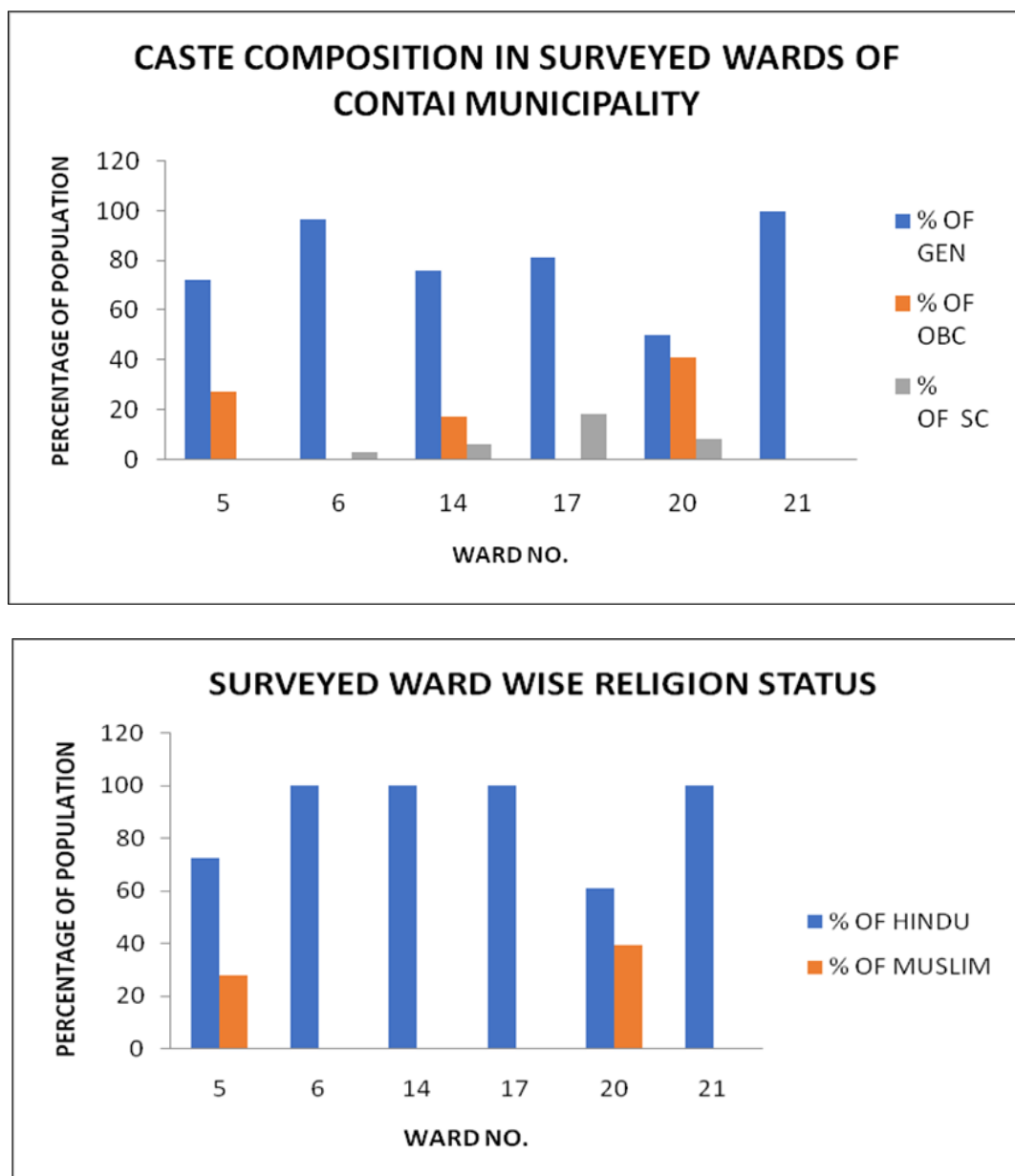


**Fig 7:** Surveyed ward wise religion status of Contai Municipality



In our surveyed wards the above figure shows that only ward no.5 & 21 has both Hindu and Muslim population. Another ward has only Hindu population.

Ward wise caste composition of Contai Municipality is showing in given figure



**Fig 8:** Surveyed ward wise religion status of Contai Municipality

In our surveyed wards the above figure shows that only ward no.5 & 21 has both Hindu and Muslim population. Another ward has only Hindu population.

Ward wise caste composition of Contai Municipality is showing in given figure

Highest male population and lowest female population seen in ward no.14 and lowest male and highest female population seen in ward no.6. The gap between male and female population is very less in ward no. 21.

**Table 2:** Demographic Parameters

Population Parameter	Year		Decadal Growth (2001-2011)
	2001	2011	
Total population	4417377	5095875	15.35
Sex Ratio	947	938	-0.95
Child sex Ratio	951	946	-0.5257
Population Density	933	1081	15.86
Total child population(0-6) age	628459	587654	-6.49
Male child(0-6)age	322110	301989	-6.24
Female child(0-6)	306349	285665	-6.75

Total literate population	2806250	3923194	39.80
Literate Male population	1626260	2149073	32.09
Literate female population	1179390	174121	50.42

**Source:** Census 2001 and 201

### References

1. Chandna RC. Geography of Population: Concepts, Determinants and Patterns. Kalyani Publishers,
2. Clarke JI. Population Geography, Pergamon Press, Oxford, 1965.
3. Tripathi RD. Demography and Population Study. Vasundhara, Gorakhpur, 1999.
4. Trewartha GT. Geography of Population, World Pattern. John Willey, New York, 1969.
5. Ghosh BN. Population Theories and Demographic Analysis: Meenakshi b Prakashan, Meerut, 2004.
6. Premi Mahendra K. Population of India in The New Millennium; National Book Trust of India, New Delhi, 2006.
7. Saho VC, Zacharia E. Elements of Demography, Allied Publishers Limited, New Delhi, 2000.
8. Scheidel W. Population and demography, Princeton/Stanford Working Papers in Classics, 2016, 1-14.
9. Zelinsky W. A Prologue to Population Geography. Prentice Hall, NJ, 1996.
10. District Census Hand Book, Purba Medinipur District, West Bengal, 2011.
11. District Statistical Hand Book. 2012 –Bureau of Applied Economics and Statistics, Govt. of West Bengal, 2008.
12. District Human Development Report, Purba Medinipur District. Planning and Economic Development, Government of west Bengal, 2011.