

## Demographic characteristics of the encroachers along the Adi Ganga River, Kolkata, West Bengal, India

Atanu Mandal

Department of Geography, Fakir Chand College, Diamond Harbour, West Bengal, India

### Abstract

The demographic characteristics play a significant role in the development of a region. Within the last few decades the settlement density increased at a high rate along the Adi Ganga. The Adi Ganga is a palaeodistributary of the Bhagirathi-Hugli River. According to Mediaeval Bengali literature, Adi Ganga River was an important navigational channel. During British period, many foreign ships, vessels also carried import and export of goods via Adi Ganga to Kolkata Port. Now, due to unprecedented urban growth, the river is sandwiched by the encroachers from both sides and the riverside land use patterns have been entirely modified. Several demographic parameters such as growth, concentration, male-female ratio, caste categories, education status and type of ration card are carefully studied for the better understand of the present status of the encroacher. The study reveals that, maximum encroachers are illiterate, poor and belongs to below poverty line income group.

**Keywords:** encroacher, urban growth, caste, education, poor

### Introduction

The partition of Bengal (1947) and the consequent rise in population led to an overwhelming demand for land in Kolkata and the refugees started to settle riverside. The southern part of the city experienced unprecedented population increase from the late 1960s followed by the construction of too many high-rises mainly along the rivers and canals. Many of them also came from Bihar, Jharkhand, Odisha etc. and permanently resides along the river. Due to high growth rate of the encroachers, they have reclaimed some portion of the riverside and somewhere constructed bamboo made huts inside the river bed. Polluted water coming from various sources also discharges into the river Adi Ganga. People, who are living at the vicinity of the river, are directly and indirectly suffering due to many waterborne diseases.

### Study Area

The encroachers use river water for different domestic and ritual purposes. To study the use of river water by the encroachers and related problems of the Adi Ganga and its impact on the surrounding environment, the course of Adi Ganga from its Off-take (bounded by 22°27'08"N and 22°33'03"N parallels of latitude, 88°18'59"E and 88°24'10"E meridians of longitude having an area of about 28.266 square kilometres. under Kolkata district of West Bengal) upto Garia has been selected for detailed study (Fig. 1). As the course of the Adi Ganga upto Garia is continuous and traceable for the fluvio-hydrological studies, the study has been restricted to the flood plain of Adi Ganga upto Garia only. Adi Ganga and its surrounding regions are mainly situated in the lower delta plains of Bhagirathi-Hugli system.

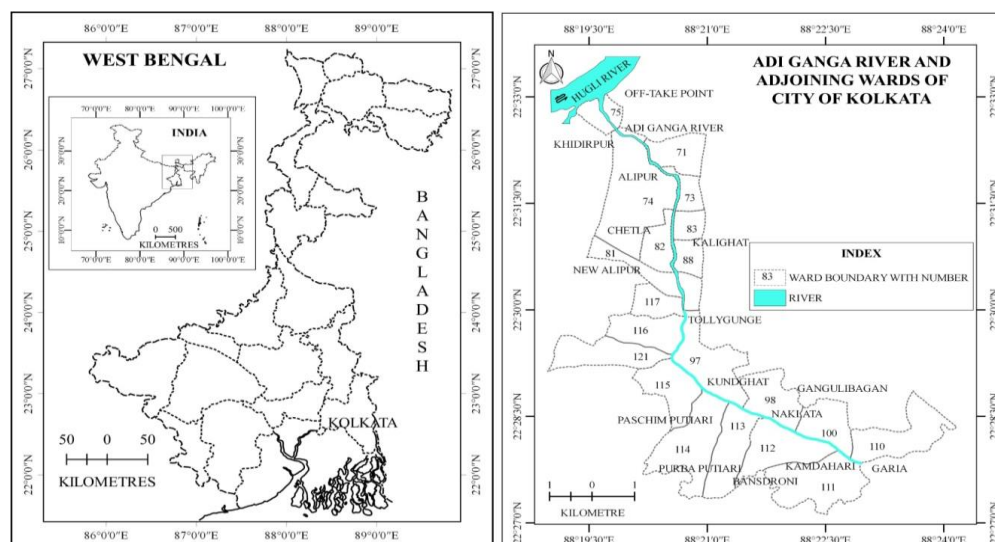


Fig 1: Location map of the study area

**Objectives**

The objectives of the study include the following:

- To identify the growth and concentration of encroacher along the Adi Ganga River
- To highlight male-female ratio and caste categories of encroacher
- To study the education status and ration card type of encroacher

**Materials and Methods**

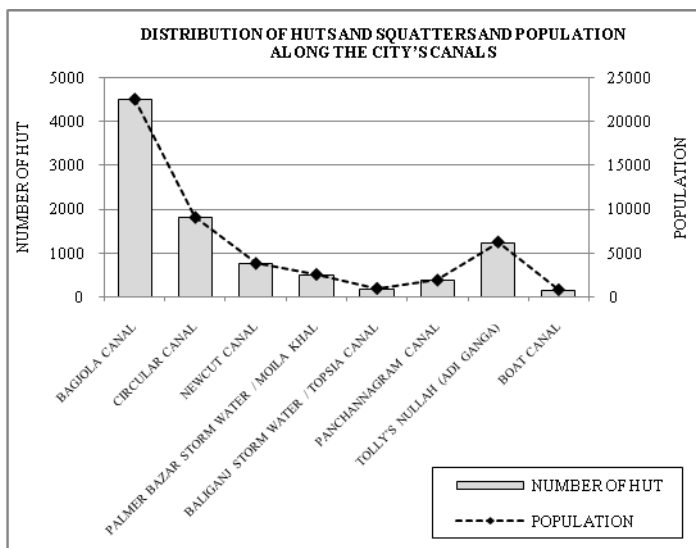
The entire study is based on mainly primary data which was collected through random sampling among the encroachers (who are directly or indirectly depend on the river) i.e. target population from the adjoining twenty wards (ward numbers 71, 73, 74, 75, 81, 82, 83, 88, 97, 98, 100, 110, 111, 112, 113, 114, 115, 116, 117 and 121) of Kolkata Municipality along the Adi Ganga River. Data for present study have been generated from the selected wards on the basis of pre-designed questionnaire following the purposive method of sampling also. The available secondary data collected from Census of India (2011) [2], various records, books, journals and Government publications. All the collected relevant data were analyzed with the help of statistical techniques. MS Excel and QGIS software were used for relevant cartographic representations.

**Results and Discussion**

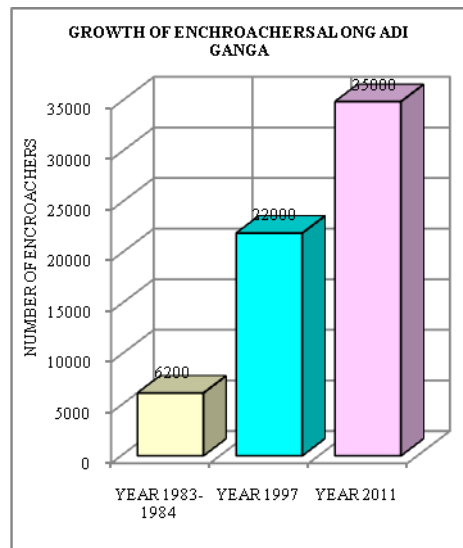
**1. Encroachers along the Adi Ganga**

Kolkata offer a relatively quick opportunity of income to the people of the surrounding rural areas as casual workers in the

transport, trade, manufacturing, conservancy and domestic sectors. During the partition of the country and also post Bangladesh war there have been huge influxes from the border into the state. These homeless and destitute persons came to be known as “Refugees” or “Displaced person”. They came to Kolkata and started to reside along the riverside like encroachers. In case of the Adi Ganga, between Karunamayee and Garia the stretch was highly populated, and now from Khidirpur to Garia all the stretches are medium to highly populated. The maximum encroachers inhabit near Khidirpur along the Adi Ganga. The encroachers are illegal inhabitants residing on the Adi Ganga river banks. According to the Department of Irrigation and Waterways, Government West Bengal [5], the custodians of the Adi Ganga River claimed that these settlements are encroachments and they hamper the proper drainage by polluting the river. In 1983-84, Unnayan, (a social service organization specially concerned with housing and shelter), made a survey of the shanty-dwellers of eight points along the city’s canals and open arterial sewers (Bandyopadhyay, 2005) [1]. According to Figure 2, there are lots of huts and squatters all around the city. In the CEMSAP survey in 1997, the total number of residents (encroachers) along the Adi Ganga route was 22,000, which has risen from 6,200 in the year 1984, after the Unnayan survey. In 1984, according to Unnayan survey there was 6200 encroachers along the Adi Ganga (Chattopadhyay, 2002) [3]. In 1997, according to CEMSAP survey the total number of encroachers was 22,000 (Chattopadhyay, 2002) [3]. In 2011, the approximate number of residents or encroachers increased to 35,000 (Fig. 3).



**Fig 2**



**Fig 3**

According to Census of India 2011, the adjoining wards of the Adi Ganga River having very high density of population i.e. above 10,000 population per square kilometre. In ward number 83 and 75 maximum percentage of encroacher inhabited i.e. Khidirpur and Kalighat surrounding areas (Fig. 4). To measure the concentration of encroacher with respect to

total population of adjoining wards of Kolkata, the Location Quotient Method was used (Mahmood, 2008) [4]. Ward number 75, 83 and 88 indicates very high concentration (location quotient value above 30) of encroacher and the wards located southern part of the study area indicates relatively low concentration of encroacher (Fig. 5).

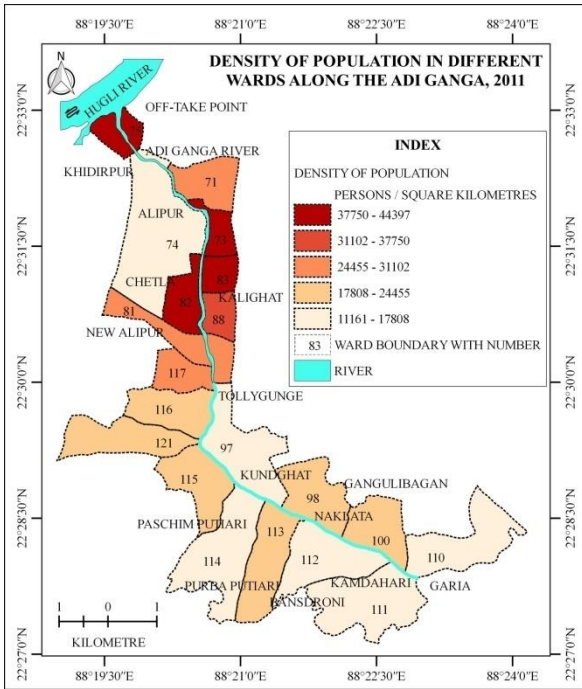


Fig 4

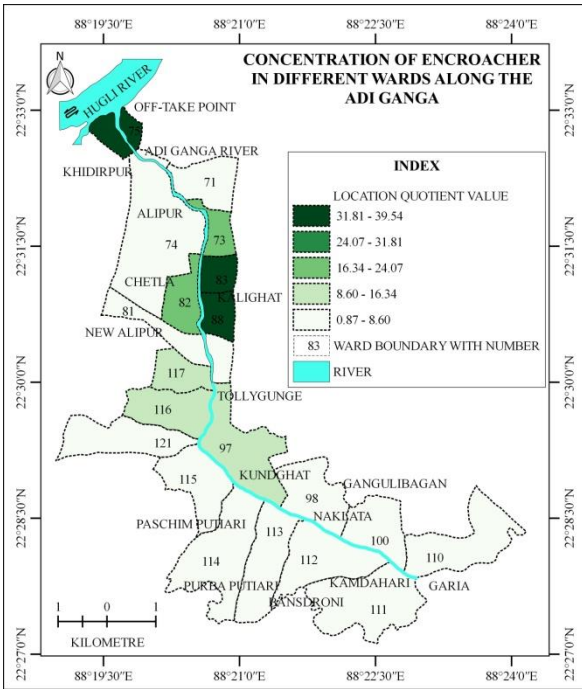


Fig 5

**2. Distribution of male and female encroachers**

All the twenty wards of Kolkata Metropolitan Corporation, along the Adi Ganga belong above 50% of male population. Another noticeable fact that, working population is high. Maximum male populations (59.81%) are in ward no. 75 and female populations (49.45%) are in ward no. 114 (Fig. 6). Out of total samples, average 52.37% are male and 47.63% are female.

**3. Caste wise distribution of the encroachers**

Maximum 67.72% of General Caste encroachers live in ward no. 82 and maximum 45.67% of Schedule Caste (S.C.) encroachers live in ward no. 75. In ward no. 116, very high (28.67%) concentrations of Schedule Tribe encroachers and high (10.10%) Other Backward Classes encroachers are in ward no. 112 (Fig. 7). It is found that the average percentage of General Caste encroachers is high (47.55%), followed by Schedule Caste (31.95%) and Schedule Tribe (15.94%). Few (4.56%) encroachers are Other Backward Classes (O.B.C.).

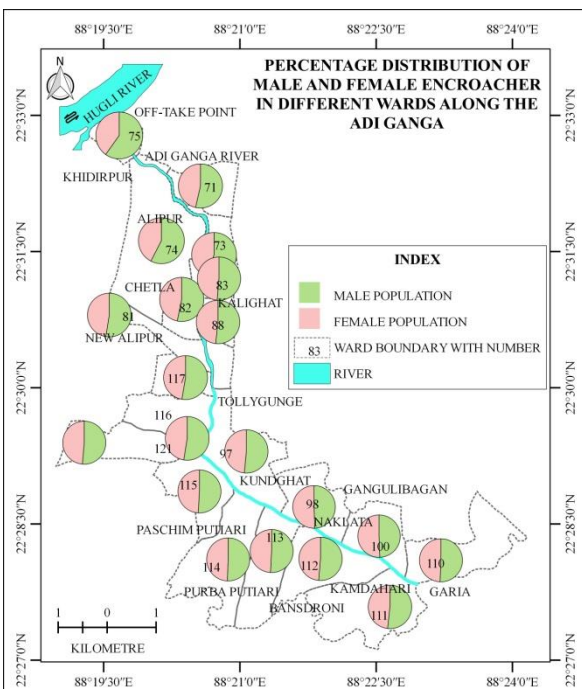


Fig 6

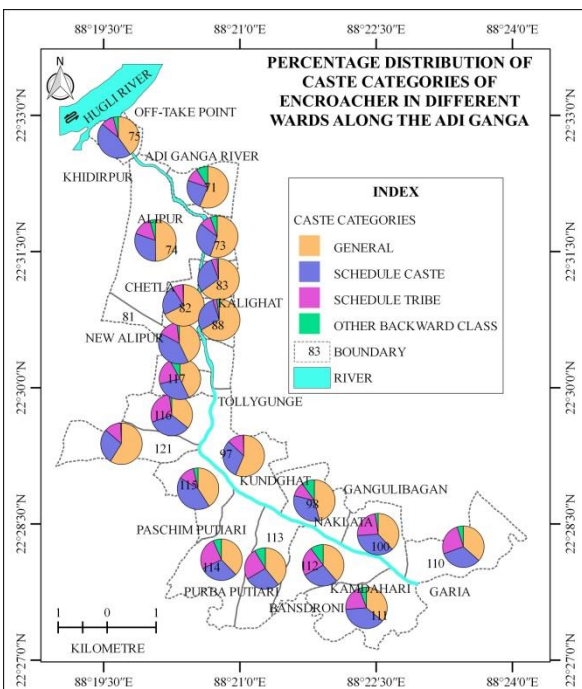


Fig 7

#### 4. Education status of the encroachers

The education status of the encroachers is very poor. They are unwilling to go to school. School bunk and school dropout are noticeable among the students. Most of them are highly engaged in different activities. Problems of child labour are prominent in this particular area. Social and educational awareness are absent. Some adults are doing crime and engaged in anti social activities. Different addictions (drugs, brown sugar, dendrites and alcohol etc.), adult and juvenile delinquency are common problems in different pockets along the river Adi Ganga. Social pathology and its consequences have been increased due to lack of education and social awareness. Social security and justice have been interrupted. From the surveyed data, it is found that, 35% are literates and 65% are illiterates. However, Madhyamik passed candidates are quite high (40.60%) followed by primary standard (33.18%). Few (6.86%) residents got graduate degree from college. 3.50% and 1.32% residents are also awarded the highest educational degree like Post-graduate and vocational degree in the year 2011. In ward no. 114, maximum 47.37% encroachers have primary standard education. But in ward no. 111, maximum 45.98% are Madhyamik passed candidates

(Fig. 8). Recently the scenario has been partially changed. Most of the literate people enroll their children to the local school run by the NGOs within their ward. This area has more affluent encroachers and this might be the chief reason why their children are sent to school instead of to work for a living. However, in the vicinity of Adi Ganga, many NGOs have been imparting education to the local residents. There are 15 Primary schools and 12 High schools in the adjacent area of Adi Ganga. The *Bal Vidyalaya, Vivek Sangha, Munshi Prem Chand Memorial School and Shibkali Vidyapith* are seen to be active in the area.

#### 5. Encroachers with BPL ration card

Large number of residents (average 45.73%) stayed here for 10-30 years, but only 40.24% encroachers have ration card, out of 55.21% have BPL (Below Poverty Level) category ration card (Fig. 9). Also 40.24% encroachers have got their voter identity. In ward no. 116, maximum 69.99% have no ration card. But in ward no. 71, maximum 64.78% have ration card. Without permanent address they have collected ration card and voter card, in this situation they put landlord's address.

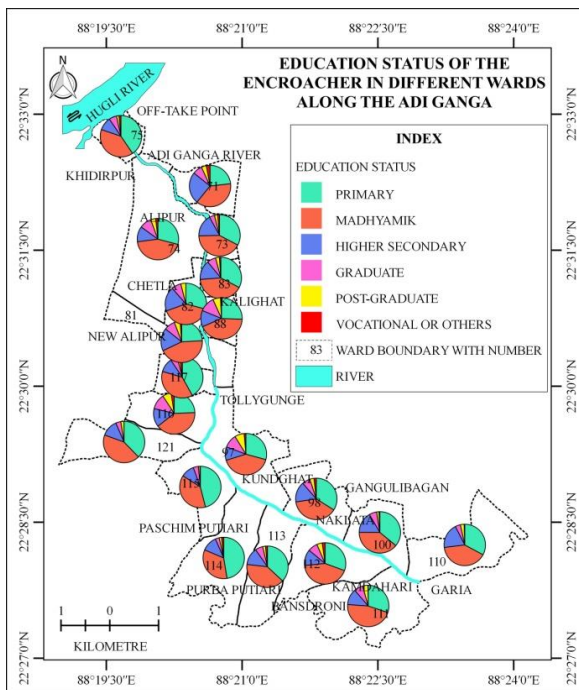


Fig 8

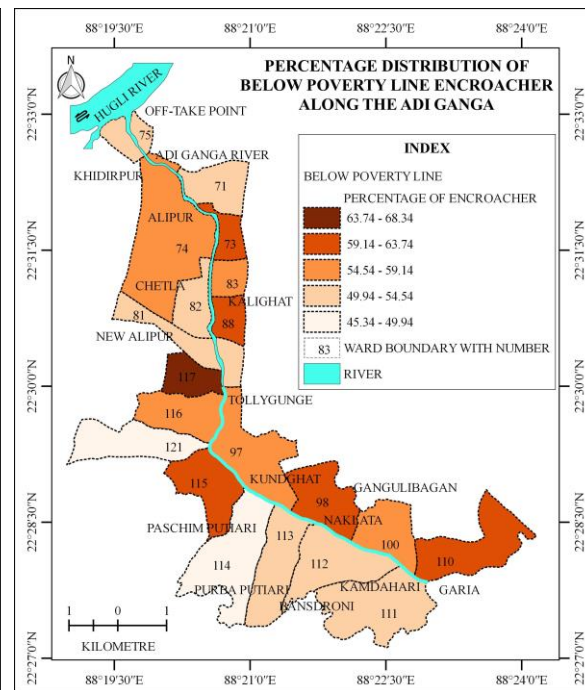


Fig 9

#### Conclusions

During last few decades the settlement density increased at an alarming rate in the wards along the Adi Ganga. In few places encroachers also reclaimed some portion of the river bed. To assess the socio-economic condition of the encroachers, various aspects have been thoroughly studied. The study shows that, maximum encroachers are illiterate and poor. The encroachers do not have any concept about the insurance. Basically, they are not getting any kind of facilities like life insurance from the government but recently State Government provides 'oldage grants' and 'unemployment bhata' for the poor residents. People are using this river water for different

purposes as it is regarded as holy water, after using highly polluted river water, they are suffering from different health related problems. Encroachers are partially accountable for different hazards like waterlogging, malaria, typhoid etc. Recent study highlighted that, more than 35,000 encroachers are directly attached with the river and also maximum encroachers are residing with high risk from different kind of hazards. It is essential to improve the level of infrastructure in the study area. Kolkata Corporation and many Non-government Organizations have tried to mitigate problems in the recent years and got good results partially. Improvement of women education and development of consciousness are

also necessary in this respect. Last not the least; overall proper initiative from local to higher authorities with a constructive approach and increasing awareness can develop the study area.

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