

Available online at http://www.journalcra.com

International Journal of Current Research Vol. 15, Issue, 02, pp.23928-23934, February, 2023 DOI: https://doi.org/10.24941/ijcr.44893.02.2023

### INTERNATIONAL JOURNAL OF CURRENT RESEARCH

# **RESEARCH ARTICLE**

### QUALITY OF LIFE OF THE URBAN SLUM DWELLERS: A CASE STUDY IN BMC, WEST BENGAL

#### \*Dr. Suma Dawn

Assistant Professor, TDB College, Raniganj, India

#### **ARTICLE INFO**

Article History: Received 04<sup>th</sup> November, 2022 Received in revised form 27<sup>th</sup> December, 2022 Accepted 29<sup>th</sup> January, 2023 Published online 19<sup>th</sup> February, 2023

#### Key words:

Quality of Life, Standard of Living, Slum Dwellers, Indicators, BMC.

\**Corresponding Author:* Dr. Suma Dawn

### ABSTRACT

The Quality of life (QoL) of urban slum dweller embodies overall well-being and happiness, including access to all the civic amenities, as well as good physical and emotional health of an urbanite. It's relative, subjective and has intangible components, such as spiritual beliefs and a sense of belonging. The increase of a nation's production and wealth; however, development incorporates the enhancement of choices and accesses to the basic needs of the people of the society. To upgrade the quality of life, it is essential to reduce poverty by providing various income opportunities as well as ensuring various economic plus social factors. The area under investigation is also assessing the indicators of Quality of Life (QOL) of people of some selected wards (Ward No. 1 to 7) in Burdwan Municipal Corporation (BMC) responsible for the low QOL. The paper finds out the disparity in the indicators of QOL of the slum dwellers and studies the comparative analysis of the wards of the urban area.

*Copyright©2023, Suma Dawn.* This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Suma Dawn. 2023. "Quality of Life of the Urban Slum Dwellers: A Case Study in BMC, West Bengal". International Journal of Current Research, 15, (02), 23928-23934

## **INTRODUCTION**

Rapid urban growth needed urban infrastructure development. The haphazard growth of urban areas has resulted in slum areas in the town. These are neglected parts of any city where housing and living condition are appallingly poor. Slums range from high-density, squalid central city tenements to spontaneous squatter settlements without legal recognition or right sprawling at the age of city's (World Bank, 2000). A slum is predominantly an overcrowding area where dwellings unfit for human habitation. It is an area where basic amenities like housing, water supply, drainage and sanitary condition are lacking and hence, poor Quality Of Life (QOL) & reduced standard of living. The poverty is interminable part of slum dwellers. So the slum population is backward socially and economically. A slum locality in a developed country may be good living area as per the standards in developing country slum results from a toxic combination of weak governance, under investment in basic infrastructure, poor planning to accommodate growth, poor and insufficient public transportation and limited access to employment. Urban congestion, tremendous migration of labour forces both skilled and unskilled, non-availability of housing infrastructure is leading to occurrence of slum reflect the deteriorating quality of life in urban areas. The basic characteristics of slum are - dilapidated and informal housing structure, poor ventilation, acute over-crowding, faulty alignment of streets, inadequate lighting, paucity of safe drinking water, water logging during rains, absence of proper toilet facilities and non- availability of basic physical and social services. The National Sample Survey Organization (NSSO) in the Ministry of Statistics and Programme Implementation, Government of India has

released the report of a nation-wide survey carried out by it during July 2002-December 2002 on the condition of urban slums.

#### LITERATURE REVIEW

Duckworth (1926) stated about the origins and connotations of the slum have important consequence. If one considers some particular index of slum conditions such as overcrowding; it can be possible that the bulk of the population could lie outside these are commonly known as slum whereas some of these areas may not be subject to overcrowding. Another feature that is slum areas has often been far from uniform internally; either in housing or social character, and maybe over contested with districts outside. To some extent this is an inevitable product of generalization, acceptable for many purposes but it does not dangers in promoting a view of slum as thing apart, requiring special remedies. Conclusion may be derived from the confusions of different scales of analysis given that the most studies the nature and intensity of physical and social variables is not strictly controlled. Mukherjee (1932) had taken an initiative to draw a view of the spatial organization of Calcutta slum with the score of principal component analysis of different variable like percentage of slum population ,percentage of slum area, slum external density, slum size , family size, water tap or tube well. As the study of rebalanced, on the basis of this spatial variation, instead of considering all the slums as homogenous entities, different planning issues should be incorporated. Abrahams (1935) visualized various types of slum (metropolitan, rural, new slum, man-made and prefabricated) including illegal squatter.

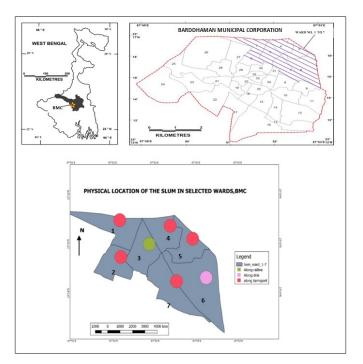
He added that the worst slum condition could be detected, when the physical slum was accompanied the overcrowding. It is a common feature all of countries. Engels (1942): The slum and their associated problems were first apprehended by Engels in 1936. As a collaborator of Karl Marx, he broadly studied and depicted the socio-economic conditions of the working class population of the Cheetham Hill, Manchester, in the light of dialectical materialism. One of his articles indicated the hygienic conditions of the homes for the poor and workers between the big luxuries buildings on both sides along straight road. Sen (1954-58) had examined and studied the spatial pattern and confined to the construction of houses in slum and availability of basic amenities. Gadgil (1959) discussed the problem of slum clearance and housing in Poona. His interpretation was mainly confined to the high density per room in the slum, water, sanitary conditions and housing shortage. He advocated the provision of more space for hosing and inadequate conservancy service. Singh (1960) had estimated that the slum population varies from 10% of the total population of major urban centre of India. He had analysed the spatial structure of the dilapidated houses of slum dwellers around the central business district and industrial centre.

Hunter (1964) had illustrated how slum dwellers create social and economic problems in the neighbourhood region and challenge the social balance of the urban areas. Sing (1964) had studied the slum of Bangalore and came to a conclusion that there were 98 slums are consisting of three- fourth of the population. They considered of slum patches of huts built with mud and roofed with kerosene tins. They were numerous in industrial North West and clustered around sources of water supply. Ramachandran (1967) had framed the concept on the growth of slum and their spatial structure. He had also studies the socio-ecological problem of slum areas developed out of negligence and inadequate amenities and had suggested few solutions. Deliberate Sings (1978) mentioned about the slum clearance committee and also suggested purposeful set up for urban development. Ray (1988) analysed slum in reference to social group as much as to a particular section of the city where the social pathologies of alcoholism, disorder family life prostitution and the like are common occurrences. He also mentioned some housing acts for slum clearance and urban renewal.

Ramachandran (1989) in his study in urbanization and urban system argued that since big cities offer opportunities for land development and provision of housing on a large scale and increasing land and property values can contribute to the finical resources, policy framework should aim at a system of self-financing in a big cities which can be utilized as a measure of better life style of the slums. Banerjee (1990) identified slum as one of the most significant problem of Calcutta Metropolis. He thought that the progressive deterioration of the metropolitan landscape might be the results of various economic, social and political constraints. These forces had initiated a process of urban decay with the evidences of proliferation of slums, chronic housing shortage, mounting unemployment etc. As the author suggested, successful planning programmes with tremendous resource mobilization, increase public participation and utilization of scientific talents only could tackle with the accumulated problems. Mukopadhya (1993) had discussed the slum problems in terms of community participation within the framework of urban development in the context of developing country. Tiwari (1999) worked on the myths related to slum dwellers 'economic life of the city Kanpur. He examined different aspects of slum dwellers such as occupational features, economic expenditure mobility debt pattern, saving capacity etc. He concluded that slum functional and well integrated with the larger economic system than the structural and sectorial analysis tends to show. Mary and Deodhar (2001) took an attempt to identify urban sub-areas in Bhubaneswar, the first planned city of India. The poor dwellers used to face problems meeting the long term repayment of the housing loan and were forced to sell their dwellings. As a result the slum dwellers had to start all over again. And the slum of hope had changed into one of despair for these poor dwellers. Dasgupta (2005) had discussed some measure taken for slum improvement for the sake of urban environment management. He suggested some infrastructural investment for roads, daring, fuel

supply, seweage etc., he also gave example from international fields like Jakarta, kitaga of japan etc.,

**Study area at a Glance:** Barddhaman is grown up as a district on the North bank of river Damodar, 105 kilometer away from the state capital Kolkata in West Bengal. The present study is an attempt to explain the physical quality of life of the slum dwellers of some selected wards (Ward No. 1 to 7) in Barddhaman Municipal Corporation (BMC) of West Bengal. It is a major part of Barddhaman Municipal Corporation containing the wards 1 to 7. Barddhaman Municipal Corporation is located beside the river Damodar in the topographical sheets 73M/15 and M/16 of Survey of India. The latitudinal extension varies from 23°13' to 23°16'Nand longitudinal extension varies from 87 °49' to 87 °53'E (Map no- 1.1). The wards 1, 2,4,5,7 are located along the transport line, on the other hand the ward no 3 is situated along rail line and ward no6 is located along a high drain.

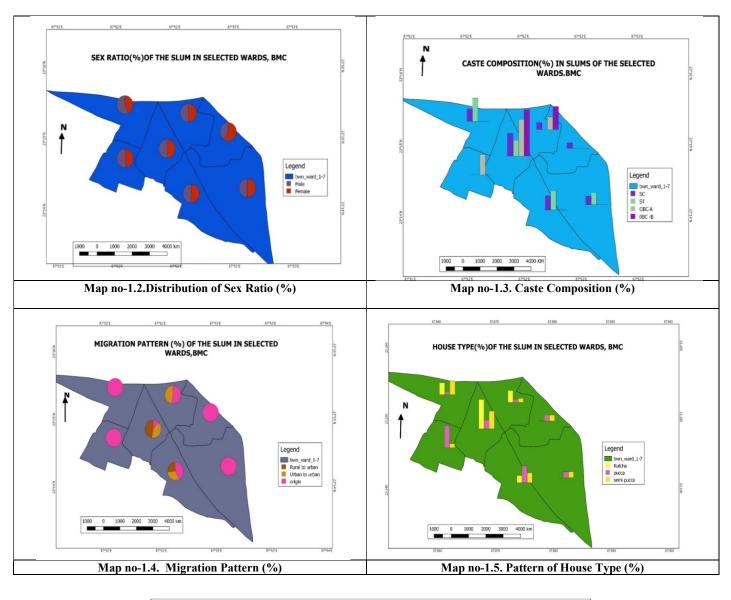


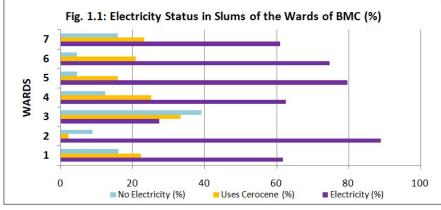
Map 1.1. Location of the Study Area

**Objective:** The objective of the present paper is to understand the present status of physical quality of life of the slum dwellers of ward number 1 to 7 at the BMC in West Bengal. The paper examines the distribution of physical, social and economic indicators of QOL in different wards and interprets the comparative analysis.

**Methodology and Data source:** This study was carried out to examine the socio-economic and health related indicators of physical quality of life of slum dwellers of some selected wards Ward No. 1 to 7) in BMC. The study is carried out on both the qualitative and quantitative method. In quantitative approach, the paper based on primary data were used and collected from randomly selected (118 households) slum dwellers from the seven wards. The secondary data were selected from journal papers, articles, books, official documents etc. By analysing of the data, it is seen that slum dwellers were deprived of basic needs. The slum dwellers work as daily labour in unorganized sectors, street hawkers etc. Inadequacy of urban services has an immediate effect on urban health especially of the slum dwellers in the city.

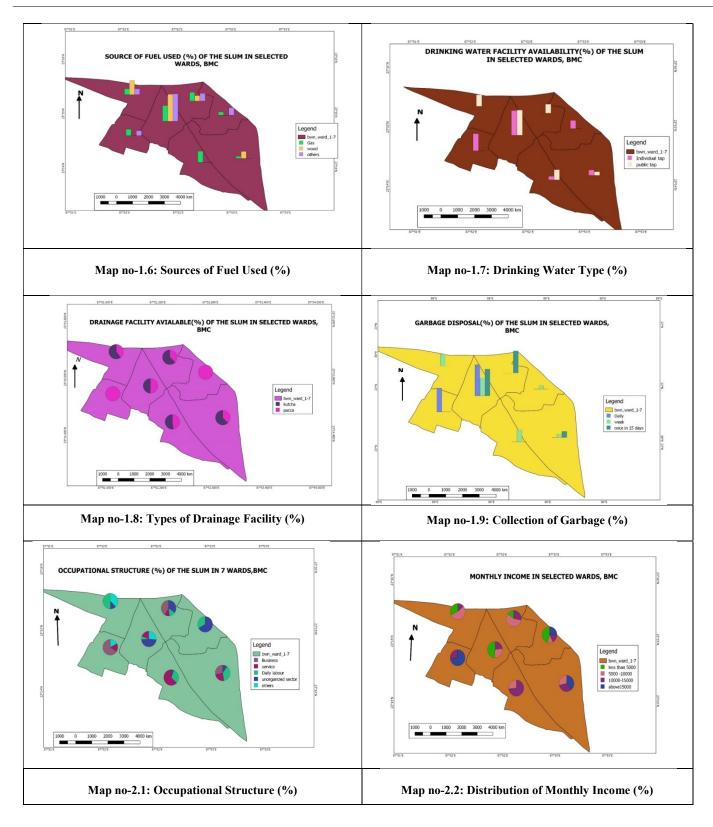
**Socio-Economic Characteristics of the Study Area:** Demographic composition reflects the socio economic characteristics of any region. The most effective parameter of the demography of any area is the sex ratio. It has been noticed that the sex ratio of the slum population in the selected wards in BMC is 893 indicates social backwardness of the area.





Source: Primary Field Survey, 2019

Among total slum population, male population is 343 (52.85%) and female population is 306 (47.19%). The percentage of slum male population is very high in wards no-3 and low in ward no 5. The percentage of female slum population is very high in wards no -3 and very low is wards no -6. (Map No. 1.2). Caste composition also highlights the social segregation and concentration of the under privileged section of the society in the study area. The slum families of different type of castes reside in here, divided in approximately SC, ST, OBC-A, OBC-B and General. Scheduled caste population is 31% for ward no-3, 18.33% for word no -1, 20.5% for word no-7. Scheduled tribe is 33% for word no-1, 22.22% for ward no -7. OBC- A is 59% for ward no -3, 29.41% for word no-2, 17.64% for word no-4.OBC-B is 66.66% for word no-3 and 33.33% for word no-4. There is no general caste population in the study area. Hence, the caste composition is showing high concentration of community people here. (Map No. 1.3). Slum population mainly migrates for better employment opportunities and different urban amenities. People migrate not only from other districts in west Bengal, but also from different parts of India. According to field survey, most of the slum families are not immigrants. The large portion of slum dwellers is original residents for 40-60 years of the wards no-1, 2,5,6,7. Some of slum families (76%) come from Bihar in ward no-3, ward no-4, 11.76%, and ward no-5, 11.76%. (Map No. 1.4).



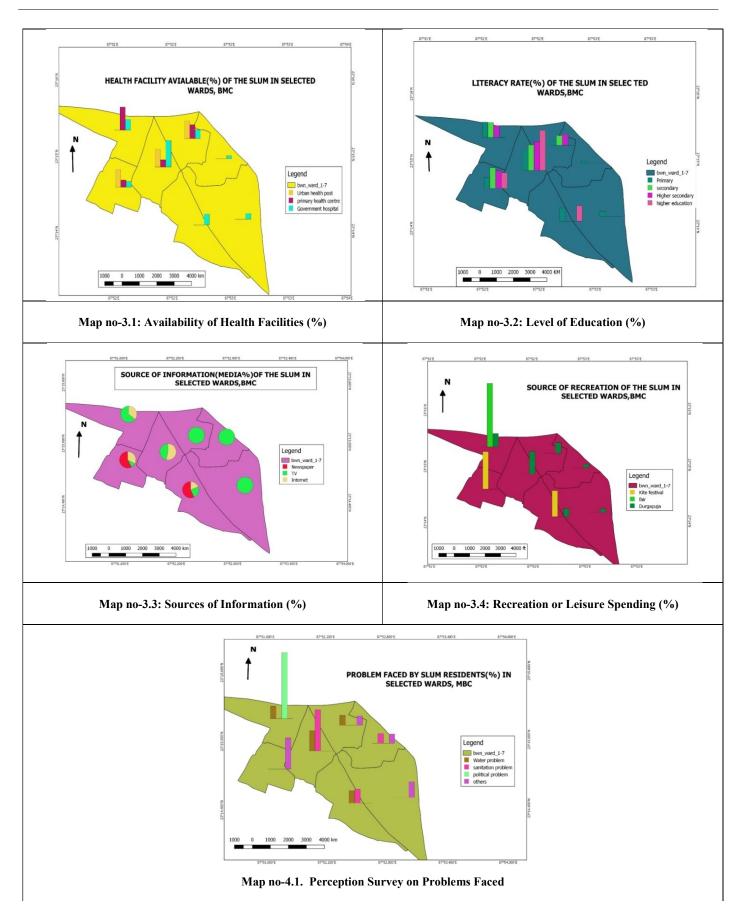
#### PHYSICAL INDICATORS OF QOL

**House Type:** From the field survey it is found that most of the house structure is semi *pucca* (21%) in ward no -1.In ward -2, 34.78% house-holds have *pucca* house and 6.06% *semi-pucca*. In ward no-3, most of the families (45%) have *katcha* house type others have *pucca* (13%) and *semi-pucca* (27%). In word no -4, the house structure represents 18.3% *katcha* and 4.34% *pucca*. Finally, in ward no -7, figure of *pucca* house is 26.08%. (Map no-1.5)

**Fuel Used:** In the study area, the fuels mainly used by the residents are wood, coal, gas etc. Gas is used in all the wards. The highest percentage of gas used in the wards no-7 (29.41%) and 3 (21.18%). Some slum respondents also use wood and coal.

The distribution of wood used by the respondents are like this: in wards no -1 (26.67%), wards no -3(50. %), wards no -4(16%), wards no -5(13.33%). Slum residents use coal grass in ward no-1(11.43%), wards no -2(8.5%), wards no -3(51%), wards no -4(14.29%), wards no - 5(14.20%). (Map no-1.6).

**House Lighting:** In the field survey as the large portion of families remarks good for electricity. In ward no-1(16%), 2(8.84%), 3(38.99%), 4(12.30%), 5(4.42%), 6(4.42%), 7(15.92%) people had no access of the electricity facilities. Some slum dwellers also have to use the kerosene till now instead of electricity, their percentages in different wards are: Ward no-1(22.22\%), 2 (2.12\%), 3 (33.33\%), 4 (25.1%), 5(15.9%), 6(20.84%), 7(23.15%). (Fig.1.1).



**Type of Drinking Water:** Most of the slum dwellers dependant for the source of drinking water on the public tap. Some of the dwellers use individual tap also. In ward no-1 19.51% households use public tap while in ward no -2, 29.42% families have individual tap and some of them also use public tap. In ward no-4 people are mostly depended on public tap. In ward no-6, only 8% of the families have individual tap.

In ward no 7, 75% of the inhabitants depend on public tap for the source of drinking water supply. (Map no-1.7). The quality and quantity of water supply is sufficient and satisfied in ward no 2. Water supply is partially connected in ward no -3 and 7. The supply is not connected in ward no 1 and 3.

**Drainage Facility:** Drainage system of ward no -1 is moderate. In ward-2 and 5 the drainage system is completely *pucca*, while in ward no -1, 3, 4 and 6, most of the drains are *katcha* in condition. In rainy season, the area faces acute problem as majority of the drains are badly overloaded, congested and produce dirty smell. In ward no-7 drain are mixed with *katcha* and *pucca* structure. According to the respondents living there, the environmental condition of the slum are not the hygienic due to untreated sewerage. (Map no-1.8).

**Garbage Disposal:** Garbage collection in the study area is done on daily and weekly basis. The collection of garbage is done once in 15 days in some of the wards (Ward no. 3, 4 and 6). Garbage collection from the roads and streets are not done in the regular basis. Slum dwellers of ward no. 3 (48.47%), 4(40%) and 6(11, 43%) suffer very much due to irregularities of garbage collection, sometimes more than 15 days or so. Daily garbage collection is done in wards no-2. Garbage collection is done once in a week in ward no 1(21.69%), 5(6.02%), 6(6.02%) and 7(21.69%). (Map no-1.9)

#### ECONOMIC INDICATORS OF QOL

The slum dwellers are poverty stricken and most of them are below the poverty level. As per the field survey, most of the slum families have male earning member as in wards no -2(9%), 3(38.73%)4(15.3%), 7(15.31%) and a small percentage of female are also engaged in source of earning as in ward no-3(22.22%), 4(5%) and 7(6%). Most of the source of earning member are female in ward no 1(50%).

**Occupational Structure:** As their educational level is poor, hence they are incapable of getting any high-quality job. Moreover they have no willingness to improve their living standard as well. Field data reveals that they have five sectors of economic activities: business, service, daily labour, factory workers and others workers (such as workers in tea shop on contractual works etc). In ward no-1, 26% of the population belongs to unorganized sector and 15.38% them are others workers.

In word no-2, 31.25% of the population has small business, 8.31% is the service holders and 7.69% are other workers. In word no -3, 11.1% people are engaged in service, 41.75% are engaged as daily labour and 26.67% are engaged in unorganized sector. In ward no-4, 12.5% people have small business, 2.8% are service holders, 41.7% is daily labour worker and 10% are engaged in unorganized sector. In ward no-5, 2.08% are daily labour and 4, 44% belongs to unorganized sector. In ward no-6, 6.25% people have business and 8.33% of the total population is engaged in unorganized sector. In the ward no-7, 85% people are service holders, 10.42% is engaged as daily labour, 2.22% are engaged in unorganized sector and 11.54% of the total population belongs to others workers. (Map no 2.1).

**Income and Expenditure:** The survey depicts that monthly income of 14.28% household was below Rs. 5000 and of 24.53% household in between Rs. 5000-10000 in wards no-1. Monthly income is above 15000 for most of the people in wardno-2 and some of the households in wards no 5, 6, and 7. Majority of the slum dwellers use to spend their income on food, health, education and clothing. Some households were able to improve their economic condition while the others answered that their economic condition was better than past in ward no-1. Few of them said that their economic condition was getting poorer in ward no-3 day by day but also some of them believed that their economic condition remained unchanged. (Map no 2.2).

**Consumer Durables:** From the survey it is noticed that the most of the slum households have electric fan, mobile phone, colour TV in each of the selected wards. Some slum respondents used bicycle in wards no-1(16.47%),ward no -2(20.83%),ward no-3(41.67),Ward no-4(4.17%),ward no -7(16.67%).little portion slum respondents answered they used two wheeler in ward-2(25%),wardno-4(37.50%),ward no-7(37.50%).

#### SOCIAL INDICATORS OF QOL

**Health Facility:** Most of the respondents of slum were dependent for their treatment on the Government hospital (Burdwn Medical College Hospital). In ward no-1 13.25% slum people go to the Govt. hospital and 32.26% were dependent on PHC (Primary Health Centre) because of free treatment or low cost treatment facilities. The study shows that very few people go to the private urban health facilities in ward no-2(25%) and 4(25%). Most of the respondents said that poverty was their main reason of getting improper treatment. Most of the slum people go the Govt. hospital in ward no-1 to 7 (8.47\%, 37\%, 11.86%.4.24\%, 7.63\%, 15.25\%). (Map no-3.1).

Level of education: According to the field survey the level of education in the study area is average. At word no-1, 22.05% is in primary, 21.44 % in secondary and 16.67% is in higher secondary. At ward no-2, 75% of the total population is literate, within them 28% in secondary, 25% in higher secondary and 22% in higher education. At ward no-3 the educational status of higher secondary is moderate (55.5%). In Ward no-4, it is noticed that percentage of primary institutions in the study area is 5.89% and higher educational institution in the study area 22.23%. Ward no-5, 6 and 7 percentage of enrolment in primary institution is good but that of the other institute of upper level is not good (Map no-3.2).

**Source of Information:** The data also reveals that slum people collect the information from TV, newspaper and internet. Majority of the dwellers collect the information from daily newspaper as in ward no-2 (66.67%) and 7 (33.33%). On the other hand, significant proportion of the residents collect information from TV in the ward no-1(20%), 2(11%) 3(33.33%), 4(13.33%), 5(4.44%), 6(3.33%) and 7(14.44%). Some of the slum dwellers also depend on the internet for the source of information as in ward no.- 1(11.54%), 2(38.46%), 3(38.46%) and 7(11.54%) collects (Map no-3.3).

**Recreation and Leisure:** The occupational life of the majority of slum dwellers is such that they find very little time for recreation and time for the leisure. There is no time available for leisure in the daily routine of their life. In the study area recreational facility include kite festival, fair or *mela* and *durgapuja*. In ward no-2 all of the people enjoy the kite festivals. In ward no- 1 all of the respondent enjoy the local fair. On the other hand in ward no -3(36.14%), 4(16.87%), 5(6.02%), 6(6.02%), 7(13.25%) families enjoy the *durgapuja as their* main recreation or leisure. (Map no-3.4)

#### PERCEPTION SURVEY

The study area faces multiple problems related to urban amenities and socio-economic capabilities. The urban amenities related problem like problem in regular water supply, sanitation problem as well as political problem related to social security and unrest, crime etc. are very prominent in the area. In wards no-1 all of the people face political problem. In ward no-2 47.62% of families faced the insufficient store and irregular clearance of garbage. In wards no-3(32%), 4(14.89%), 6(14.89%) and 7(19.15%) people face the water supply related problem. Again, in ward no3 (62.50%), 6(15.63%) and 7(21.88%) the slum dwellers face the sanitation related problem (Map no-4.1).

#### **COMPARATIVE ANALYSIS**

Based on the sample survey, it is find that slum dwellers are in better living standards in ward no-2 than in the ward no-3.Ward no -3 is highly populated and worse in different indicators. The busy *bazaar* area makes the slum dwellers physically filthy, whereas ward no-2 possess a much clean and clear environment along with the metalled high roads. The literacy level is higher in ward no-2, sanitation facility is also good and people are less habituated to take bath in public tap. The structure of the slum house is poorer in ward no-3 and condition of water source and sanitation facility is also worse in ward no-3. It can be stated that the overall situation of the slum in ward-2 is far better than ward no-3 regarding houses structure, sanitation facilities and above all of the presence of hygienic service among literate slum dwellers.

# RESULTS

#### The paper highlights the findings below:

- Sex ratio is high of ward no -3, medium in ward no 7,1 and low is ward no-4,5,6. Total population in ward no-2 are Muslim by religion.
- There is no general caste population in any wards, mostly are community people.
- Ward no-1 is represented as the worst one being unprivileged with *katcha* and semi-*pucca* house structure, fuel use of wood, source of drinking water as public tap and absence of proper toilet facilities.
- Ward no-2 is better e as there is LPG as fuel and connection of water is good in all the households. Literacy rate is also high in ward no-2.
- Slum population of ward no-2 are more satisfied than other wards no, regarding the regular municipal service like cleaning drains, garbage disposal.
- Semi-*pucca* and *katcha* house are common are maximum wards. Most of the slum families faced the water problem and sanitation problem. Use of LPG gas as cocking fuel is less in other wards than in ward no-2.
- There are *Anganwaries* (ICDS) within the slum to take care for lactating mothers and new born babies.
- For most of the wards, except ward no-2, it is found that the maximum slum families have one or two earning members.
- The level of satisfaction regarding infrastructures in slum areas varies from ward to ward.

#### SUGGESTION AND CONCLUSION

Finally it is concluded that slums are the darkest part of the city including various problems in BMC. With the degraded environment and a large portion of unprivileged urban population, slums in the seven wards represent socio-economically backwardness of BMC. Each and every ward has different issues related to the low standard of living and poorer quality of life. However, after identifying problem and extensive evaluation of the present condition of this slum area, it is utmost necessity to take immediate action and implementation of the policies and eradication measures by the municipal corporation as well as other NGOs. Consequently, to improve the poor situation of the slum area, especially, in ward no -3, first and foremost task is to supply the basic municipal services to the notified slum dwellers, like cleaning of drains and garbage on regular basis; regular supply of piped water and the construction of shared community toilets. Initiatives should be taken by the Govt. as well as the NGOs in collaboration with the public participation.

Different occupational trainings may be introduced in these slums to improve the family's income level as well as standard of living, such as Self Help Groups (SHGs) working in different parts of West Bengal. Moreover, some fair like '*Sabala Mela*' may be organised to promote the products manufactured by these SHGs. Various health awareness programme and free health check-up camps may be organised from the municipal authority, which may help to grow the sense of hygiene and overall health condition among the slum dwellers. Free education may be provided by the Govt. at grass root level by starting night schools and adopting social outreach programmes by nearer schools and colleges.

## ACKNOWLEDGEMENT

Thankful to Padmabati Ghosh, a PG student for the data collection and field survey

### REFERENCE

- Abrahams, C., 1953. "Slums and urbanization" in Desai, A.R.; Pillai, S.D(ed), 1970, slums and Urbanization, popular prakashan, Bombay.
- Banerjee, Birassware, 1990. "Problems of Calcutta Metropolis and Strategy for the Future", Geographical Review of India, Vol-52, no-2pp.26-33.
- Duckworth, G., 1992. "The Making, prevention and Unmaking of A slum" in Journal of The Royal Institute of British Architects33,
- Engels ,F 1942, "How the Bourgeoisie solves the Housing condition" in Desai, A.R, Pillai, S.D. (ed), 1970, Slums and Urbanization, Popular Praskashan, Bombay
- Gadgil, D.R., 1959. "Housing and slums in Poona" in Desai, A.R; Pillai, S.D. (ed), 1970, Slums and Urbanization, Popular Praskashan, Bombay.
- Hunter, D.R; 1964. Challenge and Response, The Free Press, New Work.
- Mukherjee, A., 1932. "Community participate action in urban Development" in Ekistics 49, No.297.
- Ramachandran, P., 1967, "The slum: A note on facts and solutions with special reference to Greater Bombay" in Desai, A.R., Pillai,S.D (Ed), 1970. Slums and Urbanization, Popular Prakashan,Bombay.
- Sings, Kamaldeo Narain, 1978. Urban Development in India, Abhinav Publications, New Delhi.
- Tiwari, H.R., 1999. "The Myths about slum Dwellers' Economic life" in Indian Journal of Regional science 31, no-2.

\*\*\*\*\*\*