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## LIVING CONDITIONS AND HOUSING ENVIRONMENT IN SLUM DWELLERS: A CASE STUDY OF BILASPUR CITY ( CHHATTISGARH)



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**Abstract:** Increased frequency and severity of natural disasters by climate change over the past recent years are not only displacing people physically but also exposing to enhanced poverty by threatening their livelihoods temporarily and permanently of Bilaspur city. Growing number of people rush to city's slums creates urban crisis in Bilaspur city. Climate change threatens peoples' access to food as they become socioeconomically susceptible. Displaced people living in urban slums are in search of better and secure life. But urban slums located mostly in low lying environmentally hazardous area coupled with inadequate facilities like food, shelter, sanitation, health care make their life even worse. Socio-economic factors characterizing living conditions, physical environment (mode of waste disposal), households' health behavior particularly dietary practice and health outcome (disease occurrence) have been analyzed by applying statistical technique, frequency distribution.

**Keywords:** Housing Environment , Living Conditions , socioeconomically , environmentally.

### INTRODUCTION:

The majority of migrants have come to this particular slum area because of cheap accommodation as they cannot afford higher accommodation costs. This factor compelled them to stay in Bilaspur City itself and not move into other slums. A majority of them were influenced by their relatives who were already there. Today, the catchall term "slum" is loose and deprecatory. It has many connotations and meanings and is seldom used by the more sensitive, politically correct, and academically rigorous. But in developing countries, the word lacks the pejorative and divisive original connotation, and simply refers to lower quality or informal housing. The term "slum" is used in the Report to describe a wide range of low-income settlements and poor human living conditions. A simple definition of a slum would be "a heavily populated urban area characterized by substandard housing and squalor". Some of them survive on a shoe-string budget or even a hand to mouth existence, though cases of relative opulence hidden in an ocean of poverty cannot be ruled out.

However, generally the slum population is below the poverty line. Most of the migrants who came during the earlier periods also are from the local area, the immediate vicinity of the slum and to some extent. The range of attraction of the slum is therefore constricted. Evidently, even the socio-economic conditions of slum dwellers are not too good, as is testified by their income and expenditure patterns and their being mired in debts. The slum has public facilities like drainage, street lighting, tap water etc... and is therefore considered favorably by the residents. Some challenges that may encounter during identification of slums

are as follows. The challenges are also followed by recommendations to deal them. There are some areas in Bilaspur city, which used to be public land long time back and later was encroached by local residents and still occupying by them. Such area Mini Basti, Bharat Chowk, Bahdhwa Talab, Bandhwa Para, Surya Chowk, Subhash Chowk, Bishwa Chowk should not be considered as a squatter settlement

### OBJECT OF THE STUDY

(I) Thus the scope of slum clearance should be enlarged to embrace slum improvement by providing them minimum amenities like sanitary-latrines, drainage, uncontaminated water supply, approach roads, paved streets and lighting, in order to prevent them from spoiling both the physical and social environment

(ii) Slum dwellers are more prone to disease because of the sub-human conditions, which prevail due to unawareness and neglect

(iii) In computing this shortage, the fundamental assumption was that each household should have a .pucca. dwelling unit, a reasonably permanent structure to provide minimum standards of comfort and safety.

### WORK METHODOLOGY

Identification of slum areas and locating on the map using slum population growth is shown with time scale Primary data collection through survey to assess the socio-economic conditions in the slum areas. Ward wise mapping of the density of slums, slum population, density of slum

houses.

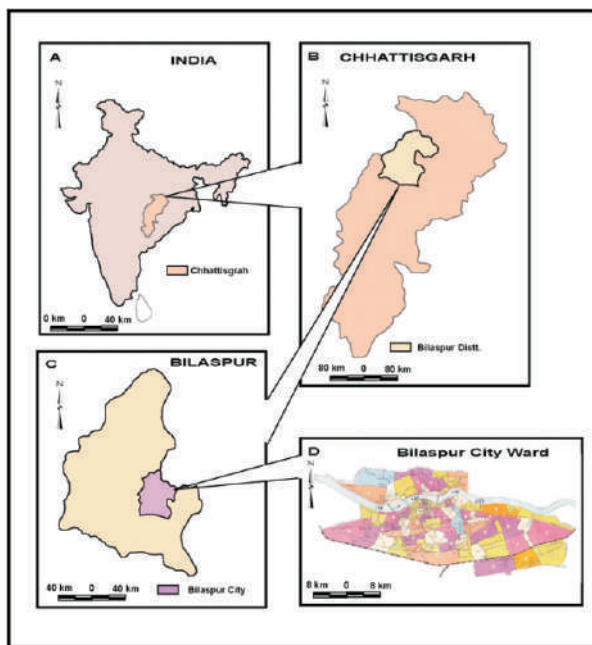
**Bilaspur City: Data type in relation with methods of data capture**

Method	Data type	Description
Field observation	Spatial data	Identified problem of areas with poor housing, sanitation and access route at keeled level, Identified problem area lacking water supply.
	Non spatial data	Pictures, descriptive information of the areas.
Map interpretation	Spatial data	1. Identified unplanned area (Irregular pattern). 2. Identified dense area (congested small size buildings).
	Spatial data	1. Identified area with inadequate access to sanitation. 2. Identified area lacking proper internal and external access. 3. Identified area with poor housing condition.
Focus group	Spatial data	1. Description of slum area 2. Description of slum characteristics.
	Non spatial data	1. Description of slum area 2. Description of slum characteristics.

**Secondary data type and description**

Data set (required)	Data Source	
Strategic investment Areas	Strategic investment	area
Existing residential map	Existing land use	
Water supply, tenure security, sanitation, housing durability maps	urban inequity and analysis	Survey data and analysis results

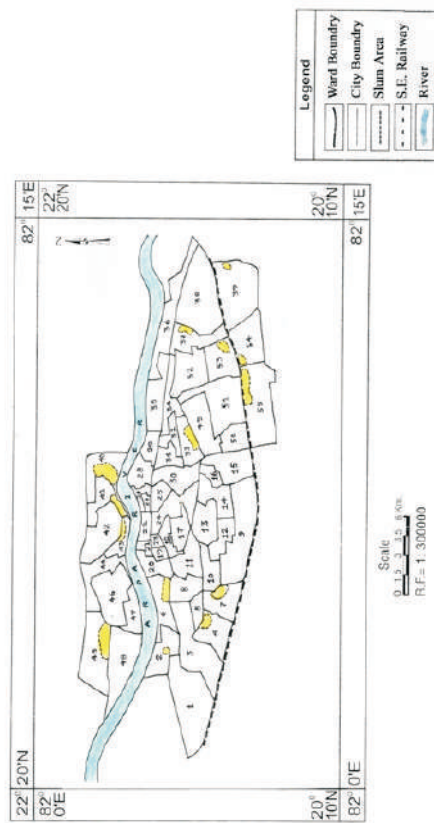
**BILASPUR CITY: LOCATION MAPS**



Map No.1 BILASPUR CITY: LOCATION MAPS

Source: Municipal Corporation, Bilaspur (C.G.)

**Bilaspur City : Slum Location Map**



Map No.1 Bilaspur City Slump Location Map  
Source: Municipal Corporation, Bilaspur, 2012

**MIGRATION IN SLUM POPULATION**

Migration keeps a balance between population distribution and the supply of natural to the resources. (Gupta, I. and A. Mitra 2002) The trends of migration mentioned the changing pattern of population form one place to another place.

Peoples are generally moved from law earning area to high earning area, for some facility like daily work or employments, some people migrate for business purpose, some are migrate for marriage and also education. The 29.82 % peoples are pull migrate for work or employment purpose. The 10.58% peoples are pull migrate for business purpose. The 4.68% peoples are migrating for educational purpose. The 21.57% peoples are migrating for marriage purpose. The 14.51% and 18.84% peoples are pull migrate for another purpose in the Bilaspur city. In Bilaspur City maximum peoples are migrate in state and very small amount of peoples are migrate in other state outside.

**Table No. 1**  
**Bilaspur City: Growth of Population, 1961-2011**

Census Year	Population of the year	Decadal variation (%)
1961	86,707	-
1971	1,36,676	63.43
1981	1,87,104	36.90
1991	2,29,615	22.72
2001	2,74,917	19.73
2011	335293	21.96

Source: Statistical data sheet vol.1, Bilaspur Municipal Corporation, 2011

**Table No. 3**  
**Bilaspur city: Migration in the State and other State, 2011**

Sl No.	Name of Slum	Total Migration	Migration with in State		Migration from other State			
			Total	Rural	Urban	Total	Rural	Urban
1	Vishnu Nagar	1200	800	495	305	400	290	110
2	Ranibai Nagar (Railway)	1700	1265	640	625	435	254	181
3	Loco Colony (Railway)	1200	920	752	168	280	165	115
4	Bapu Nagar (Railway)	740	520	290	230	220	155	65
5	Arvind Nagar (Bandhwa para)	4232	3733	2301	1432	499	355	144
6	Irani Chowk	1500	1025	520	505	475	240	235
7	Melapara, Dalhan Mohalla, Devongon Mohalla, Santoshi Chowk	700	490	255	235	210	165	45
8	Sanjay Nagar, Chantidih, Krishan para,	375	255	132	123	120	61	59
9	Ram Nagar, Chingrajpara,	950	740	320	420	210	135	75
10	Surya Chowk	1580	1223	660	560	357	189	168
11	Hemu Nagar (Ganesh Nagar)	324	260	158	102	64	41	23
12	Bahdwa Talab, Bandhawa para	970	665	340	325	305	203	102
13	Bharat Chowk	1050	800	595	205	250	120	130
14	Guru Ghasidas Nagar (Mini Basti)	2050	1515	910	605	535	425	110
Total		18571	14211	8368	5840	4360	2798	1562

Source: Bilaspur city Development report by NGO, pp.58, 2011

#### HOUSING STRUCTURE

(i) A slum is a cluster of houses- A slum is an area therefore, an individual house is not considered as a slum.

(ii) Slum areas are generally found in periphery of old inner city, which is a marginalized area from the point of view of old settlements and these days, which is being occupied by new migrants.

(iii) Lack of access to public services – A slum generally lacks access to public services such as sewerage, water supply, roads, street lamps etc. or even if they have them, they provide poor service facilities.

(iv) Over crowded area – A slum generally have high density of people within the dwelling unit on the basis of space occupancy. Small houses or huts with narrow and dark street lanes characterize slums in most of the cases.

1. Density of the people as one of the criteria in defining slum may not work in case of the area where household size varies frequently. (Desai Vandana, 1988) That may happen in the poor rental areas. It is important to know the mobility pattern of residents in such area.

2. It was mentioned that a slum has to be named by name of settlement like Jhopri Clusters, Slum designated area, unauthorized colony, Resettlement Colony, Planned colony, Regularized unauthorized. But demarcation of slum in such case is not always easy as the slums may extend to larger space in the course of time.

3. A slum is a cluster of houses, defining the smallest cluster size is very difficult. All slums should not have same grade. A grading of slums is essential so that they can be addressed as per their grade.

(v) Low income group – Residents of the slum belongs to low income or economically deprived group such as poor tenants. In some areas, they can also be the people, displaced by disasters or conflict.

(vi) Socially deprived – Residents of the slum may also belong to socially deprived group such as “lower castes”.

(vii) Poor housing – Houses in the slum area generally used low-cost building construction materials with poor hygiene and sanitation.

**Table No. 4**  
**Bilaspur City: Household Occupancy Characteristics, 2012**

Household Occupancy Characteristics	No. of Households	% Households
Couple Only	2340	18.40
Couple with One Dependent Child	1600	12.58
Couple with Two Dependent Child	5006	39.36
Couple with One Adult Working Offspring	3004	23.62
Couple with Two or More Adult working Offspring	506	3.97
Two or More Couples	205	1.62
Other households	56	0.45
Total	12717	100.00

Source: household survey, 2012

#### HOUSEHOLD INDICATORS

##### Housing Condition in the Slum Areas

As mentioned earlier, a slum is characterized by



poorly built tenements, mostly of temporary nature and crowded together, unhygienic conditions, inadequate sanitary and drinking water facilities. As is evident from a large number of houses are not pucca in nature. The problem is more acute in the non-notified slums. There have however been improvements since 2001. In 2012 only 30 % of slums had majority of pucca houses.. In terms of roads within the slum, 60 % of the notified slums have a pucca road while only 40 % of non-notified roads have a pucca road within the slum. Significant strides have been made in terms of availability of roads since. In 2012, only 65 % of slums had a pucca road within the slum in terms of accessing road to the slums. There have been improvements in terms of electrification of urban. In 2012 electricity connection was not available in 0.21 % of the notified slums and about 16 % of the non-notified slums.

#### **Household Types**

Slum dwellers' families have been categorized into four types of living units: single family, mess, nuclear and joint family. The survey report of 2001 reveals that 4056 people live in 810 households located in 9 slums. In 2012 the slum population had increased to 12717 household. The majority of these people are members of nuclear families followed by joint families as the second largest category. It is also seen that they are predominantly Hindi speaking (63 %) the majority of whom have come from Villages' main hinterland. The Chhattisgari speaking population accounts for 37 % whereas the share of the others speaking group is estimated to be 19 % of the total number of slum dwellers.

The balance of the population comes from almost all the major linguistic region of Chhattisgarh or the neighboring State. It has been found that more than 41 % of households have been living in slums for two generations or more. The next group of 24 % originated from adjoining states while about 14 % of these households have come to the slums from different states. Again 17 % of households in the slums were seen to have migrated from Madhya Pradesh. The process of settlement in these slums started long ago and has proliferated over time. Also most of the households are settled on a permanent basis and they are likely to continue to live here.

**TABLE No. 5**  
**Bilaspur City: Type of House in Slum Area, 2012**

SL. NO	Name of the slums	No. of Houses	House Type			
			Hut	Kutchha	Semi-Pucca	Pucca
1	Vishnu Nagar	450	100	150	175	25
2	Guru Ghasidas Nagar (Mini Basti)	1500	550	200	730	20
3	Bharat chowk	900	350	250	285	15
4	Bandhwa Talab, Bandhwa Para	450	150	100	180	20
5	Hemu Nagar (Ganesh Nagar)	225	75	100	40	10
6	Surya Chowk, Subhas Chowk, Vishwa Chowk, Pravat Chowk	1800	500	650	625	25
7	Ram Nagar, Chingraj Para,	1500	500	600	390	10
8	Sanjay Nagar, Chantidih, Kishan para, Dabari para	600	150	200	225	25
9	Melapara, Pathan mohalla, Devangoan mohalla, Santoshi Chowk	787	250	200	320	17
10	Irani chawk	568	150	175	230	13
11	Arvind Nagar (Bandhwa para)	1109	350	300	445	14
12	Bapu Nagar (Railway)	329	150	100	50	29
13	Loco Colony (Railway)	1749	650	350	730	19
14	Ranibai Nagar (Railway)	750	200	300	225	25
Total		12717	4125	3675	4650	267
Percentage		100	32.44	28.90	36.56	2.10

Source : Field Survey, 2012

#### **CRITERIA DEVELOPED FOR DEFINING SLUMS IN CITY**

Population density of that area is very high, that is the population size is much higher in comparison to the land they occupy. Majority of residents in that area has very low income or they are economically deprived. Majority of residents in that area is socially deprived such as lower cast people. The area does not have or very poor accessibility to basic public services such as road, water and sewerage. Slum area is generally named by the name of settlement (Joparpatti). Houses in the slum area generally have land ownership with some exceptional case. A slum without land ownership houses are called as a squatter settlement. 1500 household are live in residential area in the city and 450 household are road side, there are huge are railway line 2563 household. Side of pond and Arpa River 3337 household are settled and surrounding the market place have settled 1168 household.

**Table No. 6**  
**Bilaspur City: Status of clustered Slum Population, 2012**

Sl. No	Area with encroachment	No. of House	Total Population
1	Residential Area	1500	7500
2	Road	450	2250
3	Part and Open Place	3249	16245
4	School	450	2250
5	Market	1168	3140
6	Railway Line	2563	12815
7	Pond/River	3337	16687
	Total	12717	60887

Source: Field Survey, 2012

**Some challenges and recommendation in identifying slums**

Some challenges that may encounter during identification of slums are as follows. The challenges are also followed by recommendations to deal them. There are some areas in city, which used to be public land long time back and later was encroached by local residents and still occupying by them. Such area Mini Basti, Bharat Chowk, Bahdhwa Talab, BandhwaPara, Surya Chowk, Subhash Chowk, Bishwa Chowk should not be considered as a squatter settlement.

1. There is no official standard for defining poor in City. So it is very difficult to define low-income group or economically deprived people in urban area. Therefore, it is important to define urban poor prior to defining slums in urban areas.
2. Low cast people has been considered as a socially deprived people in most of the identified slums. But even displaced people are also found living in slums. (Bmrda, 1994) People displaced from conflict also are recognized as social deprived people. Therefore, it is important to define who the socially deprived people are.
3. Density of the people as one of the criteria in defining slum may not work in case of the area where household size varies frequently. That may happen in the poor rental areas. It is important to know the mobility pattern of residents in such area.
4. It was mentioned that a slum has to be named by name of settlement like Jhopri Clusters, Slum designated area, unauthorized colony, Re-settlement Colony, Planned colony, Regularized unauthorized. But demarcation of slum in such case is not always easy as the slums may extend to larger space in the course of time.
5. A slum is a cluster of houses, defining the smallest cluster size is very difficult. All slums should not have same grade. A

grading of slums is essential so that they can be addressed as per their grade.

**Length of Household Residency in Slums**

More than 41 % of households have lived in slums for more than 8 years. More than 70 % of the households have lived there for more than 5years. The newcomers to slums with a duration of stay of up to 5 years constitute only 4 % of the sample surveyed. About 16 % of the population has been living from 6-15 years in authorized slums such as Jhupri.

**Table No. 7**  
**Bilaspur City: Duration of residence of Slum Population, 2012**

SL.No.	Name of the slums	Duration of Residence (Household)					Age not started
		< 1 year	1 to 4 yrs	5 to 9 yrs	10 to 19 yrs	20 yrs	
1	Vishnu Nagar	5	15	20	200	150	35
2	Guru Ghasidas Nagar (Mini Basti)	10	20	50	700	620	100
3	Bharat chowk	10	20	30	450	340	50
4	Bandhwa Talab, Bandhwa Para	5	5	20	180	200	40
5	Hemu Nagar (Ganesh Nagar)	2	3	10	110	90	10
6	Surya Chowk, Subhas Chowk, Vishwa Chowk, Pravat Chowk	20	25	30	750	900	75
7	Ram Nagar, Chingraj Para,	5	10	40	700	690	55
8	Sanjay Nagar, Chantidih, Kishan para, Dabari para	10	15	20	240	288	27
9	Melapara, Pathan mohalla, Devangan mohalla, Santoshi Chowk	5	10	30	300	350	55
10	Irani chowk	5	10	25	300	400	47
11	Arvind Nagar (Bandhwa para)	10	15	24	700	900	100
12	Bapu Nagar (Railway)	5	13	15	300	200	35
13	Loco Colony (Railway)	2	5	12	160	100	50
14	Ranibai Nagar (Railway)	15	20	30	450	550	44
	Total	109	186	356	5540	5778	723

Source : Field Survey, 2012

**Duration of Residence**

Comparing the surveys, it appears that the 10-19 years they have settled maximum 400-600 house hold in Vishnu Nagar, Guru Ghasidas Nagar (Mini Basti) Loco Colony (Railway) Ram Nagar, Chingraj Para Bapu Nagar (Railway) of households having four or five members appears to have gone up, The average duration of residence has been found to be 5- 9 years average 35 household in there locality , maximum 900 household are settled during 20 years in Surya Chowk, Subhas Chowk, Vishwa Chowk, Pravat Chowk, Arvind Nagar (Bandhwa para).

**HEALTH STATUS**

**Disease occurrence**

Almost half of total 856 children are reported seek due to different types of water-borne diseases. 67% of affected children have been reported as suffering from fever. The higher prevalence of disease among children reveals inadequate education or lack of consciousness among parents to give proper care to the children. (Asthana Sheena, 1994) Most of the time mothers are busy with household works; therefore children are not given enough care by them. Also unhealthy environment and mother's lack of knowledge about hygiene and dietary practice make children more vulnerable.(Kapadia-Kundu, N. and T. Kanitkar, 2002)

Even though parents have some kind of primary education but lack of affordability to consume healthy food indicates poor dietary practice among children living in slums. It is said that nutritious food prevents chronic disease as it helps children to recover disease quickly like diarrhea, influenza, malarias. But majority of households cannot afford healthy food items like protein food, not even in weekly basis.

#### **CONCLUSION**

There is considerable variation of pucca dwelling units from 22 % for the rural poorest to 64 % in case of the richest in the rural areas. In case of the slums and squatters the proportion residing in pucca dwelling units varies from 91 % for the poorest to face the greatest hardship. Regular religious ceremonies and festivals are the main focus of slum life and a source of much interest and excitement combined with fun and partying. The other main social centre in slums has been the welfare Centre. The National Slum Policy has components aimed at making slum dwellers creditworthy. The production activities of many of these entrepreneurs appear to be seriously crippled for lack of capital and working space, obsolete production techniques, difficulties in procuring raw materials and getting markets for the products etc. In the marginal sector in Bilaspur City on the other hand, the major occupational group is "casual labour" constituting 22.2 % of the aggregate household occupations. About one fourth of the group does not have any regular or steady source of income in Bilaspur City. These laborers often become victims of exploitation. The category "others" include pensioners, renters' domestic servants, beggars, rag-pickers etc.

#### **REFERENCES**

- I.Asthana Sheena, (1994) Integrated Slum improvement in India: Problems and Prospects in Habitat International, Volume 18, No. 1, pg 57-77
- II.Bmrda (1994) Draft Regional Plan for Mumbai Metropolitan Region 1996-2011 Mumbai The Impossible Dream, June 22- July 6 Vol. IX ,No. 21, Bombay.
- III.Desai Vandana (1988) "Dharavi the Largest Slum in Asia" Habitat International, Vol.12, No.2, pp.67-74, Pergamon Press
- IV.Gupta, I. and A. Mitra (2002) Rural Migrants Segmentation and Labour: Micro-Level Evidence from Delhi Slums. Economic and Political Weekly, January 12.
- V.Kapadia-Kundu, N. and T. Kanitkar (2002) Primary Healthcare in Urban Slums. Economic and Political Weekly , December 21



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