

Urban socio-economic Domination on rural neighbourhood: a micro level study

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Abstract

Urban growth and sprawl have an influence on surrounding rural areas. Shankarpur mouja, a suburb of Durgapur Steel Township, West Bengal, experienced a rapid growth of population as well as socio-economic development. The study found that over 95% workers of the mouja were engaged in secondary and tertiary activity and only 3% workers were involved in agricultural sector which was the opposite picture of any purely rural area. The main aim of the study was to evaluate the impact of urbanity on neighbourhood rural area. Data were collected from field survey and different secondary sources. Microsoft Excel and QGIS 2.8 RS-GIS Software were applied for the study. It was recorded in the study that Land use pattern of the mouja also got affected by Neighbourhood Township. During the last few decades, the amount of settlement area of the mouja expanded at the cost of agricultural land and forest land. A clear indication of unsustainable land use change was recorded in the study. In the concluding part, restriction against unsustainable land use change and eradication of socio-economic inequality among the inhabitants were recommended.

Key words: 1. Rurban area, 2. Urban Sprawl, 3. Multi-stored building, 4. Socio-Economic Inequality.

1. Introduction:

Universally accepted definition of development in single word is very difficult to give (Kanbur, 2006). The initial conceptualization is that 'development' is a process of structural societal change. Thomas (2000, 2004) refers to this meaning of development as 'a process of historical change'. Gore (2000) noted that development means the 'structural transformation' and 'long term economies and societal transformations'. It may take place from rural society to urban society or agricultural society to industrial society. According to opinion of Robert Repotto (1986), development means the continuous changes taking place for some specified target, the consciousness of natural

and anthropogenic resources. Development includes changes to socio-economic structures including ownership, the association of production, technology, the institutional structure and laws. In the recent period, development is very important issue to the researchers, educationists and planners (Tikader and Saha, 2009). Takoli (1998) stated that rural-urban linkage is very important factor to abolish poverty and effect development of any region. A common point of most of the definitions is that 'development' encompasses 'change' in a variety of aspects of the human condition. Previously, economic and social development got more importance than the development of natural environment. In present time environmentalists started to give more emphasis on sustainable development.

The Government of India in recognition of the role played by infrastructure in poverty alleviation has taken up massive programmes for construction of both urban and rural infrastructure under different programmes, but pace of development is not uniform everywhere. Though the different developmental programmes are taken by govt. it is found that developmental pace is high in urban area than rural area. It is also found that rurban area or peri -urban area is also developed than any purely rural area and the rate of socio-economic development in this area is high owing to direct impact of urbanity of adjacent town.

The concept of periurban or rurban has emerged on account of limitations in the dichotomy between rural and urban (David,L.I, et al. 2000). According to them there is also an increasing perception that rural, periurban, and urban environments operate as a system rather than independently and that rural development and urban planning are necessarily linked activities. Functions in one ground have consequences in the other.

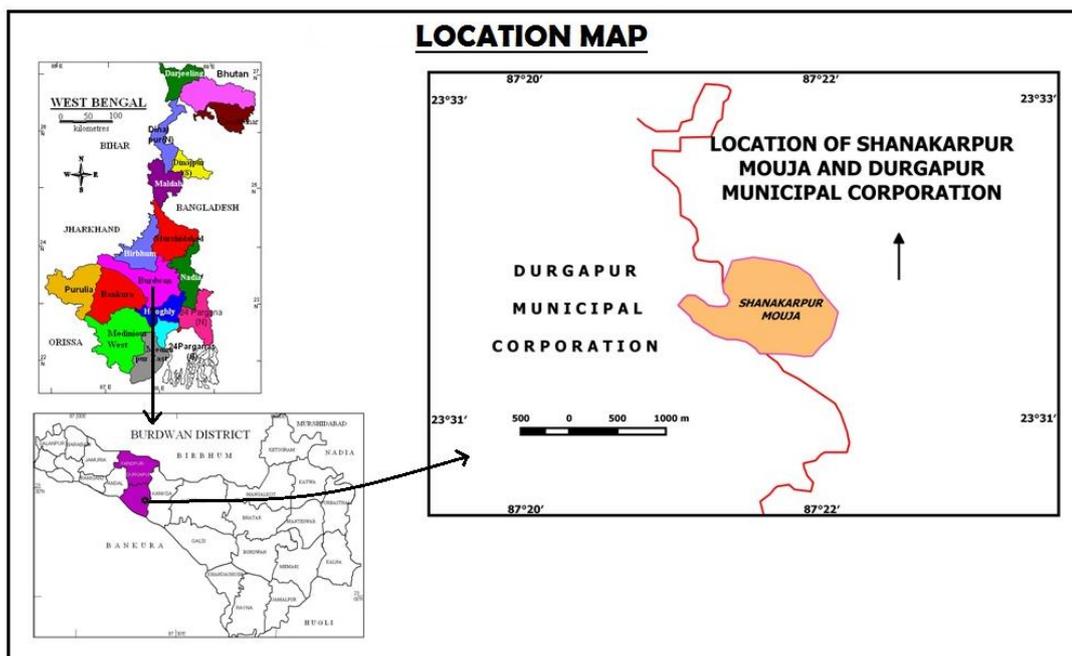
Urban adjacent rural neighbourhood generally termed as rurban area signifies both urban and rural characteristics. This should not be treated as two distinct zones as the city merges perceptibly into rural countryside by way of mixed land uses (Sharma, 2015).

The area on which the present study has made is located under a Grampanchayat (GP) but the socio-economic developmental pace of the area is healthier than the whole panchayat scenario. Because locationally this mouja touches the boundary of Durgapur Municipal Corporation (DMC), consequently impact of urbanity on this mouja is the prominent characters. In the present study a detailed analysis on demographic status, socio-economic condition of the people living in the study area transformation of land use from previous to present has been done clearly. Simultaneously comparative analyses of socio-economic condition between Shankarpur mouja, Jemua panchayat and DMC area have been made. Some basic problems of the region have also been identified along with its probable solutions.

2. Study area:

Shankarpur mouja (Jl No.95) is situated in the Jemua Grampanchayat in Durgapur-Faridpur block of Burdwan District of West Bengal (Fig: 1). It is situated at the eastern side of Durgapur Municipal Corporation (DMC). Total area of the mouja is 103 hectares and it is bounded by Phuljhore in the northern side, DMC in the southern and Western side, in the eastern side Tetikhola mouja is situated and in the North-eastern side Kaliganj mouja is located. The latitudinal extension of the mouja is $23^{\circ}31'31''\text{N}$ to $23^{\circ}32'21''\text{N}$ and the longitudinal extension is $87^{\circ}20'43''\text{E}$ to $87^{\circ}21'37''\text{E}$. Though the mouja is located under panchayat area it bears suburb characteristics of Durgapur city. In one side of Sardar Ballav Bhai Patel road is Shankarpur mouja and the other side of this road there is Ward No. 27 of DMC. The Socio-economic condition of the mouja is different than the average condition of Jemua GP. The mouja occupied 8 % land of the total geographical area of the Jemua GP.

Fig: 1
Location of the study area



3. Source of data and methodology used:

Two types of data have been collected for the study, secondary data and primary data. For secondary data and maps, the study refers to census report of India of various periods like 2001 and 2011, Panchayat office report and Topographical map (73 M/6). The cadastral maps of the area have been collected from DLRO office, Burdwan. To collect different socio-economic and land use related data frequently field surveys have been done on the study area. To understand the influence of urbanity on land use of the

study area two land use maps in separate time period (1975 & 2015) have been prepared using QGIS2.8 RS-GIS software.

For preparation of land use map Cadastral map of the mouja has imported into raster then georeferencing has been done using QGIS 2.8 with the help of Survey of India Topographical map (73M/6) and Google Earth image. To classify the land use category of the mouja, help of Google Earth image has been taken and frequent ground truth verification had been done. Using QGIS software attribute data regarding land use have also been generated and analysed later.

After collection of necessary data, it have been converted into percentage values and data plotted by different cartographic techniques like bar diagram, pie-chart etc. Finally an

3. Objectives:

The objectives of the present study are as follows:

- To study the present socio-economic status of Shankarpur mouja.
- To understand the transforming mode of land use pattern from earlier to present.
- To find out the differences of socio-economic development between Shankarpur mouja, Jemua GP and DMC.
- To highlight the present problems of the area.

4. Result and discussion:

Demography and social status: comparative analysis

Shankarpur mouja constitutes 8.13% of total geographical area of Jemua GP, but it shares more than 19 % population of the GP. Total no of household of the mouja is 653(2011) which comprises 19 % of household of Jumua panchayat and the household density of the study area is 634/ km², where in Jemua panchayat it is 273/ km². The rate of increase of household of Shankarpur mouja and Jemua GP during 2001 to 2011 was 170 % and 53.77% respectively. Availability of urban facilities and low cost of residential land in the mouja compared to DMC land are acting as main factors of this type of rapid growth of households.

Total population of the study area is 2915 and density is 2830 persons/ km² (2011). In case of Jemua GP total population is 15051. Population density of Jemua and DMC are 1188/ km² and 3634 / km² respectively. So it is clear that population density of the mouja is 140% higher than the Jemua GP.

If we examine the sex ratio, it is clear that the scenario is quite bad for Shankarpur. The sex ratio of Shankarpur mouja is 911 while for the whole panchayat, it

is 946. Some people dwell here without their family for their job, which may act as a factor of low sex ratio.

The rate of population growth also merits our attention. During the period spanning 2001 to 2011, the population growth rate of the mouja and GP was 151 % and 37 % respectively and DMC registers only 14% growth of population. Immigration is the important contributed factor for this trend of growth of population in Shankarpur mouja during 2001 and 2011. It is established from local people that people migrate here not only from surrounding rural area but also from other cities or districts even from other provinces because of job facility in Durgapur city. As a result number of multi-stored building are increasing rapidly in the area, reducing agricultural land.

Table: 1 Demographic composition

Demographic Composition	Administrative Area								
	Shankarpur Mouja			Jemua Panchayat			DMC		
	2001	2011	Growth Rate(%)	2001	2011	Growth Rate(%)	2001	2011	Growth (%)
Total Household	242	653	170%	2241	3446	34.96%	109925	130944	19.12%
Total Population	1160	2915	151.3%	11017	15051	36.6%	493405	566517	14.81%
Male Population	638	1525	139%	5744	7736	34.67%	263721	294255	11.58%
Female Population	522	1390	166.3%	5273	7315	38.72%	229684	272262	18.54%
SC Population	209	523	150.2%	2875	3674	27.80%	75233	83804	11.39%
ST Population	45	254	464.4%	312	546	75%	13606	12224	-10.2%
Population Density (sq.km)	1126	2830	151%	870	1188	37%	3200	3674	15%

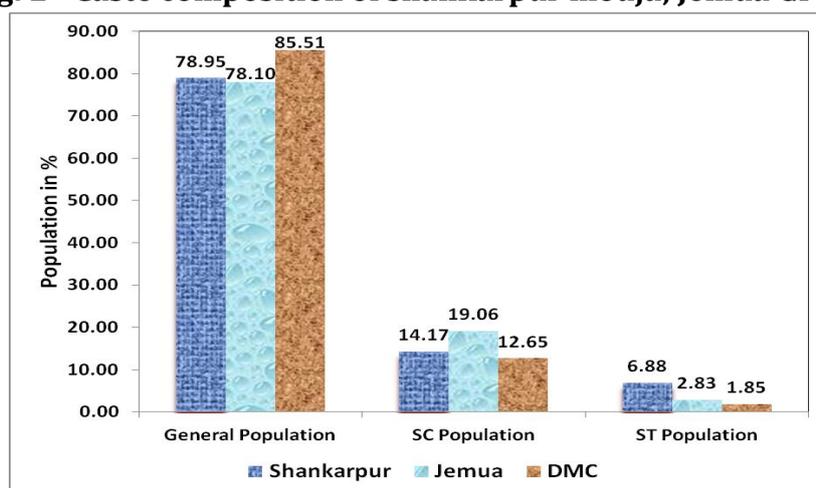
Source: Census Report 2001, 2011 And Author's Calculation.

5. Social status:

Most of the people living here belong to Hindu community, i.e., Hinduism is the only religion in this area. But caste system is present here (Fig; 2).

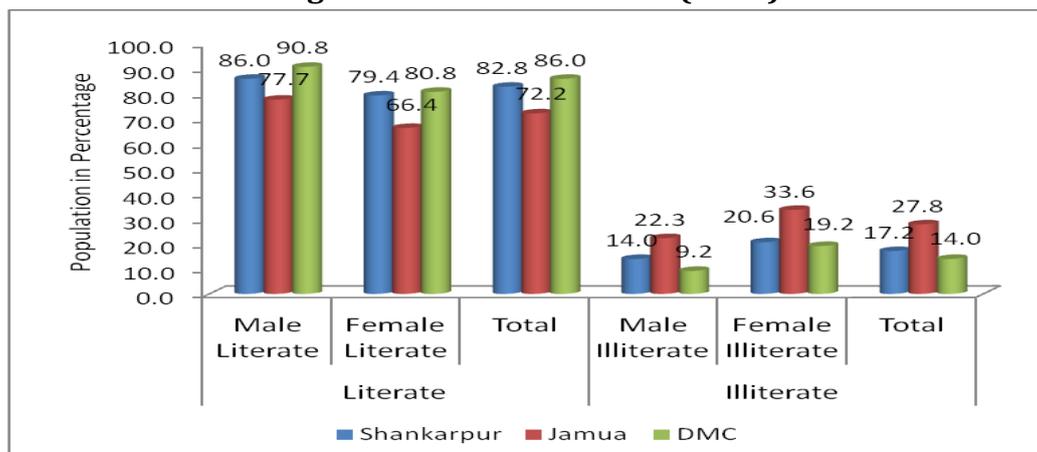
It is found from fig: 2 that 79 % of general category people live in Shankarpur mouja whereas SC and ST population are 14 % and 07 % respectively. On the other hand in case of Jemua GP, people belong to general category constitutes 78 %, SC population is 19 % and ST population is 03 %. DMC also bears similar type of demographic characteristics. General category population in DMC is slight higher than Jemua and Shankarpur. From this statistics, it is explicable that the mouja is affected gradually by urbanization. Census report of India proves that SC and ST population is less in number in urban centre than rural area. An urban demographic feature is present in this mouja.

Fig: 2 - Caste composition of shankarpur mouja, Jemua GP AND DMC



As social development, Shankarpur mouja is more advanced than other parts of the Jemua GP. The literacy rate (2011) of Shankarpur, Jemua and DMC is 82.8 %, 72.2 % and 86 % respectively (fig: 3). Literacy rate of male population in Shankarpur, Jemua and DMC is 86%, 77 % and 90 % respectively. Literacy rate of female population is also healthier in Shankarpur mouja (79 %) than in the Jemua GP (66 %). So the social status of female population is more advanced in Shankarpur compared to rural part of the GP. The literacy rate in Shankarpur mouja is higher than the panchayat's average, because of its location. This mouja is located in the vicinity of the DMC area. Thus the impact of urbanity of Durgapur town has felt on the concerned area. Within few Kilometres number of primary schools, high schools, general colleges, hospitals, management colleges etc. are located. So education facility is better at this part than rest part of the GP.

Fig: 3 - Educational status (2011)



6. Economic status:

As the Shankarpur mouja comes under the Panchayat area, it is natural that more people of this area should be engaged in primary activity, but census report (2011) shows that only 3.4% labours are engaged in agricultural activity (Table:2). On the contrary, in case of Jemua Panchayat, 21 % labours are engaged in primary activity i.e. they are working as agricultural labour or as cultivator and in case of DMC the percentage of primary workers are 2.8% only.

Table: 2 Occupational structure

Administrative Unit	Agricultural Worker (Cultivator+ Agri, Labour)	Household Workers	Other Workers	Total Workers
Shankarpur Mouja	33(3.4%)	10(1.1%)	916(95.5%)	959
Jemua GP	1068(21%)	95(2%)	3983(77 %)	5146
DMC	5624(2.8 %)	4511(2.2 %)	188878(95 %)	199013

Source: Census Handbook, 2011 And Author's Calculation.

The other worker¹ category is 95.5 %, 77 % and 95 % for Shankarpur mouja , Jemua GP and DMC area respectively. Other category worker is made by adding

¹A person, who has been engaged in some economic activity during the last year reference period but not as a cultivator or agricultural labourer or worker in Household Industry. The type of workers that comes under this category includes all government servants, municipal employees, teachers, factory workers, plantation workers, those engaged in trade, commerce, business, transport, banking, mining, construction, political or social work, priests, entertainment artists, etc. In fact, all those workers other than cultivators or agricultural labourers or household industry workers are 'Other Workers' (Census of India).

secondary and tertiary workers. Household industry labours at different level in 2011, 1.1 %, 2.0% and 2.2 % were engaged in Shankarpur mouja, Jemua GP and DMC respectively. But rural part of Burdwan district comprises 67 % agricultural workers, 4.34% Household Workers and only 28.65 % other workers. It is remarkable that in Shankarpur area only 3 % workers are engaged in agricultural activity, where as rural part of Burdwan District comprises 67% agricultural labours. So Shankarpur mouja contains urban character in respect of economic condition.

Table: 3 Monthly income shankarpur mouja

Monthly Income(Rs)	No. of respondents	% to Total respondents
Below 5000	11	5
5000-10000	44	20.8
10000-15000	85	40
Above 15000	73	34.2
Total	213	100

Source: Door to door sample survey, 2015

In 2015, a primary survey was conducted on Shankarpur mouja and it is found that monthly income of 40 % family ranges from Rs.10000-15000 followed by 34.2 % family whose income is above Rs 15000.(Table: 3 and Fig: 4).

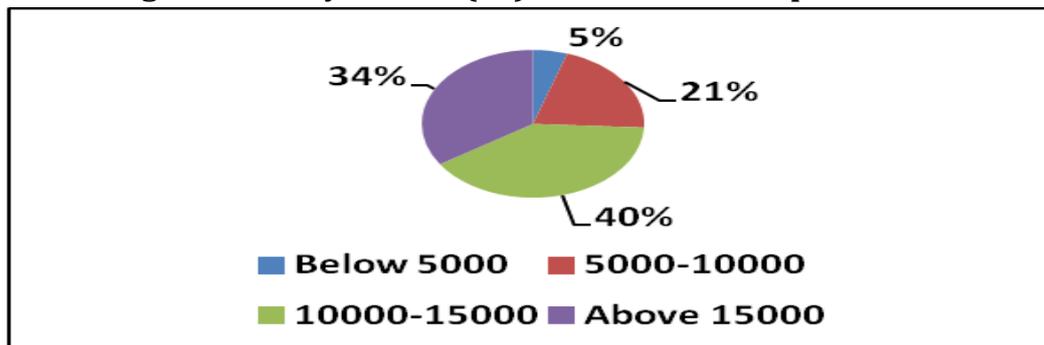
Table: 4 Media exposure in shankarpur mpouja

Media Exposer	No. of houses	No. of house respondent	% to total respondent Houses
News Paper	32	213	15
Radio	6		2.8
Tele Vision	148		69.5
Mobile	106		50

Source: Door to door sample survey, 2015

The survey on media exposure (Table: 4) reveals that 69.5 % of houses have T.V; 15 % houses subscribe to News papers, 3 % households possess Radio and 50 % houses enjoy Mobile services facilities. It is envisaged from this study that life style of people living in this mouja is more advanced. From the survey report it is evident that most of the houses have some kind of media exposure. These scenarios indicate that the financial condition of the mouja is as strong as that of town rather an entirely rural area. It is estimated that influence of Durgapur town is the key mechanism of this type of development of the area.

Fig: 4 - Monthly income (rs.) Status of shankarpur mouza



Source: Household survey, 2015

7. Urban influence and land use transformation:

In the Steel Township Durgapur, during last few year numbers of factories, shopping malls, Multiplex, IT Park, Private Schools and colleges are increasing. Most of the people have come in quest of job in this town from adjacent districts and regions and settled down. Promoters are constructing flats (Multi-stored building) for providing houses to these immigrants. Most of the flat they are constructing in Panchayat area adjacent to DMC as the land rent is low and they get easily plan of their project from Zila Parishad. Consequently the agricultural land is rapidly converting into built-up area with rapid urban sprawl of Durgapur city. The promoters are offering high amount of money to poor farmers. Lure of huge money is prompting the farmers of the region to sell their land to the promoters and they are making flats on that land. All new immigrants of Durgapur are not financially wealthy, which is why they are moving towards Panchayat area like Shankarpur mouza where they can avail flat or houses or they can buy land at cheaper rate than in the DMC area. As a result, agricultural lands are rapidly converting into built-up area.

Fig:5 - Luc of shankarpur mouja, 1975

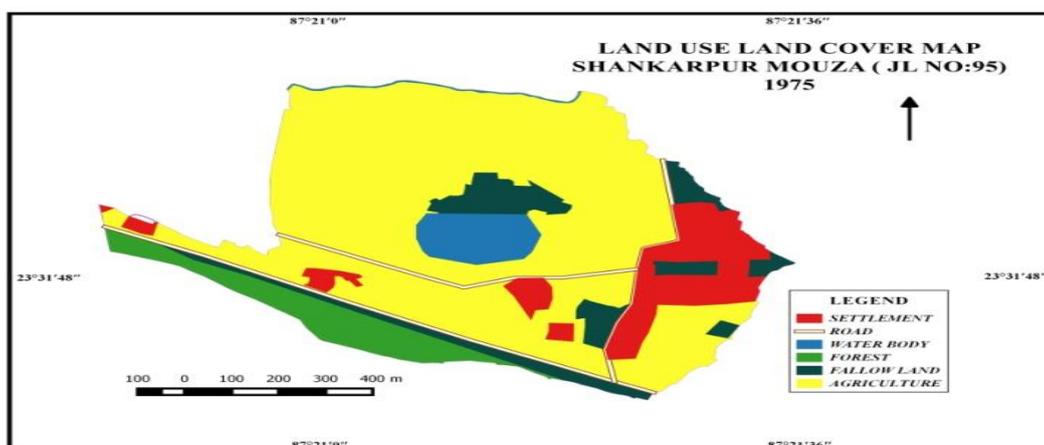


Fig: 6 - Luc of shankarpur mouja, 2015

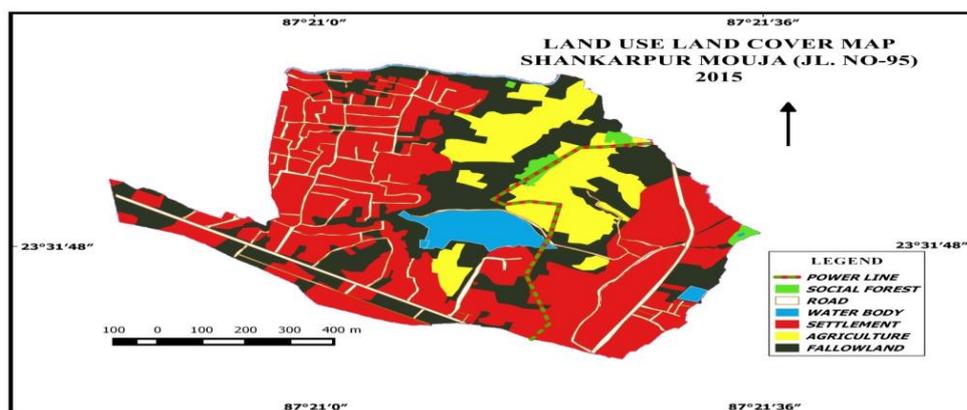


Table: 5 Lulc transformation during 1975-2015

LULC	Amount of Land in %	
	1975	2015
Agriculture	59.61	17.22
Settlement & Road Network	17.55	47.72
Forest Land	5.52	0.92
Fallow Land	14.02	30.6
Surface water body	3.3	3.54
Total	100	100

Source: Author's calculation.

It can be found from table: 5 that agricultural land of the mouja has decreased from 60% to 17% during 1975 to 2015. Settlement of the region has gained its area from 17% to 48 % of total geographical area of the mouja during same tenure. It is found from the field visit, land use map and report from the local people that most of the agricultural land of this area are converting into settlement and fallow land. It is reported from local people that many persons have purchased number of agricultural plots for making their home, some of it remain vacant which is treated here as fallow land. It is found that fallow land is mostly transforming into built-up area.

So table: 5 show that land amount for settlement and fallow has increased but agricultural land has decreased remarkably. Surface water bodies have increased slightly from 3.3 % to 3.54 %. Behind this dramatically land use change of the study area, influence of urban sprawl is working as core factor.

8. Concluding remarks:

It can be concluded that the developmental pace of Shankarpur mouja is more than average condition of Jemua GP, though the rate of socio-economic development is not uniform to all residents of the mouja. Polarised character of development is seen

here. The SC/ST people of the area are in weak condition compared to people of general category. Overall the socio-economic condition of the mouja is comparable to any Ward of the adjacent town.

The rapid socio-economic transformation of the mouja is felt on its ecology and environment. It is reported from local people that only a small area enjoys DMC pipeline water supply. From the primary survey report it is found that over 80% people depend on ground water for their livelihood. Generally poor family use tube well as well as open well water but flat residents extract ground water using pump sets. As a result ground water level of this area is depleting rapidly. In pre monsoon season poor people suffer scarcity of water because in this time ground water level falls below the depth of normal tube wells and most of the well dry up in the summer season.

It may be concluded that eradication of socio-economic inequality among the inhabitants of the area is urgently needed to bring about development of the area. Local administration should strictly verify the project proposal regarding flat construction before sanctioning their project, otherwise our development will not be sustainable.

9. Acknowledgement:

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