

# Impact of Jammu City on its Rural-Urban Fringe

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## ABSTRACT

*Jammu city is the fast-growing city experiencing heavy influx of population in recent years. The city with the rapid growth of service sector, as a centre of higher learning and with other facilities has attracted people from surrounding villages and urban centres. As the city of Jammu is finding it difficult to accommodate the excessively growing population through both natural increase and migration, which has serious implications as the services are not able to keep up with the pressure of population. The growing city has literally expanded into the surrounding countryside leading to changes in land use pattern, morphological characters and social and economic lives of the rural folks living in the peripheral areas of the city. Thus the main purpose of the study is to understand the process of structural and urban land use transformation, impact of changing population densities, sex ratio, literacy rate, occupational structures and transport services in the rural-urban fringe.*

**Keyword:** Urban sprawl, influx, countryside, transformation, residential, land use, land cover.

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## INTRODUCTION

During ancient times, the cities and rural area were clearly defined; the cities and rural areas were around the city. In the cities, people were engaged in non-agricultural activities and in the rural area, people were engaged in the agriculture and animal husbandry. This distinction has persisted through time. But now, the scenario has completely changed. The towns and cities are growing rapidly. Rapid industrialization along with an unprecedented increase in population has enhanced the scope of economic activities of the urban centers both in magnitude and character. Hence the cities are expanding beyond their administrative boundaries, encroaching upon their surrounding rural areas in the process of expansion. Generally, their development happens to be in a haphazard, spontaneous and unplanned manner. In this type of development, there is a revenue flow of people from the city to the country side. This rural-urban interaction between the town and countryside has created a rural-urban fringe around them, which exhibit an intermixing and overlapping of urban and rural character.

“The term rural-urban fringe has been used to designate such areas where we have a mixture of rural and urban land uses”. With the expansion of population and increase in a number of migrants, the city is unable to accommodate all people and hence there is a physical expansion of the city in two steps. The first step involves the occupancy of the vacant city area and the second step includes the encroachment on land areas lying outside the city limit.

Literally, the term “Rural-Urban Fringe” amalgamates two types of fringes rural as well as urban. Thus this transitional zone formed around every urban centre depends upon the impact of the urban area. Greater is the impact of the city, larger becomes the extent of its rural-urban fringe. This zone is indeed a real expansion of urban concentration beyond the city limit. The sprawling of the urban activities into the rural landscape involves the conversion of land peripheral to urban centres that have previously been used for non-urban purposes into one for more urban uses.

## OBJECTIVES:

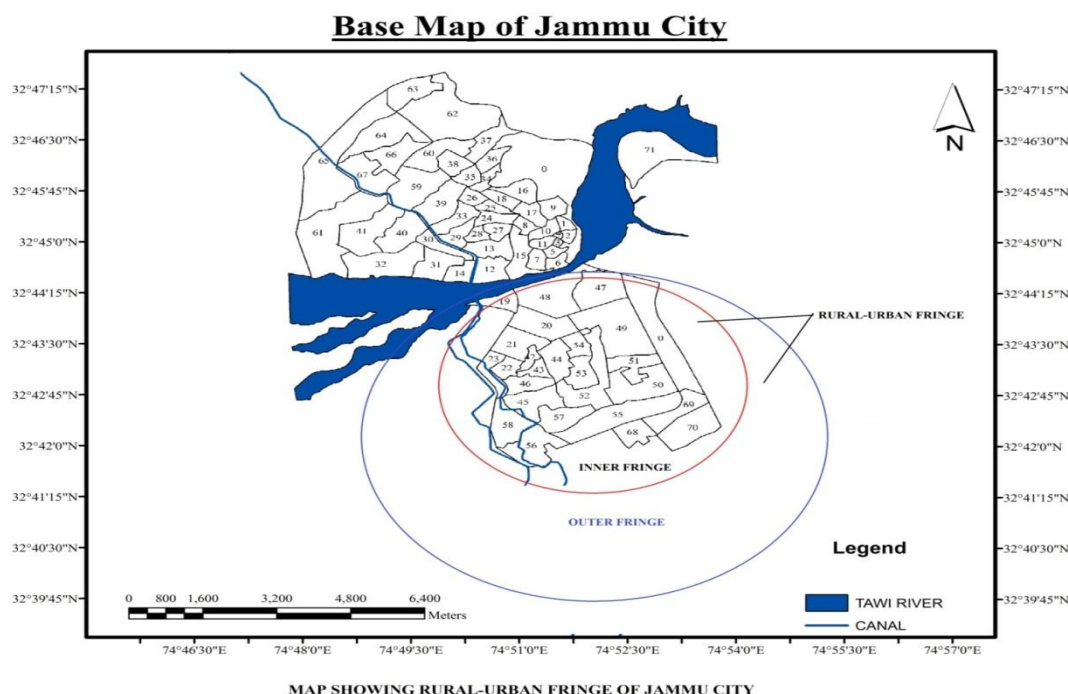
1. To bring out the character of the rural-urban fringe area.
2. To assess the demographic and transformation processes that have occurred through years.
3. To analyze the change in land use, land values and infrastructure facilities.
4. To identify the problems and prospects of fringe area.

## METHODOLOGY

The information has been gathered from both the primary and secondary sources. For the collection of primary data random sampling was done. Five villages were chosen from each category of fringe i.e. the primary or inner fringe and, secondary or outer fringe. The household survey from each sample village was carried on by using a questionnaire. In all 200 households were questioned, taking 40 households from each village. The secondary data have been borrowed from various agencies such as Government offices, Jammu Municipal Corporation (JMC), Jammu Development Authority (JDA). The census data and other records are used to get a more general picture of the population profile and employment structure. Information on land use is taken from existing maps, as well as from agricultural land records; newspaper articles and reports. The data thus collected from various primary and secondary areas are represented by various statistical methods. The results are presented through various diagrams and tables generated and interpretations are sought accordingly.

### Jammu city: Population Growth (1901-2011)

Year	Area (Km)	Population	Decadal growth rate
1901	-	36,130	-
1911	-	31,728	(- 12.2)
1921	-	31,506	(- 0.7)
1931	-	38,613	+ 22.6
1941	4.00	50,379	+ 30.5
1951	-	76,558	52.00
1961	18.3	1,02,738	34.2
1971	21.42	1,57,908	53.7
1981	61.42	214,737	36.0
1991	NA	NA	NA
2001	150.4	5,49,791	156.2
2011	288	5,76,198	4.80



### IMPACT ON LAND VALUES:

The changing land value in the rural-urban fringe also plays an important role in determining the urban impact. The value of land depends upon many factors such as transportation facilities, education facilities number of services available, distance from the market, quality of land, economic factors surrounding environment and other socio-cultural factors.

**Table No.1: Rural-Urban Fringe- Land Values**

Fringe Zone	Name of the area	Value per canal in lakh (2001)	Value per canal in lakh (Present)
Inner or Primary fringe	NarwalBala	20-30	100-110
	Sunjwan	5-15	70-80
	chowadhi	0-10	60-70
	Chakjalu	5-15	60-70
	KaluChak	10-20	80-90
Outer or secondary fringe	Birpur	0-10	20-30
	Mandal	0-10	5-15
	Purmandal	0-10	0-10
	Kanhal	0-10	20-30
	Saror	0-10	20-30

**Field survey: 2020**

Table No.1: depicts the land values of various villages lying at varying distance from the city limit. The villages lying closer to the municipal limits or primary fringe villages' viz. Narwalbala, ChakJallu, Kaluchak, sunjwan, chowadhi have land values for commercial and residential purpose varies from 60 lac to 110 lac per Kanal. All these villages lying closer to the municipal corporation limit and linked with the roads diverging from the city which is the main reason for the high value of land in this zone. These areas provide an ideal condition for the construction of new colleges, schools, apartments, marriage palaces, resorts etc. The value of land has increased three to four times from the past few decades. While in some areas the land value has increased six to seven times like chowadhi, kaluchak, sunjwan mainly due to the construction of new schools, colleges, apartments, marriage palaces, resorts, and better transportation facilities. These areas provide ideal condition for the construction of new colleges, schools, apartments, resorts etc.

In the secondary fringe area of the city, the land values of the commercial and residential land vary from 5 to 40 lac per Kanal, in village Birpur, Mandal, Purmandal, kahal&Sarore. It is observed that cost of the land generally goes on decreasing as one moves away from the city which is mainly due to less linkage with the main roads, poor transportation facilities, poor quality of the road, low number of services & educational facilities etc. The value of land has increased three to four times from the past few decades mainly due to linkage of roads.

#### **IMPACT ON LAND UTILIZATION:**

Rural-urban fringe around a city is a dynamic zone which undergoes considerable changes from time to time in terms of area and functional land use changes in the land use/land cover.

**Table No.2: Land utilization in Rural-Urban fringe (in Percentage)**

Fringe Zone	Name of the area	Agricultural Area		Forest area, pastures, Grazing land		Built up area		Other	
		1991	2020	1991	2020	1991	2020	1991	2020
Inner fringe	NarwalBala	10	5	20	5	45	80	25	10
	Sunjwan	25	5	30	5	30	80	15	10
	chowadhi	30	15	40	20	15	60	15	5
	Chakjalu	30	10	40	10	15	75	15	5
	Kaluchak	25	5	20	5	35	85	20	5
	Total	120(24%)	40(8%)	150(30%)	45(9%)	140(28%)	380(76%)	90(18%)	35(7%)
Outer fringe	Birpur	25	20	40	20	20	55	15	5
	Mandal	15	15	60	50	10	25	15	10
	Purmandal	15	15	55	50	15	25	15	10
	Kanhal	60	25	20	10	10	55	10	10
	Saror	50	20	25	10	15	60	10	10
	Total	165(33%)	95(19%)	200(40%)	140(28%)	70(14%)	220(44%)	65(13%)	45(9%)

**Source: Census of India 2011 & Field survey (2020)**

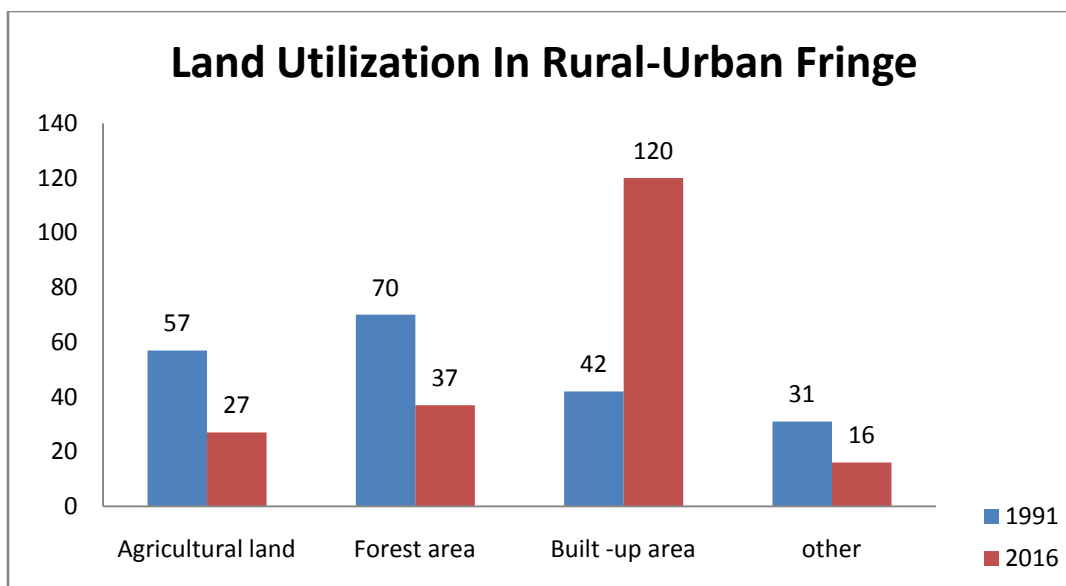


Figure: 1

Figure 1 show that is a considerable decrease in the Agricultural land, forest area and other (like barren land, lakes, nallas, khads, rills, river etc...) from the past few decades. At the same time, there is a continuous increase in the built-up area from the past few decades.

#### IMPACT ON DEMOGRAPHIC CHARACTERISTICS:

There is a great impact on the population of the fringe area of Jammu city due to the continuously built-up area. There is a large scale flow of population to this fringe area from other parts of the city. The great impact has been seen on the literacy rate, population density, sex composition and occupational structure.

#### Literacy

Socio-economic achievements of a particular society are usually reflected by the literacy level. In case of fringe, villages of Jammu city enhancement in the percentage of literacy has been observed during the past few decades. This reveals that the population of the fringe villages is affecting and transforming the traditional and old living style and consequently the surrounding environment is gradually changing from rural to urban and its impact is dominating over their hereditary system.

Table No. 3: Number of literate in Rural-Urban fringe (in Percentage)

Fringe Zone	Number of Literates (%)		
	Name of the Village	1981	Present
Inner or Primary Fringe	NarwalBala	20.25	75.27
	Sunjwan	24.31	74.21
	Chowadhi	37.51	73.23
	Jaluchak	35.27	87.29
	KaluChak	50.12	88.54
Outer or Secondary fringe	Birpur	31.54	72.77
	Mandal	33.77	63.33
	Purmandal	27.21	57.55
	Kanhal	51.81	78.18
	Sarore	45.25	73.8

Source: Census of India 2011

Table no.3 shows that the villages falling in the primary fringe area are having the higher average literacy rate above 75% while those falling in the secondary fringe are showing average literacy rate of below 70 % (except Birpur). There is a

considerable increase in the literacy rate from the past few decades. The reason for the increase in the average literacy in the last 3 decades is awareness among the people about the importance of education in their lives, which ultimately transform the standard of living and change their social structure also. Increase in number of schools, colleges and other technical institutes also play an important role to increase literacy rate in the sample villages.

### SEX COMPOSITIONS:

Sex composition of the human population is one of the basic demographic characteristics, which is extremely vital for any meaningful demographic analysis. Changes in sex composition largely reflect the underlying socio-economic and cultural pattern of a society in different ways. It is an important social indicator to measure the extent of prevailing equity between males and females at a given point in time.

**Table no.4: Sex composition in Rural-Urban fringe (in %)**

Fringe Zone	Name of the area	Total Population	Male	Female	Sex ratio
Inner or Primary fringe	NarwalBala	8157	4234	3923	926
	sunjwan	14808	7847	6961	887
	chowadhi	2914	1534	1410	919
	Chakjalu	8051	4161	3890	934
	kaluchak	5853	3089	2764	891
	<b>Total</b>	<b>39783</b>	<b>20865</b>	<b>18948</b>	<b>908</b>
Outer or secondary fringe	Birpur	7177	3841	3336	868
	Mandal	1001	555	456	821
	Purmandal	1276	662	614	927
	kanhal	1820	940	880	936
	saroor	4462	2330	2132	915
	<b>Total</b>	<b>15736</b>	<b>8328</b>	<b>7418</b>	<b>890</b>

Source: Census of India 2011

Table no.4 depicts that the sex ratio in the inner fringe is higher than the outer fringe. There are 908 females per 1000 males in the inner fringe which is higher than the outer fringe which may be because of awareness among the people, a higher number of educated people. While on the other hand there are 890 females per 1000 males in the outer fringe. This ratio is lower than the inner fringe which may be because of lack of awareness and education.

### OCCUPATIONAL STRUCTURE:

A number of people engaged in different sectors constitute the occupational structure of an area. It is the indicator of the standard of living in an area.

**TableNo.5: Occupation structure in Rural-Urban Fringe (in Percentage)**

Fringe Zone	Name of Village	Govt. Jobs	Business	Agricultural workers	Labourers	Others
Inner or Primary fringe	NarwalBala	45	15	-	20	20
	sunjwan	55	15	-	10	20
	chowadhi	30	25	10	10	25
	Chakjalu	40	20	10	10	20
	Kaluchak	60	5	5	10	20
	<b>Total</b>	<b>230(46%)</b>	<b>80(16%)</b>	<b>25(5%)</b>	<b>60(12%)</b>	<b>105(21%)</b>
Outer or secondary fringe	Birpur	35	10	10	15	30
	Mandal	20	20	20	20	20
	Purmandal	20	10	25	15	30
	Kanhal	25	15	30	10	20
	saror	25	15	30	15	15
	<b>Total</b>	<b>125(25%)</b>	<b>70(14%)</b>	<b>115(23%)</b>	<b>75(15%)</b>	<b>115(23%)</b>

Source: Field survey (2020)

The table no.5 shows that maximum numbers of the people in inner fringe are engaged in the Govt. Services accounting for 46%. This is followed by the business men and others by 16% and 23% respectively. About 21% people have other occupation which includes house-wives etc. In Village KaluChak maximum number of people i.e. 60% are engaged in govt. services. Only 5% of people are engaged in the agricultural sector. The occupation structure and therefore the income of the people will be the deciding factors in the standard of the other dependent activities. While in outer fringe only 25 % of people are engaged in the government sector and about 23% of people are engaged in agriculture sector & others. Very little number of people is engaged in government services which are mainly due to illiteracy and fewer opportunities for Job.

#### 4. POPULATION DENSITY:

Population density is a better measure of understanding the variation in the distribution of the population. It is expressed as a number of persons per unit area.

**Table No.6: Density of Population in Rural-Urban Fringe (in Percentage)**

Fringe Zone	Name of the Village	Area	Total Population		Pop. Density (persons per sq. km)	
		Sq. km	1981	2011	1981	2011
Inner or Primary fringe	NarwalBala	4.76	2350	8157	493	1713
	sunjwan	6.69	2780	14808	135	722
	chowadhi	3.68	600	2914	163	792
	Chakjalu	5.25	1807	8051	344	1533
	kaluchak	3.85	1600	5853	415	1520
Outer or secondary fringe	Birpur	6.88	2000	7177	290	1043
	Mandal	1.82	450	1001	247	550
	Purmandal	6.97	874	1276	125	183
	kanhal	1.15	1131	1820	981	1578
	saror	4.36	2012	4462	461	1023

Source: Census of India 2011

Table no. 6 reflects that the density of population in the fringe area generally goes on increasing in every sample village from 1981 to 2011. If we talk about the primary fringe village, every village shows a tremendous increase in the density. The maximum rise of population density has clearly been seen in the inner fringe of the city mainly due to migration from other parts of the city. In village sunjwan and chowadhi the density of population has shown maximum rise which is mainly due to increase in better education facilities, low land prices from the main city, transportation facilities, job opportunities, excessive migration from the Kashmir valley and other parts of the city.

On the other hand among the secondary fringe villages rate of increase in density is less as compared to the villages in primary fringe. In villages like Birpur, Saror the density of population has shown a maximum rise. It is observed during the course of field survey that the villages lying at the peripheral area i.e. far away from the city the rate of increase in density is low. The reason of less increase in the density of population as compared to increase density in secondary fringe village is the farness from the city, less influence of the city, lack of good education, lack of water, medical and transport facilities. As a result of shortage of these facilities, people living in the peripheral rural areas tend to move towards the primary fringe area, which in turn increases the density of population in this area.

#### Impact on Standard Of Living:

**Table No.7: Number of people in different income groups (in Percentage)**

Fringe Zone	Name of Area	Monthly income			
		<5000	5000-15000	15000-40000	>40000
Inner or Primary fringe	NarwalBala	30	20	40	10
	Sunjwan	20	20	40	20
	chowadhi	20	25	35	20
	Chakjalu	10	45	30	15



	Kaluchak	10	40	30	20
	<b>Total</b>	<b>90(18%)</b>	<b>150(30%)</b>	<b>175(35%)</b>	<b>85(17%)</b>
Outer or secondary fringe	Birpur	30	30	25	15
	Mandal	40	40	15	5
	Purmandal	45	40	10	5
	kanhal	25	40	25	10
	saror	30	40	20	10
	<b>Total</b>	<b>170(34%)</b>	<b>190(38%)</b>	<b>95(19%)</b>	<b>45(9%)</b>

Source: Field survey (2020)

Table no.7 shows that majority of residents i.e. 53% of people in inner fringe has an income level above Rs 15000 which shows the high standard of living and about 30% of them have income level ranging between Rs 5000-15000. Only 18% of people of the residents have their income less than Rs 5000. Among the sampled villages high standard of living is seen in village sunjwan

While in the outer fringe majority of people i.e 34% have their monthly income fewer Rs 5000 which shows the low standard of living. It is mainly because of illiteracy, lack of job opportunities and distance from the city. Only 28% of the people have their monthly income more than Rs 15000. Among the sampled villages higher standard of living is seen in village Birpur. Therefore we can say that people's standard of living in inner fringe is higher than the people living in outer fringe.

**Table No.8: Distribution of Toilet, Kitchen Facilities and House type in Sample Villages (in %)**

Fringe Zone	Name of Area	Toilet facilities		Separate kitchen Facilities		Type of House	
		Yes	No	Yes	No	Pucca	Kaccha
Inner or Primary fringe	NarwalBala	90	10	90	10	100	-
	Sunjwan	90	10	95	5	95	5
	chowadhi	20	20	90	10	95	5
	Chakjalu	75	25	95	5	95	5
	Kaluchak	90	10	95	5	100	-
	<b>Total</b>	<b>425(85%)</b>	<b>75(15%)</b>	<b>465(93%)</b>	<b>35(7%)</b>	<b>485(97%)</b>	<b>15(3%)</b>
Outer or secondary fringe	Birpur	80	20	85	15	90	10
	Mandal	60	40	80	20	80	20
	Purmandal	35	65	60	40	75	25
	kanhal	90	10	95	5	100	-
	sarore	90	10	90	10	95	5
	<b>Total</b>	<b>355(71%)</b>	<b>145(29%)</b>	<b>410(82%)</b>	<b>90(18%)</b>	<b>440(88%)</b>	<b>60(12%)</b>

Source: Field survey (2020)

**i) Toilet facilities:** Table no.8 shows that the number of households having the toilet facilities is more in inner fringe than the outer fringe i.e. 85% & 71% respectively. The reason of low percentage in outer fringe as compared to the inner fringe is being the farness from the city, lack of awareness related to health hygiene among the people economically weaker section, the dominance of rural character and poverty. In village purmandal about 65% of households do not have toilet facilities mainly due to rural character, poverty etc.

**ii) Separate Kitchen Facility:** If we take a look at the primary fringe villages then about 93% of the households are having the separate kitchen facilities and 7% of households are devoid of separate kitchen facilities. While in outer fringe 82% of the households are having separate kitchens and 18% of households are devoid of separate kitchen facilities. Those who don't have separate kitchen facilities usually cook food in verandahs or courtyard. About 40% of households in the village Purmandal are devoid of separate kitchen facilities.

**iii) Type of Houses:** Among the sampled villages of the inner fringe about 97% of the households are generally made up of cement and bricks except for certain old houses which are totally made of mud walls and toilet or thatched roofs. While in case of outer fringe only 80% of households are made of pacca material in village mandal & Purmandal more than 20% of households are made of kaccha material. They lack in proper ventilation, suffer from darkness and usually have kaccha courtyard or verandahs. The reason being economically weaker section, dominance of rural character and poverty.

## PROBLEMS AND PROSPECTS

### i) Land Use Problems:

Due to the rapid urbanization process, the population of the Jammu city is increasing at a faster rate. This, in turn, has increased the demand for cheaper lands for residential purposes. The transformation of landscapes starts with the acquisition of rural land for urban uses. The vacant and agricultural lands are acquired by various agencies and built in their own way etc. Due to this the area under forests and agriculture has reduced to a great extent over the past few decades. There is a huge influx in these areas from the other parts of the city. Due to the availability of cheaper land, many entrepreneurs set up the industrial units in these areas. The rural-urban fringe is often used for dumping garbage and location of factories.

### ii) Administrative Problems:

Lack of proper administration is one of the serious problems which has been faced by the fringe areas of cities. Unlike the administration of the city, the fringe consists of villages and hamlets which are administered by village Panchayat, so the development of a village depends mainly on the local administrators viz. village Chiefs (Gram Pradhan). The main reason why the fringe villages are not developing homogeneously on a uniform pattern is that they are at a time under the influence of more than one administrative agency. Moreover, there is lack of integration and tug of war between them with regard to jurisdiction aspect.

### iii) Infrastructural Problems:

The rural-urban fringe of Jammu lacks most of the infrastructural facilities viz. the poor condition of transportation, housing, lack of shopping, medical, banking and other services are the serious problems. These problems of the fringe area are ignored by both urban and rural authorities because they fall outside their territory. Besides the main roads, the inter-villages roads are also found usually in bad condition. The major roads and some link roads of the fringe area are metalled while other roads remain unmetalled and kaccha or brick paved and semi metalled. Most of the inter-village roads are water logged and broken at places during the rainy season.

The primary urban facilities, such as water supply, sewerage etc. are in most part, not available because the city provides these services only to places within the Municipal limits. Most of the villages bring out drinking water from open wells.

Other urban services like – electricity supply, telephone services, disposal systems, educational institutions, healthcare and medical facilities are also not very satisfactory in the fringe area. Also, the fringe area lacks in recreational activities viz. park, cinema, restaurants, playground etc. are also absent in this part. Shops in the fringe area are also inadequate to cater the demands of fringe dwellers. Inhabitants of the fringe have to go to the city to buy essential elements.

The educational institutions in the outer fringe area are also inadequate in number. Up to higher Secondary level the situation is more or less satisfactory but for higher education and vocational teaching, studies depend on the city.

The dearth of medical facilities also causes problems for the fringe dwellers. Although some villages are provided with the health centres but most of them do not have adequate facilities.

### iv) Increasing land values:

The values of land are continuously increasing in the rural-urban fringe area due to the influx of people from the other parts of the city. Due to this, a zone of transition between the rural and urban landscapes has been generated. Though middle-class people could afford the housing charges, it is the poorest people who suffer most. Since the land prices are such a high that they cannot afford decent housing.

### iv) Rural Slums:

During the survey, it was observed that considerable land of the fringe area is under unhygienic conditions of habitation. Lower class people working as the lawalas, masons, domestic servants, labourers, sweepers etc. usually try to settle down near the place of work, especially along the roads. The fringe area thus got distinct growth of slum pockets around the work



centers. Due to poor economic conditions many inhabitants suffer from illiteracy, diseases and anti-social evils. In study area, these slum pockets were found around Narwalbala, chowadhi. Most of them are from UP, MP and Bihar

#### **V) Waste management problem:**

There is also the problem of waste management due to haphazard and unplanned development. Also, there is lack of awareness among the masses due to illiteracy. Some rural areas in fringe area act as dumping grounds that has to lead to unhygienic conditions in the area.

### **FINDINGS**

The primary survey has been conducted in the sample villages by using the questionnaire, so that the heterogeneous characteristics of the primary and secondary fringe may be properly known. Secondary data has also been collected from various sources. Villages lying closer to the municipal limits have high land values ranging between 60-110 lakh while the villages lying in the outer fringe have land values ranging between 5-40 lakh per canal.

It is found that villages falling in the primary fringe area are having the higher average literacy rate above 75% while those falling in the secondary fringe are showing average literacy rate of below 70%. Maximum rise of population density has clearly been seen in the inner fringe than outer fringe of the city mainly due to migration from other parts of the city. In village sunjwan and chowadhi, the density of population has shown maximum rise which is mainly due to increase in better education facilities, low land prices from the main city, transportation facilities, job opportunities, excessive migration from the Kashmir valley and other parts of the city. The sex ratio in the inner fringe is higher than the outer fringe. There are 908 females per 1000 males in the inner fringe while the sex ratio in the outer fringe is 890 females per thousand males. The number of people engaged in government services is about 46% while in outer fringe only 23% of people are engaged in government job. In case of inner fringe, only 5% of people are engaged in agricultural sector while it is 23% in case of outer fringe. About 21% people have other occupation as house wives in case of inner fringe while it is 23% in case of outer fringe.

There is religious dominance of the Hindus in rural-urban fringe which constitutes 62% & 75% in the inner and outer fringe respectively. They are followed by Muslims and Sikhs. No other religious community found in the study area. However, the distribution of the religious communities was not even. Majority of residents i.e. 53% of people in inner fringe has an income level above Rs 15000 while it is only 28% in case of outer fringe. In case of inner fringe, only 18% of people of the residents have their income less than Rs 5000 while it is 34% in case of outer fringe.

In case of inner fringe, about 85% of households have toilet facilities while it is 75% in case of outer fringe. Majority of houses in the inner fringe i.e. 97% are made of pucca material while 88% of houses in outer fringe are made of pucca material. About 93% of households in inner fringe have separate kitchen facility while it is only 82% in case of outer fringe. The major problem in the rural-urban fringe is mainly related to land use, administration, increasing land values, infrastructure, rural slums, and waste management.

### **SUGGESTIONS**

- The problems and prospects of the fringe are ignored by both urban and rural authorities because they fall outside their territory. Thus, an independent separate authority should be developed and established to solve the problems of the fringe.
- There is a need for effective planning and control of the rural-urban fringe in full adjustment with the city planning because the fringe of today is the city of tomorrow. For this, rigid action will have to be taken so as to ensure as well organized fringe development.
- Planning for the development of rural-urban fringe of Jammu city is important as its development will directly affect the city. Government intervention required to guide urban development for orderly development of different areas of the city so as to improve the quality of life & standard of living.
- Proper management of waste in the rural & urban areas.

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