

## **DYNAMICS AND DIVERSIFICATION OF LIVELIHOOD IN URBAN FRINGE OF ALIGARH CITY, U.P., INDIA**

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### **Abstract**

#### **Dynamics and diversification of livelihood in urban fringe of Aligarh city, U.P., India**

Urban fringe is a region of urban-rural interface, continuously moving outward in response to urban sprawl or expansion over the times. It is the area of socio economic transition, experiencing dynamism in the pattern of livelihoods of the people. Land resource used under various cropping systems providing livelihoods to the rural people is declining due to increasing demand of land for non agricultural uses. The declining agricultural activity in the urban fringe has resulted in diversification and structural change in livelihoods. The exposure to urban lifestyle and mass media is causing mental transformation of youth in the urban fringe. They are more inclined towards value added farming systems and non farm activities of secondary or tertiary sectors. Dynamics in socio-economic milieus of urban fringe presented the challenges for livelihood security, employment opportunities and the sustainability of existing farming system and environment in the area. The present study analyzes the impact of urban expansion upon the structural change in pattern of livelihood of people of various socio economic horizons and the diversification of farming systems in the urban fringe of Aligarh city during last 20 years. The study is based on primary data generated through field survey of five villages from urban fringe of the city. The Study reveals expansion of Aligarh city at least three times since 1990. A large number of villages have been included in municipality area but rural economic activities like cropping and animal husbandry still exist in the form of urban vegetable and dairy farming operated by the local people and the immigrants from other parts of the district. The urban fringe witnessed dynamism and diversification in sources of livelihood. The study reveals that approximately 20 percent of surveyed people are only engaged in agriculture. The other important source of livelihood is animal husbandry, agro-processing, retailing and allied services. This structural change in livelihood has resulted in social, economic and environmental instability.

#### **Key words**

Urban fringe, livelihood, farming system

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## **1. Introduction**

The urban fringe is the zone of transition experiencing continuous change in the utilization of resources and services. The people of urban fringe experience both rural as well as urban influences (Sharp J.S. and Smith M.B. 2003). Many studies have been undertaken regarding the concept, delineation, and land use change in the fringe areas in India and abroad the notable ones are Galster et al. 2001, Srivastava B and R. Ramchandran 1974.

The rapid urbanization in the Indo Gangetic plain has resulted in many fold growth of towns. The urban fringe or peri-urban areas are the important concentric zones at various radial distances from the city for the flow of perishable food resource like vegetables, milk and meat (Kroll F. et al. 2011). The rural urban fringe is associated with changes in population and social characteristics. Thus it is also associated with social and cultural conflicts (Beesley K.B. 2010). Globally the demand of milk and meat has increased tremendously. Per capita milk consumption increased by more than 50 percent during 1983 to 2002 (Delago, C. et al. 1999) This dynamic change in demand for animal products resulted in geographical and socio economic shifting in farmers' agriculture land use and production decision making process. Their increasing demand has encouraged the peri-urban and urban agriculture with the production of horticultural products and animal husbandry. Mode and scale of production have been also changing up. The urban fringe is the major source of vegetables to any city (Khan N and Rehman A. 2011). The rural markets in the urban fringe are the main channel of transaction of vegetables (Khan et al 2008). They have a very dominant role in the supply of fresh and cheap vegetables to any city and help in the sustainable development of the rural economy (Khan et al 2009). This particular form of peri-urban agriculture has the potential to provide cheap, fresh and nutritious food. It also saves the expenditure incurred for packaging, storage and transportation and has potential to generate more employment and incomes.

The continuously changing characteristics and socioeconomic variation makes it a place of diversification of livelihood. The maximum change is experienced in land utilization and hence it affects the livelihoods of the local people. The change of agricultural land to non agricultural purposes leads to evolution of new options of livelihood for the local people. The proximity to the city effects not only in social and mental change but also in behaviour of the people. The young people get multiple options livelihood options and the traditional livelihood of the rural areas is transformed into diverse form. The people getting income and employment through farming systems are no longer involved in farming and this dynamic shift in the livelihood results not only in insecurity of employment but also threatens the existing farming system and the environment of the area. The majority of the people once engaged in agricultural activities shift into different types of economic activities. The fringe area is a promising area for vegetable cultivation, animal husbandry and other allied activities which provides a supplement for the needs of the city (Khan et al 2010).

Moreover, Aligarh city is an important industrial and educational centre where population has been continuously increasing. Horizontal and vertical expansion both has taken place within last two decades tremendously. Aligarh is an academic hub and attracted thousands of population. Muslim population shares approximately 50 per cent of total city residents. Approximately twenty thousand students reside in

the university hostels. Thus the demand for vegetable, milk and meat is very high. Buffalo meat is greatly demanded in the city itself due to larger number of Muslim population. Meat producing industries located in Aligarh periphery area have also accelerated demand for buffalo. Besides, a large number of milk processing units are located in the city which demand more amount of milk excluding the milk demanded for direct consumption.

Thus the demand in the city and the loss of agricultural land in the urban fringe is responsible for employing the people of the urban fringe into various livelihood activities. This rapid change in the urban fringe leads to both socio-economic and environmental change. The present paper explores these issues of the urban fringe of Aligarh city.

## **2. Aims and Objectives:**

The present study has been undertaken with the following objectives:

1. To analyze the spatio-temporal change in area and population of Aligarh city over the last two decades.
2. To study the pattern of changing livelihoods in the urban fringe of the city.
3. To suggest possible solutions for sustainable development of the people, agriculture and environment in the urban fringe.

## **3. Methodology**

The study is based upon primary and secondary data. The primary data regarding the occupational, social and environmental change was obtained with the help of a questionnaire. The field survey was conducted in the 5 villages. One thousand respondents, 200 from each village were surveyed from the sampled villages selected on following basis:

1. Distance from the CBD: The villages selected for field survey were not more than 10 kms. away from the CBD. The villages were selected in different directions.
2. Population Size: The village sampled for the survey should not be having more than 3000 population.

The secondary data regarding spatial and temporal change of area and population of Aligarh city, and other relevant data was obtained from the Municipal Corporation, Aligarh and other government offices.

## **4. Study Area: Urban Fringe of Aligarh City**

Aligarh city is situated in the western part of Uttar Pradesh at 27<sup>0</sup>.53' North latitude and 78.<sup>0</sup>05' East longitude. It is one of the important educational and industrial towns in the north India having a population of 8, 27,000 persons. The city can be roughly divided into 2 parts, the old city area and the civil line area. The old city area is more densely populated and small scale lock factory is dominated there. The civil line area is the newly developed area having less dense population. It is also the seat of Aligarh Muslim University, a residential university harbouring about 20,000 students. Aligarh city has a literacy rate of 63.92 %. Presently, the city is divided into 70 wards for administrative convenience. The old city has a large proportion of Hindu population while the civil lines area is highly dominated by the Muslim population. The urban fringe under the present study covers 96 villages.

The urban fringe of Aligarh city undertaken under this study is limited to 10 Kms from the centre of the city. The urban fringe is mainly dominated by the agricultural activities and the impact of Aligarh city is seen as we approach the city. The total number of households in the sampled villages is 1471 having a population of 9,170 persons (Table 1).

Tab. 1: Sampled Villages in Urban fringe of Aligarh City.

S. No.	Sampled Village	Total Households	Total Population	Distance from Aligarh (Kms.)
1	Siya Khas	254	1682	4
2	Boner	243	1403	7
3	Morthal	334	2125	9
4	Talaspur	386	2476	8
5	Luosara Bisawan	214	1484	7
Total		1471	9170	

Source: Primary Census Abstract, 2001.

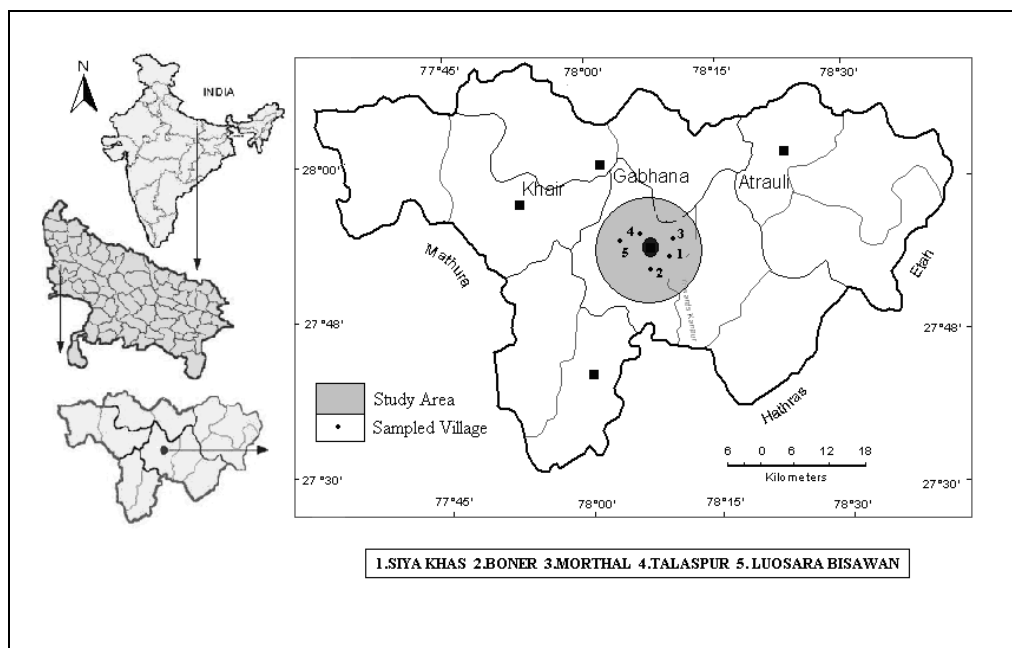


Fig. 1: Aligarh City - Study Area.

## 5. Temporal Change in Area and Population of Aligarh City

The population of Aligarh has increased considerably over the last decades. The population of Aligarh during 1961 was 185020 persons It rose up to 9, 31,637 persons in 2011.

Tab. 2: Decadal Change in Area and population in Aligarh City (1961-2011).

Year	Population	Decadal Growth Rate (%)	Municipal Area (Km <sup>2</sup> )
1951	141668	-	-
1961	185020	30.60	-
1971	253314	36.91	-
1981	320861	26.66	17.32
1991	480520	49.76	17.32
2001	669087	39.24	17.32
2010	827000	23.60	50.54
2011	931637*	39.24*	50.54

Source: Statistical Booklet of District Aligarh (1971, 1981, 1991 and 2001)

\* Estimated from decadal growth rate

Thus during the last fifty years the population has increased by 4.5 times and has doubled in the last two decades (Table 2). The urban area under municipal limit has also changed from 17.32 square km in 1971 to 50.54 square km in 2011. The total number of households also increased from 1, 02,004 to 1, 29,590 during 2001 to 2011.

## 6. Social Structure of Respondents

The respondents in the study area belong to different socio-economic strata of the society. The Indian society has developed its distinct social and cultural variations on the basis of the economic status. The role of social and cultural difference is an important factor for the type of livelihood adopted by a certain group of people. In general the social groups are divided into High class; other backward Class (OBC) and Scheduled Castes (SC).

Tab. 3: Caste wise Share of respondents in sampled villages.

S. No.	Sampled Village	High Class	OBC	SC	Total Respondents
1	Siya Khas	21 (10.51)	67 (33.50)	112 (56.00)	200 (100.00)
2	Boner	49 (24.50)	108 (54.00)	43 (21.50)	200 (100.00)
3	Morthal	37 (18.50)	136 (68.00)	27 (13.50)	200 (100.00)
4	Talaspur	44 (22.00)	84 (42.00)	72 (36.00)	200 (100.00)
5	Luosara Bisawan	82 (41.00)	64 (32.00)	54 (27.00)	200 (100.00)
Total		233 (23.30)	459 (45.90)	308 (30.80)	1000 (100.00)

Source: Field Survey (2012).

The high class people are generally having more influence in the society and belong to upper economic strata of the society. The literacy and employment level is more among the high class people. They generally dominate all the social and cultural activities of the society. They generally engage themselves in agricultural,

administrative or other tertiary activities pertaining to high status. The other backward Classes (OBC's) are the deprived class of the society lacking in both education and employment. They are weaker sections of the society and generally engage themselves in routine daily activities and small low pay jobs. The scheduled castes (SC) are the most deprived and unprivileged class of the society. They are engaged into the lowest order of the jobs, generally not preferred by and other class of the society. They are generally having very low income and are merely educated. The table 3 reveals caste wise share of the respondents. The majority of respondents in the sampled villages belong to the OBC's (45.90 %) followed by SC's (30.80 %) and High class (23.30 %).

## 7. Occupational Structure of Respondents

The occupation or livelihood is highly influenced by the socio-economic order of a person. Traditionally the social recognition of a person is based upon its caste/ethnic order. The people of the high caste prefer some specific jobs which are different from the jobs done by the OBC's and SC's people. The study reveals that the respondents in the sampled villages are also engaged in different types of occupations according to their social order. Table 4 shows that the people of the high class are generally engaged in agriculture, marketing, shop keeping, animal husbandry and private jobs. They do not prefer to do handicraft, agricultural worker, labour or industrial workers. The livelihood of OBC,s is more diversified and they are engaged in those occupations also which are not preferred by the high caste people. The SC are also engaged in all types of activities but their share in business, marketing, shop keeping and private job is quiet less. They work as agricultural labour, labour and other occupations which are not done by the OBC's and the High Class people

Tab. 4: Caste wise Occupational Distribution of respondents in Sampled Villages.

S.No.	Primary Source of Income	High Class	OBC	SC	Total
1	Agriculture	159	103	130	392
2	Animal Husbandry	16	87	42	145
3	Agricultural Worker	0	67	46	113
4	Handicraft	0	5	3	8
5	Shop keeping	14	6	3	23
6	Labour	0	122	48	170
7	Marketing /Business	27	6	3	36
8	Other Occupation	8	51	28	87
9	Private Job	9	7	3	19
10	Industrial worker	0	5	2	7
	Total Respondents	233 (23.30)	459 (45.90)	308 (30.80)	1000 (100.00)

Source: Field Survey (2012).

## 8. Livelihood Change in Fringe Areas of Aligarh City

The study reveals that there is a shift in the pattern of livelihood of the people in the fringe of Aligarh city. The survey of 1000 respondents in the 5 sampled villages in

the fringe area reveals that the landless people have adopted various new means of livelihood for their sustenance. The change in the livelihood is highly associated with the income from a certain occupation. The people have moved into more remunerative means from their traditional forms of livelihoods. The people of the urban fringe tend to get involved into the new livelihoods due to social and cultural change experienced by them due to the proximity of the Aligarh city.

Tab. 5: Decadal Change in Livelihood of respondents in Urban Fringe of Aligarh City.

S. No.	Primary Source of Income	Number of Respondents (2001)	Number of Respondents (2012)	Difference	Decadal Change (In %)
1	Agriculture	459	392	-67	-14.60
2	Animal Husbandry	120	145	25	20.83
3	Agricultural Worker	150	113	-37	-24.67
4	Handicraft	15	8	-7	-46.67
5	Shop keeping	17	23	6	35.29
6	Labour	130	170	40	30.77
7	Marketing /Business	27	36	9	33.33
8	Other Occupation	73	87	14	19.17
9	Private Job	9	19	10	111.11
10	Industrial worker	0	7	7	100.00
Total Respondents		1000	1000		

Source: Field Survey (2012).

The study reveals a decline in the traditional forms of livelihood and people have shifted to new options available to them. The respondents in the urban fringe were engaged in 9 types of occupation during 2001. The largest numbers of respondents were found to be engaged in agriculture (45.9 %) followed by agricultural workers (15.0 %) and labour (12.0 %). The rest were engaged in different occupations as shown in Table 5. The maximum numbers of respondents were practicing agriculture and worked as agricultural labourers. The domination of agriculture and agriculture related activities were found.

The decadal change in livelihoods is seen in the study and the respondents were found to be engaged in 10 types of occupations. The maximum number of respondents were still practicing agriculture but there share has decline from 45.9 per cent to 39.2 %. The next major occupation was labour (17 %) followed by animal husbandry (14.5 %). The share of respondents engaged as agricultural workers has declined from 15.0 % to 11.30 %.

The number of persons departing from old to new livelihoods is seen in case of agriculture (67 persons) followed by agricultural workers (37 persons) and handicraft (7 persons). The other occupations have shown and increase since the last decade. The growth in different occupations which has attracted the respondents are labour (40 persons), animal husbandry (25 persons), and other occupations (14 persons) as shown in Table 5.

The urban fringe has seen a decline in agriculture and agricultural practices over the last decade. The major reason is the low remunerations in the agriculture and the high demand of land in the urban fringe for non agricultural activities. The people have sold off their land at good prices and have changed their livelihoods. The

decline in agricultural workers is due to the loss of agricultural practice and hence the demand of agricultural labour has also declined. The village economy sustains the handicrafts and other domestic small scale local industries. The influence of city markets and the availability of new products to the respondents along with the increase in purchasing power have reduced the interest of the people towards the traditional handicraft items. This has resulted in decline in handicraft.

The marginal and small farmers who were dependent upon their land for their sustenance were left with no means of income after selling their land. Thus they started working as labour or industrial workers in the nearby city. Thus the maximum increase is seen in the labours over the last decade. The high demand of milk and meat in the city and proximity of urban fringe makes animal husbandry another emerging activity. People have turned towards keeping milch animals for daily milk production. They sell them to the nearby localities or shops. The high demand of milk is resulting in continuous increase in the prices of milk. Thus a large number of responded have shifted to this occupation during last decade. Another opportunity for the people in urban fringe is for getting different types of occupations in the city. These jobs may be seasonal or temporary. It includes rickshaw pulling, hawkers, shop attendant, driver, domestic help, and watchman etc.

## 9. Problems associated with urban fringe

The diversification of the livelihoods in the urban fringe is leading to different social, cultural, environmental and economic problems to the respondents. The primary survey reveals that most of the people find that the change in livelihood has resulted in many socio-cultural problems. The Table 6 reveals the major problems reported by the respondents of urban fringe in Aligarh city.

Tab. 6: Major problems in Urban Fringe Area of Aligarh City (2012).

S.No.	Problems	Respondents Reporting Problems		Rank
		Number	Percentage	
1	Improper Sanitation	813	81.3	1
2	Social Conflicts	754	75.4	2
3	Improper waste disposal	712	71.2	3
4	Water Contamination	657	65.7	4
5	Decline in Social Customs	567	56.7	5
6	Increase in Diseases	441	44.1	6
7	Unsatisfied with present employment	345	34.5	7
8	Decline in Social Status	245	24.5	8
9	Increase in Frustration	215	21.5	9
10	Decline in Saving	213	21.3	10

Source: Field Survey (2012).

The study shows that people in the urban fringe are experiencing social, cultural, economic and environmental problem. The urban fringe being a zone of transition has resulted in dynamic change in livelihoods and lifestyle of the people. The people of the urban fringe were mainly accustomed to rural lifestyles, village customs and traditions. The present socio-cultural scenario is totally different from that of the rural areas. Thus people are unable to adjust themselves to the changes in urban type of lifestyles and livelihoods.

The major problems pointed out by the respondents were improper sanitation (81.3 %), social conflicts (75.40 %) and improper waste disposal (71.20 %). These



problems are mainly due to change in lifestyle from rural to urban. The people living in the urban fringe also include some migrants from the other rural areas thus the social conflicts on petty issues occur more frequently. Another reason is lack of civic amenities and facilities in the urban fringe. The people living in the urban fringe also report water contamination (65.70 %), decline in social customs (56.70 %) and increase in diseases (44.10 %). The people who have changed their livelihoods are sometime not satisfied with their new employment and are prone to dissatisfaction and frustration. Some other respondents have also reported a economic loss from their change in livelihood. The reason may be low income or irregular employment opportunities due to more competition among the unemployed people.

## **10. Conclusion and Suggestions**

The urban fringe is associated with the dynamics of livelihoods and lifestyle changes. The increasing demand of land for non agricultural use has raised the land price of the urban fringe. Thus people are selling their agricultural land and shifting from traditional low remunerative agricultural practices to new livelihoods promising better income and social status. The present scenario of the urban fringe reveals diversification of the livelihoods during the last decade. Thus people are shifting from agriculture and agricultural activities to non agricultural sectors. The change in livelihood and lifestyle has resulted in many social, cultural and economic problems to the people of the urban fringe. The people accustomed to rural environment and lifestyles find it difficult to adjust to new social customs and urban lifestyles. Some of them even find difficult to adjust themselves to their new employment. Thus there is a threat to agriculture, social traditions and environment of the urban fringe.

The present problems are associated with the loss of livelihood and social change experience by the respondents. The government should look into the land acquisitions projects and enable the land holders to get some means of livelihood and social adjustment for their sustainable development. The development of better marketing facilities and proper remuneration of the agricultural produce along with introduction of integrated farming system encompassing floriculture, livestock husbandry and vegetable cultivation along with the traditional crops will not only ensure economic security to the people but it will also preserve the agriculture and environment of the urban fringe.

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## **DYNAMICS AND DIVERSIFICATION OF LIVELIHOOD IN URBAN FRINGE OF ALIGARH CITY, U.P., INDIA**

### **Summary**

Urban fringe is a region of urban-rural interface, continuously moving outward in response to urban sprawl or expansion over the times. It is associated with the dynamics of livelihoods and lifestyle changes. Thus, socio economic transition and dynamic change in the livelihood pattern is experienced by the resident people. The increasing demand of land for non agricultural use has raised the land price of the urban fringe. Thus people are selling their agricultural land and shifting from traditional low remunerative agricultural practices to new livelihoods promising better income and social status. This has resulted in the decline of land resource used under various cropping systems. Further, declining agricultural land has led to loss of livelihoods to the rural people

The declining agricultural activity in the urban fringe has resulted in diversification and structural change in livelihoods. The exposure to urban lifestyle and mass media is causing mental transformation of youth in the urban fringe. The present scenario of the urban fringe reveals diversification of the livelihoods during the last decade. Thus people are shifting from agriculture and agricultural activities to non agricultural sectors. They are more inclined towards value added farming systems and non farm activities of secondary and tertiary sectors. The change in livelihood and lifestyle has resulted in many social, cultural and economic problems to the people of the urban fringe. The people accustomed to rural environment and lifestyles find it difficult to adjust to new social customs and urban lifestyles. Some of them even find difficult to adjust themselves to their new employment. Thus there is a threat to agriculture, social traditions and environment of the urban fringe.

The present study analyzes the impact of urban expansion upon the structural change in pattern of livelihood of people of various socio economic horizons and the diversification of farming systems in the urban fringe of a Aligarh, a north Indian city during last two decades. The study is based on primary data generated through field survey of five villages from urban fringe of the city. The study reveals expansion of the city at least three times since 1990. A large number of villages have been included in municipality area but rural economic activities like cropping and animal husbandry still exist in the form of urban vegetable and dairy farming operated by the local people and the immigrants from other parts of the district.

The urban fringe witnessed dynamism and diversification in sources of livelihood. The study reveals that only 20 per cent of surveyed people are engaged in agriculture. The other important source of livelihood are animal husbandry, agro-processing, retailing and allied services. This structural change in livelihood has resulted in social, economic and environmental instability. These problems are due to loss of livelihood and social change experience by the respondents. The government should look into the land acquisitions projects and enable the land holders to get some means of livelihood and social adjustment for their sustainable development. The development of better marketing facilities and proper remuneration of the agricultural produce along with introduction of integrated farming system encompassing floriculture, livestock husbandry and vegetable cultivation along with the traditional crops will not only ensure economic security to

the people but it will also preserve the agriculture and environment of the urban fringe.