

Tuhin Roy

Sarojini Naidu College for Women

Rural Land Use Dynamism- A Geographical Analysis of Selected Villages of North 24 Parganas, West Bengal, India

Abstract

Land use has an important dynamic influence on rapid growth of population which gradually leads to urbanization and encourage the encroachment of urban settlement towards rural areas. In case of land use in urban areas, it appears quite varies and potential due to multi facet activities. In contrast, rural land use is stereotype and without any variety and vibrant. Uses of lands depend on the livelihood of the inhabitants. Hence, the land use patterns of villages are always very much similar to each other. But the intensive study shows that land use of rural areas of North 24 Parganas are highly influenced by the urban centres, especially by Barasat town, the district head quarters. As per 2011 census, out of 22 blocks of north 24 Parganas 10 blocks are totally rural in nature that means around 47.8 percent out of total area. Livelihood pattern and social amenities in these blocks are different from what has been observed in other parts North 24 Parganas. According to total number of rural population and average distance of the villages from the district core area of Barasat town, 7 villages have been selected for survey. Present paper has been prepared by way of making detail discursion and proper information

about their land use, demography and facilities being enjoyed by them. Another most important point has been taken into account which indicates the way they maintain the link with Barasat town and villages are influenced by the town accordingly. It has also been observed that gravity of rurality in land use pattern varied from village to village by their respective distance from Barasat town.

Key Words: *Urbanization, Encroachment, Inhabitants, Rural land use etc.*

INTRODUCTION:

The district of North 24 Parganas has both rural and urban population with an overwhelming dominance of rural population. The urban areas are mainly located in the western part of the district that covers Barasat, Barrackpur, Agarpara, Kancharapara, Halisahar, Naihati, and North Barrackpur, are the most prominent once. Rural belt starts from the Eastern fringe of this urban belt. As a result, movement of population appears to have been from east to west or vice versa according to their respective needs. As per 2011 census, out of 22 blocks of north 24 Parganas 10 blocks are totally rural in nature hence there is no urban population which covers 47.8 percent of total area. The names of 10 blocks are Amganga, Bagdah, Swarupnagar, Deganga, Haroa, Basirhat-I, Minakhan, Sandeshkhali-I, Sandeshkhali-II, Hingaljanj. The Livelihood pattern and social amenities in all these 10 blocks are quite different compared to other parts of the rural areas in North 24 Parganas which have been observed during survey. Accordingly, the nature of the village economies, their infrastructures and needed facilities are absolutely different from rest of the blocks in north 24 Parganas. Hence, land use pattern of the villages which are located in western part appears to be more dynamic than eastern and south eastern part owing to their easy connectivity with Barasat town. In this paper, the main focus has been given on changing scenario of land use

pattern of villages which are changing according to its distance from the urban areas of the district specially from Barasat town the district head quarters.

OBJECTIVES:

- To make a comprehensive survey to have an idea in respect of land use pattern of some villages which are situated at different parts of the district.
- To compare the rural land use pattern and amenities among different villages of the district.
- To find out the influence of location on village land use dynamism.

LITRETURE REVIEW:

- Moris Opler (1956) in his study of “The Extensions of an Indian Village”, has pointed out the common origin of villages and towns with a cluster of surrounding villages. The village exogamy creating kinship ties with other villages and caste assemblies cutting across village lines; customary work, obligations of practical and ritual services in another rural community; pilgrimage to distant shrines and religious centres in towns. This connection also spread over towns.
- Ruth Crichton (1964) in her Commuters’ Village found that “recent changes in the size and shape of her village have discouraged integrations with the leading town”.
- “Urbanisation migration and rural change”(1988) – A study of West Bengal which Edited by Biplob Dasgupta, Asim Chaudhuri has found the development, urbanisation and Rural-Urban relationship of Jalpaiguri district that also depict the knowledge of Rural-Urban land use in his work ‘Development, Urbanisation and rural –urban relationship in a plantation dominated Economy- Myth and Reality’ : The case of Jalpaiguri district: North Bengal.

MATERIALS AND METHODS:

- Total study has been made on the basis of secondary data and also by primary survey. A lot of primary and secondary data have been collected from field work and various official sources. Secondary data is collected from Bureau of Applied Economics and Statistics and 24 Parganas District Gazetteer. Other than these, maps of selected sample mouzas of North 24 Parganas and other information have been obtained from Municipal Offices, Block Development of Offices, Panchayat Offices. House hold surveys have also been made from selected villages for detail information.
- For getting a clear idea about the influence of socio-economic conditions of surveyed villages from western urban zone and specially from Barasat town, a diagram has been prepared for this, with an interval of 15 km., 30 km., 45 km., 60 km., 75 km. and above, arc of circles have been drawn centering Barasat town. Thus the study area has been divided into a 7 semi circular zones. From each zone at least one village has been selected for a detailed study. Maps have been prepared for showing the land use pattern of villages.

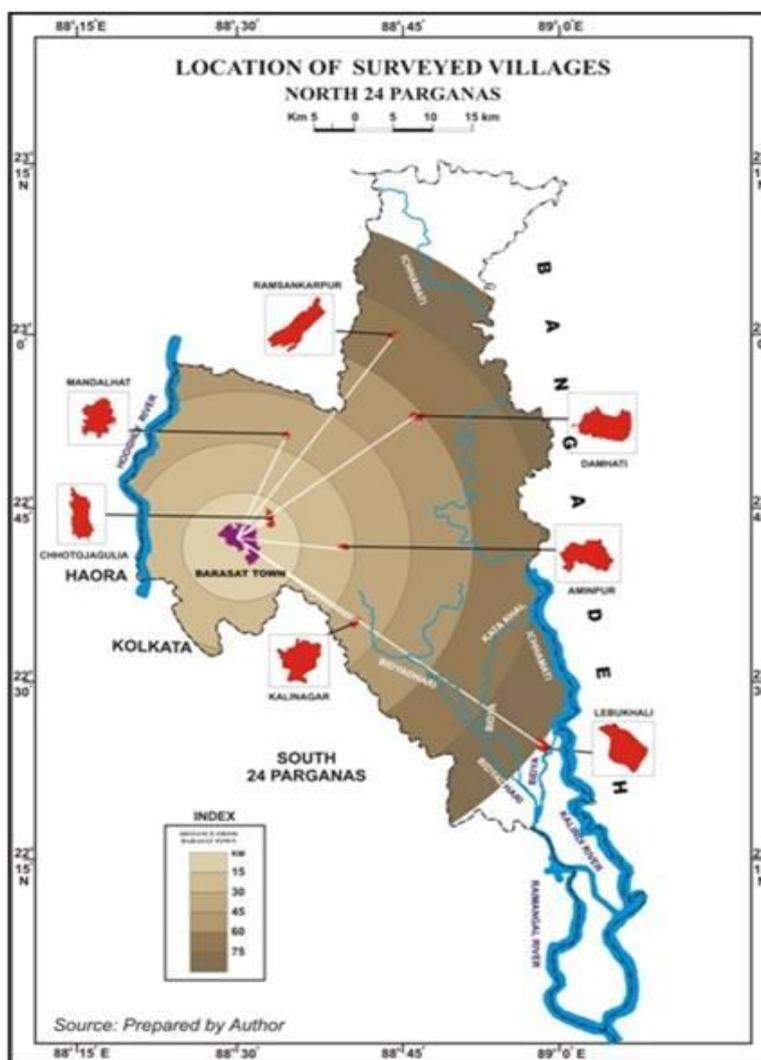


Figure No.-1

RESULT AND DISCUSSION:

Number of population of rural North 24 Parganas is 40,83,339, according to Census 2011 and the population density is 1157 persons/sq.km. Rural North 24 Parganas is more densely populated compared to at least 15 districts of the state. Bongaon is the biggest block in terms of rural population in this district. In terms of population density however, Barasat I is the most densely populated block (Population density per sq. 2079) of the district which is almost twice the average population density in rural North 24 Parganas km. Hingalganj, a block in the Sunderban region is the least densely populated block of the district. Following all these

feature of population variation, for micro level analysis above mention method have been chosen and 7 villages are selected from different parts of the district. As the population is varies place to place land use also being changed accordingly.

Seven villages have been primarily surveyed out of 1582 villages in the district of North 24 Parganas as sample village study to bring out the locational influence on their land use and basic amenities. Surveyed sample villages are 1. Chhotojagulia 2. Aminpur 3. Mandalhat 4. Kalinagar 5. Damhati 6. Ramsankapur 7. Lebukhali.

Table No: 1 Description of Seven villages

Name	Name of Blocks	Population (2011)	Area in Hectares	Population density
Chhotojagulia	Barasat – I	8945	201.20	44.45825
Aminpur	Deganga	5217	132.40	39.40332
Mandalhat	Habra – II	763	100.00	7.63
Kalinagar	Haroa	1879	166.00	11.31928
Damhati	Swarupnagar	2012	185.00	10.87568
Ramsankapur	Bongaon	1272	103.90	12.24254
Lebukhali	Hingalgunj	4895	429.37	11.40042

Sources: Census of India, 2011 and computed by author

Criteria of selection of seven villages:

1. Distance: Distance from the district Headquarter Barasat has been considered as the criterion of selection of sample villages.

2. Size of Population: Apart from distance, size of population is another important criterion in the process of selection of the sample village. In the question of size of population, Chhotojagulia village is having a population of 8,945. On the other hand, in Mandalhat village, the number of population is 763.

3. Direction: The radial distance which has been taken up from Barasat town has played as deciding factor because with the increase in distance from Barasat, the influence of Barasat town gradually decreases. The villages which are situated on the western most side have not

been considered, because over urbanized Barrackpur I & II Blocks are situated on this side of the Barasat town.

❖ Case Study of Selected Villages

Village -- Chhotojagulia :

- **Location:** Chhotojagulia village is situated within Barasat – I Block of North 24 Parganas district, Jurisdiction list (J.L.) number of this village is 115. Latitudinal extension is from $22^{\circ} 43' 29''$ N to $22^{\circ} 45'$ and Longitudinal extension is from $83^{\circ} 31' 45''$ E to $88^{\circ} 32' 24''$ E. The area of this village is 201.2 hectares.
- **Demography :** In regard to demographic status of this village it has been observed that the population is increasing. As per census report of 2001 the number of population was 3512 which has increased to 8945 in 2011. Population density is also very high.
- **Land use and Facilities:** When land use pattern of this village is studied it appears that Net Sown Area appears to be very meager, i.e. about 7.0%, Water bodies occupy 4%, orchard 6% and others miscellaneous uses occurs on 3.0% of the total geographical area only.

The Chhotojagulia village could be considered as a semi-urban village. Nearly all the facilities which are generally available in a town could be obtained from this village. The locational advantage has made this possible. Within a radius of 5 km. of this village there are primary, secondary and higher secondary schools, sub- divisional health centre, deep tube well, post office, agricultural credit society, recreational centre, police station, daily markets, weekly markets etc. The village falls under semi-urban zone.

Village -- Aminpur:

- **Location:** Aminpur village is situated within Deganga Block of North 24 parganas district. The area of this village is 132.4 hectares. The Jurisdiction list number (J.L.) is 74.

Latitudinal extension is from $22^{\circ} 30' 24''$ N to $22^{\circ} 31' 11''$ N and Longitudinal extension is from $88^{\circ} 38' 36''$ E to $88^{\circ} 39' 40''$ E.

- **Demography :** As per census report of 2001, the total number of population in Aminpur village is 2670 growth turned as much as 57.94% in the year 2011, the total number of population stood at 5217 .
- **Landuse and Facilities:** Most of the areas in Aminpur village are basically agricultural lands. Out of total area, about 56% is meant for cultivation and 25% lands are used for residential purposes. In this village there are many lands used for betelvine orchards. Aminpur is a developed village. Because almost all types of urban facilities are available here and all are within the reach of 5 km. For instance, Primary Schools, Higher Secondary Schools, Sub-Health Centre, Deep Tubewells, Post office, Weekly market etc. are located within a radius of 5 km. But all the ways within the village are without metal surface.

Village -- Mandalhat :

- **Location:** Mandalhat village is situated within the Block of Habra – I of North 24 Parganas district. The Jurisdiction list number (J.L.) of this village is 64. Latitudinal extension is from $22^{\circ} 49' 05''$ to $22^{\circ} 50' 11''$ and Longitudinal extension is from $88^{\circ} 35' 08''$ E to $88^{\circ} 35' 48''$ E. The area of this village is 100 hectares.
- **Demography :** According to 2011 census the population of Mandalhat village was 763 compared to 456 in the year 2001.
- **Landuse and Facilities :** The land use map of Mandalhat village reveals that maximum lands are used for agricultural purposes. These are comparatively low lands, 12% of lands are exclusively used for housing. Mandalhat village is too small in size and is located in a very remote area of this district. As a result, this village has not been developed as per expectations. Hence, all types of facilities are not readily available.

Village--Kalinagar :

- **Location:** Kalinagar Village is situated within Haroa Block of North 24 Parganas district. According to census report Jurisdiction list number (J.L.) of this village is 33 and Latitudinal extension is from $22^{\circ} 30' 50''$ N to $22^{\circ} 34' 53''$ N and Longitudinal extension is from $88^{\circ} 39' 32''$ E to $88^{\circ} 44' 21''$ E.
- **Demography:** Kalinagar is a small village. In the year 2001 the number of population was 1331 and in the year 2011 it increased to at 1879.
- **Land use and Facilities:** From survey, it appears that maximum lands of Kalinagar village are used for agricultural purpose. Here rice and fish are cultivated simultaneously during the rainy reason. In other seasons only crops are cultivated. The principal source of income is from fisheries. As a result, more than 49% lands are used by the villagers for it. The residential area covers about 38% of the total area.

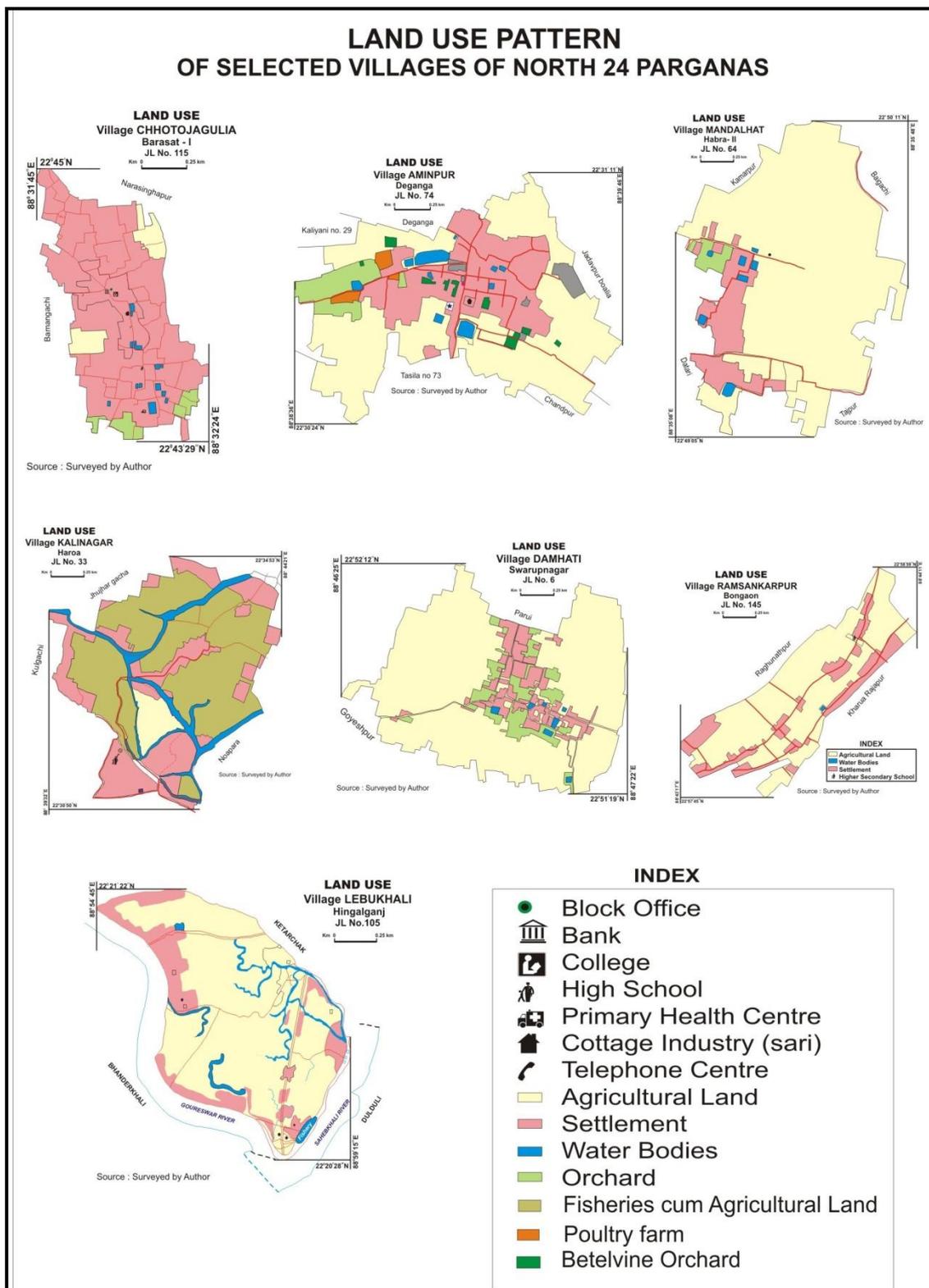


Figure No.-2

Kalinagar village is a remote village. Urban centre of Hara is situated at a distance of 7 km. from this village. Vidyadhari river is located within its short distance. The economic

condition of Haroa and Kalinagar has improved significantly compared in recent years. From survey , it is seen that Primary and Higher Secondary Schools and Primary Health Centre lie at a distance of 6 km from the village. No mettaled road is there.

Village – Damhati:

- **Location:** Damhati village is situated in the Swarupnagar Block and its Jurisdiction list number (J.L.) is 6. Village area is 185.4 hectares and its Latitudinal extension is from 22⁰ 51' 19'' N to 22⁰ 52' 12'' N and Longitudinal extension is from 88⁰ 46' 25'' E to 88⁰ 47' 22'' E.
- **Demography :** In 2001 the number of population of this village was 1488 which increased to 2012 in 2011. The increase is 35.13%. The reason behind the increasing population of this village is attributed to the continuous infiltration of a good number of populations from Bangladesh.
- **Landuse and Facilities:** Land use of Damhati village is almost similar to that of other villages in the region. Here also 76% of lands are used for agricultural purpose. About 11% lands are covered by residential houses.

This village has almost all sorts of modern opportunities. A wide metalled road goes through the centre of this village and has connected Barajagulia and other places on its way. Apart from this, in this village there are Primary and Secondary Schools, Sub-Health Centre, Helping Centre for those who are engaged in agricultural activities. Besides, there is weekly market, Deep Tubewells etc.

Village -- Ramsankarpur :

- **Location:** Ramsankarpur is a small village and is situated in the Block of Bongaon in the district of North 24 Parganas. Jurisdiction list Number (J.L.) is 145 and the total area of this village is 103.9 hectares. The Latitudinal extension is from 22⁰ 57' 46'' N to 22⁰ 58' 59'' N and Longitudinal extension is from 88⁰ 43' 17'' E to 88⁰ 44' 11'' E.

- **Demography:** The population of Ramsankarpur has not increased like other selected villages. According to census report of 2001 the number of population was 1126 and in the year 2011 it was increased by 30.73% and stood at 1272.
- **Land use and Facilities:** It appears from land use map of this village that most of the lands are used for agricultural purpose and the percentage is about 71%. 26% of total area is used for residential houses.

Currently, almost all types of facilities and opportunities are available within this village. For instance, there are Primary and Vocational Training Schools, Flood Controlling Centre, Health Centre, Self-Help Group Centre, Agricultural Credit Society, Deep Tubewells etc.

Village – Lebukhali:

- **Location:** Lebukhali village is situated on the northern side of the Hingalgunj Block of North 24 Parganas district. The Jurisdiction list number (J.L.) of this village is 105. The Latitudinal extension is from 22° 20' 28'' N to 22° 21' 22'' N and Longitudinal extension is from 88° 54' 45'' to 88° 59' 15'' E.
- **Demography :** This village is thickly populated. According to census report of 2001 the number of population was 1954. But in the year 2011 the number has increased to 4895. The reason behind the increasing population of this village is attributed to the continuous infiltration of a good number of populations from Bangladesh.
- **Landuse and Facilities:** The total amount agricultural land comes to 68%. But primary survey reveals that during the last ten years residential areas have been increased by at least 21%.

At present, there are certain facilities, like Primary Schools, Sub-Health Centre to meet the educational needs and preliminary health related facilities. But roads are unmetalled.

There are also Secondary and Higher Secondary Schools, Hospital, Bank, Markets etc. though all are located at a considerable distance. Hospital facilities are not adequate.

❖ **Influential Factors behind Land Use Dynamism:**

1. Influence of Barasat town:

Barasat town is District head quarters which governs different sectors like Administrative, Agricultural output, Business or Financial, Industrial, Transportation and Communication and other Occupational prospects. Hence the people of the different villages are very much dependent on Barasat Town to meet their purposes and they are practice to communicate Barasat Town regularly. But it varies from village to village. According to survey of daily commuter's movement, it has been observed that those who are job seekers of different categories they almost regularly visit Barasat Town, for example, Chhotojagulia village where daily commuter appear to have been 71%. But it has also been observed that villages which are located at a considerable distance from Barasat Town they are to depend on agricultural activities and they generally commute Barasat Town occasionally. Like Damhati Village where percentage of visiting people to Barasat Town is only 11. Hence movement of population of different villages depends on growth of their economy which reflects by their land use pattern also.

2. Availability of Facilities:

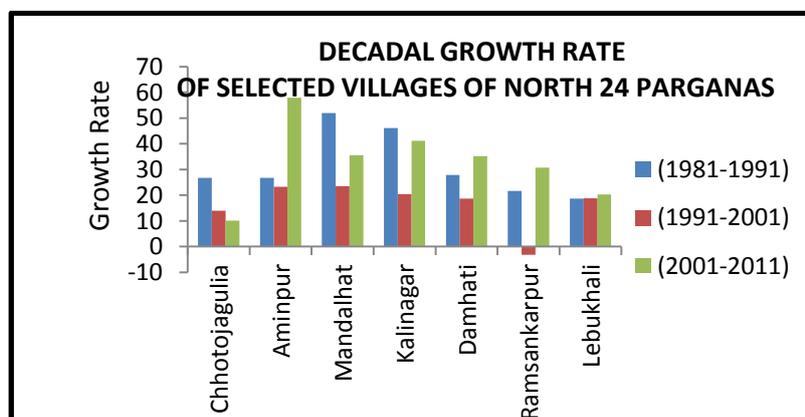
Respective distances are the deciding factor of availability of different facilities like daily consumer goods and essential services in villages, which are situated at different direction in district. Due to increase in distance, availability of those goods gradually becomes scarce. Communication is an important aspect which needs to be taken into account in this respect. After studying of these villages, it has been observed that the land use of all these villages is highly influenced by these factors also.

3. Influence of nearest town:

Other than Barasat town land use pattern of these selected villages have also been highly influenced by the nearest town. Concentration of settlement or the tendency of development is followed by the location of the town also. In case of Damhati village, its nearest town is Bongaon which is situated at northern part and settlement concentration is also found at northern part of the village. In others villages, land uses are also develop in same manner.

4. Population growth:

Decadal population growth rate is very much significant in analyzing population change. Be it urban area or rural area, this change indicates a socio-economic background of those area. In this connection population change in 7 villages of rural North 24 parganas is very much noticeable. In case of Chhotojagulia decreasing tendency of population change due to the influence of nearest urban centres is being noticed. Other villages show the positive growth of population from 1981-91 to 2001-2011. Here positive change of population growth occurs due to its natural growth and migration from Bangladesh. Negative change is due to less scope of economic activities and lack of infrastructural facilities in those areas. So, population growth is also influences the volume of settlement which also become a causative factor of land use variation of these villages.



Source: Census of India and then computed by author

Summary and Conclusion:

Present paper discussed about the rural scenario of district North 24 Parganas. Beside this, seven villages have been selected according to their particular location. The detail discursion has been made with proper information about their land use, demography and facilities they have. So, ultimately the present studies explain the reasons behind the rural land use dynamism.

In general, though the land uses of almost all the villages are as same as other ones, but it has been observed that nature of land use has gradually started changing according to their respective locations. The villages which are located near to Barasat town or other municipal town land uses are more dynamic. As a result, all these villages are more developed than villages located far-off.

References

Andrews, R.B., "Elements in Urban Fringe Pattern," The Journal of Land and Public Utility Economics, Vol. 18. 1942, pp. 167-83.

Applebaum W, 1952 "A Technique for Constructing a Population and Urban Land use Map" in Economic Geography, Vol. 28, No. 3 pp.240-243

Barasat Municipality (1995) Report and data; Barasat Municipality, North 24 Parganas, West Bengal.

District statistical hand book, series 26 villages and town primary abstract, North 24 Parganas District, Directorate of Census operation, West Bengal, 1991, 2001, 2011.

District Gazetteer 24 Parganas, 1991.