CHAPTER 1. URBAN MORPHOLOGY AND RESIDENTIAL MOSAIC

The age and size of an urban area has a very close nexus with its land use. The built up areas of Bhagalpur were always influenced by the historical and geographical factors. It witnessed unprecedented growth particularly since the beginning of the recent century. In the process of the growth of the built up area in the city, all the three traditional models of land use pattern are partly observed. The early settlements in the city before 1800 AD, clung to the southern river bank and the size of the build up area were determined by the position of the river Ganga and the local terrain. The old build-up area formed a shape of an arc along the recent shaped Ganga. The initial build-up portion of the city followed the southern levee of the river and there after in linear shape around a single business core, more or less representing concentric development.

1.1 URBAN MORPHOLOGY

The growth of the build-up area was influenced by cultural rather than physical factors and especially by the
cultural barriers like railway lines, manufacturing areas and parks etc. All these distributed and restricted the old circular pattern giving rise to sector zone form of development.¹

Recently, the built-up area of the city has also grown at places, in multinuclear forms, consequent upon the new trend of outward migration of the people on the one land and specialization of the functions on the other.² In the city such developments are obvious near or around the educational establishments. The oldest nucleus of the city lies to its western road, which had little scope to expand in any direction owing to the low-lying areas to the south and east of it and the river Champa and river Ganga to the west and north respectively. Thus the main built-up area was developed around the second nucleus situated at the centre of the city. The future expansion will be mainly to the east and south along the state highway, where land is relatively up. These lands are in the process of filling up the open spaces lying between them. The commercial areas are concentrated at one place at the centre of the city while the main administrative zone is situated in the east. A secondary zone mainly in function is located at the centre of western half of the city around T.N.B. College. Thus Bhagalpur presents a mixed urban growth
through concentric zone, sectoral and multi-nuclear form of growth through the ages.

The total land use differ from developed land use because total land takes into account the total areas of the town or city including vacant land where as, developed land excludes vacant or agricultural land and covers built-up areas and roads etc. This category of urban land occupies an area of 15.38 square kilometres (3801.60 acres, 51 per cent of the city area). It comprise all such built-up areas which are developed publicly or semi-publicly and privately. Land under public and quasi-public uses covers an area of 1212.65 acres, (excluding parks and playgrounds, roads and street and railway property) which account for 3175 per cent of the developed and 16.29 per cent of the total area of the city. This category of land includes public buildings, places of worship, entertainment, administration, main government offices as well as post office and other services. About 16.29 per cent of the land of the city is occupied by different institutions. The highest acreage of land under this use is in ward 6 which is followed by 4 and 5 respectively. Such land use may further be divided into the following major categories for the convenience of the study (fig. 2.1).
BHAGALPUR CITY

Fig. 2.1

1. Barari
2. Anandgarh
3. Mayaganj
4. Khanjarpur
5. Mansoorganj
6. Court Area
7. Manikpur
8. Khalifabagh
9. Mandroja
10. Tilakmanjhi
11. Barahpura
12. Bhikhanpur
13. Dickson Road
14. Mundichak
15. Shujaganj
16. Marwari Tola
17. Company Bagh
18. Sarai
19. Tatarpur
20. Asanandpur
21. Sahebganj
22. Nasratkhani
23. Kabirpur
24. Nathnagar
25. Madni Nagar
26. Tanti Bazar
27. Champapuri
28. Narga
29. Nathnagar PTS
30. Maulanachak
31. Aliganj
32. Mirjanhaat
33. Hussainabad
34. Sikanderpur
35. Mujahidpur
36. Ishaqchak
37. Modinagar
2.1.1 Educational Zone: The total area under educational and other institutional land use (University 249.88, Medical College 25.55, Institutional Complex around Lajpat park 26.25, Constables’ Training School 40.13 and other educational and allied institutions such as lower and upper primary, middle, secondary schools private and government both and other technical institutes 53.75 acres) is 405.56 acres. Bhagalpur University has an ideal location in between the city proper and Nathnagar amidst vast mango orchards. T.N.B. College, Sankrit College, Marwari College are located in and around the University complex make this area a prefect educational zone. The only women’s college Sunderwati Mahila College, available to impart higher education among women is situated in Khanjarpur. Bhagwan Pustakalaya and the University Library are two big libraries located in Nayabazar and the university area respectively besides a hostel complex lies in the west between administrative buildings of the University and T.N.B. College where some other important centres of the education are also added into this category of land use.

2.1.2. Medical Zone: This zone covers an area of 172.38 acres, Sadar Hospital, Church Missionary Hospital, Jaiprakash Narain Hospital, Naulakha Kothi, Jawaharlal Nehru Medical
college Hospital and other recognized medical institutions are part included in this zone. Some other small hospitals, dispensary, clinics, nursing homes are scattered throughout the city with a view to providing efficient and emergency medical services and maternity homes lie close to the densely inhabited parts of the city. But the hospital for specialized treatment such as infectious disease, veterinary, T.B. sanitorium and leper asylum need peripheral location. Site on which the medical college and the nursing board houses are located, has an area of 102.94 acres.

2.1.3 Administrative Zone: The offices of central and state government, the main court compound (62.28 acres) as well as those government and privately owned buildings (152.47 acres) form such zone. It also include the Central Jail and the Camp Jail (special jail, 232.75 acres) landing ground (101.18 acres), Barari Water Works, Aliganj Power station and other utilities and services like water tanks and power and substations (80.25 acres). In order to facilitate the smooth functioning of the administration and government organizations, this type of land use has great importance. A well demarcated and specially developed administrative zone (240.2 acres) are concentrated near the court area (ward 6 and 10) within a radius of 1 to 2 kms. As administrative
offices enjoy advantage of location is guided primarily by accessibility, seclusion and availability of open spaces. Consequently, the administrative offices of the city also occupy the area of the outskirts, too far from the congested and crowded quarters of the city in scattered form. Apart from these institutions, the urban area posses a number of religious and cultural institutions including other organizations. They do not form any clear cut institutional zone and places of historic or architectural interest. Landing ground and utilities and services are also existing in the city with an area of 68.16, 101.18 and 80.25 acres respectively (fig. 2.2).

2.1.4 Commercial Zone: This category of land use covers area of 34.87 acres, which accounts for 6.18 per cent of the developed land and 3.15 per cent of the total land area the limit of municipal corporation.

This main business thoroughfare located in the north of Bhagalpur Railway Station is locally known as Shujaganj Market. Covering an area of 87.85 acres, the Bazar is bounded by Dr. Rajendra Prasad Road on north, Patal Babu Road on the east and south and the Mahavir Prasad Dwivedi Road on the west. The land along the main thoroughfare of the city are also under commercial use. These business roads possess a large number of retail and wholesale shopping establishments,
usually at the intersection of major roads, streets, lanes and by lanes. This central market areas of the city, usually exhibits mixed and complex type of land use, which is characterized by comparatively tall buildings, high land values and maximum concentration of people and traffic during day time. Shops of this core area of the city are the smallest dimension, probably to produce maximum return from land. Because of development of business among the chief arteries of the city (D.N. Singh and other mentioned roads) forms the shopping ribbons which deal in both consumer and shopping goods. Retail trade is carried on in several shopping centres developed on the crossing of few main approach roads of the city, there people from the surrounding areas coming to the city make some purchases. These are nomenclature as Regional Shopping Centre. These local business areas are capable of satisfying the daily needs of local consumers.

2.1.5 Industrial Zone: This category of land uses covers a total area of 89 acres which account 2.22 per cent of the developed land. Almost 34 per cent of the total units are engaged in the manufacturing of silk, tassar and handloom products. Bhagalpur has been a reputed centre for silk industry since long. According to an establishment at present there are over 3600 power-loom and nearly 6500 handlooms
manufacturing tassar and other silk articles. These units run as household industries, are concentrated at Nathnagar, Champanagar, Khanjarpur, Lodipur, Hussainabad, Kabirpur and Mirjanhat. In this part of the city, the living standard is very low due to unhygienic conditions and over crowding. The whole area is devoted to silk weaving with handlooms in the ground floor of almost every house. This admixture of cottage industry with residential quarters has further added to the congestion of the area. Household industries includes the industrial establishments generally running inside the residential houses as a traditional profession and as industries. Chadar, Shirting, Sari, Turban, Suiting, Coating and mixed fabrics of various designs are manufactured. Covering an area of 15 acres, Bihar Spun Mill located on Sabaur Road near Bhagalpur was setup by the Government of Bihar with Japanese collaboration in the year 1972-73 at the cost of nearly 1.51 crores, the mill has an installed capacity of producing 150 kgs. of 'spun silk yarn' and 150 kgs. of 'noil spun' per day in two working shift of the mill. There is a well laid out factory within the jail engaged in the manufacturing of blankets, rope, carpet weaving, aluminum work etc. An industrial estate at Barari developed on a nearly 51.35 acres site which has 36 built-in sheds of three categories as well as sites for industrial
units and community facilities. *Biri* (Indian smoking item) industry has also developed as household industry in the urban areas and support more than 300 families.

Among industries other than indicated above mention may be made of oil mills, soap manufacturing units, hand pipe manufacturing units, hosiery mills, candle manufacturing units, polythene and plastic produce, ayurvedic medicines, steel furniture and foundry works, soap factories, bakeries, ice factory and printing press do not exhibit marked concentration, but lie scattered. In view of retaining the significance of Bhagalpur as an educational, cultural, administrative and religious centre, it is essential to encourage large scale industries to grow.

### 2.1.6 Other Zones

The land under this category are not very much in areal extent and mainly come under the following uses.

**2.1.6.1 Transport Zone**: The land under roads and streets, major and minor arteries except the small residential lanes which give direct access to the building within the limits of the urban centres fall under this category. It covers an area of 323.58 acres, accounting for 8.9 and 4.32 per cent of the developed area and total area of the city respectively. It may be noted that in the old developed part, all the streets are very narrow with a number of zigzag lanes and winding by-lanes. But the newly developed residential areas of the civil lines, a rectangular street network has generally been followed.
2.1.6.2 Railway Zone: This group includes the land and buildings devoted to or reserved for the permanent railway tracks and stations, goods yards, marshalling yards, loco-sheds and other terminal facilities. This category of land use are spread over an area of 50.20 acres accounting for nearly 1.38 per cent of the developed land and 0.70 per cent of the total area. However, railway land utilized for residential quarters has been included in the residential use category.

2.1.6.3 Open Space: The open space includes the parks, playgrounds, gardens and agricultural fields, etc. A meager area of 178.96 acres which accounts for 4.44 per cent of the developed land and 2.40 per cent of the total area. Against the normal average standard of 2.5 acres per 1000 person, this type has area of 0.70 acres per 1000 person. Such land are Sandy’s Compound (101.75 acres), Lajpat Park (12.75 acres) and the playground of the Constable’s Training Centre, Nathnagar (50.67 acres) are the three major open spaces. The remaining area of playground (13.79 acres) is attached to school and other educational institutions. The open space lying in the south-eastern and north-western parts of the city are rapidly being filled by some newly build private residential colonies. If we take in to account only open space including agricultural and waste land, it covers even more area than residential uses. Thus a large chunk of land is available in the peripheral belt for future expansion.

2.1.6.4 Religious and Cultural Zone: A number of worship places like temples, mosques, gurudwara and churches
corresponding with Hindus, Muslims, Sikhs and Christians living in different parts of the city in a scattered way, form religious centre of the city. Besides several cultural institutions like Sharda Sangeet Sadan, Kala Kendra, etc. imparting training in music, sculpture, art and craft are established in a scattered form in the city. This category of land uses occupy very little area.

2.2 RESIDENTIAL MOSAIC

Residential areas play the most important role both quantitatively in morphology and sustenance of the city. They provide shelter and living accommodation to its inhabitants who are earners, designers and builders of the city. For the convenience of study the residential area of the city which are based on general characteristics differ in terms land value, density of houses, type of residences and the level of urban amenities and facilities. This category of land use covers a total area of 1,709.86 acres which accounts for 44.93 per cent of the developed land and 22.92 per cent of the total land of urban area. Thus more land of the developed urban area, in general is devoted to residential uses than any other uses. This area includes the 339.72 acres residential developments on government land, whose breakup is indicated within the brackets, Bhagalpur Medical College (204.78), Housing Board(105.67), Jhaua Kothi (10.37), Constable’s Training School (10.23) and others (8.67 acres). In addition, the University Campus also contains nearly 68.88 acres of residential development in the shape of staff quarters and hostels. The residential areas are spread in almost all the parts of the city. It would be relevant to mention that more that 65
per cent of the residential areas of the city comprise of slums and rejuvenated areas of the city. The growth of residential areas have been affected by the physical barriers such as rivers, low lands, ravines tract on the one hand and the cultural barriers like canals, railway lines and embankments, etc. on the other.

Building along the main road exhibits intermixture of various functions. The upper as well as the rear side of the houses are being used for residential purposes while the lower portion of front sides are left for business and commercial uses. About 80 per cent of the residential areas are unplanned. The residential areas around Shujaganj (wards 15 and 16) are very old, compact and substandard, dissected by winding streets and narrow lanes sometimes even less than 3 feet wide in Marwari Tola (ward 16), Burhanath, Mansuraganj and Jogsar (ward 8), and Champanagar (wards 26-28) have similar shape.

Some newly planned colonies with sufficient amenities, more open spaces and broader and straighter roads and lanes are found in Tilkamanganj area (ward 10) and northern Barahpura (ward 1). These are middle and high class residential areas. Some in-lying old residence are located in the older part of the city (ward 3 and 18) which in due course dilapidated into obsolescent structures comprising the present days worst slums. A number of villages form an integral part of the city with the inclusion of large rural areas within the corporation limits. A majority of the houses in these villages have mud walls with tiled or thatched roofs. The land of residential areas in different part of the city varies in rent and values.
2.2.1 High Class Residential Areas: High class residence are spread over 8 per cent of the total residential area. These residence belong to capitalists, businessmen, industrialists, doctors and high officials. They exhibits well-planned, modern houses mostly single storied with sufficiently large green lawns within a large front. The building materials used are cement, stone, bricks, and wooden and iron girders. Mansions of old Zamindars (landlords) and residence of top officials exist in Barari (Kanchangarh), Tilkamanjhi (Professors Colony), Court area (Sahay Bhawan) and Naulakha Kothi (Khanjarpur) Islamnagar (Bhikhanpur), Kamlanagar, Bagbari (Aliganj). These architectural buildings of well-to-do persons are scattered and developed either on the outer margin of the city or near open space having better amenities and facilities. Most of these buildings are occupied by the government for the use as offices. The pattern of the streets of the city are a mixture of both radial and rectangular types. Of the total buildings, 70 per cent are single storied, 26 per cent double storied and 4 per cent multi storied. The tendency of the people to reside in the area occupied by the residents of their own group, based on caste, community, religion, occupation or other interests have resulted in the segregation of the different cultural groups in different parts of the residential area of the
city. Muslims, Bengalees and Marwari are concentrated particularly in their own community mohallas. The area in the north-east (Manik Sarkar to Adampur) being chiefly a Bengali locality is characterized by one or two storied buildings, narrow lanes and compact developments. This part witnesses house more residential in nature than the central part of the city (wards 15 and 16).

2.2.2 Middle Class Residential Areas: The middle class residence occupy 29 per cent of the total land of residential setup. A number of housing schemes (loans for house construction on hire-purchase system) has developed for accommodating middle class people. The houses of these areas are enough smaller in size, newer and more open in comparison with low category residence. Majority of the houses are single storied and located on considerably wider roads. Such residence have mostly developed in between the old and new settlements. These areas are purely residential with insignificant business and commercial activities. This category incorporates residential colonies, constructed under housing schemes and railway colonies. The residents of these colonies are doctors, lawyers, teachers businessmen and people of middle income group serving the government, semi-government and private offices. Some of the houses are double storied.
Such residential areas are found in Mundichak, Jogsar, Sarai, Sahibaganj, Nayabazar, Adampur, Ishaquechak and railway colonies around Bhagalpur Junction.

2.2.3 Low Class Residential Areas: Some of the low class residential areas have developed around Jogsar in the north and Moulanachak in the south-west. About 63 per cent of the total residential land of the city comes under low class. These residential areas are most congested and blighted quarters having poor living conditions. Most of the houses are made of bricks but so compact and closely built that their lower or ground floors seldom receive sunlight and fresh air. These damp and dark houses are unhygienic habitation. Some lanes of the Principal Business District (P.B.D.) of Shujaganj have the same condition. The tendency of settling close to the place of work not only caused the maximum agglomeration of the people and high density of population, but the demand of land in this area and raised value of land which results in vertical expansion in the shape of multi-storied buildings. More or less low class residential areas are found in almost all wards except the newly planned areas. Lower category houses predominate in Mansoorganj, Qutubganj, Khajawalichak, Nayabazar, Parbatti, Nathnagar, Champanagar, Barari, Mirjanhat, Hussainabad, Mojahidpur, Sahebganj and Mundichak.
Bhagalpur city has 34,496 residential houses, 37,527 households and a density of 1,143.32 houses per acre. The density is highest at the centre of the city and decreases in all directions. About 60 per cent houses of the area are single storied. More than 55 per cent of the houses in the low class residential areas are sub-standard. About 7 per cent of houses are very old and irreparable, 8 per cent houses are repairable while, 30 per cent houses are in good conditions.

It is clear from the above study of residential areas that the influence which the urban activities exert on the social and economic structure of the city has carved out different types of residential areas, exhibiting different periods and phases of development because the residential areas do not develop at random but historically.5

A comparative study of population with density of houses would show a close similarity of patterns between them. The density of population is highest in the central part of the city and it decreases towards the peripheral areas. The density of houses, corresponds with the above pattern with few exceptions. The accommodation density which is related to the age and size of the city and based on the number of persons per house, reveals that density of person per house is highest in
the Nathnagar and Champanagar area. Thus, this area is marked by poor living condition where there is shortage of houses.

2.2.4. Slums: The term 'slum' connotes an extreme condition of blight in which the housing is so unfit as to constitute a menace to the health and moral of the community. These ill-repaired, unhygienic, unsystematically developed and neglected residential areas are living places of the petty shopkeepers, food stuff dealers, private servants, illiterate job seekers, unemployed literate, washer-men, milkmen, cart-men, rickshaw-pullers, hawkers, and cart-pullers, cobblers, coolies, beggars, orphans and low income group people. Slum is an urban phenomenon and the sore spot of the city morphology. It is blots in the cultural landscape of a city. It is estimated that 59 per cent of the residential area of the city is under slum and squatter settlement and more than 62 per cent of the total population are slum dwellers.

The attraction of the improved amenities, medical care, education, greater economic insecurity of the adjoining villages and recreational facilities have caused the influx of people from the rural area to the urban area. The growing volume of the work force that rushed into the city from the adjacent countryside, found cheapest accommodation in the areas lying on the fringes of the city is the main reason behind
the creation of slums and squatters. Consequently such migration of people has multiplied city's population about four times within a short period of forty years. The slum houses typify the slum areas. Over crowding, faulty arrangements and design of buildings, narrowness of streets, lack of ventilation, improper light and sanitary facilities are common in slum areas. The materials used in construction of houses are mud straw or leaves, bamboo when used for walls and roofing indicate the house condition of the slum dwellers.

Three major factors, physical, economic and cultural, are responsible for the formation of slums. Among the physical reasons, mention may be made of the utter disregard of building, bylaws and town planning regulations regarding proper layout of residential area and provision of educational, shopping and recreational centres along with other community facilities as well as lack of essential utility services such as water supply, drainage, sewerage, disposal of garbage and other waste materials of houses. Economic factors include drift of population from rural areas in search of employment. The need of this low earning migrant population for cheap housing accommodation close to their places of work has resulted in the building of sub-standard tenements without proper sanitary facilities which ultimately caused the growth of slums.
Cultural factors such as joint family system, tendency of people to live together with their relations and overcrowding of persons in dwelling units have also contributed to the rise of slums.

The slums of Bhagalpur city may be classified into four categories and their salient features are described in the lines hereinafter.

2.2.4.1 'A' Type Slums: Barari and Manikpur have degenerated into slums due to obsolescence and shift of economic activities fall under this category. The former is located in the north-eastern parts of the city along the river Ganga and the latter in the south-eastern parts of the city. Manikpur falls in the urban belt. These oldest parts of the city having old aged dilapidated building need immediate repair. A large percentage of these buildings belonging to old Zamindars (Landlords) are in an almost decaying stage. After the abolition of Zamindari the people engaged in administrative and economic activities of Barari state became unemployed as a result, migrated to other parts of the city. Naturally, these neglected buildings degenerated into slums. The density of houses is 65 per acres of land and the average room density is 4 to 6 persons per room. Some of these areas such as Mayaganj have prevalence of cow dung, dirt and filth.
2.2.4.2 ‘B’ Type Slum: The slum areas of this type are located in rural as well as urban pockets within the city covering area of the western part Tanti Bazar, Nathnagar, Champanagar and Sahebganj, (wards 26 and 21), central part Mandroja, Laheritola, Tatarpur, Asanandpur and Jamtikari. (wards 8, 19 and 20), and southern part Mujahidpur, Sikandarpur, Mirjanhat, Ishakchak, Hussainabad, Mohaddinagar and Aliganj, (wards 30, 31, 32, 33, 34, 35, 36, and 37). These newer slums have developed without maintaining proper standard of planning of building regulation and constitute the commercial-cum-residential belts. The inhabitants of these areas belong to a mixed income group lower 60, middle 23, and high 17 per cent. The housing conditions are not up to the mark. These extremely haphazard houses built of mud, bricks, mortar and cement are poor in lavatory and sanitary facilities. About 45 per cent of houses still have service latrines and hardly 21 per cent have piped water supply connections. The residents therefore use drains and open space for latrines. Streets are very narrow with unfit bands for the movement of the vehicles which present obstruction in traffic. About 58 per cent houses have roofs of muria tiles and floors are kachcha (unmetalled). The density of houses are 100 per acre of land and an average room density is
2 to 6 person per room. This area is mainly inhabited by wage-earners engaged in manual work, e.g. rickshaw-pullers, mechanics, agricultural labourers etc.  

2.2.4.3 'C' Type Slums: This category of slum area comprises Shujaganj market area (the main commercial hub of the city), Mundichak (south-east of the former), Jogasar, Mansoorganj and Nayabazar (north of shujaganj) wholly or partly. Such slums are characterized by over-crowding of buildings (more than 120 houses per acre), complete absence of recreational facilities, higher accommodation, density (average 4 to 7 person per room), where extreme unhygienic conditions prevail due to lack of proper sanitation and sub-standard facilities of accessibility and drainage. The houses are clustered together with narrow circulation lanes most of them unfit for particular traffic. These extremely congested areas form the commercial area of the city contains main shopping and business centres, do not have suitable civic amenities. The structural condition of the building is generally good to medium type, built of bricks and cement with pacca (cemented) floors and roofs. There is absence of sunlight and proper ventilation in ground floors. The drains are mostly open. Many of the buildings have lack of essential services like bathroom, kitchen and lavatory.
2.2.4.4 'D' Type Slums : Such slums include parts of Tilkamanjhi and Mundichak residential area located in the eastern part of the city where development has taken place recently without maintaining building laws and standard fixed by the town and country planning. These newly built houses are of good and medium structural conditions. The walls are built in cement and roof is of reinforced concrete. The sanitary fittings within the premises are also of modern type. But improper street layout without accurate drainage system resulted in sanitary problems.

Apart from the above mentioned slums, countless temporary squatters are found around or near the most planned colonies in which lower income group people co-exist with cattle and other animals under the same roof in deplorably sub-human conditions. A few small villages previously lying on the outer fringes of the city recently included within the corporation's limits are being converted into the worst type of slums.

In the newly developed slums near Lajpat Park, refugee colony, Mayaganj, Barari, Company Bagh (university area), south of silk Institute, Bhagalpur Railway Station and along the old Bhagalpur-Barari Railway line, on an average five person occupy single roomed tenement, which is against the
norms of healthy human habitation. These slums and squatters are shelters of criminals and anti-social elements due to the very low economic status of the residents. Some temporary hutment are developed along Bhagalpur-Mirjanhat road where water logging during rainy season is common near Bholanath Bridge. These new slums are more problematic. The pattern and physical condition of housing in these new hutment are not better than any rural settlement.

2.3 CHANGES IN URBAN LAND USE

In order to ascertain how much change has taken place in the urban landscape in the past, presenting exact figures on the amount of change induced by the kinds of process is more difficult task than simply itemizing examples of change. Many changes have only recently to be viewed as important; and so the desire to measure them is relatively new phenomenon. However, we can make gross estimate by analyzing the change in boundaries between major ecological zones. Changes in land use occur everyday as millions of individual and public representatives make land use decisions ranging in scale from global concern to the building of a single house. The effect of these changes on people and on the environment can be negative or positive.
TABLE 2.1 Changes in Functional Land use of Bhagalpur City (1933-1991)

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<th>Functions</th>
<th>1933</th>
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<th>Changes (1933-71)</th>
<th>1991</th>
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<td>9.60</td>
<td>-</td>
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<td>3.25</td>
<td>1.61</td>
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Source: District Census Handbook

The above table reveals that the city has experienced maximum, 14.26 per cent increase in its residential area during 1971-91. The open space of old residential area was filled up by new buildings. The maximum growth of such settlements are found in the western, central and southern part of the city. The eastern part have also grown tremendously as sufficient open space was available in this part. Brahpura and Bhikanpur show considerable changes in residential area. The residential area of Bhagalpur are expected to cover more than 65 per cent
of the total land. This high figure will result only at the cost of the other uses.

Bhagalpur has sufficient land under commercial use as the city experienced 2.64 per cent. The present expansion of new business area is towards eastern (Tilkamanjhi), western (along the Bhagalpur- Nathnagar road) and southern (along the Bhagalpur-Dumka State Highway) Bhagalpur.

The amount of land given to industrial uses are very small i.e. 1.08 per cent. This category of land shows an increase of 0.68 per cent from 1971 to 1991. The increase in this is mainly due to the establishment of household and other small scale industries even in the densely built area.

Due to the opening of large number of new offices, colleges, schools, technical institutes and hospitals, the proportion of land devoted to administrative-cum-institutional uses has an ever increasing tendency since 1971.

The administrative land use has witnessed an increase of 0.94 per cent in 1991 while institutional land use has grown from 4.11 per cent in 1971 to 4.94 per cent 1991.

The portion of land use under transport has also increased by 0.66 per cent from 1971 to 1991 where as land under agriculture fields, orchards, water bodies and wasteland which represent non-urban use, or open space has had
decreasing trend of -21.18 per cent from 1971 to 1991. The patches of slum areas have also witness an increasing trend since 1971\textsuperscript{13}.

**References and Notes:**


8. Imperial Gazetteer of India 1907.


10. Master Plan for Bhagalpur (1976-94) prepare by the Town and country Planning Organization, Govt. of Bihar, Bhagalpur on the behalf of the Bhagalpur town Planning Authority, P-280


13. Pandey, S.N.: "Thesis on Jagdishpur and Bhagalpur" submitted for the award of Ph.D. in the Department of Geography, Tilkamanjhi, Bhagalpur University. Author has comprehensively consulted this thesis for this chapter. Any interpretation of the basic idea is the sole responsibility of the author.