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## Land use pattern in Madhubani urban area

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### Abstract

Madhubani District is located in the Border of the vast northern Gangetic plain of north Bihar. Madhubani District is the northern district of Darbhanga division lying between 26° 40' north latitude and 85°44' to 86°44' east longitudes. It is bounded on the north by the Nepal Tarai on the west by Sitamarhi district of the Tirhut division, on the east by Supaul of Kosi division and on the south by Darbhanga district and in shape the district resembles a parallelogram, breadth from west to east being a little greater than its mean length from north to south. It consists of a rich alluvial plain interfered by numerous rivers and streams originating from Nepal and running almost parallel to each other from north to south. Chief rivers are little Bagmati Kamla, Kareh, Balan and Tiljuga, Kosi, etc. There are four urban areas, Madhubani, Jaynagar, Jhanjharpur and Ghoghardiha in Madhubani District. Madhubani Town is situated on the eastern bank of the river kamala plain and the functional use of land is influenced by the river side location of the town as well as the main rail route of N.E. Railway passing through the town and historical sites and religious places inside the municipal limit. Important categories of land use are residential, commercial, industrial, recreational, institutional, administrative, transport, playground and other categories. The above mentioned table reveals the dominance of the residential use of the urban centre of Madhubani because a good number of resourceful persons have migrated from rural areas to the urban centre of Madhubani due to deterioration in law and other conditions in the rural area. These people also have purchased larger plots in urban areas and have constructed dwellings in part of the plot. The second position goes to the open spaces, playground and other government land lying in the form of pasture such areas are about 36.5% the development of road network inside the settlement has engaged 4.1 percent areas of the town. Commercial and administrative areas have engaged 2.9% and 2.3% area of the town respectively. The urban centre of Madhubani has unplanned growth. As such all functional areas consisting of residential, commercial, administrative, educational, recreational etc., have also developed haphazardly leading to unplanned development of roads, streets, sewerage and electricity connections and other services amenities. The urban centre is well linked with main urban centres of the states of Bihar as well as adjoining international country of Nepal.

**Keywords:** Sewerage, alluvial plain, religious places, unplanned growth

### Introduction

Land has been the greatest Resource to satisfy human wants. It is very inspection of human occupancy in different parts of the word. Drastic change has taken place in the pattern of land use owing to the increase in population with time. This is true for the entire northern genetics pain and similar densely populated areas. The pattern of land use is determined by two sets of factors:-

- a. Physical factors
- b. Human factors

Physical factors include topography, climate and soil which determine broadly the capabilities of the land and human factors contain length of occupancy, density of population, social and economic institution etc. Which determine the extent to which the resource of land we utilize.

### Study area

Madhubani district is located in the Border of the vast northern genetic plain of north Bihar. Madhubani District is the northern district of Darbhanga division lying between 26° 40' north and 85° 44' and 86° 44' east. With an area of 350159 KM. The Region had a total population of 44, 76044 in 2011. Which is about 3.72 % of the total area and 4.31 % of total

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population of state (2011). It is bounded on the north by the Nepal tang on the west by Sitarnarhi district of the Tirhut division, on the east by Supaul of Kosi division and on the south by Darbhanga division, on the east by salmi! of Kosi division and on the south by Darbhanga district in shape the district resembles a parallelogram, breadth from west to east being a little greater than its mean length from north to south. It consists of a rich alluvial plain interfered by numerous rivers and streams originating from Nepal and running almost parallel to each other from north to south chief rivers are little Bagmati, Kamla, Kareh, Bolan and Tiljuga, Kosi, etc. There are four urban areas Madhubani, Jaynagar, Jhanjharpur and Ghoghardiha in Madhubani District.

Madhubani Town is situated on the eastern bank of the river Kamla plain and the functional use of land is influenced by the river side location of the town as well as the mail rail route of N. E. railway passing through the town as well as the main rail route of N. E. Railway passing through the town and Historical sites and religious places inside the municipal limit important categories of land use are residential, commercial, industrial, recreational, administrative, Transport, playground & other space and other etc.

**Location map**

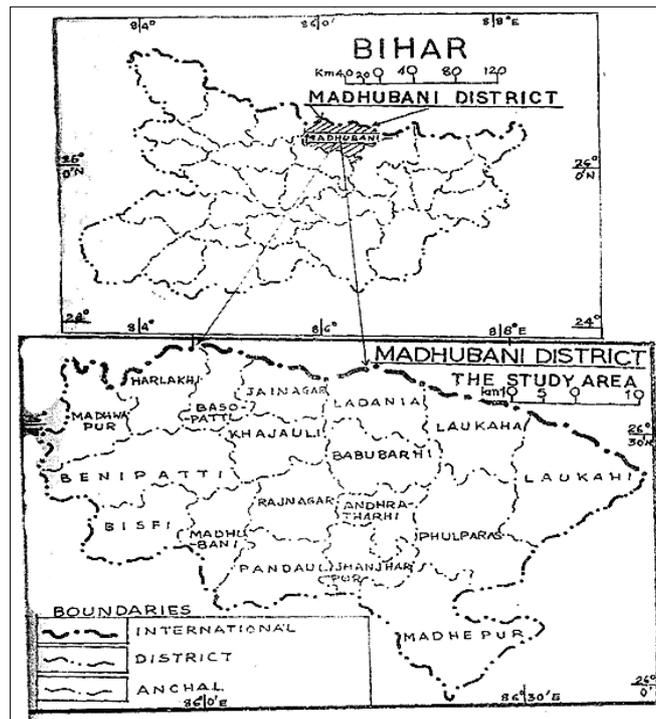


Fig 1: Location map Madhubani district and the study area

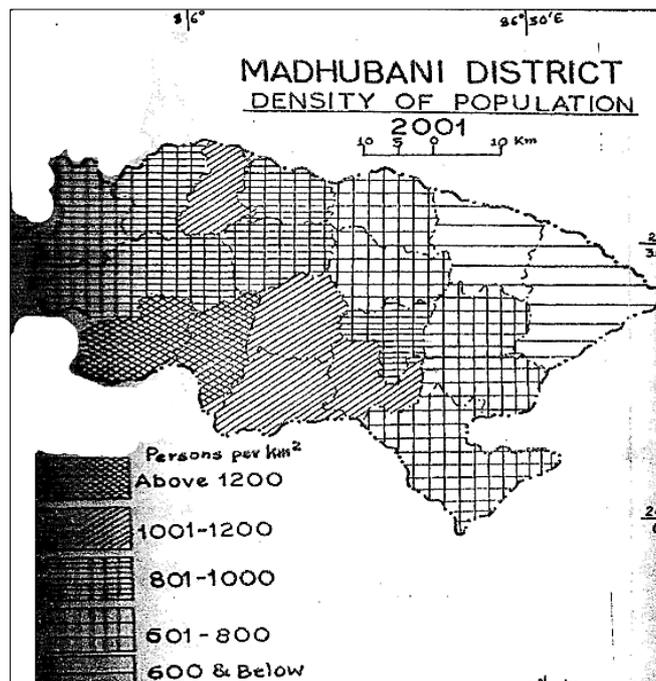


Fig 2: Madhubani district density of population, 2001

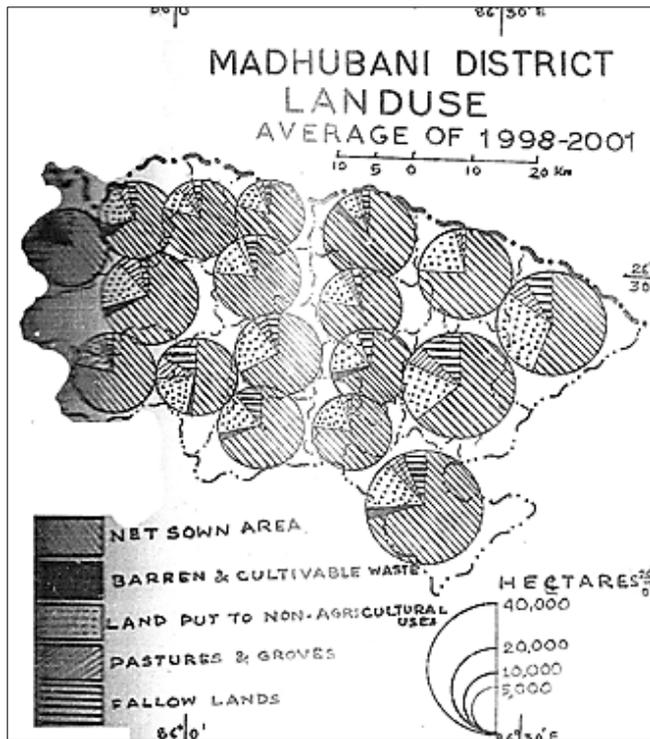
**Methodology**

ALL information and data are based on secondary sources, Land use data of Madhubani district has been collected from district statistics office Madhubani. The land use statistics for C.D, blocks and N.A.C. office Madhubani of the district are computed every year. The aggregates of village figures and totals of Anchals is collected by the revenue Karamchhari through field survey.

**Land use pattern of Madhubani district**

**Table 1:** The details description of land used changes in between 1958-59 and 2000-01 is given below

Sl. No.	Name of district	Total area in hectors	Net sown area in %	Follow land in %	Barren and cultivable waste	Land put to non-agricultural uses in %	Postures and groves	Urban area
1	2	3	4	5	6	7	8	9
01	Madhubani	350159	58.48	0.66	0.42	20.21	6.65	4.34



**Fig 3:** Madhubani district land use

**Table 2:** Urban land area and percentage of land use in Madhubani

Sl. No.	Land use categories	Area in hectare	Percentage total area
1.	Residential	17.86	2.9
2.	Commercial	17.86	2.9
3.	Institutional	13.19	1.9
4.	Recreational	7.24	1.3
5.	Industrial	7.42	1.4
6.	Administrative	15.22	1.9
7.	Transport	25.26	4.1
8.	Playground & Other Space	220.84	35.5
9.	Other	96.98	8.9
Total			100

This category includes the area which are under municipal corporation or cantonment board and area declared under notified area committee (N.A.C) The district 350159 km of land as urban area accounting for 1,64578 total population (2011) There are four urban areas– Madhubani, Jaynagar,

The land in Madhubani district according to its use has been divided in to six major categories-

- Net sown Area.
- Fallow land
- Barren & Cultivable waste
- Land put to Non – Agricultural uses
- Pastures & Groves
- Urban Area

Jhanjharpur and Ghoghardiha in Madhubani district important categories of land use are residential, commercial, industrial, recreational, institutional, administrative, transport, play, playground & other space and other etc. The above mentioned table reveals the dominance of the residential use of the urban center of Madhubani because a good number of resourceful persons have migrated from rural areas to the urban center of Madhubani due to deterioration in law and other conditions in the rural area. These people also have purchased larger plots in urban areas and have constructed dwellings in part of the plot. The second position goes to the open spaces, playground and other government land lying in the form of pasture. Such areas are about 35.5 % the development of road network inside the settlement has engaged 4.1 percent areas of the town. Commercial and administrative areas have engaged 2.9 and 1.9% area of the town respectively.

**Residential land use**

Since the urban centre of Madhubani has unplanned growth specific functional areas are hardly found virtually almost all areas have mixture of different functions excepting the newly developed industrial or administrative areas. However, there are areas being dominated by particular functions. The older residential areas lie along the khadi bhandar bhwan, babu sahav deodhay, ganga sagar pokhar, L.I.C. office, police line and baliraj gardh kila areas etc. in this areas houses are quite old. The recently developed residential areas are located in staydiyam road, R.K. collage road, sapta, civilcourt line, Heart hospital mangrauni and ranti road areas in this area houses are of larger size and have adequate open spaces.

**Commercial land use**

Trade and commerce are essential functions in a town. Variations may be found in their functional specialization. Wholesaling and retailing are parts of the same functions and are often grouped together. The commercial land use thus occuppies very important position in the urban space. The urban centre of Madhubani has several business areas. These areas are both old and new. Besides thes there are small marked areas developed in Madhubani township areas, gelation bazar areas. Rahika and Jebach chowk has be-weekly market where food grains, vegetables and other items are being sold on Monday and Friday. Other market areas have developed along by pass road, station road, nilam

cinema road civil court road and Jaldhari chowk areas. Main road, kali mandir road and Kishore lal chowk areas specializes in cotton market. Shops dealing with cosmetic goods are mostly found in bata chowk, nariyal bazar and churi bazar. Loha patti areas specializes in hardware & electronic shops. The development has motivated a large member of Traders to have wholesale shop of food grains, vegetables and fruits in the batachowk and gelation bazer. But shops dealing with sports good opticals, art and craft etc. have not developed contiguously.

### Industrial areas

The urban Centre of Madhubani is not so important from the point of view of industrial of functions. However, this function has engaged 1.4 percent land of the urban centre of Madhubani. This industries developed in this town are medium and small scale or household industries. This industries are scattered over the entire of the urban centre. These industries include engineering work shop, sugar mill, jute mill and mithila panting etc.

### Administrative area

In almost all urban centre central areas remain engaged in administrative offices and institutes in order to facilitate smooth functioning. Civil administrative as well as to achieve coordination between the local administration and the government organization, it becomes necessary that every urban centre should have an area specially developed for administration purposes. This area still has D.M. and S.P office, S.D.M. office, S.D.P.O. office and civil court office most of the other officers are also located here certainly collectariat has been shifted to main road front of +2 shiv ganga balika high school. Even civil court has to be totally shifted district educational officers is located in the street Bhoop narayan singh colonay, The development of new administrative area, in the south has enabled the expansion of the town ship in the south as well as developed of urban amenities drinking water development of residence of concerned officers and marketing facilities.

### Institutional area

Madhubani also noted for educational institutions of different hierarchial orders starting from primary school to P.G. (arts and science) degree level institutions. Certainly all educational institutions are distributed in all areas lacking the formation of clear cut educational area. These hapazardly located educational institutions of different hierarchial orders have engaged 13.19 hectares land nearly 1.9% urban land of Madhubani. it may be pointed out that educational institutions concerning primary schools providing educational facilities to teenagers are more scattered than the secondary and degree (M.A., M.Sc., Medical, Engineering, I.T.I.) level educational institutions. All Mohallas have government and private schools for kids. Even middle schools and colleges are located in the main areas.

### Recreational land use

Almost all urban centres need some recreational facilities like cinema hall, club, theatre hall, parks, playground, tanks etc. which provide recreation, sports and spaces for public gathering.

### Transportational land use

The land under railways roads and street come under this category of land use. The development of rail route in the eastern portion of the town has engaged some area, The development of several important road, connecting Kamla bridge, national highway, local roads, streets etc. has engaged bought 4.1 % areas of the town.

### Other functional area

A part from above mentioned urban land uses there are several other uses of land scattered in the urban areas of Madhubani. There are several areas where religious activities are performed. These religious sites include kalimandir, Ganga sager pokhar, Mahavir mandir, Durga mandir, Babusahab deodhay, Ekadush shiv mandir mangrauni temple etc. Baliraj gardh Quila important in jhanjhar pur urban area. Quila maidan is noted for religious function India Red Cross society is also near S.B.I. bank campus Madhubani.

### Concept

The concept of mobility in the context of urban land use embraces the definitional quality as spatial version of people's circulation and migration. The element of definition of mobility maybe identified to include all kinds of territorial movements covering varying distance, direction duration or the degree of permanence of stay. The concept of mobility acquires social, economic and psychological relevance with reference to some spatial segment.

### Conclusion

The pattern of land use is changing gradually to fulfil the recent requirements of increasing population. It has been observed that land use pattern of Madhubani urban has changed in various ways of its use. The "jamin" (land) is the free gift of nature. This resource is important resource in the world and its use is also most important including of Madhubani distric. The land use pattern of Madhubani urban has changed drastically due to another important factor influencing the populated in urban area is rail cum – road bridge between Lohna road station to jhanjhar pur station. It would provide smooth connect between Jaynagar, Madhubani and Jhanjhar pur, Ghogardiha urban area. It would also change the pattern of land use.

The urban center of Madhubani has unplanned growth. As such all functional areas consisting of residential, commercial, administrative, educational, recreational etc. have also developed haphazardly leading to unplanned development of roads, streets, sewerage and electricity connections and other services amentities. The urban center is well linked with main urban centers of the states of Bihar as well as adjoining international country of Nepal.

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