

Rural Landscape, Developmental Changes and Challenges: A Case Study of Akbarpur, Kanpur Dehat (UP)

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Abstract

Rural Landscape is described as the diverse portion of country's land area not much populated or intensively developed. Which also includes several geographic features such as, rivers, forest, lake, cropland, pastures, desert, grassland etc. The main focus of the research paper is to strengthen the implementation policies and to understand the benefits and development of rural landscape of the study area. The secondary source of data has been used which obtained from the published and unpublished sources. The published source contains, article, newspaper, books, census of 2011, etc., used as per the requirement. The unpublished source contains research papers of universities and documents from the government and non-government institution. Various secondary data sources have also been used to represent the last 10 years developmental changes and challenges in the rural landscape. Some various suggested schemes and programmes have also been discussed for the upliftment rural poor's. In conclusion, the rural landscapes are important sites which provide a range of economical, ecological and cultural benefits to the lesser communities. The rural landscape whether it is farm, forest, or village their protection, preservation and conservation is important for the nation's well-being. Hence, the results will be valuable for establishing the strong correlation mechanism between the land owners and the government helps to find out the ideas and paths for the dynamic growth in the area of rural landscape.

Keywords: Rural landscape, development, land use

Introduction

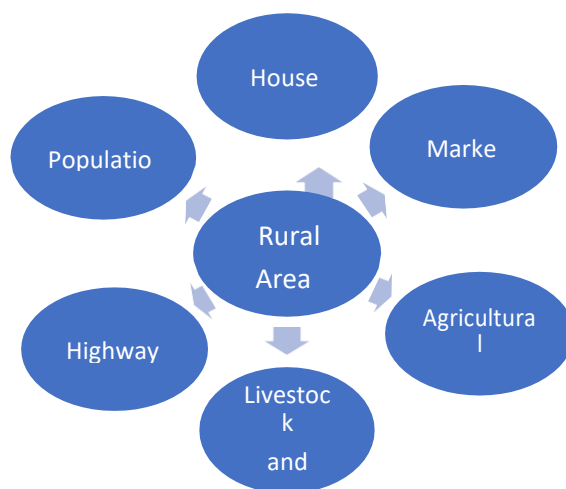
A landscape is the visible features of an area of land includes the physical elements such as mountains, hills, water bodies while human elements are land use, buildings structures, etc. Rural landscape constitutes a number of resources which in ways can be mobilized by the rural actors and the local landscape is a suitable spatial level for studying and analysing rural transition and their socio-economic context. Studying landscape in transition involves a change of symbolic values (cultural heritage, values and identities), productive structures and functions and ecological/environmental aspects of sustainability.

It is beneficial to us as a source of food, as a place to live, work and play. Land is the basic need of human civilization on which different economic activities take place. It is a finite resources and competition for it has escalate because of rapid urbanization, industrialization, increasing population, economic development, need of water, food and energy. Which affects the economy, ecology and society of the areas around cities divides the urban and rural land

use pattern (UN-GGIM, 2015). In today's world these areas are interconnected with flows of goods, services, money, and people.

The term 'Rural Landscape' used as synonyms for rural areas and rural people which ultimately emphasizes their connection with the agricultural land. It is associated with agricultural and harmony with nature where people lead a simple innocent life (Williams, 1993; Aytö 1990). A zone area or area as perceived by local people or visitors, whose visual features and character are the result of the action of natural and/or cultural (that is human) factors. This definition reflects the idea that landscapes evolve through time, as a result of being acted upon by natural forces and human being. It also underlines that a landscape forms a whole, whose natural and cultural components are taken together, not separately. The rural landscape is comprised largely of villages which are different from urban areas. Broadly speaking, rural areas are differentiated from urban in terms of location, spatial distribution of households based on kinship family ties and close interactions between individuals and families. Landscape studies represent a fastest growing field of research involving ecological, economic and cultural disciplines, but are still fragmented with limited integration of different disciplines (Tress et al.,).

Figure No.1 - Rural Landscape



Source: Mandal (1989)

Rural landscape transformation thus, is not confined to economic transformation alone, but it also encompasses a shift in social, economic, political and cultural environment which act and react upon each other. It denotes improved living conditions in rural areas along with increase in income and employment opportunities for the people.

The issues of the rural landscapes change are covered by different approaches and perspectives in the papers of the spatial issues. The main objective of this papers is to focus how the rural landscapes of the study area has been changed in the last 10 years and the different government policies and programmes at different level and the ways farm households

and rural inhabitants in general responds to these policies.

Study Area

Akbarpur tehsil is the administrative division of Kanpur Dehat district was formed in 1981 by dividing old Kanpur district into Kanpur Nagar and Kanpur Dehat. It is one of the seventy districts of U.P and was divided into five Tehsil viz; Akbarpur, Bhognipur, Sikandra, Derapur, and Rasoolabad with 10 development blocks. Akbarpur Tehsil of Kanpur Dehat district has a total population of 532,513 as per the census 2011, out of which 285,036 are males and 247,477 are females. The latitudinal extent of Akbarpur (Mati) is 26°22'44 North and its longitudinal extent is 79°57'3 East. Its total area is 803.36 sq. km with population density 663 per sq km. As per the census 2011, out of the total population 10.4% people resides in urban areas and 89.6% in rural areas. The Average literacy rate in urban areas is 81.3% while that in rural areas is 76.4%.

According to census 2011, there were a total 98,719 families lives in Akbarpur Tehsil. The Average sex-ratio of Tehsil is 868. The sex-ratio of urban areas in Akbarpur tehsil is 884 while that of rural areas is 866. It was surrounded by Bihaur from north, Derapur from west, Pukhrayan from south- east and Kanpur Nagar form east. There are 275 villages and 4 towns in Akbarpur Tehsil. The natural drainage is totally inadequate in some parts of the district to dispose of excess water. The most important characteristics of the soil are loamy sand, loam, clay loam, silty clay etc. are majorly distributed among the district of Kanpur dehat has become the good source for the agriculture.

Study Area Map

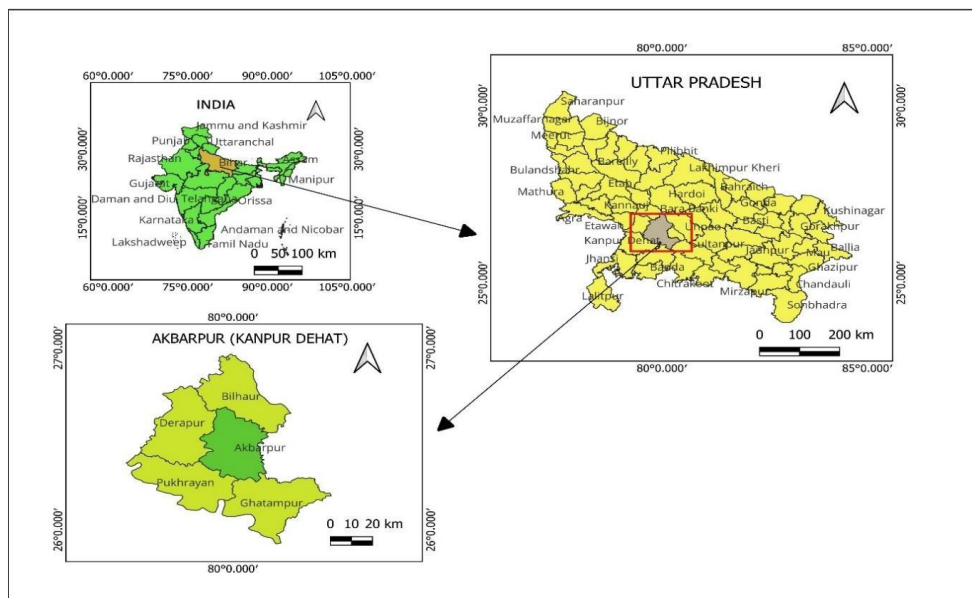


Fig. No. 2 depicts the study Area by using QGIS Technique

Objective Of the Study

- ❖ To examine the last 10 years developmental changes and challenges in the rural landscape.
- ❖ To evaluate the government policies and programmes for the upliftment of different communities.

- ❖ To understand the benefits and development of rural landscape of the study area.

Review of Literature

Due to urbanization the rural landscape is changing consistently the land under cultivation is being utilized for the purpose of urban settlement, construction of roads and industrial buildings, tourist places, railways and like uses. The change in the usage of land is resulting in reduction of the land undercultivation. This results in the loss of rural landscape and different communities. In order to overcome with the problems created due to urbanization he suggested to give priority to the rural and cottage industries generates employment opportunities to the locals (Rao, 2005). Less destruction in the rural land use pattern saves the rural landscape.

According to Hodge and Whitby (1981), Rural landscape may be characterized by the existence of local-self functional government, by the size of human settlement or by adding indication like occupational structure, land holdings etc. For Barnes and Duncan (1992), The landscape has two sides. Firstly, there is the material side; The visible natural and artificial (man-made) artifacts. Secondly, thereis the interpretation side dealing with the significance of these natural and artificial objects. So, they made a distinction between the natural and man-made landscape.

The concern gathers together some of the papers carried at the 20th session of permanent conference forthe study of rural landscape held in Tartu and Otepää, Estonia in August 2002. The issue starts with Claval's discussion on the language of the rural landscape. He concludes that the language of the rural landscape could be classified according to the position of people's community having created the landscape. After that, Antrop (2005) elucidate why landscape of the past are important for the future. Bender (2005) developed a methodology of combining cadastral map and land plot records in GIS to study the past landscape. Various studies have been done on integrated rural area development and planning by, B.N. Singh (1981), S.P Mishra (1985), R.C Arora (1979), R.Y Singh (1987), Sharma and Malhotra (1977) etc. Hoda (1979) analysis the role of technology as an instrument for rural development. Madhuri Srivastava (1987) deals with the various approaches to rural development and different policies of employment generation.

Research and Methodology:

Methodology is adopted to achieve the major objectives are compilation of existing secondary data collected from different sources and institution. Various different thematic layered map was used to examine the LULC (land use/ land cover). Various data have been analysed to understand the changes in the land use/land cover pattern of rural landscape. Last ten years developmental changes in landscape were used to assess the spatio temporal change in land use pattern. QGIS techniques is used to represent the study area through vector data obtained from computing country's shapefile and by extracting thatshapefile into software.

Land use/Land cover:

The total land-use pattern as per statistical diary of 2011 shows that out of the total reported area 314,984 hectares during 2009-10, forest covered 5,786 hectares cultivated waste land 4,245

hectares, whereas, present unused land and other fallows is 34,999 hectares ‘usar’ and uncultivable land 16,775 hectares. Land use other than agriculture is 28,204 hectares. Table 1 depicts the distribution of land in 2011-12 which shows that out of total geographical area 315.44 hectares, the area under forest is 5.81 hectares, barren cultivated and uncultivated land accounts 16.28 hectares, present fallow land is 21.00 hectares, land put to use other than agriculture is 29.00 hectares, land under misc. tree and grove is 3.15 hectares and net sown area is 230.2 hectares.

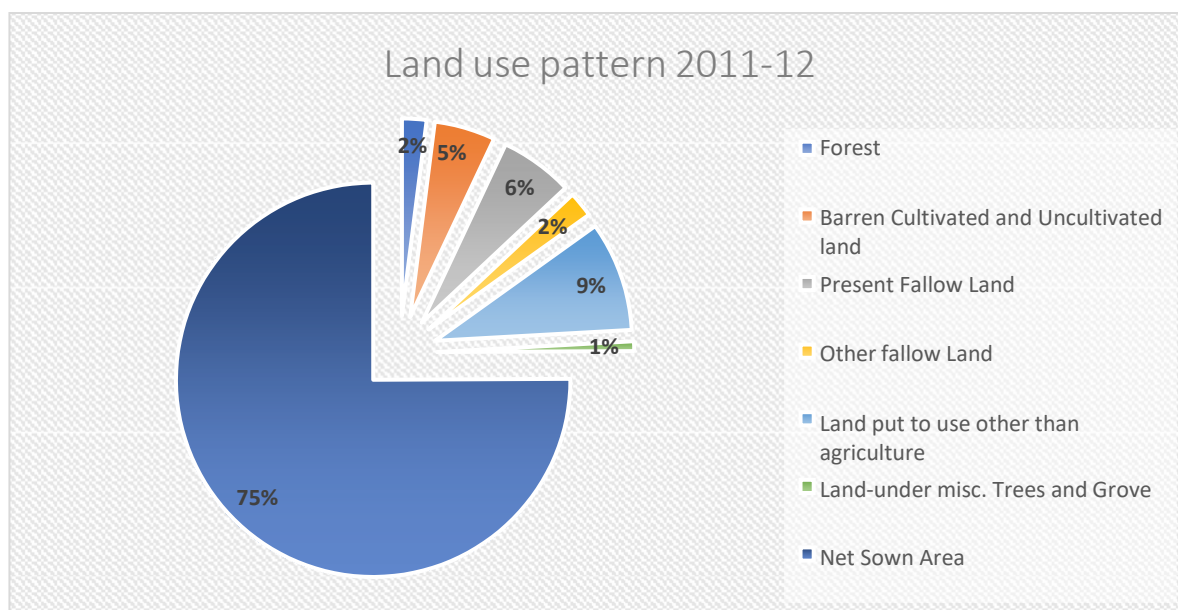


Fig no.3 shows the land use pattern of Kanpur dehat (2011-12)

In the year 2020-21 the distribution of land into different categories accounts forest area (5.04 hectares), barren cultivated and uncultivated land (18.10 hectares), present fallow land (28.35 hectares), other fallow land (9.45 hectares), land put to use other than agriculture (31.5 hectares), land under misc. tree and grove (2.90 hectares), net sown area (219.90 hectares) out of total geographical area 315,24 hectares. According to the district census handbook (2011-21), In rasoolabad block, with 140 villages have a total area of 55.7 hectares of this 69.24% of land is cultivated and of the aforesaid area 91.50% is irrigated. In maitha block, all the 112 villages have a total area of 34.9 hectare of this 75,50% of land is cultivated and of the aforesaid area 86% is irrigated. In jhinhak block, all the 73 villages have a total area of 25.11 hectares of this 77.23 % of land is cultivated and of the aforesaid area 85.31% is irrigated. In derapur block, all the 75 villages have a total area of 22.8 hectares, of this cultivable area is

80.2% and 77.14% is irrigated. In akbarpur block with 101 villages has a total land area of 28.9 hectares of this 76% is cultivated area, out of 81.6% is irrigated. In sarbankhera block, with total 74 villages have an area of 28.77 hectare of this 77.1% is cultivated area and out of which 79% is irrigated.

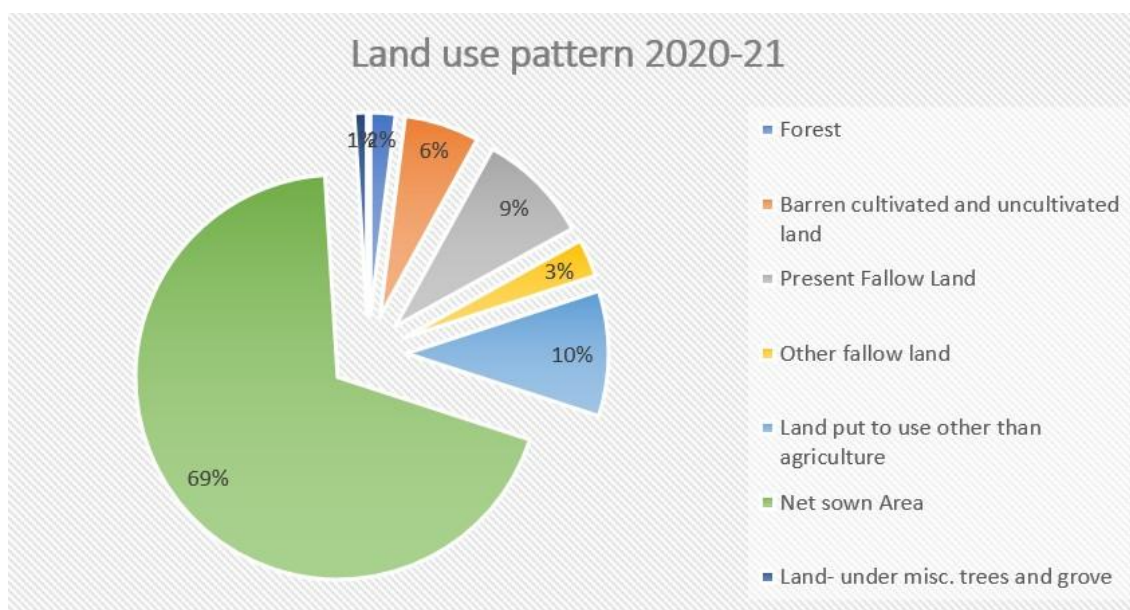


Fig no. 4 shows the land use pattern of Kanpur dehat (2020-21)

Change detection

The change in the landscape pattern is a frequent occurring phenomenon has not only increase in its total geographical area but also shown incredible change in major land use/land cover pattern. (Sanyal, 2017) The socio-economic factors have played an important role in bringing change in the land use pattern during 2011-21. Table-1 depicts in 2011-21 around 0.5% of forest increase, the change in the share of barren cultivated and uncultivated land is 0.9% decreases.

Table 1- Kanpur dehat land use cover (2011-21)

Land use/Land cover	Area (ha)		Percentage (%)	
	2011-12	2020-21	2011-12	2020-21
1. Forest	5.81	5.04	2.1	1.6
2. Barren cultivated and uncultivated land	16.28	18.10	5.1	6.0
3. Present fallow land	21.00	28.35	6.0	9.0
4. Other fallow land	10.00	9.45	2.0	3.0
5. Land put to use other than agriculture	29.00	31.5	9.0	10.0
6. Land under-misc. tree and grove	3.15	2.9	0.8	1.0
7. Net sown area	230.2	219.90	75.0	69.4
Total	315.44	315.24	100.00	100.00

Source: District handbook census 2011-21

Fig. 3 and Fig. 4 shows the land under present fallow land increases with 3%, other fallow land increase with 1%, land put to use other than agriculture shows an increase of only 1%, in the year 2011-12 to 2020-21, no significant change was noticed in land under misc. tree and grove which

only increases to 0.2%, and the total net sown area decrease from 2011-21 with a change of 5.7%, the reason of such decrease in the net sown area is due to rapid industrialization and urbanization.

Rural Settlement Patterns

Mostly, rural settlements are found near water bodies such as rivers, springs and lakes where water can be easily obtained. It is usually classified into two distinctive types i.e., compact and dispersed settlement with many intermediate stages. The distribution of rural settlement was based on many different physical factors (climate, temperature, soil, water, etc.) determining the rural settlement types and forms in any region. And are classified under following patterns: Rectangular, Linear, Circular, Semicircular, Star-like, Triangular and Nebular pattern. In the region of Akbarpur district Kanpur Dehat there are broadly three settlement patterns found; firstly, the rectangular pattern develops along the crossing of roads. Secondly, linear pattern develops along the roads, railways tracks or river banks and thirdly, circular pattern around lakes, tanks, pond and planned villages.

Caste

Caste system is a unique feature of Indian society from the ancient times (Yadav, N. (2022)). According to the census (2011), there are 25.64% Schedule Caste (SC) and 0.04% Scheduled Tribe (ST) of total population in Kanpur Dehat district. Various SC's and ST's have been found in the different part of the state. As per the census (2011), some names of scheduled caste are mentioned as, Agariya, Badi, Baheliya, Baiswar, Banjaniya, Bajgi, Balmulki, Beriya, Bhuriya (excluding Sonbhadra district), Chamar, Dhusia, Jatava, Dhanuk, Dhobi, Gond (excluding Mahrajganj, Siddharth Nagar, Basti, Gorakhpur, Deoria, Mau, Azamgarh, Jaunpur, Ballia, Ghazipur, Varanasi, Mirzapur, and Sonbhadra districts) etc. On the other hand, Scheduled Tribes (2011), are Bhotia, Buksa, Jaunsari, Raji, Tharu, Kharwar, (In district of Deoria, Ballia, Ghazipur, Varanasi and Sonbhadra), Patari, Chero, Bhuiya, Saharya (In the district of Lalitpur).

Population

The percentage share of urban population in the district is 9.7 percent as against 22.3% of the population in urban areas of the state. Kanpur Dehat has population density of 595 persons per sq. km., which is less than the state average of 829 persons per sq. km. Decadal growth rate of the district (14.9%) which is below than the state average 20.2%. Akbarpur tehsil has the highest number (267) of inhabited villages while Derapur tehsil has the lowest number (138) of inhabited villages.

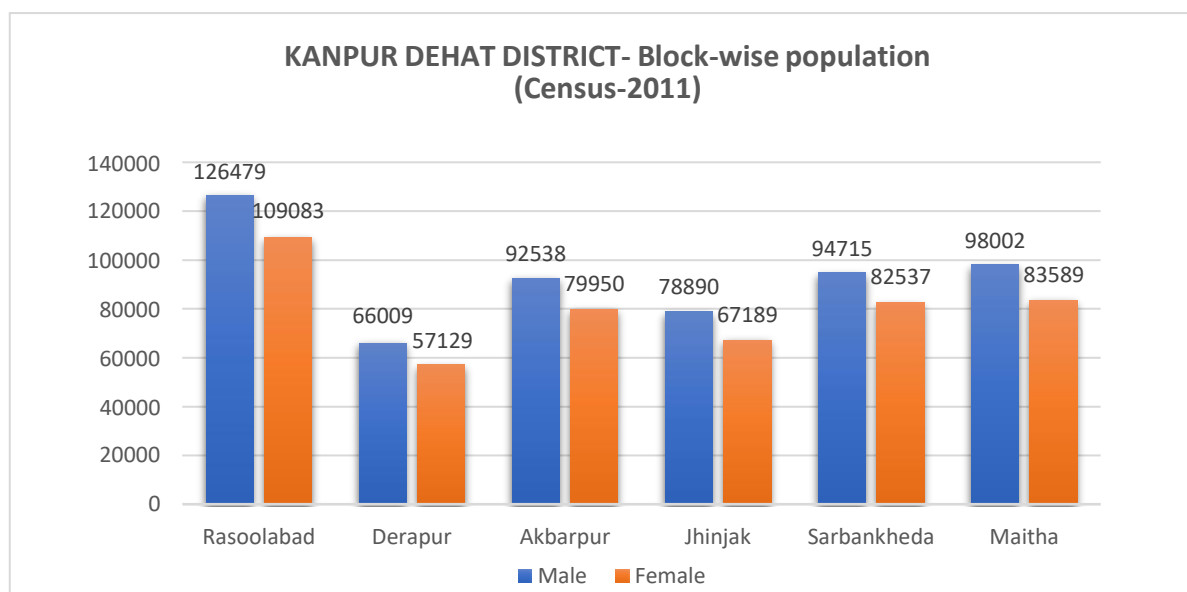


Fig no. 4 Source: District census handbook (2011)

Figure no. 4 depicts block-wise distribution of male and female population. According to the census (2011), from the six important blocks of district Rasoolabad has highest number of male (126,479) and female (109,083) population while in Derapur has the lowest population share of male (66,009) population and female population with (57,129). Akbarpur have an average male (92,538) and female

(79,950) population. Which shows the balanced population structure because of the moderate influence of urbanization, literacy, living standards of people etc.

Benefits of Rural Landscaping

Rural Landscaping is the solution for subdivisions in need of aesthetic and functional enhancement.

As a property owner, applying rural landscaping to your property not only saves you enough but it also raises the value of your land without drastically changing its natural features. Some benefits areas under:

1. Economic Development
2. Brings jobs to the Area
3. Introduce new housing markets
4. Better use of lands:
 - 4.1. Allocate lands preserving protected plants and habitats and get government grants.
 - 4.2. Plan future use of certain areas of the land use provide room for the development like more sub-division units, roads, and drainage, etc.
5. More community services:
 - 5.1. Create community gardens
 - 5.2. Protecting cultural, historical and environment areas is a great way of supporting community education and preservation of cultural treasures.

6. Establish as a tourist centre.
- 6.1. Provide yoga, and meditation facilities gives the importance to the forest cover area by increasing rural tourist attraction centres helps to enhance the economy of the state government.

Programmes and Policies

Under the programme of community development, it was decided to bring about a coordinated and various side of development in the rural landscape/area by creating initiative and teaching the villagers about the importance of organized co-operative efforts on the principle of making policies for their mental and physical development. Some plans and policies are:

- ❖ The first community development programme (CDP-1952) was not much successfully implemented. The planning is highly desirable in which an action plan is to be proposed for each year by village leaders under the influence of the block development agency.
- ❖ Integrated Rural Development Programme (IRDP-1978).
- ❖ Development of Women and Children in Rural Areas (DWCRA).
- ❖ Training of Rural Youth for Self-Employment (TRYSEM).

A Second CDP model should be launched by the government with new technology for the better development in rural landscape.

Findings and Suggestion

- ❖ There should be planned and equal development in the region.
- ❖ The Government should promote the programmes and policies for the development of rural landscape and lesser-known communities.
- ❖ Awareness campaign should be launched time to time for understanding the people's behaviour which helps to set-up co-operative bond between Government and Land owners.
- ❖ People's perception will help to do better improvement in the plans.
- ❖ Training and development of local leadership and providing technical services in the form of personnel, equipment etc.

Conclusion

Earlier Kanpur dehat is a part of Kanpur district, now as a separate district it faces several issues not only in the change of land use pattern but also with development and growth. The concept of rural development is always been a challenge to the government since 1947. To full fill the related gaps in

plans and policies the government has to launched some programmes for the speedy growth in the rural landscape. All this transformation in the landscape needs an attention from the concerned authorities and rural planners to implement some land management policies in the Kanpur dehat district.

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