

## A RESEARCH STUDY ON TOWN AND COUNTRY PLANNING IN THE ROHTAK DISTRICT WITH A FOCUS ON RENEWABLE RESOURCES

*\* Sonia , \*\*Dr. L. C. Verma, \*\*\*Dr. Nagendra Kumar Sharma,*

*\* Research Scholar, (Geography), \*\*Research Guide & \*\*\*Research Guide, Bhagwant Universityajmer, Rajasthan, India*

### Abstract

*In this research paper we have described about Research Study on Town and Country Planning in the Rohtak District with a Focus on Renewable Resources. For the three decades ending in 2001, the city of Rohtak expanded at a slower rate than the state of Haryana. As a result of Rohtak's designation as a Municipal Corporation in 2010, the city's urban sprawl has expanded to include a total of eight formerly unincorporated settlements. With the shift in the economy, sustainable land management has become a need. For effective urban planning and development, it is crucial to have access to spatial information regarding land use/land cover types and to be able to identify changes in these kinds over time. This effort is being made in that vein. The influence of urbanization and changes in land use on Rohtak's city structure have been examined. Timeframe analyzed is from 1983 until 2010. For this analysis, researchers drew on a variety of primary and secondary resources. Primary sources of data include ground truth and images from the field, whereas secondary sources of data include guide maps, topographical sheets, and high definition satellite imageries.*

**Keywords:** *Renewable resource, Water resources, Population Growth etc.*

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### Introduction:

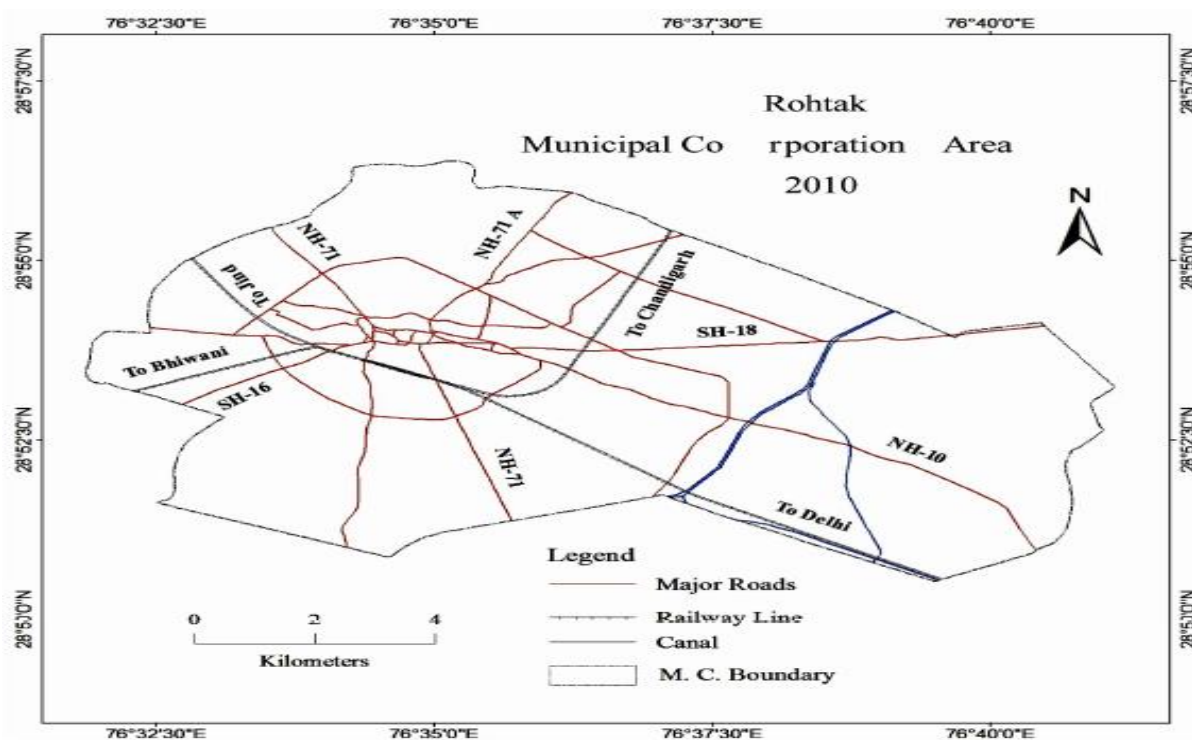
In this research paper we have described about Town and Country Planning in the Rohtak District with a Focus on Renewable Resources .

In the National Capital Region (NCR) Regional Plan 2001, Rohtak was designated as one of the eight priority towns that will become Regional Centres. It is located 70 kilometers to the north-west of Delhi, which is the capital of India. It stretches over a total area of 100.57 km<sup>2</sup> and can be found along National Highway No. 10 in the NCR region of Haryana state, which is located at 28°41'1" North latitude and 76°12'42" East

longitude. It was anticipated that the city's population would reach 500,000 by the year 2001. In spite of its proximity to the nation's capital, the area failed to entice investment, and the pace of urbanization remained disappointingly low.

### Study Area:

The city of Rohtak is situated on National Highway No. 10 at the junction of 28°41'1" north latitude and 76°12'42" east longitude in the NCR area of Haryana. It is situated 70 kilometers north-west of Delhi and 240 kilometers south of the state capital, Chandigarh (Figure 1).



**Figure 1. Geographic location of study area.**

#### Renewable resource:

##### ● Water resources:

Water can be considered a renewable resource provided its consumption, temperature, treatment, and discharge are properly regulated. Otherwise, it would deplete a nonrenewable resource at that point. Groundwater, for example, is considered a non-renewable resource since it is often extracted from an aquifer at a pace far faster than its relatively slow natural recharge. Water removal from aquifer pore spaces may result in irreversible compaction (subsidence) that cannot be replenished. The Earth's water is 97.5% salt water and 3% fresh water, with slightly more than two-thirds of this frozen in glaciers and polar ice caps. [4] The remaining unfrozen freshwater is mostly found as groundwater, with barely a trace (0.008%) present above ground or in the atmosphere. [5]

Pollution is a major water resource issue. 22% of global water is utilized in industry. [6] Hydroelectric dams, thermoelectric power plants, mineral and oil refineries,

manufacturing units, and waste dumps are major industrial consumers of water.

Agriculture-free food

Alaska "berries" from the Innoko National Wildlife Refuge - Renewable Resources Any thing eaten to nourish the body is food.[8]

Most food comes from renewable resources.[7] Food comes from plants and animals.

Hunting is still a vital source of meat for many rural and isolated communities. It's the only food wild predators get. [9]

#### Georeferencing:

The city grew little after 1991's economic changes. Due to government initiatives, Faridabad and Gurgaon, two Delhi suburbs, took over. Their locational advantage in the new economy. Rohtak, a historic village, became a Class-I city in 1971 with a population of 1.25 lakhs, which doubled to 2.95 lakhs in 2001 [3]. Area increased from 11.66 km<sup>2</sup> in 1971 to 29.58 km<sup>2</sup> in 2001 [4]. City density decreased. In 2001, HUDA sector I (1.20 km<sup>2</sup>) made it an urban agglomeration (Table 4.1).

**Table 2. Rohtak city: area, population and density, 1961- 2011.**

Census Year	Area in per km <sup>2</sup>	Population	Density per km <sup>2</sup>
1961	11.66	88193	7564
1971	11.66	124755	10699
1981	22.03	166767	7570
1991	28.38	216096	7614
2001	29.58	294577	9959
2011*	100.57	459658	4570

On March 17, 2010, the Government of Haryana formally notified the public that the city of Rohtak has been designated as a Municipal Corporation [5]. Municipal Committee gave way to Municipal Council, and now Municipal Corporation governs the city. As defined by Section 2A of the Haryana Municipal (Amendment) Act, 1994, a "Municipality" is any body of local self-government, including a Municipal Committee, Municipal Council, or Municipal Corporation.

The terms "Municipal Committee" and "Municipal Council" refer, respectively, to 1) a transitional region with a population of less than 50,000 and 2) a smaller urban area with a population of more than 50,000 but less than 3,000,000. and 3) A "Municipal Corporation" is a city with a population of more than three lakhs, and it is subject to a different Act than smaller cities. Except in such urban areas or parts of the roof as the State

Government may, by notification, specify to be an industrial township [6], taking into account the size of the area, the municipal services being provided or proposed to be provided by an industrial establishment in that area, and such other factors as it may deem fit.

Furthermore, no military cantonment or portion of a military cantonment shall be included in a municipal jurisdiction. The State Government may, by notification, further define what constitutes a "transitional area," "smaller urban area," or "larger urban area" for the purposes of this section, taking into account the population, population density, revenue generated for local administration, percentage of employment in non-agricultural activities, economic importance, and any other factors it deems relevant. As a result of this, the cityscape has undergone a judicial shift as eight revenue villages have been incorporated into the city.

**Table 3. Urban land use classification.**

Level-I	Level-II	Level-III
Built-up	Built-up (Urban)  Built-up (Rural)	Residential Area, Industrial Area, Recreational Area, Vacant Land, Public and Semi-public Area, Transportation and Communication, Public Utilities and Facility, Commercial Area, Plotted Land
Agriculture Land	Crop Land Fallow Land	
Forest	Dense Forest, Open Forest, Plantation, Mangroves	
Wastelands	Salt-affected, Gullied/Ravinous Land with/without scrub, Barren/Rocky, Sandy Area	
Waterbodies	Canal, Lakes/Ponds Reservoirs, Tanks, Cooling Pond	
Others	Quarry/Brick Kilns Dam/Barrage Coral reef/Atoll	

Source: Adopted from NUIS Manual, 2008.

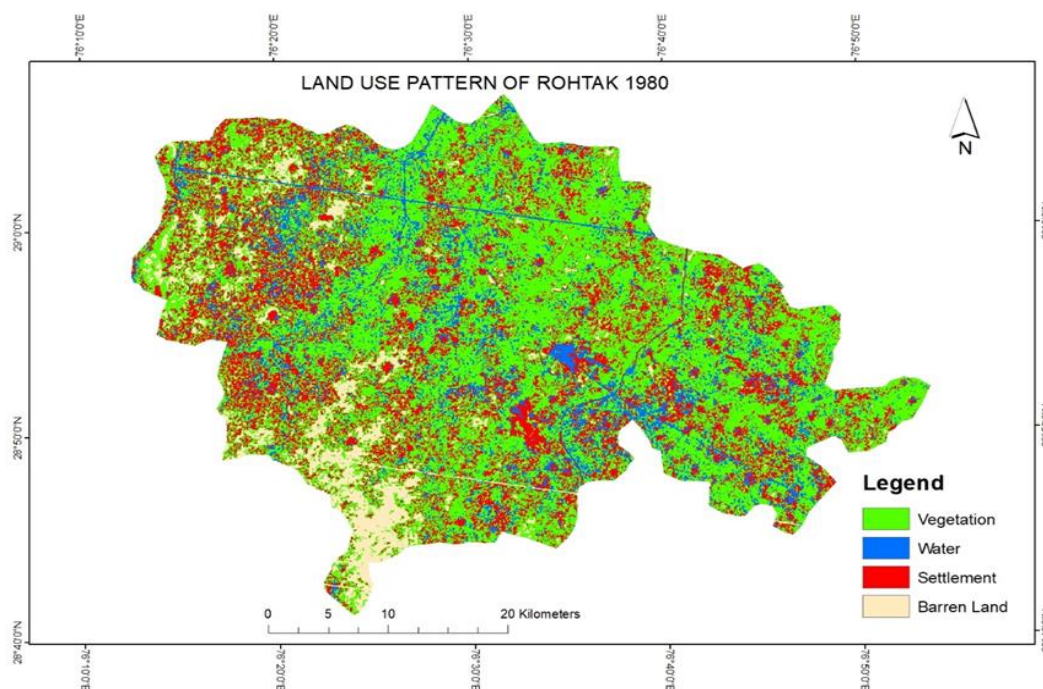
When the trend of territorial jurisdiction extension in its urban area was most prominent. It experienced an increase of roughly 71 km<sup>2</sup> in area and a population increase of more than 1.5 lakh people.

### Result:

In this paper we have discussed about the result and conclusion part of our proposal work which are as follows:

While just 33% of India's population resides in urban areas, this has not stopped the country from being one of the most urbanized in the world. In India, urbanization is primarily occurring in lowland regions, rather than mountainous ones, which is causing arable land in lowlands to be depleted. The city of Rohtak has

expanded greatly in recent years. The city of Rohtak expanded from an area of 1796.49 ha in 1980 to an expected 13900 ha in 2020. Since the year 2010, the city of Rohtak has had its own municipal government. The city of Rohtak has expanded, having an impact on the surrounding countryside. After being included within the city's municipal corporation boundaries, lush farmland in the neighboring villages was transformed into houses and shops, causing a serious decline in agricultural output. The city of Rohtak has seen a significant increase in its population in recent years. These once-fertile landscapes have been encroached upon as the city has developed industrial districts like IMT.



**Figure 2 Land U**

### sed Pattern of Rohtak

#### Resource that can be replenished:

One type of resource that may be replenished is called a flow resource, but the term "renewable resource" is more common. It is a limited resource in human terms since [1] will regenerate to replace the fraction used up by usage and consumption through natural

reproduction or other recurrent processes. Resources are said to be permanent when the pace at which they may be replenished is extremely unlikely to surpass a human time scale. [1] Earth's natural ecosystem, and its main components, are renewable resources. If a resource has a good LCA, it is likely to be around for a while.

**Table 4 Town Planning**

<b>Town Planning</b>	MCR/TECH/TP/01	<ul style="list-style-type: none"> <li>• Sanctioning of building plans of residential /industrial, commercial /public buildings</li> <li>• Identification of encroachments</li> <li>• Regularization of unauthorized colonies</li> <li>• Excitation and demarcation of MC limits and ward limits and population survey</li> <li>• Issue of NDC for electricity, Water, sewage connection.</li> <li>• Issuing of Completion and occupation certificate.</li> </ul>
	MCR/TECH/TP/02	
	MCR/TECH/TP/03	
	MCR/TECH/TP/04	
	MCR/TECH/TP/05	
	MCR/TECH/TP/06	
	MCR/TECH/TP/08	
	MCR/TECH/TP/09	

**Table 5. Town Planning Wing :- Headed by Deputy Town Planner, Municipal Corporation, Rohtak**

<b>Function</b>	<b>Rules</b>
<ol style="list-style-type: none"> <li>1. Urban planning including town planning.</li> <li>2. Regulations of land-use and construction of buildings.</li> <li>3. Planning for economic and social development.</li> <li>4. Approval of building plans-Residential, Commercial, Industrial and Public Buildings within Municipal Limits.</li> <li>5. Regularization of the Unauthorized Colonies within the Municipal Limits as per Govt. Guidelines issued from time to time.</li> <li>6. Declaration of Commercial Streets</li> <li>7. Extension of Municipal Limits.</li> <li>8. Delimitation of wards within Municipal Limits.</li> <li>9. Preparation of town planning scheme.</li> <li>10. Issuance of NDC</li> <li>11. Issuance of DPC, Completion &amp; occupation certificates of the buildings.</li> <li>12. Composition of Unauthorized constructions.</li> <li>15. Identification of dangerous buildings and places;</li> <li>16. The removal of obstructions and projections in or upon streets, bridges and other public places on complaint basis</li> <li>17. The fulfilment of any other obligation imposed by or under this Act or any other law for the time being in force;</li> <li>18. The improvement of the Municipal area in accordance with improvement schemes approved by the Corporation;</li> </ol>	<ul style="list-style-type: none"> <li>➤ <b>The Haryana Municipal Corporation Act, 1994 as amended from time to time section 249 to 267 &amp; 408.</b></li> <li>➤ <b>Haryana Municipal Building Bye-laws 1982 as amended from time to time.</b></li> </ul>

**Conclusion:**

Current trend of urban development in Rohtak city has huge impact on the land resources of the nearby areas of the city leading to the depletion of precious agricultural land. Rohtak city has undergone large urban development in past few decades. The main aim of this study is to analyze the effect of urban sprawl of Rohtak city on the environment of the city. Rohtak city is located in the NCR region due to which it will keep on expanding. We need to take preventive measures for protecting the nearby agricultural land. We need to focus on sustainable development of the Rohtak city keeping in view the increasing population and massive resource utilization by the people. Thus, we need to focus on the development of rational urban planning policy for decreasing the adverse impact of urban sprawl of Rohtak city.

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