

Procedure International Journal of Science and Technology

(International Open Access, Peer-reviewed & Refereed Journal)

(Multidisciplinary, Monthly, Multilanguage)

ISSN : 2584-2617 (Online)

Volume- 1, Issue- 4, April 2024

Website- www.pijst.comDOI- <https://doi.org/10.62796/pijst.2024v1i405>**Regional Planning and Infrastructure
Development of Gorakhpur City****Dr. Dherendra Tripathi***PhD (Geography), University of North Bengal, Darjeeling, West Bengal.***Abstract-**

GIS based master plan is one of the sub - plans under AMRUT Mission. Master Plan is the main method for urban land management, which reflects detailed land use allocation for the sustainable development of the city. The use of GIS helps in bringing accuracy in master planning as the base map is prepared from very high-resolution satellite (VHRS) images. Master planning provides the framework that helps in the systematic development of a city. The scheme provides adequate infrastructure to meet future demand. It also provides a well-planned financial structure for urban areas which helps for effective administration in the urban development sector. It also helps in resolving the issues faced by the public as well as the administration of the development authorities. Gorakhpur is a

city of Uttar Pradesh which requires master planning for proper development of the city. The city has so far had two master plans, which were prepared for the time period 1971-2001 and 2001-2021. Since the period of the city master plan is about to end, the city needs a new master plan. The present paper tries to focus on regional planning and infrastructure development of Gorakhpur city.

Key-words: Regional Planning; Master plan; Policy formulation.

Introduction

The name of Gorakhpur city is associated with the famous saint Gorakshanath. He is known as Gorakhnath, who was a guru of the Nath Yogi sect. This sect is also called Siddha Yogi or Avadhuta-Yogi sect, Guru Gorakshanath came here in the 9th century AD. Then there was the rule of King Devpal of West Bengal (810-850 AD). The Guru started performing penance at the place where the famous temple of his name is situated today. In ancient times there was a temple of a local deity, Gorakshanath, situated on the left bank of the Rapti river in the 4th century BC. At that time Rapti used to flow from the center of the city towards Ramgarh

Tal. During the epic period, this area fell within the present Gorakhpur region (Basti Mandal and Gorakhpur Mandal) and was known as Karupatha, an extremely peaceful and beautiful area, which was a part of Kasel state, an important center of Aryan culture and civilization. At that time the city originated in the northern center of the present city near the present Gorakhnath temple. The present old Gare Khapur, Madhappur and Jatepur are the oldest inhabited localities of the city. Their remains are still found in the respective areas. After that during 900-950 AD Man Singh or Madan Singh became the ruler of this area and established the city to the south of the old city. By the time of Akbar, Gorakhpur had become a big city. It expanded in the southern part around Urdu Bazaar, Miyan Bazaar and became the headquarters of the Gorakhpur government in the province of Awadh until it became a British state. In about 1650, Basant Singh built a fort on the banks of Rapti in Basantpur Mohalla and strengthened his hold.

In 1801, Nawab of Awadh Saadat Ali Khan handed over the city to the British who made it the district headquarters and the original civil station was established at Captainganj Mohalla which is currently Civil Lines. Gorakhpur became a military station in 1810 and a cantonment was established to the east of the city. Some soldiers of the East India Company were brought here from Faizabad and soon some officers started settling in the cantonment area from Captainganj. It presents the temporal evolution of the city from ancient times to modern times. The city was given the status of municipality on September 7, 1869, and in 1891 it became the headquarters of Gorakhpur division. After the opening of the railway in 1884, Boulia, Dairy and Bichiya railway colonies were developed in the northern and north-eastern parts of the city near the railway station. Also railway offices and railway loco workshops were constructed at some places as the city became the headquarters of the North Eastern Railway. At present, the city is developing and expanding very rapidly in two directions - East and North and North-East due to Rapti River in the west and low and waterlogged area in the south.

Regional situation-

Gorakhpur city is well connected to other parts of the country through road and railways. Major roads lead from the city in all directions, which is a national highway that leads from Lucknow to Delhi in the west, to Gopalganj in Bihar in the east and further to Kolkata and Assam in the east. Another important road connects the city to Deoria and Kolkata via Bihar. National Highway 29 passes through the city from the India-Nepal border to Varanasi and Allahabad, connecting the city to the southern part of the country. Another local road runs from the city to Maharajganj, Thuthibari (India-Nepal border) and another to Captainganj and Bagaha in Aarey Bihar.

Gorakhpur is situated at an altitude of 339 feet (102 m) above sea level at $83^{\circ} 20'$ to $83^{\circ} 27'$ East longitude, $26^{\circ} 43'$ to $26^{\circ} 50'$ North latitude and at the confluence of Rapti (old name of Achiravati) and Rohinar (Rohini). The Rapti comes from the north and the Rohin comes from the north and together they form the western boundary of the city. After the confluence of the Rohin, the Rapti turns at right angles and flows southwards forming the western boundary of the city. The city lies in the middle Ganges valley located in the north-eastern part of Trans Saryu Plains (North-East UP). It is a major center of socio-economic and commercial, cultural and administrative activities of North Eastern UP. Ramgarh Tal to the

north-east of the city. There is a large lake named after and the Kusamahi forest in the east. The city is 815 km north-west of Kolkata, 272 km north-east of Allahabad, 232 km north of Varanasi, 262 km east of the state capital Lucknow. , is located. Roads lead from the city to Nautanwan and Sonauli, Maharajganj and Thuthibari (both up to India-Nepal border) Kasya (Kushinagar), Gopalganj to Assam in the south-east to Deoria Siwan-Chhapra-Kolkata in the south Badhalganj-Allahabad- Varanasi and goes to Lucknow, Kanpur, Delhi in the west.

The city is well connected to major cities of the country by road and railways, while Kolkata, Lucknow, Delhi are connected by air routes. The city of Gorakhpur is located in the Ghaghra-Gandak Doab which is a part of the great plain of the Ganges. It is composed of alluvial fill up to a depth of about 6000 meters at Gorakhpur Kund and gradually reduces to 3000 meters near the Ghaghra River in the south. Khadar (new alluvium) and Bhangar (old alluvium) are the major geological components of the area. The city is almost a flat plain but has some local islet variations due to shifting river streams.

Need for master planning-

The first Master Plan of Gorakhpur was prepared for the time period 1971-2001 and to continue the development process, the Master Plan 2001-2021 was prepared by the Town and Country Planning Department in collaboration with the Gorakhpur Development Authority to plan systematic development. A master plan has been prepared for the year 2021, which now needs to be revised to meet the growing needs and demand as well as to ensure appropriate development as per the proposed land use. In the revised master plan, all the deviations and changes from the existing master plan will be taken into account. The area of Gorakhpur Development Authority has been increased to 643 sq km, which includes Gorakhpur Municipal Corporation, PPganj Nagar Panchayat, Pipraich Nagar Panchayat, Mundera Bazar Nagar Panchayat and 319 villages.

Built up Area-

In the Gorakhpur Master Plan 1971-2001, the old densely built up area of the city was proposed as a high density residential area, which has also been shown as a high density built up area in the revised Master Plan - 2021. Commercial development has taken place in this old part by demolishing, reconstructing, redeveloping the residential buildings built along the roads and constructing big commercial establishments (complexes). Due to this, all the available and proposed open pits, pits and ponds in this area have been developed unauthorizedly in the form of residential buildings and commercial buildings.

Current land use-

According to Survey-2020, following problems have arisen due to intensive development in this area:-

1. The available roads have become narrow and the traffic pressure on them has increased.

2. Due to the set back of buildings in these commercial areas and lack of provision of proper parking space as a place to park the vehicles, all the vehicles are parked on the roadside in front of these shops, due to which The actual minimum available width of the road also reduces, which hinders the smooth movement of traffic.

3. The amount of open space in this dense (built up) area of the city has become almost zero or negligible.

Policy formulation :

1. Under the revised Gorakhpur Master Plan 2031, such roads in the built up area where commercial activities have developed at a rapid pace are proposed as market streets.

2. It would be appropriate to reserve the currently available open areas whose area is more than 0.25 hectares as open areas and to provide public utility facilities related to the open areas.

3. It is inevitable to shift all the existing Thaka Mandis in the built up area to the outer areas and make the vacant land convenient as parking space.

Policy formulation for Highway Convenience Zone:

The master plan provides commercial, social and economic facilities and road facilities for the rural areas located outside the urbanization limits. A depth of 300 meters after the green belt of 30 meters on both sides of the national and state highways and constructed/under construction/proposed bypasses. A land use proposal has been made to provide highway access facility. The category of Highway Facility Zone will be considered a part of agricultural land use only. If any plot/land in the Highway Facility Zone is connected to the National Highway, State Highway and Bypass and is also connected to a roundabout, then it should be at least

Right of way of 12.00 meters will have to be ensured, in which no construction of any kind will be allowed. Permissible activities under this land use will be as per the permitted activities in the proposed zoning regulation for this land use. According to the existing regulations, the activities to be proposed on the Bhakhu land located under the proposed highway facility are the maximum permissible land cover, floor area ratio (FAR) under agricultural land use in the effective building construction and development bye-laws. The provisions of, etc. will be implemented. In the draft master plan, activities on the land related to the proposed highway facility will be permitted as per the zoning regulations with the condition that till the date of coming into force of the master plan, the entire depth of the land owned by the land owner which is within the highway in question. Highway Facility Zone land use may be permitted if it is directly related to the Facility Zone.

River centered development

The Chink Rapti River flows alongside the city, hence it is necessary to focus on river-centric urban planning. According to the guidelines of River Centric Planning, urban rivers function as a complex balance of socio-economic-ecological systems, fulfilling cultural and religious beliefs, recreational needs, and livelihood dependencies and also -Also provides ecological services of the river system. To protect and conserve the river in the long run, any urban settlement, encroachment and development activities in the upstream areas should be strictly controlled. Quality protection and improvement are even more important for fossil resources. It should be ensured that local waste, residues of fertilizers and chemicals etc. do not seep into the groundwater. To protect the quality of urban natural water resources, a green buffer has to be provided in the form of a riparian zone along the banks of water bodies. Also projects like eco parks or riverfront development

can be implemented along the river banks. It would be appropriate to propose it as a recreational area and riverbank development on the banks of Rapti River.

Tourism Policy-

Keeping in view the provisions contained under the Uttar Pradesh Tourism Policy-1998 announced by the government to provide tourism infrastructure facilities in the state, Maunath Bhajan of widening of the major roads of the city.

Provision has been made in Mahayaje Na-2031. Along with this, a detailed action plan/proposal regarding development/beautification of roads for activities related to tourism industry, development/sanitization of parks and intersections and reserving land for development of tourism industry was included in the zonal development plan.

Film Policy-

In Uttar Pradesh Film Policy announced by the government, provisions have been made for high class cinema exhibition facilities for the overall development of the film industry by giving the status of cinema halls to the industry. Keeping these provisions in view, it is proposed to encourage the construction of cinema halls/multiplexes currently located in the city. For this purpose, in the zoning regulations of the master plan, permission has been given for construction as per requirement in various land utility areas including cinema/multiplex under commercial activities/uses.

Industrial and Service Sector Investment Policy-

Keeping in view the provisions contained under the Industrial and Service Sector Investment Policy announced by the government, in the zoning regulations matrix of Maunath Bhanjan Master Plan-2031, under industrial activities/uses, information technology/software technology parks/processing industries have been included in various sectors. Permission has been granted under 'U.P.

Solar energy policy-

Solar energy is a renewable form of energy and is used as an alternative to non-renewable sources. To encourage energy production in Uttar Pradesh. Solar energy policy can be used. The authority may encourage development of solar rooftop projects, solar street lights, solar powered agricultural pump sets, any other off grid solar product within the city. Also the authority can set up solar parks on PPP mode.

Disaster Management Policy-

In the context of the disaster management policy announced by the government, in order to ensure necessary protective provisions for the construction of buildings and installation of important infrastructure facilities in the master plan, in order to keep Maunath Bhajan Nagar safe from natural disasters and tragedies like earthquakes, the government has Government Order No. issued from time to time: 570/9-A-1-2001(AB) dated 03 February, 2001, 772/9-A-1-2001- Anti-Earthquake/2001(AB) dated 13.02.2001 and 3751/ Only after adopting the provisions contained under 9-A-1-2001-Anti-Earthquake 2001 (AAB) dated 20.07.2001, such as Indian Standards Institute's code, National Building Code, provisions related to fire fighting and other relevant guidelines etc. Permission will be given to construct all types of buildings.

Policy making on other subjects-

Proposals related to the proposed land uses, policies issued by the government and policy formulation regarding environmental protection have been given in the Master Plan. On policy topics on which provisions currently exist but which have not been included/mentioned in the policy formulation or if policy provisions are issued by the government in the future on policy topics, then as per the instructions of the government, the concerned agency will have to adopt them as per the rules. In such a situation, after approval from the competent level, the policy provisions specified in the master plan will be considered modified to that extent.

Conclusion-

Till now the area of Gorakhpur Development Authority has increased two and a quarter times. At the time of establishment in 1977, the authority's limits included an area of 285 square kilometers including 180 revenue villages and town areas. In the year 2020, 233 new revenue villages and Mundera Bazar, PPganj and Pipraich Nagar Panchayats were added in this area. At present the area of the development area is about 642 square kilometers.

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Cite this Article-

Dr. Dherendra Singh, "Regional Planning and Infrastructure Development of Gorakhpur City", *Procedure International Journal of Science and Technology (PIJST)*, ISSN: 2584-2617 (Online), Volume:1, Issue:4, April 2024.

Journal URL- <https://www.pijst.com/>

DOI- <https://doi.org/10.62796/pijst.2024v1i405>