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Uttarakhand bets on GIS technology to improve city planning post Joshimath land subsidence crisis

In preparing its GIS-based master plan for 2041, the Uttarakhand government has decided to go fully digital. This is to ensure that development happens in an environmentally sustainable manner and the cities are livable.



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Struck by a spate of natural and manmade adversities, including the recent case of Joshimath land subsidence, Uttarakhand government has decided to go fully digital in drawing its master plan for 2041. This is to

ensure that development happens in an environmentally sustainable manner and the cities are livable.

The state government has roped in Rudrabhishek Enterprises (REPL), a Delhi-based management consulting firm, to prepare a GIS-based Master Plan for the state's cities. The project aims to address the environmental concerns while also addressing the issues of liveability. The project will focus on 18 Urban Local Bodies (ULBs) of two clusters, namely clusters 4 and 5, which include districts of Tehri, Nainital, Almora and Bageshwar.

REPL's appointment to prepare the GIS-based master plan is expected to be completed in 18 months, divided into six stages. The project will evaluate the aspects of town planning, including building structure, roads, land use, parking, industrial policy, water supplies, drainage, sanitation, land sustainability in environmentally sensitive areas, and opportunities for economic growth.

GIS-powered Master Pan

"The preparation of a GIS-based master plan has become increasingly important for effective planning of a city," said a senior official. "The approach to environment-sensitive and disaster management planning through technological interventions will be a priority while preparing the master plan.

The project will undertake a detailed analysis of environmentally-sensitive areas. It will look at the issues of urban sprawl, the existing land use and the future needs. It will look at the suitability of available land for various activities like the planning of new road links, reserving land for public facilities and services, zoning, and framing.

According to Pradeep Misra, CMD, REPL, there is a need for a judicious approach to development in Uttarakhand, as the region offers immense opportunities but presents unique geographical challenges. Misra said that the existing infrastructure is insufficient to keep up with the progress of the state's growth and development. He stressed that technology can play a defining role in infrastructure development, keeping ecological aspects into consideration.

"We have been working on various projects across India using advanced and innovative geospatial technology for quite some time," Misra told ETGovernment. "The enhanced visibility provided by GIS technology enables authorities to plan development more effectively."

To identify the specific requirements of the region and their corresponding solutions, the project will undertake both primary and secondary data collection, including land use survey, and the studies of the socio-economic conditions, traffic conditions, environmental sensitivity and land sustainability.

AMRUT Mission for 500 Towns

The Union Ministry of Housing and Urban Affairs (MoHUA) launched a sub-scheme on the formulation of GIS-based Master Plans under the AMRUT Mission for 500 towns in October 2015. This initiative followed the National Meet on promoting the use of space technology in governance and development, chaired by Prime Minister Narendra Modi.

According to the National Institute of Urban Affairs, the objective of the sub-scheme is to develop common digital geo-referenced base maps and land use maps in each AMRUT city using the Geographical Information System (GIS) to formulate Master Plans. The sub-scheme includes three major components: generation of base maps and thematic maps and urban database creation at a scale of 1:4000, formulation of Master Plan as per State Town & Country Planning Act on the GIS base map and sector-wise data analysis, and capacity building at three levels.

Rs 515 crore Budget Outlay

The implementing agency for the sub-scheme is the State Mission Director/ULBs. The training is provided at three levels—the administrators level, the planning level, and the operators and technicians level. The formulation of GIS-based Master/Development Plans for 500 AMRUT Cities is one of the significant reforms under AMRUT. It has been approved as a 100% centrally funded sub-scheme with a budget outlay of Rs. 515 crore.