

GIS-BASED URBAN PLANNING & MODERNISATION OF MASTER PLANS

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As per 12th Schedule of the Constitution of India, urban planning including preparation of master plans for cities are the function of Urban Local Bodies (ULBs)/ Urban Development Authorities. Government of India supplements the efforts of the States through schematic interventions/ advisories. The Government of India supplements the efforts of States and Union Territories (UTs) through schematic interventions/ advisories and guidelines.

The Ministry of Housing and Urban Affairs (MoHUA) has undertaken several initiatives to promote **GIS-based urban planning and preparation of digital Master Plans** for cities/ULBs. Under Atal Mission for Rejuvenation and Urban Transformation (AMRUT)/**AMRUT 2.0**, a dedicated sub-scheme on **GIS-based Master Planning** is being implemented with the objective of strengthening urban planning systems through creation of geospatial databases, digital base maps and GIS-enabled Master Plans for statutory planning and infrastructure development. 'Formulation of GIS based Master Plan for AMRUT Cities' has been approved as a 100% centrally funded sub-scheme under AMRUT and 'Formulation of GIS based Master Plans for Class-II towns with the population 50,000 - 99,999 has been launched under AMRUT 2.0.

The Ministry has also issued the **Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines**, which encourage the adoption of GIS-based planning tools and geospatial technologies for evidence-based urban planning and land management.

So far, under AMRUT, Sub-Scheme on Formulation of GIS-based Master Plans for AMRUT Cities, 461 AMRUT cities across 35 States/UTs have been onboarded, Final Geospatial Databases have been prepared for 437 cities, Draft GIS-based Master Plans have been prepared for 404 cities, out of which 292 Master Plans have been finalized. Further, so far, under AMRUT 2.0, Sub-Scheme on Formulation of GIS-based Master Plans for Class-II towns with the population 50,000 - 99,999, covers 875 towns, Draft Geospatial Databases have been prepared for 399 towns, out of which 100 have been finalized. Draft GIS-based Master Plans have been prepared for 136 towns, of which 93 have been finalized.

GIS-based planning enables integration and analysis of spatial information relating to existing land use, transport networks, water supply, sewerage, drainage, public amenities, environmentally sensitive areas and proposed infrastructure. However, enforcement of Master Plans, building bye-laws and action against unauthorised construction falls within the jurisdiction of the respective State Governments/ULBs and Urban Development Authorities. The impact on unauthorised construction consequently depends upon regular updating of GIS data, integration with online building-permission and enforcement systems, and action by the concerned State/ULBs.

The geo-databases created under the two Sub-Schemes have been integrated with the PM Gati Shakti National Master Plan (NMP), and the geo-databases for 343 towns have been uploaded on the PM Gati Shakti National Master Plan Portal, thereby enabling coordinated infrastructure planning across sectors.

The Ministry has undertaken several measures to expand GIS-based urban planning across Urban Local Bodies. The GIS-based Master Plan Sub-Schemes are being implemented in 461 Class-I cities and 875 Class-II towns across the country. Standardised geospatial databases are being created using state-of-the-art GIS technologies, with Very High Resolution Satellite (VHRS) imagery at 1:4000 scale under the AMRUT GIS Sub-Scheme in accordance with the MoHUA Design & Standards (May 2016), and both VHRS imagery at 1:4000 scale and Drone/UAV mapping at 1:1000 scale under the AMRUT 2.0 GIS Sub-Scheme in accordance with the MoHUA Design & Standards (October 2020) for the creation of GIS base layers for the preparation of Master Plans. The geospatial databases are being uploaded on the PM Gati Shakti National Master Plan Portal to promote data sharing and integrated planning. The Ministry also conducts regular review meetings with States/UTs and implementing agencies to monitor progress and resolve implementation issues. Capacity building is being undertaken through technical workshops, training programmes and handholding support for States/UTs and Urban Local Bodies; under the AMRUT GIS Sub-Scheme, about 2,968 officials have been trained through 79 capacity-building programmes, while under the AMRUT 2.0 GIS Sub-Scheme, about 2,648 officials have been trained through 34 capacity-building programmes. These initiatives are contributing to the development of a GIS-enabled digital planning ecosystem for the preparation, revision and implementation of Master Plans using modern geospatial technologies.

This information was given by the Minister of State for Housing & Urban Affairs, Shri Tokhan Sahu in a written reply in the Rajya Sabha today.

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