

Map-Based Information System (MIS)- Pune Municipal Corporation (1996–2000)

Between 1996 and 2000, Maharashtra Social Housing and Action League (MASHAL) implemented an innovative Map-Based Information System (MIS) project in partnership with Pune Municipal Corporation (PMC). The initiative was designed to strengthen urban governance and support decentralized planning and decision-making at both ward and city levels.

Following the implementation of the 74th Constitutional Amendment, Pune Municipal Corporation adopted a decentralized administrative structure with ward-level committees and enhanced responsibilities for local governance. At the same time, Pune city was expanding rapidly through the inclusion of fringe villages, increasing the municipal jurisdiction to approximately 243.96 square kilometres. This expansion created a growing need for reliable, spatially referenced information to support urban planning, infrastructure management, and service delivery.

Recognizing this need, MASHAL proposed the development of a comprehensive Map-Based Information System that would integrate information from various municipal departments and ward offices into a digitized geographic database. The proposal was approved by the Build-Operate-Transfer (BOT) Cell of Pune Municipal Corporation.

Under this initiative, municipal departments and ward offices provided administrative and infrastructure-related data, while MASHAL undertook the task of converting the information into digital maps and spatial databases. The project incorporated information from multiple departments, including:

City Planning

Water Supply

Drainage

Octroi

Gardens and Parks

Public Health

Establishment and Administration

Ward-Level Offices

The resulting Map-Based Information System enabled easier access to location-specific information, supported informed decision-making, and improved coordination between departments and administrative wards.

The project emerged as an important example of collaboration between local government, civil society organizations, and concerned citizens. It demonstrated how geospatial technologies could be effectively utilized to strengthen urban governance and improve municipal planning processes. The initiative served as a model for other cities seeking to adopt technology-driven approaches to urban management and decentralized governance.

Slum Mapping and GIS-Based Biometric Socio-Economic Baseline Survey - Pune, Pimpri-Chinchwad and Nashik (2004–2007)

Between 2004 and 2007, MASHAL implemented one of India's pioneering **GIS-Based Biometric Socio-Economic Baseline Survey and Slum Mapping Projects**, focusing on the systematic documentation and spatial mapping of urban informal settlements.

The project was first undertaken in the jurisdiction of Pimpri-Chinchwad Municipal Corporation (PCMC), where MASHAL successfully completed detailed mapping and socio-economic surveys of all **72 identified slum settlements**. The initiative combined Geographic Information System (GIS) technology, biometric data collection, and socio-economic surveys to create a comprehensive database for urban planning and poverty alleviation programmes.

The survey methodology integrated:

- GIS-based spatial mapping of slum settlements.
- Structure-level identification and mapping.
- Biometric profiling of beneficiaries.
- Household socio-economic surveys.
- Demographic and infrastructure assessments.
- Creation of digital databases for planning and analysis.

Building upon the success of the Pimpri-Chinchwad initiative, MASHAL subsequently extended similar survey and mapping activities to Pune Municipal Corporation and Nashik Municipal Corporation. The project generated detailed

settlement maps and socio-economic profiles that supported planning, infrastructure development, rehabilitation initiatives, and welfare programmes for urban poor communities.

The quality and accuracy of MASHAL's work received recognition from several institutions, including the **Yashwantrao Chavan Academy of Development Administration (YASHADA)**, which appreciated the project's contribution to urban planning and governance.

The survey outputs also proved valuable for other agencies engaged in urban GIS initiatives. The GIS consultant appointed by Nashik Municipal Corporation, Rolta India, successfully utilized MASHAL's slum maps and biometric socio-economic survey data for GIS integration and planning purposes. Similarly, the GIS initiatives undertaken by Pimpri-Chinchwad Municipal Corporation through the Science and Technology Park of Pune University benefited from the foundational spatial datasets generated through MASHAL's work.

Project Significance

The Slum Mapping and GIS-Based Biometric Socio-Economic Baseline Survey Project established MASHAL as a pioneer in applying GIS technology and evidence-based planning approaches for urban poverty reduction and slum development. The project created reliable and comprehensive databases that enabled municipal authorities and development agencies to better understand settlement conditions, identify service gaps, and formulate targeted interventions for marginalized urban communities.

These initiatives laid the foundation for several subsequent urban development, slum rehabilitation, GIS mapping, and community-based planning projects undertaken by MASHAL across Maharashtra.