Technological Advancement in Mapping of Heritage by Using GIS (Mapping of Heritage: Preservation for the Future)

Rummana Khan Sherwani
School of Architecture and planning
University of Management & Technology
Lahore, Pakistan
rumana.shirwani@umt.edu.pk

Abstract— **Lahore the historic city is expanding day by day. The urban expansion affected the heritage boundaries, results into shrinking and deteriorating the precious structures. The study aims to map the historic sites by looking into it the impacts of urban development through boundary delineation process. The pictorial journey elaborates how the precious heritage are being packed into haphazard containers of irregular boundaries, which vanished the beautiful impacts of Mughal gardens around the historic structures helplessly standing there to feel pity in them. In order to improve the effectiveness of preservation strategies the role of new digital technologies such as GIS has played their vital role in the building conservation strategies. This paper presents the results of a research developed as part of the research project conducted by the researcher in college of Art & Design, School of Architecture, University of the Punjab, Lahore, Pakistan. The aims of the study were to explore the implementation of GIS as a conservational specialist in the field of conservational management, to deal the various aspects facing while managing the Mughal sites widely spreading the study area in the 3-D environment and using the GIS analytical tools to determine the urban development impacts on historic buildings. This study fills the gap between the CAD and three dimensional environment and integrating GIS from scanned images of heritage sites or photogrammetric data to the library of parametric architectural objects of the historic buildings and represent in the form of overlay layers. A framework of modeling, 3D geometry, topology, semantic, appearance properties, efficient management and analysis of the relevant data to the heritage sites are used in the research.**

Key Words: **GIS, Heritage, Conservation, Urban Development**

IJSMS

This is an open access article under the CC BY-SA 4.0 license (https://creativecommons.org/licenses/by-sa/4.0/)