Upgrading Urban Plan Production Process Using GIS: Case Study: Production of Land Value Data Layer

Amir Mohammad TOOSI, Mahmoud Reza DELAVAR and Hani REZAYAN, Iran

Key words: Urban development plan, GIS, Land value data layer

SUMMARY

Nowadays there is a high rate of urban expansion which can not be ignored in proper urban management. Parallel to the urban expansion we are faced with an increase in urban problems, which will lead to complexities dealing with the urban management and planning processes. A city is a set of condensed and broad functionalities which requires handling of huge amount and diverse types of geospatial data. There are a number of spatial and aspatial urban data to be organized and used by urban planners and decision makers. Such decisions by urban planners highly influence the functionality of different components and physical structure of cities. Hence, urban planners and decision makers have to be more sensitive in the decision making process and by analyzing qualified data, make the best decisions. Urban planners will usually use urban development plans as a tool in their decision-making.

Urban development plan production needs a broad range of spatial and aspatial data to be used to upgrade the plans provided having an organized and optimum management of them. Considering the nature of data used in the urban plan productions and different sciences and technologies available for data management, geospatial information systems (GIS), can effectively be implemented for urban development plan production.

This paper intends to investigate principals of urban planning and urban development plan production process, in addition to evaluate the role of GIS in the process. Considering the importance of determination of different land uses required in a city in urban development plan production process and the impact of land value in this matter, production of land value data layer has been successfully undertaken in a district in Tehran using GIS and neural network algorithm.