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Geographic Information System (GIS) for Structural Typology of Buildings

Authors : Néstor Iván Rojas, Wilson Medina Sierra

Abstract : Managing spatial information is described through a Geographic Information System (GIS), for some neighborhoods in the city of Tunja, in relation to the structural typology of the buildings. The use of GIS provides tools that facilitate the capture, processing, analysis and dissemination of cartographic information, product quality evaluation of the classification of buildings. Allows the development of a method that unifies and standardizes processes information. The project aims to generate a geographic database that is useful to the entities responsible for planning and disaster prevention and care for vulnerable populations, also seeks to be a basis for seismic vulnerability studies that can contribute in a study of urban seismic microzonation. The methodology consists in capturing the plat including road naming, neighborhoods, blocks and buildings, to which were added as attributes, the product of the evaluation of each of the housing data such as the number of inhabitants and classification, year of construction, the predominant structural systems, the type of mezzanine board and state of favorability, the presence of geo-technical problems, the type of cover, the use of each building, damage to structural and non-structural elements . The above data are tabulated in a spreadsheet that includes cadastral number, through which are systematically included in the respective building that also has that attribute. Geo-referenced data base is obtained, from which graphical outputs are generated, producing thematic maps for each evaluated data, which clearly show the spatial distribution of the information obtained. Using GIS offers important advantages for spatial information management and facilitates consultation and update. Usefulness of the project is recognized as a basis for studies on issues of planning and prevention.

Keywords : microzonation, buildings, geo-processing, cadastral number
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