

Locating the Best Place for Earthquake Refugee Camps by OpenSource Software: A Case Study for Tehran, Iran

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Abstract : Iran is one of the regions which are most prone for earthquakes annually having a large number of financial and mortality and financial losses. Every year around the world, a large number of people lose their home and life due to natural disasters such as earthquakes. It is necessary to provide and specify some suitable places for settling the homeless people before the occurrence of the earthquake, one of the most important factors in crisis planning and management. Some of the natural disasters can be Modeling and shown by Geospatial Information System (GIS). By using GIS, it would be possible to manage the spatial data and reach several goals by making use of the analyses existing in it. GIS has a determining role in disaster management because it can determine the best places for temporary resettling after such a disaster. In this research QuantumGIS software is used that It is an OpenSource software so that easy to access codes and It is also free. In this system, AHP method is used as decision model and to locate the best places for temporary resettling, is done based on the related organizations criteria with their weights and buffers. Also in this research are made the buffer layers of criteria and change them to the raster layers. Later on, the raster layers are multiplied on desired weights then, the results are added together. Eventually, there are suitable places for resettling of victims by desired criteria by different colors with their optimum rate in QuantumGIS platform.

Keywords : disaster management, temporary resettlement, earthquake, QuantumGIS

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