عنوان مقاله:

Site Selection for Hazardous Waste Using Fuzzy Logic Combined With Analytic Hierarchy Process: A Case study in Nahavand, Iran

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خلاصه مقاله:

Hazardous wastes include various types of chemicals and other wastes generated from industrial and other sources. Because of the complexity of waste management systems, the selection of the appropriate solid waste landfill site requires consideration of multiple alternative solutions and evaluation criteria. This paper investigated the utilization of the fuzzy logic in combination with Analytic Hierarchy Process (AHP) technique by applying GIS and IDRISI programming for choosing hazardous waste landfill site in Nahavand, Iran. Based on the real conditions of the study area, we considered economic, biological and topographical factors (۱۲ criteria). The candidate sites were determined based on the criteria weights. The best location was determined via the fuzzy logic and the AHP methods. This study found that the combination of fuzzy logic and the AHP method was the best option for selecting a site for hazardous waste landfill. In the end, ۶ suitable areas were selected for a hazardous waste landfill in the city. This study verified that the combination of the AHP method with fuzzy logic using GIS in our project is a powerful tool for solid waste landfill site selection.

کلمات کلیدی:

Hazardous waste management, Nahavand, Landfill site selection

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