# GIS based landfill site selection for Faisalabad city

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Shortage of land for waste disposal and inappropriate landfill site is one of the biggest problems in urban areas. This problem could be solved by applying new technologies like Geographic Information Systems. Most of the landfill sites in Pakistan are selected randomly, and waste is burned in air which has impacts on nature and human lives. The main aim of this research is to determine a suitable landfill site with less impact on environment. In this research, a potential site for an appropriate landfill area for Faisalabad city was determined by using Geographic Information System (GIS) as a tool to aid the decision making process. To achieve this purpose, thematic layers, and different tabular data such as topography, land use, roads network, ground, and surface water, infrastructure, and urban areas were collected. Thematic maps were used to create the vulnerability map for the area and the results were compiled to the buffer zones around sensitive areas. Multi-criteria analysis (MDA) was used to measure the relative importance weighting for each criterion. Each map layers were formed with the aid of GIS and final suitability map was created by overlay analyses of each criterion map. According to obtained results, high and low suitable areas were determined in the study area.