ABSTRACT

With increased garbage output brought on by causes including population expansion, urbanisation, industrialization, and rural-urban migration, managing urban solid waste has become a significant concern for the majority of cities worldwide. The amount of garbage produced per person in India increased from 0.44 kg daily in 2001 to 0.5 kg daily in 2011, placing a burden on natural resources, infrastructure, and financial resources. Poor waste management has a negative impact on the environment and public health. Pune, one of the cities with the fastest pace of growth, produces 1,300–1,400 tonnes of waste every day, underscoring the urgent need for appropriate disposal facilities to save the environment.

The study that used a geographic technique to find appropriate locations for the Pune Municipal Corporation to deposit solid garbage. Thematic layers were created using satellite data and topographical maps, taking into account many elements such as land use, road network, water bodies, geology, population density, slope, and proximity to the airport. In order to create the final site suitability map, these parameters were investigated using multi-criteria analysis methodologies. Based on these analyses, locations were categorised as highly appropriate, moderately suitable, less suitable, or unsuitable for the disposal of garbage. According to the findings, 1.70 percent of the regions were excellent candidates for landfilling, 7.86 percent were somewhat acceptable, 80.92% were less suitable, and 9.52% were not. Ten possible locations were found based on the selection criteria, all of which were on the periphery of the area

Keywords-Geographic Information System (GIS); Multi-Criteria Analysis; Remote Sensing (RS); Urban Solid Waste.