

PREFACE:

Due to the dramatic rise in human population around the world, the solid waste management (SWM) issue has gained a lot of attention in the early 21st century. One of the most important urban districts in Southern India, the Bangalore Urban District, was the subject of this study. With a population of about 6,537,124, it is important to find additional landfill locations to manage such a significant garbage burden. The current work attempted to investigate the most suitable new dumping sites for the Bangalore Urban District, taking into account four main (topographical geomorphological, socio-economic, and hydrogeological) and their sub-parameters from the aforementioned four main data groups, in accordance with the recommendations of the Central Pollution Control Board. An analytical hierarchical process (AHP) and a weighted linear combination model were used to determine the ratings and weighting of the primary and sub-parameters. The findings show that of the studied region, 15.69 percent is unsuitable for construction of dumping sites, Less Suitable - 20.52%, Moderate Suitable- 28.41%, Highly Suitable- 26.20% and -9.15%.is in the extremely favorable zone.

A site-based verification report also suggests over 10 potential dump sites in the research area, six of which may be the best options for the Bangalore Urban District. The results of this suitability research can therefore be followed and used as a reference by the public sectors and city planners while taking into account all topographical, environmental, social, and hydrogeological factors.