

Preface

In today's world, the efficient management of solid waste has become a pressing concern for municipalities and urban areas. As the population grows and consumption patterns change, the need for effective waste disposal strategies becomes crucial. The Kalyan-Dombivali Municipal Corporation, situated in the Thane district of Maharashtra, faces the challenge of managing solid waste in an environmentally sustainable and socially acceptable manner. Geospatial technology offers valuable tools and insights to address this issue and make informed decisions regarding site suitability for solid waste dumping. This study aims to address these challenges by utilizing geospatial technology to assess the site suitability to solid waste dumping in the Kalyan-Dombivali Municipal Corporation. By integrating various spatial datasets, including land use, topography, soil characteristics, hydrology, and population density, geospatial analysis can provide valuable insights into identifying suitable locations for waste disposal sites.

Through this research, the goal is to propose alternative sites for solid waste dumping that consider factors such as distance from residential areas, environmental impacts, accessibility, and future growth projections. Geospatial technology enables the integration of multiple factors and the visualization of spatial patterns, aiding decision-makers in identifying suitable sites that minimize the potential adverse effects on the local population and the environment.