

**“ASSESSING THE ENVIRONMENTAL IMPACTS OF MEHMOOD  
BOOTI LANDFILL SITE IN LAHORE AND THE BARRIERS FOR ITS  
REDEVELOPEMNT INTO A PUBLIC PARK”**

By

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## **Abstract**

Solid waste dumpsites are a serious threat to the environment and human health. The present study provides a detail physio-chemical analysis of the groundwater and leachate, health impact assessment and estimation of the greenhouse gas emissions (particularly methane) emitted from the site. The results obtained through the physio-chemical analysis show that the groundwater and leachate samples showed high pollution concentration especially that of arsenic which exceeded the WHO standards. The health interviews inferred that the major problems faced by respondents were respiratory issues and water borne disease. The LandGEM 3.02 modelling software was used to estimate the landfill gas emission potential for the year 2016. The model estimated landfill gas emitted from the MBOD for the year 2016 was  $2.361E+03$ , methane emission was " $6.307E+02$ ", "carbon dioxide" accounts for " $1.730E+03$ " and "NOMCs" emission was " $4.066E+00$ ". The model showed "50%" of "methane" was emitted into the environment for over a period of "one" year of residence time in a dumping site. Moreover, the results obtained through the analysis can help support the current on-going project of the redevelopment of Mehmood Booti dump site into a Public Park. The study also identifies the potential barriers associated with the redevelopment of landfills and recommends possible measures to overcome them.