



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Applied Ecology and Environmental Research [Open Access](#)
Volume 17, Issue 4, 2019, Pages 8059-8067

Closed landfill heavy metal contamination distribution profiles at different soil depths and radiuses (Article)

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Abstract

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Various types of wastes are the main sources of heavy metal within a landfill system including metal waste components such as food cans, scrap metal, household hazardous waste and electronic waste such as batteries and old computers. The procedure that occurs inside the waste cells quickens that procedure for substantial metal draining from the waste component. This study comparing soil samples taken from four different sites in Selangor of closed non-sanitary (Sungai Kembong) and sanitary (Ampar Tenang, Air Hitam and Kubang Badak) landfills at different depths (0-30 cm, 30-60 cm and 60-90 cm) and radiuses (5-10 m, 10-15 m and 15-20 m), for ten heavy metals (Al, Cr, Mn, Fe, Co, Ni, Cu, Zn, Cd and Pb) to find the risk of heavy metal movement from the upper layer cell into the deeper layer. The data were analysed using ICP-MS (Perkin Elmer NexION 300X). Al and Fe displayed higher concentration at most of the sites with different volume of concentration at different depth and radius. Most of the sites consistently showed higher contamination in deeper soil than the upper layer of the soil. © 2019, ALÖKI Kft., Budapest, Hungary.

Author keywords

Inorganic pollutant Landfill Laterite soil Leachate Municipal solid waste Urban pollution

Funding details

Funding sponsor	Funding number	Acronym
International Islamic University Malaysia	PRIGS18-021-0021	IIUM
International Islamic University Malaysia		IIUM
Ministry of Higher Education, Malaysia		MOHE

Funding text

Acknowledgements. The research was supported by the Ministry of Higher Education Malaysia (MOHE) and International Islamic University Malaysia (IIUM) under research grant PRIGS18-021-0021.

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