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E3S Web of Conferences • *Open Access* • Volume 202 • 10 November 2020 • Article number 05001 • 5th International Conference on Energy, Environmental and Information System, ICENIS 2020 • Semarang • 12 August 2020 through 13 August 2020 • Code 164805

Document type

Conference Paper • *Gold Open Access* • *Green Open Access*

Source type

Conference Proceedings

ISSN

25550403

DOI

10.1051/e3sconf/202020205001

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Challenges and Opportunities in implementing leachate recirculation in Indonesia: Technical aspects

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Sanitary landfill is the most commonly used way to process municipal solid waste (MSW) in most countries including Indonesia. Sanitary landfill system produces leachate which contains a lot of inorganic pollutants, heavy metals, dissolved organic matter, and xenobiotics. Most leachate treatment plants in Indonesia consist of stabilization ponds, aeration ponds, anaerobic ponds, maturation ponds, and tertiary treatment such as wetlands. A small part of waste water treatment plant (WWTP) consists of equalization tanks, facultative bodies, aeration tanks, polishing pools, sedimentation tanks, chemical and biological processing tanks, mud ponds and sand filters. In fact, leachate was found at depths of 4, 9, 15, 20, 30 m in final processing site in the Gampong Jawa,

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Banda Aceh. Real conditions, some WWTPs do not function properly, buildings are damaged, and effluent quality exceeds the standard. Leachate needs to be managed properly, so as not to cause pollution to ground water and surface water. Although, there are many negative problems related to leachate management, but there are many opportunities that can be developed. These opportunities not only reduce their negative impacts but also help meet energy needs and improve environmental health in the long run. This review article aims to discuss the opportunities and challenges of leachate recirculation in Indonesia in terms of technical aspects. © The Authors, published by EDP Sciences, 2020.

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
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