

Establishing the Scientific Base for a Landfill Training & Research Centre in Indonesia | ESTReC

A research partnership between Indonesia and Austria

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Like in other emerging countries in tropical regions, municipal solid waste (MSW) disposal in Indonesia is currently transforming from open dumping to sanitary landfilling, largely driven by the new law on MSW management of 2008.

This new law requires local governments to close open dumps and construct new sanitary landfills. However a study by the project team showed that improper management of MSW disposal sites is still the prevailing practice due to limited financial resources, a lack of knowhow on landfill operation and insufficient stakeholder involvement.

Hence, knowledge on landfill operation under local conditions considering stakeholders' demands must be provided. The objective of the project at hand is to establish the scientific base for a research and training center on MSW landfilling in tropical climates, located in Banda Aceh (Indonesia). To do so, two sets of laboratory experiments are carried out towards defining optimal landfill operation strategies. The first set investigates different options of maintaining the landfill water household, while the second set focuses on greenhouse gas mitigation from landfills by methan oxidation cover layers.

The results of these experiments will be discussed with and disseminated to local stakeholders in order to improve the operation of landfills towards reducing environmental impacts and greenhouse gas emissions. The project is carried out by TU Wien, Syiah Kuala University, and the Sanitation and Park Department of Banda Aceh.

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