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## ADVANCED ENVIRONMENTAL IMPACT ASSESSMENT: QUANTITATIVE METHOD FOR RED MUD DISPOSAL FACILITIES

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### Abstract

The environmental impact assessment has gained a very important role in decision making processes regarding different projects, investments, actions and proposals. The environmental impact assessment is a systematic process which deals with the consequences of the future developments in advance. The methodology of the assessment includes several techniques. The quantitative methods focus on the evaluation of the impacts by assigning importance values to the environmental parameters and quality scores. A quantitative method devised previously was further developed and a protocol for the determination of the complex environment state index was devised. This method is adapted for a disposal facility and conclusions are made on the environmental impacts of the company.

The environmental impact assessment method devised was used for a disposal facility exhibiting high environmental risks. The objective of the paper is to test this method on a red mud disposal facility in Hungary in light of the legal stipulations and limit values to support the more efficient operation of the environmental management system of the company with identification of the significant environmental issues.

*Key words:* complex environmental index, environmental impact assessment, red mud

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