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Analysis of the Current Situation and Recommendation of Appropriate Waste Treatment Technologies in Bandung City, Indonesia

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Abstract

The present research was realised in Bandung, Indonesia and it was focused on waste services in the city and municipal solid waste management (MSWM) as a whole. Bandung's waste situation is not well documented and examined field as there is a small number of references. The study was based on questionnaire survey among Bandung's residents and interviews with both governmental and public sectors. The research was supported by an observation and photo documentation of the public MSWM services, transportation and collection services as well as temporary and final disposal sites. It was seen that the quality of MSWM is poor and improvement is in need. Despite the fact that Bandung city ranks high among Indonesian most economically developed cities, MSWM lacks investments in new and better waste treatment technologies. Moreover, there are no other plans besides constructing of further disposal sites such as unsanitary landfill. To avoid rejection or misunderstanding of alternative technologies' use, preferences and opinion of public are important to embrace in a planning of the new waste management. Questionnaire survey showed that the most preferred waste treatment method among respondents was recycling centre (40 % of respondents), which points the concern of people about MSWM situation in Bandung. Recommendation for MSWM is a complex system consisted of implemented variation of waste treatment technologies to fit the sustainable waste handling. Waste management can't be focused only on one specific technology and at least it should be inspired by the public attitude. Public knowledge and preferences of treatment methods are influenced by many factors such as cultural behaviour: accepted habits from past generations of waste burning or open dumping of waste (historically organic waste), and education: people are informed about different waste treatment methods, majority of respondents are aware of recycling as a suitable and sustainable method of waste handling. Multivariate probit model has shown that the acceptance of various technologies is interconnected, i.e. knowledge and acceptance of one technology lead to an acceptance of the other. The government could have the major impact on MSW handling considering the full support of the public in the target area.

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