



A FAST METHOD FOR THE ANALYSIS OF MUNICIPAL SOLID WASTE IN DEVELOPING COUNTRIES - CASE STUDY OF SERBIA

**Goran Vujić^{1*}, Nebojša Jovičić², Nebojša Redžić³, Gordana Jovičić², Bojan Batinić¹,
Nemanja Stanisavljević¹, Omran Altabt Abuhress¹**

¹University of Novi Sad, Faculty of Technical Sciences, Department of Environmental Engineering,
6 Trg Dositeja Obradovića, 21000 Novi Sad, Serbia

²University of Kragujevac, Faculty of Mechanical Engineering, 6 Sestre Janjić, 34000 Kragujevac, Serbia

³Serbian Environmental Protection Agency, 27a Ruže Jovanović, 11000 Belgrade, Serbia

Abstract

This study aimed to develop a methodology for fast analysis of municipal solid waste applicable in developing countries. For this purpose, a case-study of quantification and morphological municipal solid waste analysis in ten Serbian municipalities with diverse socio-economic status was conducted from July 2008 to May 2009. The methodology was based on collating quantitative and qualitative data directly from the field and represents the first reliable information on the municipal waste characteristics at the national level. Random household solid waste samples were collected for morphological analysis, done manually, whilst for quantitative evaluation, MSW was collected and weighed over a seven-day period in three different seasons. Data analysis showed that the quantity of generated waste varies from 0.28 kg capita⁻¹ day⁻¹ to 1.54 kg capita⁻¹ day⁻¹, following the average income of the municipality under study. By extrapolation, Serbia annually produces over two million tonnes of municipal waste. Morphological composition analysis shows that organic waste represent 49.76% of the total mass quantity. It is followed by plastics and cardboard with their sub-categories (12% and 8% respectively); glass (5.44%), paper (5.34%) etc. This methodology is applicable to any region with under-developed waste management systems and the results are valuable starting point for developing waste management strategies as well as for creating laws and regulations in this field.

Key words: developing country, methodology, MSW analysis

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* Author to whom all correspondence should be addressed: e-mail: goranvujić@uns.ac.rs; Phone: +381638085436; Fax: +38121455672