Uncertainty Analysis for Estimation of Landfill Emissions and Data Sensitivity for Input Variation

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Abstract

The results of the research and practical experience confirm that stabilisation of GHG concentrations will require tremendous effort. One of the sectors identified as significant source of methane is disposal of waste to solid waste disposal sites (SWDSs). Methane emissions from the solid waste disposal sites are the key source and concerning to the actual emission factors there are estimated with the high uncertainty level. The emission uncertainty calculation of landfills by using the more sophisticated Tier 2 - Monte Carlo method is evaluated in this article. For this reasons the software package, which works with probabilistic distribution and their combination, was developed. The results, sensitivity analysis and computational methodology of methane emissions from solid waste disposal sites are presented.

Key words:
Monte Carlo method, methane emissions, sensitivity analyses