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ECOLOGICAL EVALUATION OF AN OPTIMISED WASTE COLLECTION SYSTEM – CASE STUDY IN A GERMAN COMMUNITY

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Abstract

Waste management does not try to dispose waste anymore but is searching for the best solution to manage valuable and scarce resources and reduce the negative impact on the environment. Preoccupation in Germany with regard to optimization of waste recuperation and valorization increases and separate collection systems for different waste fractions are taken into consideration. Within this study a pilot project was set up and its results are presented below. The investigation evaluated the introduction in a small community in Germany of the source separation for wet fraction (including organic) and recyclables of similar material to packaging. Two scenarios were evaluated and compared. Scenario Status Quo represents the initial system and Scenario New stands for the modified system. The acceptance of the population was positive. The efficiency of saving raw materials and fossil fuels in the modified system proved to be higher than the one in the initial system. Savings of CO_2 emissions in Scenario New were significant higher than in Scenario Status Quo.

Key words: CO_2 emissions, energy recovery, ecological evaluation, organic waste, separate collection

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