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CARBON FOOTPRINT OF WASTE MANAGEMENT IN ROMANIA IN THE CONTEXT OF CIRCULAR ECONOMY

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Abstract

The shift from a linear economy to the circular economy emerges as a solution to save natural resources and to decrease the effects of the climate change on the environment. Understanding the role of the waste as secondary resource and recovering it can reduce the consumption of non renewable primary resources, the consumption of energy in the production processes and can also lower the CO_2 emissions. The study aims at evaluating the environmental impact when applying the principles of the circular economy in the solid waste management and the possible savings in terms of global warming potential (CO_2 –eq.) in Romania. The evaluation is done with help of the LCA (Life Cycle Assessment) approach on a case study in Timisoara. The study demonstrates that savings of over 40.000 t CO2 -eq. per year would be possible in a city with 300.000 inhabitants. The concept can be applied (with appropriate adjustments) also in other cities from Romania or from other countries, making possible the implementation of circular economy.

Key words: circular economy, CO_2 emission, LCA, secondary resource, waste management

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