COMPARISON OF ENVIRONMENTAL IMPACT OF WASTE TECHNOLOGY WITH ENERGY RECOVERY: CASE STUDY CITY OF NIŠ

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Waste treatment technologies have different impact to the environment. Before design and implementation of different waste treatment technologies in waste management system, the sustainability assessment must be done, but specially must be considered their impact on the environment. Environmental impact should be considered throughout the life cycle of waste, i.e. from the moment of waste generation to final treatment and disposal. In this paper the life cycle assessment was applied to compare the environmental impact of waste technology with energy recovery: incineration and anaerobic digestion, in a case study City of Niš. Emissions in air, water and soil are calculated and six impact categories: abiotic depletion (ADP), global warming (GWP), human toxicity (HTP), photochemical oxidation (POCP), acidification (AP), and eutrophication (EP) were evaluated. The obtained results show that the anaerobic digestion with biogas utilization for energy generation has minimum negative environmental impact in the case study City of Niš.