

## **Evaluating waste incineration as treatment and energy recovery method from an environmental point of view**

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### **Abstract**

During the last two decades, several research groups as well as consultants have been analysing the environmental impacts of incineration in comparison to other waste treatment options. Methods and models for describing these systems have been developed. Systems studies on local, regional and national level have been performed using a wide range of different modelling approaches. The aim of this paper is to describe the environmental performance of incineration with energy recovery in Europe in comparison with other options for waste treatment/recovery. This includes identifying key factors that largely affect the outcome from environmental systems studies where such comparisons are made. The paper focuses on mixed solid waste and on waste fractions where there has been a lot of controversy whether the material should be recycled, incinerated or treated biologically (e.g. paper, plastics, compostable material). The paper is based on a meta-study, where the above research field is mapped out in order to gather relevant systems studies made on local, regional and national levels in Europe. By thoroughly examining these studies, conclusions are drawn regarding the environmental performance of incineration with energy recovery and regarding key factors affecting the environmental results.