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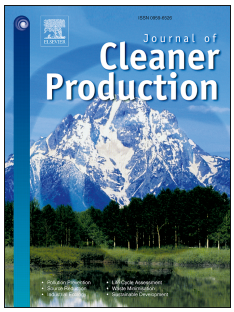

A roadmap towards integrated assessment and participatory strategies in support of decision-making processes. The case of urban waste management

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A Roadmap towards Integrated Assessment and Participatory Strategies in Support of Decision-Making Processes.

The Case of Urban Waste Management.

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Abstract

This study outlines the work carried out on Naples (Italy) as an example of a solid waste management case study that is used to test and validate a much broader strategy, namely the need for appropriate participatory and scientifically sound decision making processes summarised in a Roadmap. The aim of the Roadmap is to support appropriate decision, based on good stakeholder consultancy. The aim being to lead to better and more integrated waste management solutions, which help EU countries to fulfil the legislative requirements at the national level and also lead to the prevention of acceptance conflicts at the local level.

Results arise from research carried out in the frame of an European project, where the viability of a demo plant to produce biomass fuel is evaluated in terms of technical feasibility, socio-economic benefits and environmental care to provide better decisions for appropriate waste management process. The innovative waste management technology produces a high quality biogenic refuse recovered biomass fuel (RRBF) from the MSW. The city of Naples, characterized by heated conflicts around waste management policies, was chosen as a case study to assess the application of both the technology and the decision-making roadmap. Further research work will then be made using Naples a reference case study for additional cross-cultural assessments in other EU countries.

Identification and linkages in a 9-step tool kit has been made. The first analyses of stakeholder responses indicate that the respondents trust the potentially good performance of the proposed new technology however further tool kit assessment steps must be adopted to evaluate responses and final decision taken. A large number of stakeholders were in favor of the new presented technology, and consider that this solution is the most likely to solve the waste management in Naples (69% replied “yes”, 29% “maybe”, and 2% are not convinced at all).

Providing a suitable, well-tailored technical solution is of paramount importance as a the starting point, but other factors/ assessment tools need to be used in order to really solve the problems of meeting EU requirements on landfill if we are to present sustainable solutions that may be accepted by the stakeholders.

Keywords: Sustainable transition, solid waste management, biomass fuels, participatory decision-making, stakeholder consultancy, and sustainability science.

1. INTRODUCTION

1.1 The increasing complexity of waste management

Waste continues to be a significant problem in the 21st century, but the problem is not new. Societies create waste and societies have to deal with it over time and have to make sometimes very conflicting decisions. Waste, and its management, is also about demand for resources, development, environmental concern, personal identity, human behavior, finance, global market supply and demands, and much more. Therefore complexity of waste management requires a complex approach built up using a combination of tools that each provide added value to the understanding, evaluation and making of final decisions. The increasing complexity of waste management systems driven by increasingly detailed legislation calls for a deeper understanding of the inter-play of economic, environmental, technical