



Contents lists available at ScienceDirect

Waste Management

journal homepage: www.elsevier.com/locate/wasman

Siting landfills and incinerators in areas of historic unpopularity: Surveying the views of the next generation

Giovanni De Feo ^{a,*}, Ian D. Williams ^b

^a Department of Industrial Engineering, University of Salerno, Via Giovanni Paolo II 132, 84084 Fisciano (SA), Italy

^b Waste Management Research Group, Faculty of Engineering and the Environment, University of Southampton, Highfield, Southampton SO17 1BJ, UK

ARTICLE INFO

Article history:

Received 6 May 2013

Accepted 23 August 2013

Available online xxxx

Keywords:

Incinerator

Landfill

Public opinion

Siting

University

Waste management

ABSTRACT

The Campania Region in Southern Italy has suffered many problems with municipal solid waste management since the mid-1990s, leading to significant public disturbances and subsequent media coverage. This paper reports on the current views and knowledge of young people (university students) in this region about waste management operations and facilities, specifically the siting of landfills and incinerators. By means of a structured questionnaire, opinion and knowledge were systematically examined by degree type and course year. The study took place in 2011 at the University of Salerno campus. A sample of 900 students, comprising 100 students for each of the nine considered faculties, and 20 students for every academic course year, was randomly selected. Only about a quarter of respondents were not opposed to the siting of a landfill or an incinerator in their city. This clearly highlights that historic opposition to the construction of waste facilities is difficult to overcome and that distrust for previous poor management or indiscretions is long-lived and transcends generations. Students from technical faculties expressed the most reasonable opinion; opinion and knowledge were statistically related (Chi-square test, $p < 0.05$) to the attended faculty, and the knowledge grew linearly with progression through the university. This suggests that awareness of waste management practices develops with experience and understanding of environmental issues. There is general acceptance that many stakeholders – technicians, politicians and citizens – all have to be part of the decision process when siting a new waste management facility. The opinions of the young respondents were significantly influenced by their level of environmental knowledge.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

The Campania Region in Southern Italy has suffered many problems with municipal solid waste management since the mid-1990s, leading to significant public disturbances and subsequent media coverage (De Feo and De Gisi, 2010; De Feo et al., 2013). De Feo et al. (2013) showed that although the 18–30 age group had the lowest knowledge of waste management issues in the Campania region in 2003, knowledge and awareness had significantly increased by 2009, mainly due to the very effective media campaigns.

A number of studies have shown that attitude and/or knowledge about environmental issues affects behaviour (Guagnano et al., 1995; Chan, 1998; Corraliza and Berenguer, 2000; Steedman, 2005; Gunton and Williams, 2007). These studies may indicate that greater awareness and/or understanding of environmental issues leads to a greater level of action in the form of pro-environmental behaviour. However, there has been limited research on the atti-

tudes/behaviour of young adults in terms of waste management since local authorities and research studies often focus their attention on more permanent residents (Williams and Gunton, 2007).

Young adults such as university students make good representatives of the views of the next generation as they are often new to their University town or city, and thus have not established prior habits or a method of living in this place. It can therefore be considered an appropriate time to establish baseline information on values, attitudes and behaviour and to use this to develop specific approaches to awareness raising and targeted education (Williams and Gunton, 2007). In addition, universities have a specific importance in promoting sustainable development (Mason et al., 2003). Universities assume a special societal responsibility, in that they educate the future decision-makers of society: they bear profound responsibilities to increase the awareness, knowledge, technologies and tools to create an environmentally sustainable future (Armijo de Vega et al., 2003).

The concept of sustainability in Higher Education (HE) started with the Stockholm Declaration, which was the first declaration to recognize the interdependency between humanity and the environment (UNESCO, 1972). Over the past four decades, several envi-

* Corresponding author. Tel.: +39 089 964113; fax: +39 089 968738.

E-mail address: g.defeo@unisa.it (G.D. Feo).

Table 1
Face-to-face questionnaire administered to 900 students (100 for each faculty) of the University of Salerno in 2010 (the questions are directly translated from Italian; only the answers to Q₈ are adapted from Italian).

Aspect	No.	Question	Choices for each question
Opinion	Q ₁	What do the components separated from municipal solid waste represent to you?	Discards to dispose of in landfill; Materials to recycle; Waste to incinerate; I do not know
	Q ₂	Which of these factors leads us to more readily give away a good with it subsequently becoming a waste?	Low educational level; Lack of environmental awareness; High income
	Q ₃	Would you agree to a landfill being constructed in your city?	I do not know. Yes; No; Yes, if my city is the best among alternatives; I do not know.
	Q ₄	Would you agree to an incinerator being constructed in your city?	Yes; No; Yes, if my city is the best among alternatives; I do not know
	Q ₅	Who among these actors have to be part of the siting process of a landfill or an incinerator?	Only technicians; Both technicians and politicians; Technicians, politicians and citizens
Knowledge	Q ₆	What is the MSW component with the highest weight percentage?	Plastic; Glass; Putrescibles; I do not know
	Q ₇	What is the average daily production of MSW per capita?	150 g; 1.5 kg; 15 kg; I do not know
	Q ₈	What is compost?	A container for MSW collection; A particular chemical compound; A kind of fertilizer; I do not know
	Q ₉	What does RDF mean?	Recycling domestic factory; Refuse derived fuel; Reuse domestic facility; I do not know
	Q ₁₀	Which of these materials can be indefinitely recycled?	Glass; Aluminium; Paper; I do not know

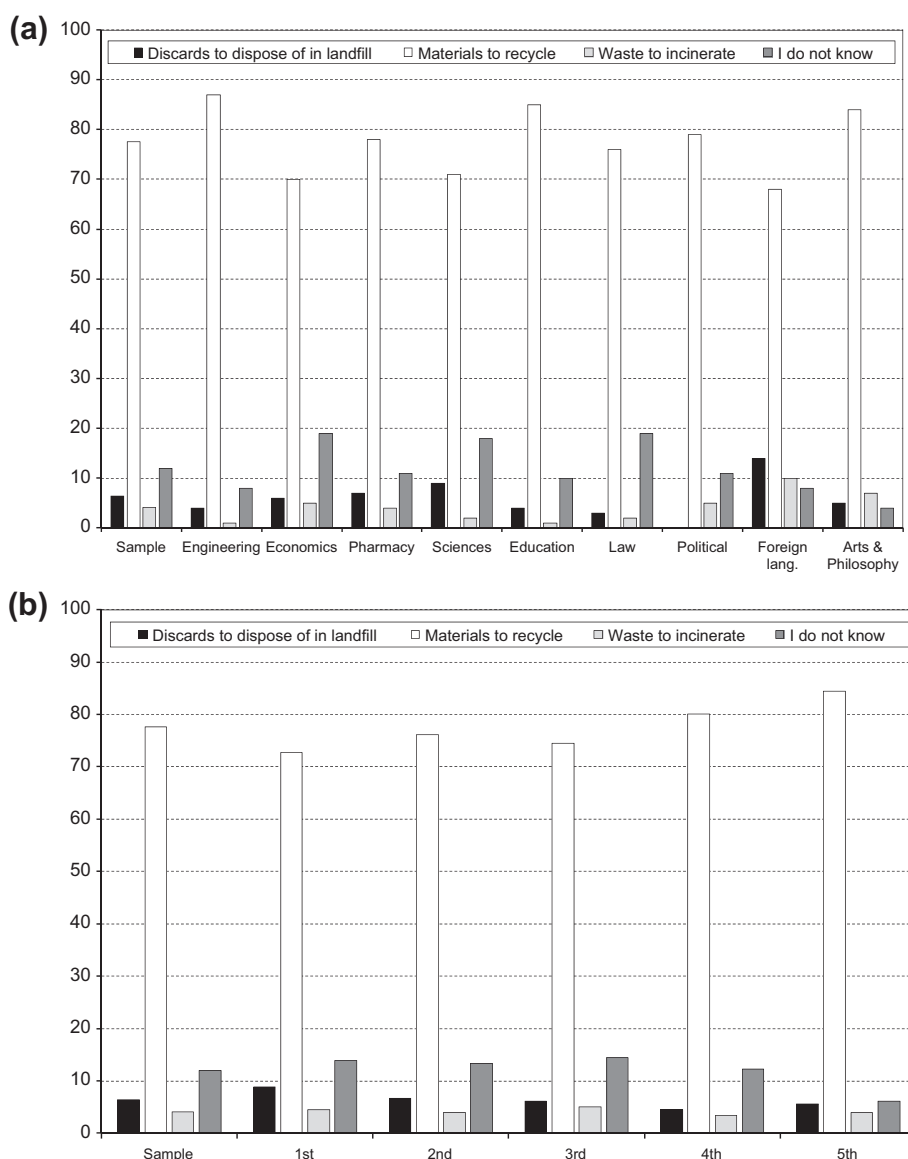


Fig. 1. Percentage answers to question Q₁ ("What do the components separated from municipal solid waste represent to you?"): (a) in terms of faculty (Chi-square test = $1.75 \times 10^{-4} < 0.01$); (b) in terms of academic course year (Chi-square test = $3.88 \times 10^{-1} > 0.05$).

Download English Version:

<https://daneshyari.com/en/article/6355289>

Download Persian Version:

<https://daneshyari.com/article/6355289>

[Daneshyari.com](https://daneshyari.com)