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Evolution of the electronic waste management system in Spain

Vastly increasing amounts of waste electrical and electronic equipment (WEEE) are being produced in Europe. Researchers have taken an in-depth look at how Spain has dealt with its electronic waste over recent years, and provide some guidance to other countries developing their own management practices.

The collection and treatment of electronic waste in Europe is of growing importance. In 2015, the amount of WEEE could be as high as 12 million tonnes, the equivalent of 14kg per person per year.

This study observed the responses of producers, governments and recycling plants in Spain to legislative changes; from the first draft of the European WEEE Directive[1] in 1998, to its full implementation in 2003. It suggests that Spain's WEEE management was initially weak, but has been improved by legislation. Its aim was to identify the most important factors in the development of waste management practices in Spain; from this, the researchers hoped to provide advice to EU countries trying to meet the requirements of the Directive. To achieve this, it analysed data gathered from experts in the fields of manufacturing, recycling, metal management, research, WEEE management and politics who attended the Technical Conference on Electrical and Electronic Equipment Recycling between 2000 to 2009. In addition using data from reports issued by public authorities, websites and annual reports of integrated management systems (IMS) responsible for collecting and disposing waste.

Four distinct stages in the development of WEEE management were identified: 1.) observation (2001), in which agents observed the legislative process and developed pilot projects, such as the collection of mobile phones in Madrid in order to prepare for the Directive; 2.) development (2002-2004), where the majority of the IMS emerged, pilot projects for the collection of waste were initiated, and new recycling plants were built; 3.) consolidation (2005-2009), where the infrastructure required to meet WEEE recycling needs reached virtual completion; and 4.) assessment and control (2010), where the problems in the recycling infrastructure were identified, including the presence of too many unregistered manufacturers.

The results of the study revealed large differences between Spain's 17 autonomous communities in their efforts to undertake pilot projects. For example, Catalonia and the Basque Country were pioneers in waste management and Andalusia was the first to draft a royal decree, whereas others waited for the Directive to be in place before making any progress. The study considers these pilot projects a key strength of WEEE management's development in Spain; the local authorities were able to gather information needed to estimate costs and the likely amounts of waste to collect. Without the pilots, the systems would have been delayed and less efficient.

A key weakness of Spain's WEEE system identified by the study is the high number of unregistered manufacturers. However, the 'Producers' Registration Observatory' has been created to help prevent unregistered manufacturers of electronics benefitting from the work of registered manufacturers, i.e. 'free-riding'.

Other assets of the system include computer and Internet tools developed to transfer information between agents about the amounts of waste collected, treated and transported; and recycling congresses and working groups were set up to encourage dialogue amongst stakeholders.

The researchers question whether it may be more cost effective to adapt existing agents, such as waste managers, than to create new infrastructure for waste management. Starting new management systems takes significant time and it is suggested that solutions should be developed well in advance, particularly in light of possible administrative delays.

1. See: http://ec.europa.eu/environment//waste/weee/index_en.htm

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