

# Environmental management systems and the smaller enterprise

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## Abstract

Small and medium-sized enterprises (SMEs) make up the vast majority of businesses in Europe. These enterprises are vitally important for a healthy dynamic market economy. However, the environmental impact of small firms is not known either at national or regional levels. Voluntary self-regulatory initiatives such as the eco-management and audit scheme (EMAS) and the international environmental management system (EMS) standard ISO 14001 seek to provide all businesses with the means to develop systematic approaches to improve environmental performance. All purport to be relevant and applicable to small and medium-sized firms; however, their uptake by SMEs has been patchy at best and down right miserable at worst. This paper sheds some light on the barriers, opportunities and drivers for EMS adoption by the SME sector. Drawing on original research investigating EMAS implementation across the European Union and a major detailed review of 33 studies which explore the sector's use of EMS, this paper estimates the number of SMEs registered to EMAS and ISO 14001 and identifies a range of issues which influence the adoption of formalised EMS. Despite these problems, the paper suggests SMEs do find real benefits from adopting EMS.

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## 1. Introduction

Small firms make up the vast majority of businesses in Europe and the UK. In 1996, around 90% of European businesses were classified as small and medium-sized enterprises (SMEs)<sup>1</sup> [7] and in 1998 there were 3.7 million businesses in the UK, of which 99% were small businesses employing less than 50 people and only 25 000 were medium sized employing between 50 and 249 people [16]. The environmental impact of small firms is not known either at national or regional levels. It is often and widely quoted that, as a sector, SMEs<sup>2</sup> could contribute up to 70% of all industrial pollution [21].

The heterogeneous nature of the small and medium-sized firms sector makes it difficult to generalise about the environmental impacts and strategies of the sector. The environmental issues facing a sole trader or partnership will have little similarity to those of a firm employing 249 people; and yet they are lumped together in the SME sector. The lack of knowledge about the impacts of the sector and the recognition of its importance in helping to ensure a healthy economy has stimulated a growing interest in the sector. In the EU engaging SMEs in environmental improvements is viewed as a vital part of the drive towards sustainable development [8].

As part of a broader strategy to provide businesses with tools to more effectively manage their environmental impacts and contribute to sustainable development, the EU developed the eco-management and audit scheme (EMAS) regulation [9] on the back of the British environmental management system (EMS) standard BS 7750 [4]. BS 7750 generated interest in EMS in the international standards world, this standard has been superseded by the international EMS standard ISO 14001 [5]. The voluntary Regulation and the EMS standards sought to provide all businesses with the means to develop sys-

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<sup>1</sup> Employing less than 250 people.

<sup>2</sup> The EU defines SMEs based on employee numbers, turnover or balance sheet total and ownership. SME has less than 250 employees and either an annual turnover not exceeding 40 million ECU, or an annual balance sheet total not exceeding 27 million ECU, and is an independent enterprise, i.e. 25% or more of the capital or voting rights cannot be owned by larger enterprise/s [10].

tematic approaches to environmental performance. These initiatives complemented normative regulation. All purport to be relevant and applicable to small and medium-sized firms.

This paper presents the findings of two studies, which sought to investigate EMAS and the EMS standards in the SME sector. The first study was a pan-EU assessment of the implementation of EMAS undertaken for the Commission of the European Communities (CEC) [24]. The purpose of the study was to investigate the current implementation practices of EMAS in the different member states. It provided data on EMAS registered sites, their use of EMS standards, EMAS implementation periods, the support needed to participate in the scheme and the benefits of participation. The second study was a review study that evaluated 33 different studies that investigated the practical implementation experience of SMEs with EMSs and the attitudes of smaller firms to the environment [34]. The aim of the evaluation was to identify the barriers, opportunities and drivers for smaller firms in the adoption of EMS.

## 2. Methods employed

The pan-EU EMAS survey employed a five part confidential questionnaire: 'Questionnaire on the Implementation Status of EMAS', in a telephone survey, between October 1997 and February 1998, to gather in-depth objective information from four populations of respondents in the regulation, i.e. the competent bodies or administrative individuals, accreditation bodies, accredited environmental verifiers (AEVs), and EMAS registered sites. The EMAS Help Desk provided the contact details for each group (<http://www.emas.lu/>).

The large numbers of EMAS registered sites (1211 sites in 12 member states) meant that interviewees were randomly selected. Random selection criteria were developed to select a representative 10% sample for those member states where large numbers of EMAS registered sites existed, i.e. in Austria, Denmark, Finland, France, Germany, the Netherlands, Sweden and the UK.

The review study analysed 33 different studies at a UK and EU level dating from 1994 to 1999. Study reports were identified from academic and government sources; support organisations, e.g. green business clubs; expert individuals, e.g. members of the British Standards Institution (BSI) Small Firms Panel; non-governmental organisations (NGOs); consultants and companies. Each report was read and analysed and relevant details entered into four standardised tables on internal and external barriers, benefits and disbenefits, and stakeholder pressures, and drivers.

There is a scarcity of quality studies into SMEs and the adoption of formal EMSs. Not all of the selected

studies examine the formal EMSs of EMAS and ISO 14001 (BS 7750, is included as some studies prior to and around 1996, refer to the British EMS standard [4]). Some studies look at SME environmental awareness and attitudes towards the environmental issues they face and provide an insight into the reasons why EMSs are not adopted.

## 3. EMAS and ISO 14001

Improving the environmental performance of SMEs is important, irrespective of their total as yet unknown impact, because they are a vital part of the enterprise society that collectively can contribute to sustainable development. One means of bringing about improved environmental performance is through the adoption of EMSs. The two formal EMSs in the market place are EMAS and ISO 14001. Common to both initiatives is the need for an organisation to implement a number of management system stages to formalise the organisations policies, procedures and practices that control environmental aspects. EMAS has the added requirement of an environmental statement, which publicly reports the environmental performance of a site. Both purport to be applicable to both large and small firms. ISO 14001 was reportedly written with the chip shop owner in mind and as a safeguard of its relevance to SMEs a working group was convened at the International Organisation for Standardisation (ISO) to investigate this issue [15]. The EMAS Regulation is less certain of the unaided participation of SMEs in EMAS and suggests supporting measures should be introduced by Member States to assist smaller companies registration to the scheme.

### 3.1. EMAS and ISO 14001 registrations as a percentage of UK businesses

The official UK and EU lists of EMAS registered sites are the most reliable source of data on registration numbers. The UK competent body asks companies registering sites to EMAS to supply enterprise size data. The estimation of SMEs registered to EMAS in UK is 24% of those registered on the 15 September 1999 were SMEs. The EU list holds no enterprise size data. Based on the pan-EU EMAS study that ascertained site sized of a randomly selected number of sites it was estimated 18% of registered sites in February 1998 were SMEs [24].

There are no official UK or EU lists of ISO 14001 certified organisations. Reliable commercial, but unofficial sources of UK ISO 14001 numbers can be found, e.g. the EGA Environ Environmental Consultancy list. However, size data of enterprises is not collected. Estimating SME registration to ISO 14001 is therefore dif-

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