



## ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS) - CONTROL INSTRUMENT OF THE IMPACT OF THE ORGANIZATION ACTIVITIES ON THE ENVIRONMENT

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### **Abstract:**

*Due to the ability to create and use technology, the human being has found various ways to transform the resources of the Earth in all sorts of new materials, equipment and energy sources. At least since the last industrial revolution until now, each generation has added more technology to the received legacy, but at the same time, left the planet in a far more degraded state than the inherited condition.*

*Within these changes, small and medium enterprises (SME) in their capacity as pillars of the economic development of a nation, have been compelled to change their previous strategies. Implementing an Environmental Management Systems (EMS) can be seen as the only way to connect the activities of the organization to the environmental requirements, in a context in which the orientation of the demand towards environmental markets is becoming increasingly apparent.*

**Key words:** *small and medium sized enterprises (SMEs), environmental management systems(EMS), resource efficiency*

### **1. Introduction**

As outlined in numerous works, the role of small and medium enterprises – SMEs-in the context of the economic development of a country has been compared to the spinal column in supporting the entire body.

Recent data published in various European studies reveal that in late 2013, at the level of EU28, approximately 21.2 million SMEs are recorded, representing 99.8% of all enterprises in the private sector, accumulating 66.8% of the total employment personnel and approx. 57.9% of the total added value generated by the non-financial sector.

According to the European legislation in force, to which Romania has also aligned, SMEs are defined according to the following criteria:

**Table 1: Definition of SMEs**

<b>Company category</b>	<b>Employees</b>	<b>Turnover</b>	<b>or</b>	<b>Balance sheet total</b>
Micro	<10	<€ 2 million		<€ 2 million
Small	<50	<€ 10 million		<€ 10 million
Medium	<250	<€ 50 million		<€ 43 million

Source: [www.ec.europa.eu](http://www.ec.europa.eu), A partial and fragile recovery, Annual report on European SMEs 2013/2014

There can be no doubt about the fact that lately, SMEs have gone through a difficult period economically speaking. Although in 2013, the added value generated by SMEs increased by 1.1%, we cannot ignore the fact that this positive trend is shaded, on one side, by the fact that, compared to 2012 (1.5%) and 2011 (4.2%), the increase is lower and, on the other hand, we should emphasize that in 2013 both the total number of SMEs (-0.9%) and the number of employees (-0,5%) has decreased ([www.ec.europa.eu](http://www.ec.europa.eu)).

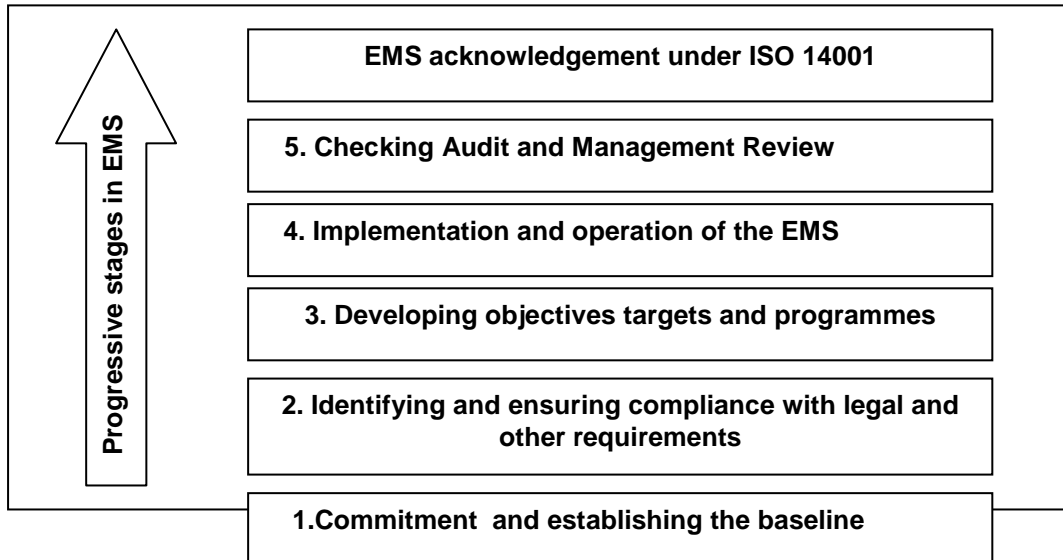
## **2. The need to implement EMS by small and medium enterprises (SMEs)**

It is important to note that although, as highlighted above, there is a close link between the development of SMEs and macroeconomic development, they cannot be equal. Thus, as most SMEs are operating in sectors serving the domestic demand, and are generally not export-oriented, they did not benefit directly from the increased demand on the foreign market, a growth which was the key to macroeconomic development in 2008-2013. Therefore, a sustained effort at the level of the EU is needed to support SMEs and there is also a need to refocus their activities towards a sustainable development. In this context is subscribed the support of the European Commission and of the National Governments under the name Small Business Act (SBA). The purpose of SBA is to support entrepreneurial activity across Europe by simplifying environmental policy and legislation, thereby by removing some of the barriers to the development of SMEs. As steps in place, it should be noted that following its adoption in 2008, the SBA was reviewed in February 2011, and later, in the year 2014, a public consultation thereof was carried out, in order to obtain a feedback that would contribute to the rehabilitation of SBA according to the requirements of the entrepreneurs.

Monitoring the implementation of SBA in the member states is done via the European Commission SME Performance Review, consisting in the publication of both an annual report on the activities of SMEs in Europe, as well as in the publication of data on the implementation of the SBA in each member country the European Union.

An Environment Management System (EMS) is a management tool through which an organization can control the impact of its own activities on the environment, through a structured approach to planning and implementing the measures to protect the environment (Figure 1).

**Figure1 Steps in planning and implementing EMS at the level of the organization**



Source: IEMA (Institute of Environmental Management & Assessment),  
<http://ems.iema.net>

An EMS monitors the environmental performance of the organization in analogy with the financial management system that refers to the financial performance of the company.

In order to develop and implement an EMS, an organization must know the impact of its activities on the environment, set targets aimed at reducing it and develop an entire strategy in order to achieve these objectives.

As apparent from the figure above, the key factor in the successful implementation of EMS is considered the organizational commitment. The other components to be considered in planning and implementing EMS are (<http://ems.iema.net>):

- Identify the environmental impact of the organization,
- Setting objectives and targets to be achieved by operating the EMS,
- Consultation and communication with internal and external audiences before and after the implementation of the EMS,
- Reviewing operational procedures to ensure their compatibility with the organization's environmental objectives,
- Fundamenting the Environmental Management Plan,
- Defining tasks and responsibilities in the training of employees in order to successfully implement the EMS,

- Carrying out the internal audit and monitoring the results obtained while implementing the EMS across the organization,
- Continuous improvement of EMS by monitoring the way in which the established procedures support the organization in achieving its goals.

### **3. European analysis of the extent to which small and medium enterprises (SMEs) know and implement EMS in order to increase resource efficiency and entry on green markets**

As mentioned in the introduction of this paper, the European Commission aims to encourage the development of small and medium enterprises (SMEs) by implementing the Small Business Act for Europe (SBA). This initiative aims to support SMEs in order to achieve a sound management of the impact of the organization's activities on the environment and the efficient use of resources.

In this context, in December 2013, the European Commission published FlashEurobarometer no.381, a study conducted at the level of EU28, in which the central objectives of the research sought to examine the extent to which the activity of SMEs is aligned with the requirements of the environmental legislation in force, the barriers in the way of increasing the efficiency of using the resources and highlighting the initiatives of the entrepreneurs aiming to enter green markets.

Thus, the analysis of the published secondary data reveals that most SMEs (51%) working at European level are in line with the environmental requirements imposed by the legislation in force, while 22% of them forecast to do more in the near future towards protecting the environment. In the year 2013, 19% of the European entrepreneurs declared their involvement in environmental protection goes beyond the legal requirements, while a percentage of 11% stressed that the issue of environmental protection is a priority for their organization; 8% said they do more than the environmental requirements imposed by law, without this being one of the objectives of their activity.

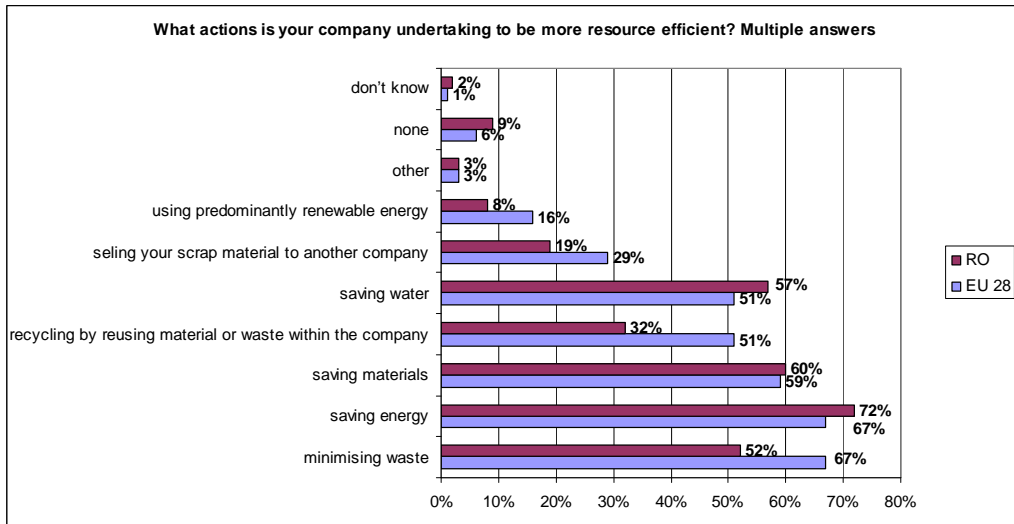
In what regards the actions carried out by SMEs in order to improve the efficient use of resources, we can notice the fact that the three main directions indicated by the European entrepreneurs were aimed at reducing waste, saving energy and materials used in the production process (Figure 2 - Actions undertaken by SMEs for a more efficient use of resources).

Regarding the effects on production costs after the implementation of resource efficiency measures recorded in the last two years, 42% of SMEs representatives stated that the overall production costs have decreased, while 23% said they increased; a 25% stated that resource efficiency measures had no impact on reducing the total cost of production. (Figure 3 – The impact registered by SMEs on total production costs in the last 2 years by applying resource efficiency measures)

In what concerns the awareness and use of EMS as a tool to improve the environmental performance of the organization, it may be noted that in Europe, 67% of the entrepreneurs do not use an environmental management system (EMS), while

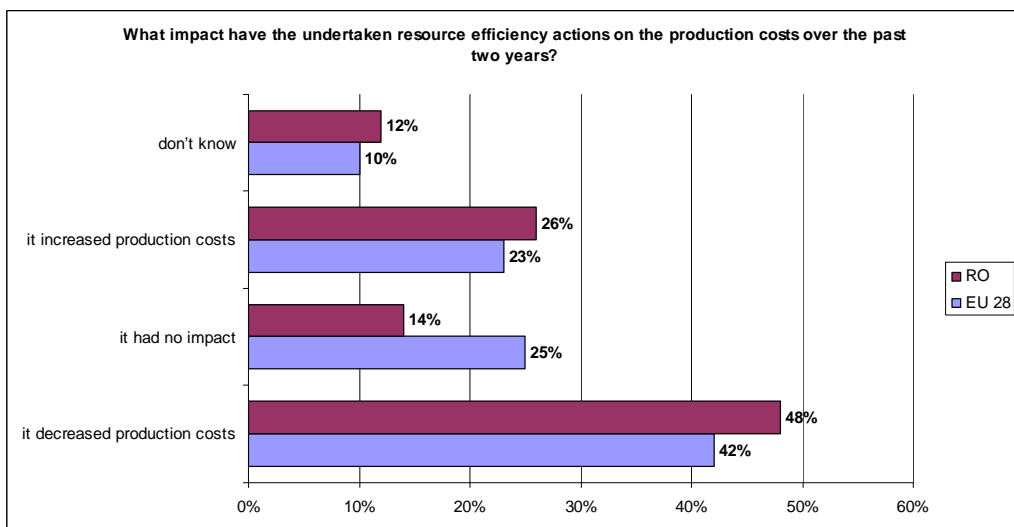
among those who use it, 11% reported using a national or regional environmental management system, while 9% responded that they are aligned to the requirements of ISO 14001 (Figure 4 - The degree of implementation of an EMS by entrepreneurs in SMEs activity)

**Figure 2 Actions undertaken by SMEs for a more efficient use of resources**



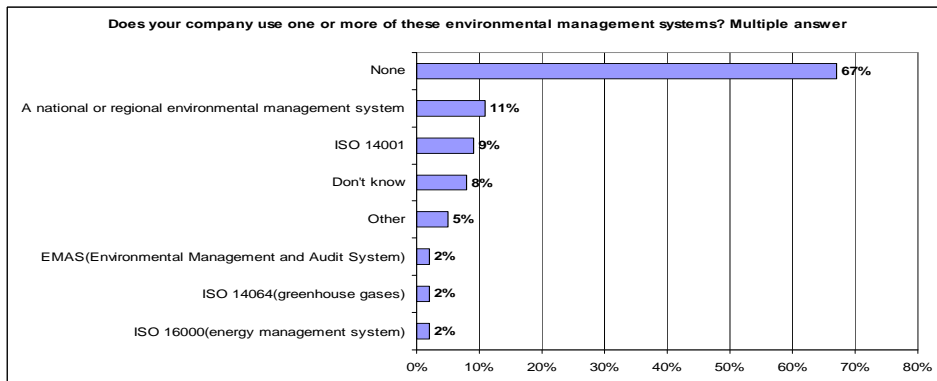
Source: European Commission, FlashEurobarometer no.381, December 2013

**Figure 3 – The impact registered by SMEs on total production costs in the last 2 years by applying resource efficiency measures**



Source: European Commission, FlashEurobarometer no.381, December 2013

**Figure 4 The degree of implementation of an EMS by entrepreneurs in SMEs activity**



**Source: European Commission, FlashEurobarometer no.381, December 2013**

Although these results show that a small number of SMEs are actually implementing an EMS in their activities, in order to improve the environmental performance of the organization and implicitly, its financial performance, they are closely related to the fact that the approach taken in the application of an EMS implies a range of both technical and financial efforts, both supported, according to the European entrepreneurs, from own sources, while only 19% of them declare they had received external support. As a result, the entrepreneurs' answers about the ways in which they consider that their company would be helped to make better use of resources were directed towards providing grants and subsidies, advice on how to better streamline the use of resources, counseling on opportunities to finance these actions or practical demonstrations of new technologies aimed at improving the efficient use of resource.

#### **4. Conclusions**

Although a relatively small number of SMEs that operate on the European market have implemented an EMS, mainly due to lack of financial and technical support in this direction, the benefits of implementation an EMS at the level of an organization are obvious and can be summarized as follows: Minimizing the "debt" to the environment; Maximizing resource efficiency; Reducing waste; Improving corporate image; Educating the public and employees on issues of environmental protection; Improving environmental performance; Profit growth as result of efficient activities.

#### **5. References**

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