

ENVIRONMENTAL MANAGEMENT SYSTEMS – COMPETITIONS AND BARRIERS OF IMPLEMENTATION

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Abstract

Submitted article deals with implementation task of environmental management systems, which belongs to voluntary tools of environmental management. Its main objective is to give a real view about actual possibilities of environmental management systems implementation. The article describes importance of environmental

management and possibilities of system implementation: standard ISO 14001 and scheme EMAS. The article results in development of SWOT analysis and suggestions aimed especially to state administration organs to increase efficiency of systems implementation and increasing the motivation of enterprises.

Key words:

Environment, management, system

Introduction

The issue of sustainable development and environmental protection is now highly actual, as the society has reached the state not only threatening the health and safety of people but also the overall conditions of life on Earth. The negative development of degradation and devastation of environment may become irreversible if mankind doesn't realize the urgent need of systematic approach to the environmental protection.

It is no secret that the one of the largest polluters of the environment are enterprises in general. Fortunately, more and more organizations are aware of the negative impact of their production activities and they implement environmental management principles to reduce the negative impact of their activities. Customers also have a part in improving environmental performance of companies, because of their interest in conditions in which the product was developed. Positive environmental profile of the company becomes a great competitive advantage and a matter of prestige and good business image.

1 Environmental management systems

EMS is a method designed to systematically improve the environmental performance of an organization. [4] It addresses the immediate and long term impacts of products, services and processes on the environment and is embedded in the organization's overall management structure. Results are achieved through the allocation of resources, assignment of responsibility and ongoing evaluation of practices, procedures and processes.

Basically we can speak about two forms of EMS application:

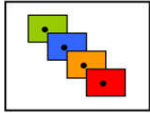
- according to standard ISO 14001
- according to European regulation: EMAS (Eco-management and audit scheme).

1.1 ISO 14001

The ISO 14001 Standard is the certification standard for EMS implementation and certification. As it is not an obligatory standard, it was designed in a way that can be applied to any size and type of organization and type of organization taking into consideration various geographical, cultural and social conditions. Efficiency of the implemented system is verified by certification auditing. Certification auditing results are used by certification organizations in the process of issuing official certificates. ISO 14001 is based in Demign cycle, which consists of 4 phases: Plan – Do – Check – Act, and which puts accent to continuous improvement. [6]

1.2 EMAS

Another document which allows voluntary participation by industrial companies is Council regulation EEC No. 1836/93 of 29 June 1993 "Eco-management and Audit Scheme" (EMAS). This regulation encourages organizations to voluntarily evaluate the environmental impact of their activities from the processing of raw materials to waste management. [9]



In April 2001 a new review by the European Parliament and Council was released (761/2001/EEC), allowing voluntary participation in the program for environmental management and audit scheme (EMAS II).

Among the most important changes brought by this review can be considered:

- The broadening the scope of the EMAS to all sectors and economic activities, including local authorities
- Integration of standards such as ISO 14001, which facilitates the transition from ISO 14001 to EMAS and avoiding duplication
- Adoption of the EMAS logo, which allows registered organizations to promote their participation in the scheme more effectively
- employee participation in the implementation of EMAS strengthening the role of the environmental statement to improve the transparency of communication of environmental performance [7] among registered organizations and stakeholders and the public,
- more attention devoted to indirect environmental impacts such as capital investment, administrative decisions, planning, procurement.

For the second time the EMAS Regulation has been revised and modified as *Regulation (EC) No 1221/2009 on the voluntary participation by organizations in a Community eco-management and audit scheme (EMAS)* entered into force on 11 January 2010.

The scheme has been amended following the review of the performance of the second version of EMAS and modifications have been made to ensure that EMAS is a high quality environmental management scheme. It has also been modified to include measures for reducing administrative burdens for EMAS registered organizations and creating incentives for raising the attractiveness of the scheme, particularly for smaller organizations. In addition, the scope of the scheme has been extended to allow organizations outside of the European Community to gain EMAS registration with EMAS verifiers who are inside the European Community.

2 Survey on EMS implementation in Slovakia

At the beginning of the year 2010 the survey on EMS implementation was developed. The survey was focused on particular aspects of EMS implementation in Slovak enterprises. 48 enterprises took part in the survey. Partial results are presented below.

2.1 Advantages of EMS implementation

Companies consider the improvement of environmental performance (49%), legislative compliance (47%) and increase of competitiveness (45%) as the most significant benefits arising from the EMS implementation. Respondents rank among the most important benefits also clarifying the environmental actions (43%) and the image and credibility of enterprise (40%). On the other hand, economic benefits are not considered as very significant (9%). Results are showed on the fig. 1.

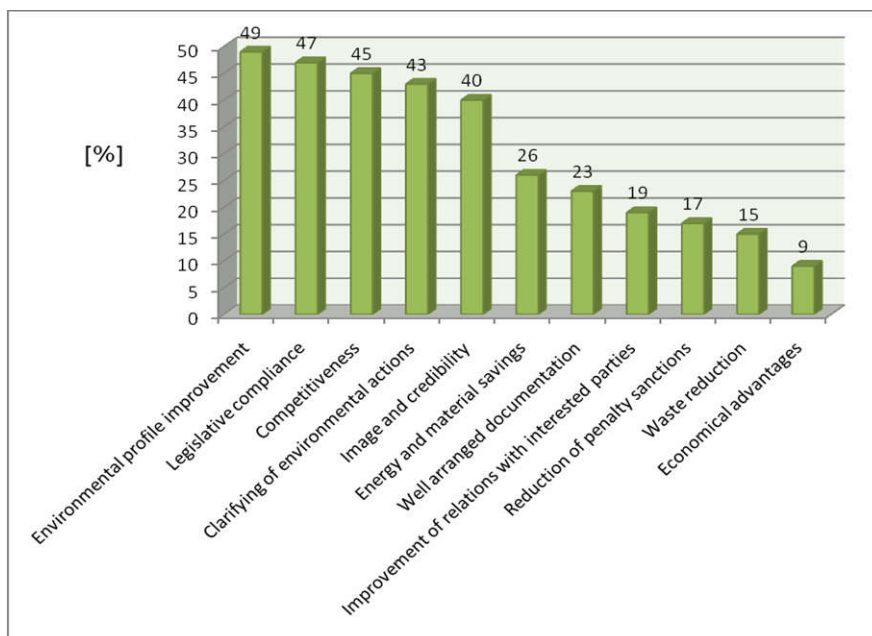
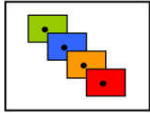


Fig. 1 Advantages of EMS implementation



2.2 Barriers of EMS implementation

Enterprises were asked about the problems they had during EMS implementation and maintenance. From the offered options, 51% of respondents consider a lack of practical guidelines as the greatest obstacle to the EMS implementation. Other significant barriers seem to be a lack of time (45%) and high bureaucracy (43%). Results are also showed on the fig. 2.

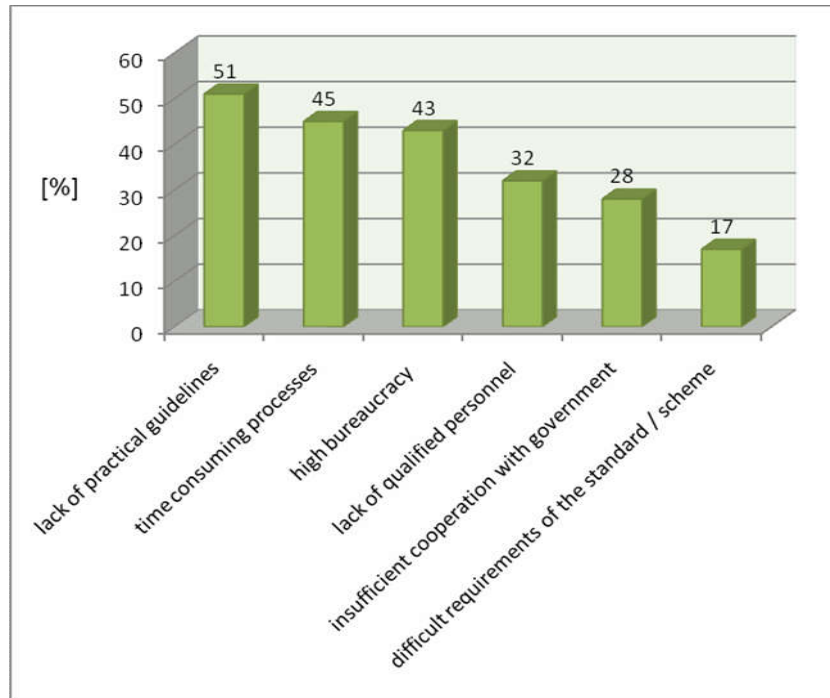


Fig. 2 Barriers of EMS implementation

3 SWOT analysis of EMS implementation

Based on information gained thanks to survey and analysis of the state of art in the field of EMS, SWOT analysis of EMS implementation was developed.

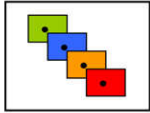
SWOT analysis (Tab. 1) objectively shows not only the strengths of the EMS, but also the weaknesses, which organizations should consider when implementing the EMS. The table at the same time informs about the opportunities organizations gain after the implementation of EMS at particular intervals, and the existing threats in the implementation of the EMS under current conditions.

Strengths of EMS have direct relation with environmental protection. We can include systematic approach to environmental protection, integration of particular environmental problems, methodical monitoring of the processes which cause environmental pollution, compliance with environmental legislation and application of principles of sustainable development.

By contrast, high costs are mostly considered for implementation and maintenance of EMS as the weaknesses of the EMS. Costs of EMS implementation and maintenance are crucial especially for small and medium sized enterprises. Another weakness is EMS documentation and a time consuming process of EMS implementation.

The introduction of EMS offers many other opportunities to improve overall management performance of the company, transparency of activities in the field of environment, increase competitiveness in domestic and foreign markets, strict adherence to laws, saving energy and materials and related costs reduction.

Organization with implemented EMS at the same time contribute to increasing environmental public awareness and streamlines its communication with all stakeholders including business partners, state authorities, customers etc. On the other hand, initial costs which are higher than advantages are threatening and in our conditions it is also lack of involvement of public authorities and the lack of information on support sources for financing EMS implementation from other sources than own sources of organization.

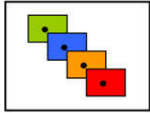


SWOT ANALYSIS OF EMS IMPLEMENTATION	
STRENGTHS	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Systematic and proactive approach to environmental protection <input checked="" type="checkbox"/> The elimination of negative environmental impacts of the production <input checked="" type="checkbox"/> The emphasis put on pollution prevention <input checked="" type="checkbox"/> Clarifying the relations between environmental problems – basis for optimal solutions <input checked="" type="checkbox"/> Continuous monitoring, evaluation and improvement of processes of organization <input checked="" type="checkbox"/> Review of compliance with environmental legislation <input checked="" type="checkbox"/> Application of sustainable development principles in organization
WEAKNESSES	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Demanding process of implementation <input checked="" type="checkbox"/> Lack of legal awareness of organizations <input checked="" type="checkbox"/> Cost demanding process of implementation and maintenance <input checked="" type="checkbox"/> Lack of skilled labor and professionals <input checked="" type="checkbox"/> Lack of funds, especially in small and medium-sized enterprises <input checked="" type="checkbox"/> Long term process of implementation, lack of time
OPPORTUNITIES	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Improved management system <input checked="" type="checkbox"/> More transparent operations in the field of environmental protection <input checked="" type="checkbox"/> Building a positive environmental profile <input checked="" type="checkbox"/> Increase competitiveness at home and abroad <input checked="" type="checkbox"/> Reduction of risks of emergency situations <input checked="" type="checkbox"/> Reduction of penalty sanctions <input checked="" type="checkbox"/> Reducing costs, energy and materials savings <input checked="" type="checkbox"/> Possibility of a timely response to changing legislation <input checked="" type="checkbox"/> Increased environmental awareness <input checked="" type="checkbox"/> Higher potential to succeed in business or public procurement in meeting customer requirements <input checked="" type="checkbox"/> Improving the credibility of the organization <input checked="" type="checkbox"/> Improving communication with stakeholders
THREATS	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Lack of involvement of public authorities <input checked="" type="checkbox"/> Lack of supporting measures for financing the implementation process from sources other than their own <input checked="" type="checkbox"/> In the beginning costs exceed the benefits <input checked="" type="checkbox"/> Increasing the requirements of legislation <input checked="" type="checkbox"/> Lack of organizations engaged in research on problems associated with the implementation of EMS in organizations

4 Recommendation for improvement of EMS implementation

Based on performed research following ideas are recommended:

- In the business sphere it would be appropriate to support interest of organizations in participation in EMAS scheme, which is nowadays the most effective voluntary tool of environmental policy, which systematically solves environmental protection.
- Effective motivation for organization with newly implemented EMS and for organizations just thinking of EMS or EMAS implementation would be challenging to inform at regular intervals on real advantages of EMS implementation of other organizations and sharing the best practice in the field of EMS implementation. Organizations will be informed what they can expect and they would not be disappointed with initial costs exceeding the benefits.
- For improvement of EMS implementation it would be important to lead information campaign on advantages of EMS implementation for organization.
- State bodies should provide education of their employees which can provide information and advisory – to improve their knowledge and competences.
- State bodies should provide more information materials (brochures, web sites etc.) with practical toolkits for EMS implementation, maintenance and improvement of EMS.
- In the field of financial support of companies with implemented EMS, these measures would be welcomed: partial coverage of costs related to counseling of external bodies and realization of EMS counseling in financially advantaged conditions.
- It would be appropriate if government supported environmentally friendly approach to environment by preferring organizations with implemented and certified EMS for example in insurance, loans, and in green public procurement.



- In the non financial field, organizations would appreciate that the government supports the reduction of administration burden and bureaucracy or rewarding and propagation of organizations which are “best in class” in the field of environmental management.

Conclusion

The aim of the article was to assess the importance of environmental management systems implementation, to analyze possibilities of implementation and through research to find out, what organizations consider as advantages and disadvantages of EMS implementation. Thanks to gained information, we suggested some recommendations for improvement of EMS implementation.

Since some measures would play important role in EMS implementation, we consider that enterprises would appreciate realization of all suggested measures. The realization of these measures is not easy; it will take not only a lot of time and financial support, but also a lot of qualified staff both in companies and government.

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