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APPROUCHE OF SMALL AND MEDIUM-SIZED ENTERPRISES TO INTRODUCTION OF ENVIRONMENTAL MANAGEMENT SYSTEMS.

The present contribution deals with the implementation of environmental management systems in small and medium-sized enterprises. At present, the EU's environmental policy is directed so as to allow future access to the market only to those companies that have an open environmental policy, i.e. that the general public are able to to prove that their activities and production activities are environmentally acceptable and friends in relation to environmental protection. Therefore, even small and medium enterprises need in the field of environmental policy, to adopt a strategy of adaptation to the new conditions of voluntary environmental legislation.

Keywords: *Management, environment, environmental impact, aspect.*

1 Environmental importance of small and medium enterprises

By the definition of the European Union is an organization regarded as small and medium enterprises (SMEs) with less than 250 employees and has an annual turnover of less than 40 million EUR or the annual total balance sheet not exceeding 27 million EUR, Figure1. The company must be an independent enterprise, it means, 25% or more of the capital or voting rights must not have be held by the biggest businesses. The companies, which are suitable for the definition, create 99.8% of all EU companies, they make 66% of total employment and 65% of trade turnover [9].

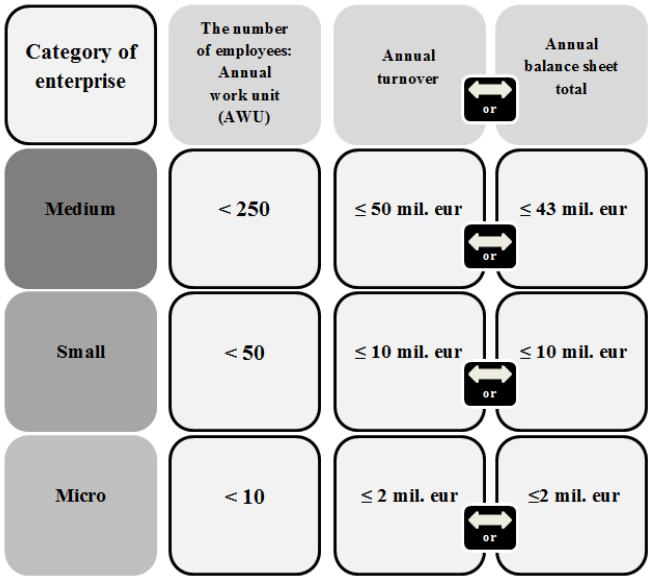

Figure1 Caterories of SMEs

The sector of small and medium-sized worldwide businesses represents about 70% of gross domestic product, although there are significant differences between the countries. The previous research has shown that SMEs are important not only in financial terms, but that this industry also has a significant impact on the environment. Some authors argue that small and medium enterprises are collectively responsible for a significant part of the total environmental burden and may contribute up to 70% s of the total industrial pollution. It should be noted that this figure is a rough estimate and is not based on empirical data. Besides a large collective impact on the environment a number of SMEs control over their effects [1].

These facts show that it is important that small and medium-sized businesses have access to tools that can help them to achieve compliance with the requirements and to improve their environmental activities. The need for instruments is even more enhanced by the fact that many small and medium-sized businesses are often located in light industrial areas, and are

often located near residential areas. One of the tools that can be used by small and medium-sized businesses is the introduction of an environmental management system.

2 Establishment of corporate environmental management

Environmental legislation developed in the late 60's and beginning of 70's and it had the character of command and control. Over time, environmental regulations have become more complex and stringent. Firms respond to new environmental requirements by employing specialists and develop various kinds of programs to ensure compliance. In the 90's gradually developed corporate environmental management, whose approach to environmental protection has been systematic and proactive and was characterized by an increase in the total cost of environmental protection and regulatory compliance [1]. Systematic approach, management and control are no longer their only basis and emerging regulations have started to include economic instruments such as taxes, emissions trading, charges and pollution taxes on carbon fuels and others. Finally, the company's focus on local environmental problems in 1960 moved and focused on global threats, such as global warming or depletion of stratospheric ozone and to eliminate of companies impact on environment, their social and environmental responsibilities. By the same time the company environmental protection is more systematic and enters to the corporate strategy. Many companies have realized that entry to the process up to the end is ineffective for the environmental protection [2].

The top management in environmentally proactive companies already has environmental friendliness not only as a financial liability. Based on their awareness is to obtain the opportunities to gain a competitive advantage by improving the environment and by generating of savings by waste reducing, buying of raw materials and energy. This was the reason why a growing number of companies have introduced a system of environmental management tools. Many of EMS systems are based on the international standard ISO 14001 used mostly by industrial companies, but in recent years has extended to the sector services and the public sector.

EMS is based on the development of several standards. The world's first standard for EMS was a British Standard (BS) 7750, which was developed and published by The British Standards Institute in 1992. BS 7750 standard was the model for a series of ISO 14000 standards and the development of EMS. It is also the basis for the European Union, its Eco-Management and Audit Scheme (EMAS).

The Standards of environmental management in these systems are almost identical. There they include:

1. Establishing of environmental policy;
2. Determining of the general and partial objectives and targets;
3. Implementation of the program to achieve these goals;
4. Monitoring used to measure of its effectiveness;
5. Repair of problems;
6. Review of system to improve its overall environmental performance.

While the elements are more or less common, special information system must be generated for each company individually, with the aim to distinguish their EMS. One of the first industries that have realized the need for such a system is the chemical industry, which was subsequently, developed Responsible Care System. At the same time, the European Union worked the next version of EMS, Environmental Management and Audit Scheme EMAS, which really is not a Standard, but voluntary EU Regulation. The registration to EMAS was originally available only to industry, but after the revision of the Regulation, it has been open to other types of organizations. These EMS Standards have been adopted by a majority of the industry. After the publication of the international Standard ISO 14001 in September 1996, the implementation of EMS began to be more frequent in industry. In recent

years, the interest in EMS also increased in the service sector and the public sector. The development of environmental management is illustrated in Figure2. [6]

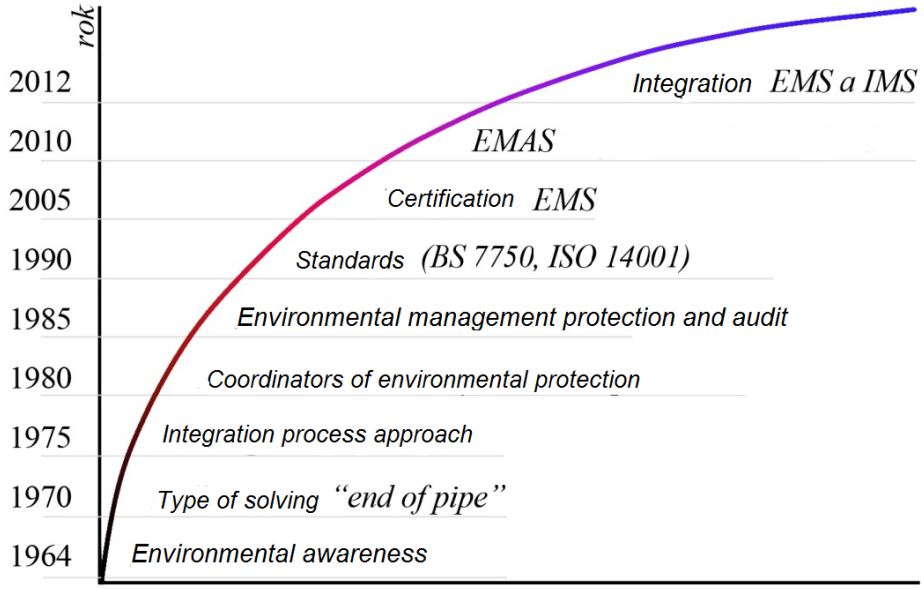

Figure 2 History of the environmental protection [6]

3 Environmental policy in the EMS context

The EU environmental policy is directed so that in the future will be allowed the admission to the market only those companies that have open an environmental policy, it means, they are capable to demonstrate to general public that their activities and production activities are environmentally acceptable, it means, friendly in relation to environmental protection.

In order to implement an EMS to control significant risks, ensure compliance with relevant legislation and to meet the requirements of ISO 14001, knowledge and expertise is needed covering:

- Environmental legislation
- Assessment of environmental aspects
- Pollution prevention
- Emission control
- Statutory nuisance
- Waste management
- Emergency procedures
- Environmental management systems and ISO 14001
- Internal environmental auditing.

The companies are therefore encouraged by EU legislation to open environmental policy and therefore they reorganized its management structure in accordance with accepted environmental principles, mainly in environmentally sensitive issues - the protection of human health and protection of ecosystems. This tendency was also gradually extended to all sectors, which means that organizations will have to fulfill the requirements contained in the environmental management system EMS according to Standard ISO 14001, respectively EMAS III. The behavior of businesses subjects in the market environment, which is accompanied by the internationalization and globalization, is oriented to solve decisive objectives of product policy related to their competitiveness and ensuring of long-term profit and profitability. The environmental policy is part of state economic policy. Its aim is to join into the production and consumption decisions of products market operators with the aim to achieve the change of "the consumption patterns". This change implies the application of

tools and methods that ensure the high environmental efficiency it means reduction of environmental damage in achieving the required economic efficiency, it means reduction of undesirable product in the economic system [6]. EMS is the effective tool in managing and reducing of negative impacts on the environment, which is gradually applied globally in many manufacturing companies, service organizations, but also in state and local governments.

EMS Implementation the Plan-Do-Check-Act approach is shown (Figure 3) as a continual improvement spiral starting.

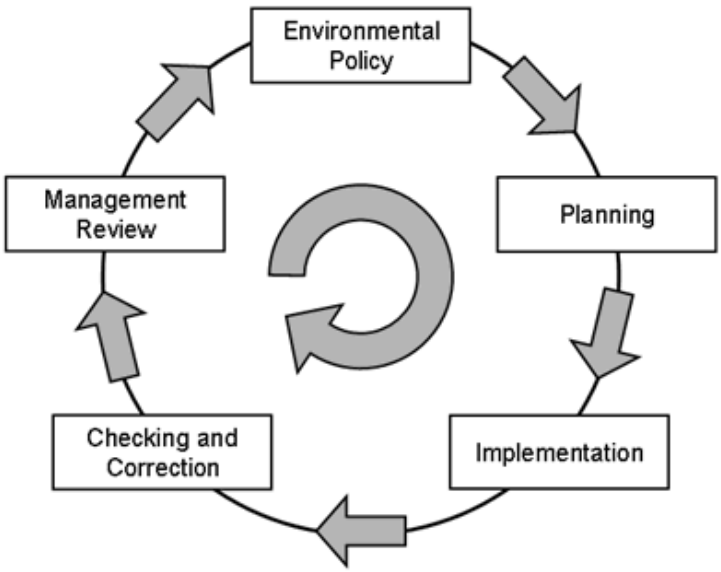

Figure 3 EMS Implementation the Plan-Do-Check-Act [12]

4 Benefits from implementation

Organisations can approach the development of their EMS in many different ways. For example, in larger companies staff may be directly employed whilst in smaller businesses existing staff may be trained and duties extended to include the EMS. In some instances consultants are appointed to assist with EMS development and some businesses have benefited from grant aided / funded programmes promoting EMS development.

The benefits from implementation of EMS in organizations can be divided into several groups [6], see Figure 4.

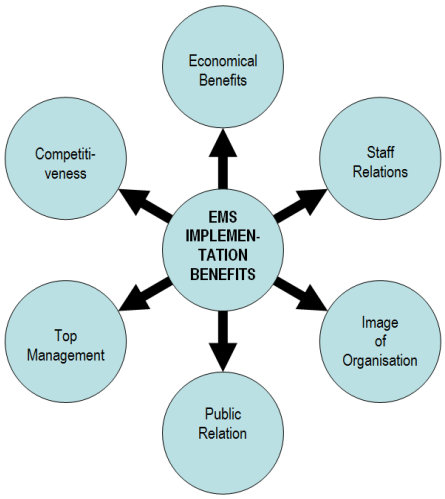

Figure 4 The benefits from implementation of EMS

The table below (Tab.1) provides environmental benefits of each group.

Table1

The benefits from implementation of EMS concept

Groups of benefits	**Outputs**
Economic benefits	➢ energy saving ➢ waste minimization - reducing the cost of disposal ➢ economic use of raw materials, recycling, use of waste as secondary raw materials ➢ transparency and traceability of costs ➢ minimizing of environmental charges and fines for environmental pollution ➢ possible tax benefits, reducing of the cost for insurance
Benefits for firms	➢ tool for obtaining the data, necessary for planning and goal of settings ➢ assess of the environmental impact and effectiveness of the measures ➢ early identification and visibility of environmental issues and risks ➢ reducing of the risk of violation of laws and criminal penalties ➢ minimize the risk of environmental accidents ➢ increase the morale of the organization
Employee relations	➢ reducing of the impact on workers' health ➢ reducing of the workers' individual responsibility for damage to the environment ➢ means for shaping of environmental awareness
Public relations	➢ the valuable communication tool with interest groups ➢ improving of the image of the organization ➢ good relations with the public and local administration
Business and marketing	➢ achieving of the certification according to Standard ISO 14001 ➢ competitive advantages in world markets ➢ improving of the image of the products

5 Barriers of EMS implementation into SMEs

Small and medium sized enterprises (SMEs) face enormous pressure on the management of their resources. Lack of awareness and expertise are often major obstacles in achieving a better business strategy. Increasing customer pressure and the need to comply with regulations are also very strong drivers for the adoption of environmentally friendly procedures and environmental protection tools taking into account the characteristics of SMEs.

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 organization's 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. 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.

The EMS are often presented as a suitable tool for larger companies [5]. It is also clear that EMS was mainly adopted by large companies. Appropriateness of the EMS and its most common standard, ISO 14001 for small and medium-sized businesses is often discussed. There were even opinions and attitudes that small and medium-sized businesses were not taken into account in establishing of standards and therefore it is unsuitable for these

companies. The strategies and tools designed especially for large organizations are often transferred to smaller organizations and EMS is no exception [3].

Although the appropriateness of the EMS according to specification in Standard ISO 14001 can be questioned for smaller firms, even under pressure from the customers and small and medium-sized enterprises, it pays to find the resources and time to implement this system and certify it. One of the example is the automobile industry, where car manufacturers, such as General Motors, Daimler-Chrysler, Ford, and Toyota, has adopted Standard ISO 14001 and require from their suppliers to do the same as a condition for further business [4].

Many of small and medium-sized enterprises complain about the complexity of the ISO14001 standard and the high cost of system implementation and the certification. Really, the standard complexity and the lack of human and financial resources are often mentioned as reasons, why many small and medium-sized enterprises do not want to accept EMS. The small and medium-sized enterprises need the access to the implementation of which would be adapted for smaller firms to adopt EMS and to go for the certification. To overcome barriers to EMS implementation by small and medium-sized enterprises, there are a number of special requests, which are classified into the following four categories:

- standardized solution for EMS implementation,
- partial approach with rewards on the road to the certification,
- professional management,
- common EMS and group certification.

The common approach has evolved in recent years and its popularity is growing among small and medium-sized enterprises. In Sweden, the common EMS and group certification gained a great attention and today there are many companies, where they work with shared EMS systems. Some of them have completed certification or planning to in the near future. [9]

6 Conclusion

Small and medium-sized firms face internal and external barriers when seeking to address their environmental issues and adopt and implement EMSs, but it is the internal barriers that initially have the more significant role in impeding progress. Negative company culture towards the environment and the disassociation between positive environmental attitudes of personnel and taking action cause the uptake of environmental performance improvements and EMS adoption to stumble at the first hurdle.

Customers are the key driver for the adoption of EMSs and have influence far beyond any of the other stakeholders cited in the analysed studies. Paradoxically, customers also show lack of interest in, or are satisfied with SMEs current environmental performance. Micro enterprises, in particular, found their customers to be uninterested in their environmental performance. This may be because the customers, like the micro firms, consider micro firms' environmental impacts to be negligible. Legislation and the regulators are more important drivers for general environmental improvements in SMEs than customers. [10]

Environmental management in the field of manufacturing and services is one of the most effective tools of achieving the priority objective – it means minimizing negative impacts of production activities on individual components of the environment. Although in the Slovakia many progressive businesses has built in their service operations such systems, it is necessary that these activities have become more numerous, which can be achieved by their dissemination in the field of small and medium-sized enterprises. The basic strategic goal of every business entity is permanently successfully sell their products, meet the need, requirements and expectations of their customers by increasing of product quality and by degree of impact on the environment. And as a direct impact of a product or service on the environment for its use, as well as the overall environmental performance of the supplier and its image in the field. Every company needs for its long-term success a support of

surroundings. If the neighborhood surroundings also must to support the company, it must be the firm action also from the view of protection of the environment and health of the population on the environment positively and it means by creating conditions for permanent improvement of its environmental profile, reducing the rate of endangering of the surrounding area, its employees and improving of the hygiene in the workplace [7].

For MSEs is essential strategy in the field of environmental policy to accept the new conditions of voluntary environmental legislation. The small and medium enterprises can choose basically two ways to roll on a trajectory of acceptance of open environmental policy – to implement in EU accepted System of environmental management and audit (EMAS III), or certificate according to international standard ISO 14001 - EMS, which are base environmentally oriented production strategies.

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