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INCREASING SERVICES QUALITY THROUGH ENVIRONMENTAL PERFORMANCE MANAGEMENT

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ABSTRACT: The qualitative dimension of the service companies' activities also refers to their impact over the environment. This aspect is meant to contribute to a sustainable economic growth, based on high economic performances, but also on obeying the environment protection and preservation requirements. Offering services in harmony with the sustainable development principles requires the companies to be concerned with monitoring and controlling the impact of their activities over the environment by adopting an adequate system of eco-management.

Through a comparative approach, the article underlines the characteristics of two of the most used environmental management systems, promoted by the European Union's legislation, ISO 14001 and EMAS, which must be adopted by the service companies in Romania in order to be compatible with the environmental acquis' regulations.

Key words: environmental performance, services quality ,sustainable development

JEL codes: Q56, Q57,M14

Introduction

Granting a fair consideration to the impact that services have on the environment constitutes a fundamental direction to evaluate their qualities and it satisfies the immediate and the perspective interests of the provides and of the beneficiaries, as well as the interests of the society as a whole, contributing to the quality of life's improvement for the present and future generations.

The concerns regarding the economy's worldwide impact over the environment have a relatively recent history. Their beginning is marked by the Brutland Report (1972), which warns the public opinion, the decision-making, organizational and institutional factors about the multiple interdependencies of the economic activities and their implications for the natural environment and the people's health. These concerns are afterwards reunited in a new concept of economic growth called sustainable development, which becomes a political objective of the European Union in 1997, by including it in the Maastricht Treaty.

Subsequently, the concerns of the European Union that trace achieving a sustainable development have multiplied and in the year 2006 the EU Council adopted the renewed Sustainable Development Strategy for the extended Europe. In this strategy the environmental protection becomes an essential objective for the quality of life's continual improvement for present and future generations. This objective was adopted by Romania in the National Sustainable Development Strategy with horizons for 2013-2020-2030 that establishes concrete directions for action to implement in a reasonable and realistic time period the sustainable development model. This model is a high added value generator, based on knowledge and innovation and is directed towards the continual quality of life's improvement, in harmony with the natural environment [STRATEGY].

The economic activities exercise a strong pressure on the natural environment along the entire chain of transforming the raw resources into products and services destined for consumption. That is why the putting into practice of the sustainable development principles requires concerns

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from the firms regarding the highlighting and control of the impact of their activities on the environment and over society.

Because of their specific, the organizations in the service sector are able to contribute to the general growth of the eco-performance through their activities: commerce, transport, maintenance, research-development-innovation, education, health insurance, culture, administration, etc. The public services of treating and supplying drinking water, of collecting and purifying used waters, the heating services and waste products' collecting and managing have major implications over the environment. That is why Romania, as a recent joined country, benefits from a financing of 4.5 billions Euros from the European Union through the Sectoral Operational Programme for Environmental Infrastructure (SOP Environment) for the rehabilitation and development of these services, making sure the regulations of the environmental acquis are observed [SOP Environment, p. 98].

Adopting systems of environmental management by the companies in the service sector will allow a better control over those significant environmental aspects with which their activities interact and, thus, contributing to the development of their own activities in a sustainable system, as well as to spreading the sustainable practices in all the economy. It is thought that the sustainable products-services system represents a fundamental way through which the firms become more economically and ecologically competitive, creating comparable advantages in the competition framework and insuring the quality of life's improvement. [Kaltenegger]

Management systems for environmental performance

The growth of the services' contribution to the quality of life needs to adapt their functions in order to better respond to the economic, social and environmental demands. The activity of the organizations in the service sector must be appreciated through the satisfaction offered to the services' users, the recorded economic performance and through the ecological and social impact.

Presently, at the European Union's level there is a management system for environmental performance, called EMAS (Eco-Management and Audit Scheme) and an international standardization system, ISO 14001, which offers the legal framework for developing the eco-management system. Both systems are operational instruments, which the companies can use to solve development and ecological problems in an integrated perspective.

The EMAS system was initially restricted only to the firms from the industry sector, but in the year 2001 it was made accessible to all the economic sectors, including the public and private services. This system allows the voluntary participation of the organizations to the Eco-management and Audit Scheme [Regulation (EC) No 761/2001]. It is available only in Europe and so far, in comparison to the ISO 14001 system, only a few entities have registered under EMAS because of stricter regulations that were imposed on them, such as: external auditors checking the accountancy statements regarding the environment (environmental costs, incomes, the balance sheet of energy and material flows) and the transparency of the information regarding the operational impact over the environment. In the year 2007, at the EU-27's level, EMAS was implemented in 3908 organizations and companies, among which 37.5% were in Germany, 23.2% in Spain, 19.3% in Italy, 6.5% in Austria and only a few in the other countries. In that same year, Romania had only one organization registered under the EMAS system. [epp.eurostat]

The ISO 14001 system is used internationally and it specifies the necessary demands for the companies' and organizations' functioning under an eco-management system. It exercises its influence over those ecological aspects for which the organizations can show control and its obtainment is conditioned by a certification given by an external authority. Afterwards it doesn't need reporting regarding the environment to the state authorities. [GEMI]

Implementing the ISO 14001 standard facilitates the economy's restructuring through directing the companies towards a functioning concerted with the environment policy adopted in the National Strategy and stipulated in the environment legislation, which constitutes a premise for the

ecological performance's growth [Sullivan]. This standard has also joint principles with the standards series of the ISO 9000 quality system, thus insuring the quality improvement for a number of beneficiaries (not only consumers, as in the case of ISO 9000) and constitutes an answer to the demands of the society regarding the environment protection and the quality of life's improvement.

Although both system (EMAS and ISO 14001) stimulate the introduction of practices favourable to the reduction of the negative effects exercised by the companies' activities over the environment, the ISO 14001 standard is more popular and is used by a larger number of companies in all the sectors.

Until December 31, 2008, in Romania, in the data base of the SRAC certification organism (organism approved by the Ministry of Environment and Sustainable Development as an EMAS environment surveyor) there are a number of 10900 companies which have benefited from the certification services for ISO 9001 (the quality management system), ISO 14001, OHSAS 18001, ISO 22000/HACCP (food safety system) [http://www.srac.ro/srac.php?id=98&meniu=0]. Among them, in the service sector are certified in the ISO 14001 system approximately 300 firms that have as activities the following: construction engineering services, maintenance and repairs for civil, industrial, agricultural-animal-technical constructions, roads and bridges, laboratory services, auto-services, architecture, urbanism, research-development in various fields, engineering and services in the geodesy, topography and land register fields, marketing, IT solutions, mechanical rigging and repairs, raticide, plant-health treatments, decontamination services, commerce, goods and travellers transport, security services, hotel and restaurant services, tapping, stocking, transporting and supplying water, sewage, landed improvements and other services tied to agriculture, local public administration services (social services, education, culture, community police), legal services, print shops, tourist services, etc. [http://www.srac.ro/index.php?tip=rez]

At the time being, it is considered that the most efficient instrument to monitor sustainable development is EMAS, because it creates economic and ecological performance, it insures a growth in the responsibilities of the organizations and their personnel, and by publishing an externally validated environment statement, the transparency of the organizations' activities and the actual involvement in solving environmental problems is achieved. At the same time, the system ensures the growth of the prestige and credibility of the companies and thus leads to superior economic performances. [Ever, p. 3]

Starting with the year 2006, EMAS includes the basic requirements stipulated by ISO 14001. The companies that are certified in the EMAS system also meet the requirements of the ISO 14001 standard because the Commission Regulation (EC) No 196/2006 contributed to assorting the two eco-management systems. The Regulation (EC) No xxx/2008 of the European Parliament and Council introduces some changes regarding the Eco-Management and Audit Scheme with the purpose to improve its credibility for all the economic partners (especially, small and medium-sized enterprises) or clients and to spread and make popular the EMAS' advantages. The new regulations guarantee that adopting and using EMAS can lead to the full adjusting with the environment legislation and can lead to the continual improvement of the organizations' environmental performance.

The role of environmental management systems in services

Introducing some of environmental practice in the activity of organizations from the service sector either through EMAS or through ISO 14001 leads to adopting an environmental management system (EMS), which must be adapted to the size and specific of the activity. The felt advantages will manifest not only in the ecological side, but also for other aspects:

- in a world of interdependencies where the problem of competition is raised, the existence of an environmental management system is meant to improve the quality of the service

companies' entire activity because EMAS is periodically evaluated, which needs a continual updating and perfecting of the decision-making and operational processes;

- the premises of an economic efficiency's growth are created as far as for achieving eco-performance the reduction of material and energy resources' consumption is used and more performing technologies or alternative methods (green) are promoted;
- the working conditions are improved and implicitly, the health state of the workers, by using technologies adequate with the environmental management system;
- the practiced green technologies and observing the sustainable development strategies ensure clean services, which will facilitate entering a specific market segment such as the green products and services market, characterized by a huge growing potential;
- the environmental management system contributes to the growth of the economic performance. As the study done by the DG Environment of European Commission shows, the organizations registered under EMAS consider this system gives them a high eco-performance on short and long term, and 72% of them announce a better performance for the economic activities in all the stages of the life cycle; [Ever, p.1-5]
- the ecological and economic efficiency aspects promoted by the introduction of the EMAS system creates a strong comparative advantage and thus constitutes a source for achieving superior financial results;
- the service companies registered under EMAS can obtain an added value from the healthy effects of the regular control, costs' cuts, involving the employees and the image benefits; [Regulation 761]
- publishing reports regarding the concerns of the companies to reduce the negative impact of activities on the environment creates a positive image among consumers, so that making popular the organization's quality to have an environmental management system becomes a valuable element of the marketing strategy. For example, the EMAS logo is one that represents quality and environmental performance [COM(2008), p. 22] without substituting the ecologic labelling system.

The demands of the commercial partnerships in the European Union recommend the introduction of an environmental management system under the form of EMAS within the companies of the member states, and the national legislation of the member states stimulates the choice of this system. The studies show that organizations with EMAS record superior results for eco-management in comparison with other systems [Gara] and can benefit from a preferential treatment in the selection procedures for contracts, loans granting, closing insurance contracts, accessing European funds, etc.

The action of the environmental management systems within organization is iterative and the series of sequences it implies – plan, do, check, act (PDCA) – can be assimilated to the Deming Wheel effect. Unfolding in time, this procedure ensures the continual improvement of the environmental performance for companies and the evolution towards the ideal target of functioning, which through assimilation with the "zero faults" concept from the total quality management (TQM) theory can be written as the "zero waste" concept. [Grupp]

Beyond the advantages build up in the internal environment, implementing an EMAS system in the service providers companies involves adopting measures and initiatives of environmental protection from the part of partner economic agents which are mixed up in the production and commercialization chain. This effect of adopting the EMAS system proves the role exercised by services in stimulating other types of activities in economy and the acquirement of features specific to sustainable production systems.

Implementing EMAS inside service organizations

The practical aspects tied to introducing a management system like EMAS within companies whose economic profile are activities specific to organizations in the service' area can be

identified by studying the existent legislation and the actual known cases. The companies that want to improve their eco-performance (by adopting EMAS) must reorganize the activities by taking into account the eco-efficiency criteria, depending on: the planned objectives, the targeted environment aspects, the actual evaluation, the reporting and control possibilities, the actual environmental management program.

Implementing an environmental management system within organizations from the services' area can be structured on several stages:

- establishing and maintaining the identification procedure for the environmental aspects specific to the organization;
- establishing and selecting the significant environmental aspects;
- establishing the environment indicators necessary for the evaluation and reporting of the eco-performance statement;
- implementing the eco-management system;
- registering under EMAS requires an initial environment analysis, writing up the environment audit and the environment statement in order to register with the EMAS according to the legal procedure [OM], validating the environment statement by an approved organism and publishing it.

According the European Union's regulations [EC No 761/2001] *the environment aspects* of the organizations' activities can be identified through the direct or indirect impact over the environment which results from the operational activity. The direct impact on the environment refers to: emissions in air and water, waste recycling, using and contaminating lands, using natural resources and the energy, the risk of environmental accidents, affecting the biodiversity and the landscapes, generating local problems (noise, vibrations, smell, etc). The activity of the service companies generates indirect effects also, which are felt in elements tied to: the practiced marketing (the product policy, the price policy, entering new market segments, means of distribution and transport, etc.), the financial policy, the partners' eco-performance and their orientation towards green products, etc. [COM, p.45]

Various actions are necessary in order to see and evaluate the direct and indirect environmental effects: consulting the employees, the persons set in the vicinity who are firstly affected by some pollution elements, studying the legislation regarding the observing of regulations concerning the pollutant's type and the admissible limits and the legislation regarding the green production, the legislation concerning the preferential regime of the EMAS companies, using the experience of companies which are already EMAS approved, studying the materials' flows and the existent infrastructure, collecting information about the features of the suppliers' products and studying their activity, etc. [DG Environment]

Defining the *environmental aspects with high significance* in the companies' activity is done by establishing the impact and the frequency of environmental damages, the effects' importance for external partners and for the employees, the existence and the demands stipulated in the environment legislation. These aspects are the subject of an environmental management system that is in a continuous improvement process.

Am important problem in implementing EMAS is establishing *the environment indicators* which are used to evaluate and report the environmental performance of an organization. The environment indicators represent those elements needed to monitor and measure the ecological impact, with the purpose to justify the rectification actions and the revise of the eco-management programmes. Through their specific, these indicators are number expressions which quantify the main environmental aspects generated by the company. They measure the annual inputs of factors or the impact of the company's activity over the connected areas, the annual outputs of economic goods, respectively, the impact over the environment caused by the elements resulted from the own system and determines the relation between the resources' entries and exits with the purpose the determine the eco-efficiency (table 1). The indicators must be adapted to the specific of the

companies' activity object.

Table no.1

Environmental indicators

Environment areas	Indicators	
	Entries	**Exits**
Energetic efficiency	Total consumption of energy, tons petrol equivalent	-
	Total consumption of energy from reusable energy , tons petrol equivalent	-
The materials' efficiency	The flows of used materials, tons	-
Water	Total water consumption, mc	-
Waste products	-	Generated quantities of waste products, tons
Biodiversity	-	Using the land, mp
Emissions	-	Total emissions of GHG, tons CO_2 equivalent

Source: COM(2008), pp.67-69

The operational activities of the service companies are various and supply usefulness for a large scale of areas existent in the entire production and value chain. The service companies insure the good functioning of the productive sector and ensure the infrastructure and the necessary logistics for all the economic and human activities.

Their large variety imposes that along with the use of the general environmental indicators, as a mean to measure and compare the eco-performances of the organizations in the same branch or from different branches, the specific indicators that address the features of its own field be identified. The aspects reflected by these indicators are also important and they must be a part of an organization's Environment Statement next to the general and financial indicators. The purpose is to draw the right economic and ecological profile and the eco-efficiency aspects it confronts.

Taking into consideration the WBCSD (World Business Council for Sustainable Development) recommendations, the following directions which can serve to establish the indicators that the companies can use to improve the eco-performance can be identified:

- lowering the intensity of using the materials;
- lowering the energetic intensity;
- cutting the emissions and the waste products;
- using reusable energy;
- increasing the recycling coefficient of materials and their use.

Making a rank of the environment aspects where the actions taken by the economic agents ensure a high eco and economic performance underlines the main place of the prevention and downplaying actions of the own operations' impact over air, water or soil pollution, then stimulating the internal and external recycling of materials, the better use of materials and energy, treating the resulted waste.

Taking as example the *transport sector*, because of the specific and dimension of this activity, the organizations in this area exercise a strong pressure over the environment and this chapter is actually the object of a careful monitoring at European level. Seen as having an important contribution in the global warming phenomenon, because of the atmospheric pollution it generates, the transport companies must become aware of the social responsibilities they have and must establish objectives, targets and practices that will meet the demands of a clean environment.

The objectives which must be at the base of the eco-management system in transports are: saving energy, reducing the polluting emissions and other polluting sources. The efforts will concentrate on making the transports' structure optimum, on reducing the energy consumption in transports, on cutting down the consumption of toxic substances, on building a favourable attitude among consumers regarding the pollution prevention and the environment protection, on recycling

residual products, on optimizing routes, on renewing the auto park, on modernizing the transport infrastructure, etc. A convincing example is the contribution of the Asiana Airlines Korea company to reducing the air pollution. In 2007, this company cut the harmful emissions with 220000 tons CO_2 by promoting un-polluting ways of maintenance for the technical equipments, by improving the flight procedures and reducing the fuel consumption. [WBCSD]

A synthesis of the main elements over which the environmental performance management system works, on life cycle, is presented in table 2. [Schwartz]

Table no. 2

The life cycle of services and the eco-performance

ELEMENTS / STAGES	**Materials**	**Energy**	**Toxic emissions**
Creating and selling the service	- Consumed materials - Consumed water	- Consumed energy for obtaining the production - Consumed energy for wrapping, distribution, transport - Energy from reusable sources	- Polluting agents released in the external environment (GHG, ODS, chemical residuals, heavy metals etc) - Waste products
Maintaining the service on the market	- The consumed adjuvant materials - Consumed water	- Energy used for transport - Energy from reusable sources per exit unit	- Polluting agents released in the external environment - Waste products
The life's end	- The materials used for treating waste products - Materials resulted from recycling	Used energy	Polluting substances transferred in other environments - Incinerated materials

The matrix is actually a functional analysis method of the company's environment profile, which highlights the effects resulted from the three categories of the services' impact flows in each stage of its existence: materials, energy, toxic emissions (the MET matrix). Tracing the environment impact of the services on stages and groups of involved elements insures the identification of the measures that must be taken in order to increase the eco-performance of the service providing companies. These measures can be synthesized in reducing the consumption of materials and energy in parallel with diminishing the aggression of the toxic substances over the environment.

Conclusions

Because of the innovative aspects regarding the rationalization of allotting and managing resources, increasing the social responsibility and the earned good image, the environmental management system is associated more and more with efficient instruments that can be used by the service providing companies in order to achieve the value added through their activity in conditions of economic efficiency and respect for preserving and protecting the natural environment.

The environmental performance management systems in services (especially Eco-Management and Audit Scheme) are methods to better manage the internal resources and to qualitatively restructure the actions, options and operational, investment and financing decisions of the businesses in services. They can stimulate on the long-term achieving of some superior levels for the economic and performance obtained on green principles. This will ensure a high added value

and, implicitly, the reward awaited by the involved factors. The environmental performance management systems hold an important place in the implementation action for a sustainable economic growth, stimulates the building up of a green behaviour for consumers, involves innovative processes and makes all the social implicated factors more responsible.

The increase of the number of organizations registered under EMAS means a guarantee of maintaining some material and energy flows at a sustainable level, so that the natural renewal capacity of the biosphere is not affected, ensuring a better quality of life and passing on to future generation the natural environment in good conditions.

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