

ROLE OF ENVIRONMENTAL AUDIT IN THE MODERN ENTERPRISE

MIHAELA UNGUREANU

“ALEXANDRU IOAN CUZA” UNIVERSITY OF IASI

myhaella5@gmail.com

Abstract:

Integration of environmental policy objectives in middle of economic activities involves changing patterns of production and consumption. This change can be done by regulations, taxation, judicial decisions, demands from public etc. Environmental audit represents a stage in the voluntary diagram of management and environmental auditing, based on a harmonized EU scheme called EMAS (Eco-Management and Audit Scheme). This paper aims to analyze, in the context of European Union new environmental legislation, the appropriateness of adopting the environmental audit concept in economic practice of enterprises, seeking the economic and social benefits related to.

Keywords: environmental audit, EMS, performance, environmental report.

JEL classification: M42, Q51, Q56,

INTRODUCTION

Effectively pollution monitoring can not be achieved only by technological solutions, it must be approached in basis of the environmental management system, integrated on general management of enterprise.

Given the legislative regulations and the public concerns regarding environmental protection and pollution reduction in the sustainable development context, it may be noticed an orientation of companies' concerns towards the introduction of Environmental Management Systems (EMS). Introducing such a system does not seek only compliance with environmental laws and the minimize of financial risks, but also the continuous improvement of environmental performance, thus ensuring a good image and a series of competitive market advantages.

EMS concept was firstly introduced in Holland, in 1985, currently being adopted in the countries of Western, Central and Eastern Europe, Asia, USA, Canada. Initially, the interest was focused towards developing legislative and regulatory components, as organizational structures to ensure framing economic activity as permitted by environmental standards.

In such conditions, industry's answer came as a reply to problems appearing, especially those of non-compliance with existing regulations. Investments were mainly directed to technological depollution solutions. Gradually, it started to integrate environmental policy into the company's economic one.

In 1987, the Brundtland Report from World Commission on Environment and Development (WCED) introduced the term of sustainable development and urged industries to build effectively environmental management systems.

Speaking of evolution of the EMS standards, are noted those at European level, EMAS and the international level, ISO 14001 and 19001.

1. ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

In the year of 1992, at Rio de Janeiro, took place the meeting that set up the sustainable development plans, resulting the global consensus and political commitment known as Agenda 21 for the start of collaboration between governments, enterprises and various organizations to solve environmental problems. Thus, the International Organization for Standardization (ISO) has been tasked to develop a set of standards into this regard, where it appeared the concept of Environmental Management System.

Environmental management system (EMS) is defined as a component of the overall management system which includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing and achieving environmental policies.

Such a system implemented in an entity has as main objectives:

- identifying and controlling of environmental aspects, impacts and relevant risks on the company;
- meeting environmental policy, including compliance with environmental legislation;
- defining principles to guide economic activities, taking into account environmental responsibilities;
- determining the company's environmental performance on an environmental balance sheet;
- defining responsibilities and procedures that involve the entity's human resources reducing negative environmental impacts.

Environmental management system is a tool to identify and solve specific environmental problems that can be implemented into various ways, depending on the nature of the entity. There is no ideal EMS suitable for all companies. Requirements vary depending on the activities needs and of the enterprise management system which should take into account the assets affected by the implementation of such system:

- reduced manufacturing costs;
- increasing sales;
- compliance with community pressures;
- avoid environmental problems during the production process;
- attracting new investors or some association opportunities;
- response to customer requirements;
- obtaining ISO certifications.

There are still certain basic elements common to all environmental management systems, namely:

- commitment of general manager concerning the willingness and assistance in the implementation of the system;
- initial analysis of the company's relationship with the natural environment;
- environmental policy as statement of general manager concerning compliance with environmental legislation and continuously improve of environmental performance;
- environmental plan that contains measures to be taken in a period;
- definition, allocation and communication of environmental structures and responsibilities required;
- integrating environmental management into general management of the company by incorporating environmental requirements in all specific areas such as supply, marketing, research and development, financial services etc.

Complexity of environmental issues shows challenges faced by companies when deciding to implement and develop an environmental management system. Currently,

worldwide, the ecosystem conservation problem is treated more seriously and severe penalties are provided for those who ignore the efforts in this regard.

Determining the most effective methods of environmental management system implementation and its assimilation into daily activities, should consider three aspects:

- identifying significant issues related to natural environment, which the entity wants to quantify, by associating costs;
- identifying relevant information for inclusion of such costs;
- defining data collection systems.

Depending on data requirements may be considered two options to implement the necessary system. The company can integrate management accounting into the existing accounting system, or to redesign it. Both systems require identification of environmental costs and relevant information about those.

Benefits from implementation of an environmental management system, are:

- the decision making receives an advanced informational support;
- new opportunities are detected through analyzing environmental costs, used then for savings by recycling;
- improving the pricing policy;
- assistance in the process of data reporting;
- increasing competitive advantage;
- improving entity's image, mainly by efforts to reduce environmental costs;
- attracting and motivating staff by creating favorable working conditions and opportunities;
- social benefits by willingness to cooperate for a "cleaner" environment.

The amount of decisions affected by the costs of interaction with natural environment is increasing, so that such a system becomes increasingly important, not only into environmental management as well as for other management activities such as designing processes and products, allocation and control of costs, supply process, price and performance evaluation policies.

2. CONCEPT OF ENVIRONMENTAL AUDIT – BOUNDARIES BETWEEN THEORY AND PRACTICE

One of the most used instrument of environmental management is the environmental audit. The term of audit is widely used in the financial field, but it has been recognized as an effective tool in the quality management system certification.

ISO 14010 defines this concept as a methodical and documented verification process of the audit evidence obtained and evaluated in an objective manner to determine whether the activities, events, conditions, the environmental management system and related information are in the accordance with audit criteria.

The last years have been the period in which the environmental audit has consolidated its position as a voluntary instrument of self control of environmental management within an entity. Currently, environmental audit is seen as a management tool for systematic, documented, periodic and objective organizational performance and processes for environmental protection in order to facilitate monitoring environmental impacts and to evaluate compliance with implemented environmental policies.

Environmental audit represents that systematic and informed action of evidence of certain environmental samples that have been obtained and objectively assessed to determine whether the activities, conditions, processes and environmental management systems comply with audit standards.

The literature uses the concept of auditing the environmental management system. This title actually refers to the point of view on systematic and informed internal verification of environmental audit proofs, performed in order to determine

whether the environmental management system ISO 14001 of a company complies with the audit criteria for environmental management system determined by the society and reporting to the leadership of the organization.

According to context of assessing environmental performance of an activity, the literature is noting three main types of environmental audit:

- environmental audit prior purchase;
- environmental audit prior sale;
- transversal environmental audit.

The practice of this domain develops five main types of environmental audit, each with their own ends, as shown in Table no. 1.

Tabel no. 1 – The main types of environmental audit

Types of environmental audit	Aims pursued
Contaminated land audit	- identify responsibilities for contamination of soil and water in the area of a site or building; - determining the costs / benefits incurred; - establishing authority and sanctions.
Ownership transfer audit	- identify risks and responsibilities associated; - analysis of previous compliance.
Compliance audit	- analysis of current activities; - assess how they comply with the requirements of national regulations.
Environmental management system audit	- systematic analysis of the existing EMS; - testing and certifying compliance with ISO 14001; - ensuring a continuous operation.
Environmental management plans audit	- analysis of implementation of measures to reduce the effects on the natural environment; - monitoring the occurred effects.

Initially, the environmental audit was only a report made available to shareholders, business partners and the general public. In time, there has been an extension of this work, due to factors such as:

- increased frequency of accidents on various operating platforms;
- increasing environmental regulations at local, regional and global level;
- increasing the civil society's interest, through NGOs dedicated to environmental protection, on the identification and mitigation of negative effects of economic and social activities on the natural environment.

Improving the legislative framework for environmental protection had as result implementation of certain principles for damages recovery, such as the “polluter pays” and other economic principles regarding pollution. Environmental audit differs from other techniques for assessing environmental impact, having as main objectives:

- evaluating if the ecological systems and equipments are operating at design parameters in accordance with the requirements of maintaining natural equilibriums;
- assess the fulfillment of company policy and regulations on environmental restrictions;
- assessing compliance with the laws and regulations established at national, regional and global level;
- reducing human exposure to the effects of environmental degradation.

In certain circumstances, audit types listed above can be combined. Detailed enrollment sphere of audit varies depending on the specific objectives pursued. Additionally, it may be performed specific audits targeting wastes, of water or energy, to evaluate in detail the degree of compliance or to identify opportunities to reduce costs, harmful effects on environment and waste.

3. PERFORMING ENVIRONMENTAL AUDIT ACTIVITIES

The audit, generally, constitutes an assessment methodology of the current situation relative to a reference. Environmental audit is a management tool for establishing the performance of measures for environmental protection. Environmental audit quantifies environmental performance and environmental entity's position. In this way, environmental audit provides a function analogous (similar) to financial audit. Environmental assessment is carried out during the preparation of the plan or program and is completed before its adoption or sent to the legislative procedure.

In the European Union it has outlined a methodology to conduct a complex environmental audit, which involves the following steps:

- a) compliance audit, the conformity clearance stage with environmental legislation;
- b) pre-acquisition audit, performed at purchase of property;
- c) audit for protection and safety at work, is meant to identify areas of risk to human health;
- d) the audit of company is initiated by management to verify the organizational structure, responsibilities and the implementation mode of environmental policy;
- e) the audit of environmental policy seeks to control the implementation of an environmental policy for all significant environmental aspects of the organization and how it is communicated to employees;
- f) the audit of the site by collecting specific data for the workspace: identifying pollution sources and potentially affected areas, collecting samples of water, air, soil in the best conditions and making noise measurements;
- g) the audit of cross-sectoral activities is addressed to several interest areas for the organization: transportation audit, raw materials suppliers audit.

The audit itself must be preceded by an environmental review outlining the forms of economic and social activity's impact on the environment. Environmental audit activity involves, primarily, developing a protocol between the beneficiary and the executing on institutionalized procedures. Then, the actual deployment of the approach is divided into three phase, as shown in the table no. 2.

Table no. 2. Stages of environmental audit

Pre-proceeding stage	- identify activities for which environmental audit is performed;
	- working up the team;
	- development of the plan for achieving the audit.
Actual elaboration stage	- knowing the control system of management activity;
	- evaluating the control realization capability on the management activity development;
	- collection, systematization and correlation of information;
	- evaluation of the findings;
	- communication of final conclusion.
Final stage	- preparation and presentation of a draft report;
	- preparation and presentation of final report;
	- elaboration of the action plan for improving the ecological performance of business activity;
	- pursuing the action plan.

The objectives of environmental audit activity are, at the same time, the ones of the final stage of approach:

- identification of priorities;
- establish the diagnosis by each sector of the enterprise;
- drawing up action plans by sector of activity;

- prioritizing and integrating plans into an overall strategy.

Advantages of the environmental audit consist in:

- helps protect the natural environment;
- allows monitoring compliance with the rules in the field;
- helps to identify current or potential environmental problems;
- reduces risks of disputes, accidents as result of damages to the environment;
- allows the identification of opportunities for achieving certain savings through actions such as reducing waste volume;
- facilitates the exchange of comparative information between enterprises.

According to purpose of the audit, it can be performed by independent consultants or experts or people with appropriate training, belonging to the personnel of enterprise or department submitted to audit.

4. THE ENVIRONMENTAL REPORT

For transactions, namely when buying or selling facilities or land, should be evaluated the condition in terms of natural environment, the target, to eliminate risks and hidden costs.

By taking into account the natural environment, risk analysis is performed being illustrated the investments required in field of environmental protection and deviations from legal requirements. This are vital information that serve on one hand as evidence for the seller, and on the other hand to risk minimization and investment plannification for the buyer. So can be detected or excluded hidden risks.

Environmental report represents a part of documentation process of plans or programs, that identifies, describes and evaluates significant environmental effects of their application and their rational alternatives, taking into account the objectives and geographical area. Thus, it appears that the environmental report is the essential part of environmental assessment and the monitoring base of effects on the natural ambient.

In the environmental report will be included, where appropriate, also an evaluation of safety and labor protection. This section will include:

- historical research;
- waste management;
- storage of hazardous substances;
- wastewater;
- atmospheric emissions;
- labor safety;
- legal situation.

The objectives of the environmental report are primarily identification, description and evaluation of significant environmental effects from implementing the program (plan) where the organization. The holder of such a program may be any public authority (municipality, county council, ministry etc.) as well as any person or entity.

An environmental audit report contains, ideally, a statement of environmental performance and environmental entity's position and may also determines what needs are to support and improve the performance and position indicators. In a general sense, an environmental report contains the following elements:

- a) exposing content and main objectives of the program and the relationship with other related plans;
- b) relevant aspects regarding the actual environmental status and its possible development if the proposed plan is not implemented;
- c) environmental characteristics of the area to be affected;

- d) any relevant environmental issues for future work, including those related to any area of particular importance, such as areas protected by law;
- e) environmental protection objectives established at national, EU or international level;
- f) potential significant environmental effects, including: biodiversity, population, climate factors, material assets, cultural heritage;
- g) measures to prevent, reduce and compensate any adverse effects on the environment due to implementation;
- h) state the reasons that led to selecting certain options and describe how to evaluate.

An environmental report is most valuable when it forms an integral part of an environmental management system. This demonstrates to the interested parties that it is not only a factor of image, but also that clearly recognizes the increasing awareness and concern for sustainable development.

Among the advantages of developing such a report, it should be noted that it is accessible to both managers and local community and by translating the environmental data in numbers, it can be presented to a broad public. Then, producing this report can provide a marketing advantage by demonstrating environmental concern, since customers are increasingly interested in this issue. Another advantage is considering to improve relations with key stakeholders such as investors, suppliers, creditors, etc. Also, an environmental report may be a factor in retaining existing staff and recruiting new employees who meet the requirements of the entity. An immediate effect is to increase performance and therefore savings to be made.

Ideal presentation form of an environmental report is the electronic one, given that the printing on paper is expensive and runs counter to environmental policy.

CONCLUSIONS

Environmental audit is a multidisciplinary method of objective analysis of an enterprise's performance, in relation with the natural environment in which it operates. The approach concerns manufacturing processes, materials storage, operating procedures and environmental management, aiming to identify potential environmental effects and related responsibilities. The main targets pursued are to facilitate the control of those practices with a potential impact on the environment and to assess compliance with environmental policy, including the achievement of the environmental objectives in relation to the economic ones of the organization.

A key component in this approach is the existence of an environmental management system (EMS) implemented within the entity. This is the tool by which the leadership has access to information regarding environmental performance of the company. So, it can be done a thorough analysis of environmental costs supported by the entity and the benefits incurred that are expressed, ultimately, also in financial terms. Such an own system provides the best decisions making to meet the entity's environmental policy, in full conformity with economic objectives established.

Environmental audit activities will identify whether an EMS is properly implemented, efficiently maintained and if provides useful information to management. As noted in the paper, there isn't an ideal EMS, generally valid to all entities. The form it takes, as well as implementation and operation largely depend on the nature of the company, its management system and activities. Environmental risk assessment depends on the nature and scope of the study, the amount of available data and other factors. Also, the manner of the assessment can vary from a simple qualitative analysis, to semiquantitative analysis and even to a purely quantitative assessment.

Thus, it can be said that in the context of deeper negative effects on planetary level, due to irrational exploitation of natural resources along the time, growing concerns are required in order to limit them. Involvement must come not only from the authorities and civil society, but also from economic environment involved. Environmental audit represents a response to the need for monitoring and control the impact of economic activities on the natural environment. Thus, implementation and expansion of environmental audit beyond the need to align with EU legislation represent a factor to achieve the overall performance of an entity (by economic, social and environmental objectives), including benefits to be achieved on medium and long term.

REFERENCES

1. Bețianu, L., (2008) *Calitate totală în contabilitatea mediului*, Iasi: “Alexandru Ioan Cuza” University Press.
2. Cahill, L., Kane, R. (2011) *Environmental Health and Safety Audits*, 9th edition, London: The Scarecrow Press.
3. Calow, P. (2009) *Handbook of Environmental Risk Assessment and Management*, Oxford: Blackwell Science.
4. Hackett, S., Moore, M. (2011) *Environmental and Natural Resources Economics: Theory, Policy, and the Sustainable Society*, 4th edition, New York: M.E. Sharpe.
5. Mironiuc, M. (2009) *Sisteme de managementul mediului. Metodologia de proiectare și implementare*, Iasi: “Alexandru Ioan Cuza” University Press.
6. Rojanschi, V., Grigore, F., Cimoș, V. (2008) *Ghidul evaluatorului și auditorului de mediu*, Bucharest: Economica.

Aknowledgements:

This work was supported by the the **European Social Fund** in **Romania**, under the responsibility of the Managing Authority for the Sectoral Operational Programme for **Human Resources Development** 2007-2013 [grant POSDRU/CPP 107/DMI 1.5/S/78342].