

Environmental Audit within Romanian Small and Medium Sized Enterprises

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Abstract – In Europe, the growing concern for environmental protection, along with expanding environmental legislation led to taking into account environmental audit in small and medium size enterprises (SME). This awareness coincides with that of various bodies involved in the production process, so that it became necessary to introduce environmental issues related to daily decision-making process. It is about developing an appropriate policy regarding environmental agreement in principle with the social, can turn into a powerful marketing tool if used correctly.

Keywords: sustainable development, environmental audit, small and medium size enterprises, costs

I. INTRODUCTION

Actually in Romania, a large number of SME do not spend money on innovation and do not allocate any of their incomes on research and development activities. The major part of SME has reduced their investments in the last years. If we consider environmental issues, this is a discussion, which does not affect one particular country, being in reality a world action with a firm objective of environmental protection. SME in Romania and their large representation in the economy generate a great impact on the environment. This impact includes air pollution, the use of natural resources, the use of energy, noise, odor, dust, disposal of wastes and so on. The impact that SME activities have on the environment can be turned into a great opportunity to explore the economic advantages with the support of an environmental audit [1, 10, 11, 12, 13].

II. REPORTING ENVIRONMENTAL INFORMATIONS

Considering the tendencies in sustainable development approaches described by researchers and academia, eco-efficiency is oftentimes considered the priority standard for managerial decision making in an

environmental (triple helix model has to be considered) context because it seemingly reconciles the efficient use of capital and the efficient use of environmental resources [6].

Furthermore, since the 1990s, sustainability reporting has become an increasingly relevant topic in business (macroeconomic and microeconomic levels) and different stakeholders as responsible staff or policy makers, consultants, researchers and academic staff and researchers were focused on defining a general framework, model or approach for those kind of analysis, evaluation and reports. In this context, literature is still limited and no major state-of-the-art based on relevant studies or latest approaches and developments have not been presented since 2013.

One important synthesis in the field has been published by Hahn and Kühnen (2013). Their research provides a "review of 178 articles dating from 1999 to 2011 from journals related to business, management, and accounting" [8]. Their research article aims to "identify what determinants of sustainability reporting are examined in the literature and to identify (in)consistencies, gaps, and opportunities for future research". They have presented "specifically illuminate factors influencing the adoption, the extent, and the quality of reporting". Based on their findings, Hahn and Kühnen have provided "an otherwise often missing link to theory (especially legitimacy, stakeholder, signaling, and institutional theory)" [8].

Unlike traditional management accounting, environmental management accounting (EMA) offers an abundance of information to both internal and external users. SME and the environment have a continuous interaction and the general standards and approaches have to be reconsidered and adapted for their practical use and exploitation. Nowadays, EMA use is associated with environmental strategy (planned or implemented), organizational dimension (small or medium enterprise) and to aspects related to

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environmentally-sensitiveness of the industry where the SME is related [2, 5, 7]

According to Christ and Burritt researches, that were published in 2013, "EMA has received increasing interest in recent years and has been promoted as a means by which the business community can more easily manage its environmental and associated economic performance" [4].

According to Ricoh Group [14], a way of presenting environmental information is the preparation of plans, which would reflect the processes and fluxes concerning the recycling activity or reincorporating raw materials, energy and water. From the perspective of Ricoh Group, to become the type of organization that is envisioned by its top management team there have to be realized changes for the creation of a sustainable organization that has to be integrated in a sustainable society, that has to change into a sustainable one. "In 1994, Ricoh established the Comet Circle as the basis to encourage such change. The Comet Circle expresses the greater picture of the environmental impact reduction scheme, which includes not only the scope of the Ricoh Group as a manufacturer and sales company but also the entire lifecycle of our products, including

upstream and downstream of our business activities. Being well aware that product manufacturers like Ricoh, because of their involvement in the early phases of a product's lifecycle, can make the greatest contribution to reducing environmental impact, we engage in all business taking into account the Comet Circle" [14].

As it is presented in Figure 1, the flow of the Comet Circle is described by different cycles. Each cycle represents the partners that can be attracted and that could support the development of a sustainable society. "The new resources harvested by the materials supplier from the natural environment (upper right) will be turned into a product through moving from right to left along the upper route, finally reaching the users (customers). The used products will follow the route below from left to right" [14].

The Comet Circle model could be a good practice, an example to be followed by other companies that started to follow sustainable principles. In this context, SME in Romania have to consider all their activities in order to develop a long term plan for sustainable development [1, 10, 11, 12, 13].

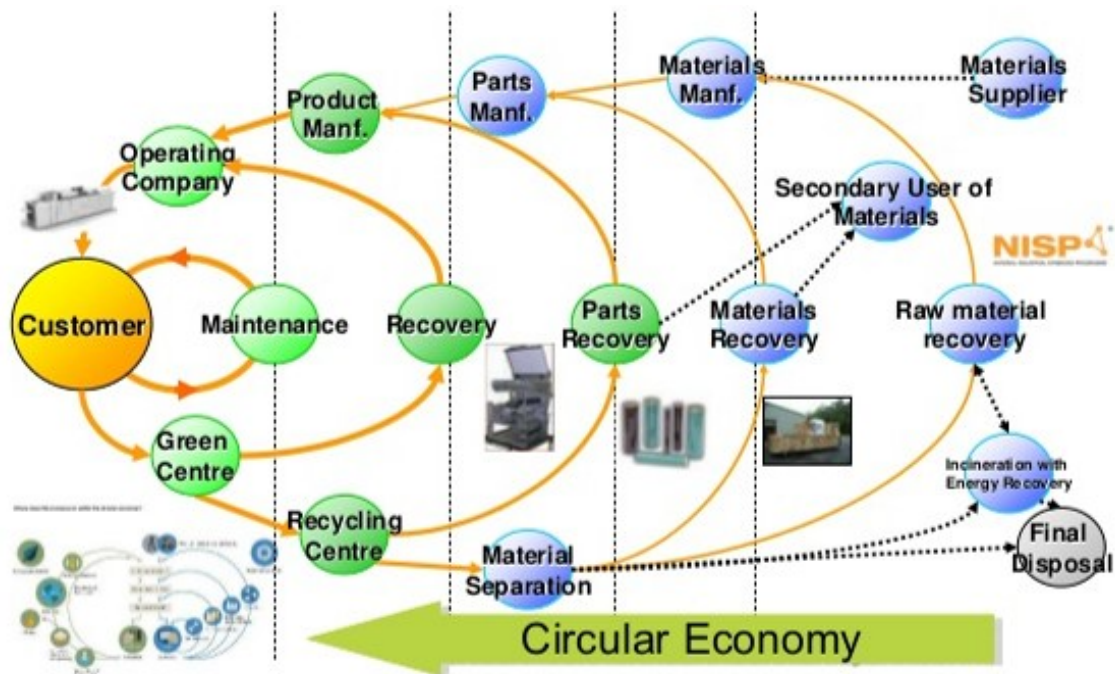


Fig. 1. The Comet Cycle for sustainable SME [14]

III. ENVIRONMENTAL AUDIT IN SME – A PROPOSED FRAMEWORK

Environmental audit should provide management with sufficient information to control, plan and check activities that can have an impact on the environment.

At the same time, it facilitates assessing the adequacy of the entity's environmental policy.

In our opinion an environmental audit objectives are very broad and diverse and depend largely on the characteristics of the activity, the audited entity and the environment in which it is located. The Proposed framework for the environmental audit of SME is depicted in Figure 2.

The main objectives of an environmental audit within Romanian SME, in the proposed framework vision, have to take into consideration the following aspects of the general audit procedure:

- To study the system documentation to determine if they match the corresponding reference standards;
- To establish the level of compliance with procedures, as part of the Environmental Management System;
- Verify that all departments and levels of the organization follow the procedures for technical requirements set;
- To determine the degree of conformity of the management system audited or certain parts of it, with audit criteria action;
- To assess the ability of the management system to meet the objectives specified;

- To propose corrective actions and improvements necessary to succeed the procedures and objectives;
- To prevent a recurrence of the problems

An environmental audit is an indispensable tool in the certification process of an environmental management system within SME.

Traditional Auditors lacked knowledge regarding environmental issues, and those who were involved in environmental auditing, formed multidisciplinary teams to combine knowledge of several persons.

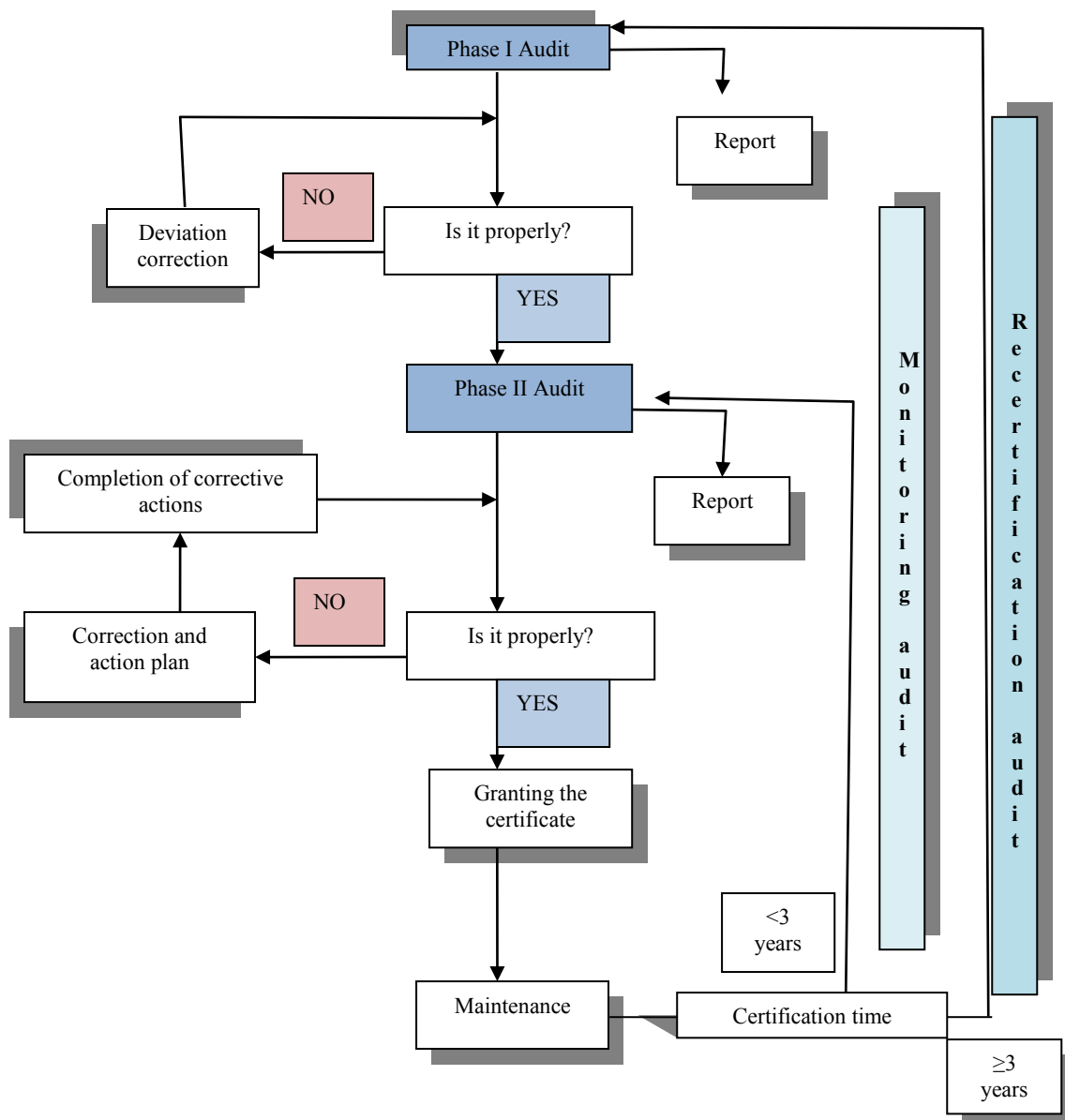


Fig. 2. Environmental audit within SME [1]

IV. CONCLUSION

Environmental audit presents both negative and positive aspects. In the case the negative aspects, we could mention the cost of the environmental audit, which is obviously a negative aspect.

The nature of environmental audit questions the subject; which must bear the costs of collecting and presenting the environmental information. In the same way that financial audit and internal audit, SME must support the costs, which may vary considerably regarding the type and purpose of the audit.

Another disadvantage of reporting environmental information in Romanian SME is that environmental audit may reveal breaches of environmental regulations, which could have a negative financial impact on the entity and can have negative financial consequences, on the image of entity, resulting in loss of customers or loss of investor confidence.

In case of SME in Romania, the environmental audit may affect the operations of SME, even though adequate planning can sustain the diminishing of this risk. In Romania, some SME would rather not know or may not disclose a range of issues, which are facing because knowing those issues must assume their obligations for correction [1].

Environmental audit also, has many benefits. The greatest benefit of environmental audit, is the gradual reduction of the company risk.

Through environmental audit SMEs understand the relationship with the environment, find the problems that may occur and thereby can create a competitive advantage.

One other benefit environmental audit has over SME is providing data to support management decisions, debt security, creating an additional tool for evaluation of compliance a management better aid in educating employees and a tool for public relations and marketing.

Balancing these advantages and disadvantages will influence SME decision to carry or not an environmental audit.

We consider that, in financial terms, an environmental audit is profitable if the costs avoided as a result of environmental audit conducted (penalties, lost time of production, costs of cleaning the area) exceed the cost

REFERENCES

- [1] Artene A. „*Auditul sistemelor de management al mediului*”, Ed. Eurostampa, Timisoara: 2011.
- [2] Bennett, M.; Schaltegger S.; Zvezdov D. “Environmental management accounting”. *Review of Management Accounting Research* (2011): 53-84.
- [3] Biondi, V.; Frey, M.; Iraldo, F. „Environmental management systems and SMEs: Motivation, opportunities and barriers related to EMAS and ISO 14001 implementation”, *Greener Management International*, vol. 29 (2000): 55-69.
- [4] Christ, K. L.; Burritt. R. L. “Environmental management accounting: the significance of contingent variables for adoption.” *Journal of Cleaner Production* 41 (2013): 163-173.
- [5] Ferreira, A.; Moulang C.; Hendro B. “Environmental management accounting and innovation: an exploratory analysis.” *Accounting, Auditing & Accountability Journal* 23.7 (2010): 920-948.
- [6] Figge, F.; Hahn T. “Value drivers of corporate eco-efficiency: Management accounting information for the efficient use of environmental resources.” *Management Accounting Research* 24.4 (2013): 387-400.
- [7] Herzig, C., et al. “Environmental management accounting.” *Case studies of South-East Asian companies*. Oxon: Routledge (2012).
- [8] Hahn R.; Kühnen M. “Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research.” *Journal of cleaner production* 59 (2013): 5-21.
- [9] Markandya, A., Tamborra, M. „Green Accounting in Europe. A Comparative Study”, Edward Elgar Publishing, UK, (2005).
- [10] ***, McGraw-Hill „Dictionary of Environmental Science”, McGraw-Hill Companies, USA, 2003
- [11] EUROSTAT, „Environmental Expenditure Statistics – General Government and Specialized Producers”, Data Collection Handbook, (2007).
- [12] *** <http://www.iso.org/iso/home.html>
- [13] ***
<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>
- [14] ***
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