

THE ACCOUNTING PROFESSIONAL AND ENVIRONMENTAL MANAGEMENT ASSUMPTIONS, STAKES AND CHALLENGES

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ABSTRACT: *The objective of this paper is to highlight the role of the accounting profession in obtaining and capitalizing in a pertinent manner the information by environmental management. The paper approaches issues regarding: the accounting profession (features, responsibilities, including in the areas of sustainable development and environmental accounting), environmental management, the challenges faced by accounting and management in the process of ensuring sustainable development. The quality, weight and role of the accounting information are known at the level of each organization, as it's the fact that given the current global context that mankind is going through, new formulas to build a sustainable economy and to restore economic growth are required, without increasing the obvious environmental crisis.*

KEY WORDS: *accounting professional, environmental management, information.*

JEL CLASSIFICATIONS: *E01, F64, M41.*

1. INTRODUCTION

“Globalization includes a multitude of processes that crucially affect all areas of the economic and social live. It may be considered a phenomenon, an ideology, a mentality, a strategy or all in one” (Tabără, et.al., 2010, p. 94). No matter the nature of the assembly (economic, social, “environment” o.n), it cannot be considered automat systems (that can autocorrect itself) and, hence, the improvement of the performances is obtained through the permanent intervention of the management factors in the development of activities (Stuparu et.al., 2010, pp. 321-332).

The environment is an essential part of any development process and includes existent links and interdependencies between people and natural resources. Sustainable development isn't a new concept. It is the most recent expression of a very old ethic

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that involves human relationships with the environment and the responsibilities of current generations to future generations.

In this paper we intend to explore the current coordinates that define the role and statute of the accounting professional through the responsibilities adjunct to environmental management.

To achieve the mentioned objective, we considered relevant to approach the following issues:

- the need for environmental management in organizations and its extrapolation to macroeconomic level;
- taking into account the environment in the life of organizations through the information provided by the accounting profession;
- the realities and challenges of the environment for the accounting profession;
- the content of the informational support provided by the accounting profession for environmental management, content that shows complexity in terms of generating and reporting information in a context shaped by ecological boundaries;
- other opportunities provided to the accounting profession by environmental management.

Currently, there is a global general focus on the environmental management systems within companies. These provide a structured and systematic method to incorporate environmental care in all the aspects of the business, the ultimate goal being (Tiuzbăian, 2004, p. 105) to minimize the financial risks of the responsibilities towards the environment and costs, to improve environmental performance and to gain competitive advantages, while complying with environmental regulations.

Integrating the environment in the life of the entity implies taking it into account from a technical, legal, economic, but also accounting and financial viewpoint. Environmental accounting is considered a managerial tool for use in multiple purposes, including: improving performance in terms of environment, cost management and control, efficient investments in less polluting technologies, promoting less polluting production processes and products, etc.

The reason for approaching this subject was the on-going globalization process that swept the world economy and called for the rapid convergence of the content and assessment and recording manner of the economic, patrimonial and financial operations of the companies.

Internationalization resulted from the need to reduce costs due to the awareness related to the existence of limited resources and the intensification of the efforts to standardize at global level the accounting systems developed until a given moment.

We wanted to explore the possibilities available to the accounting professional to intervene in achieving an efficient environmental management.

Thus, we resorted to the four basic levels of the research activity, namely description (for collecting and centralizing the evolution of information), classification (which allows comparisons), explanation (in order to show the meaning of the causality relations based on theory) and prediction (to spread opinions about the

potential future evolutions of the accounting profession/environmental management relationship).

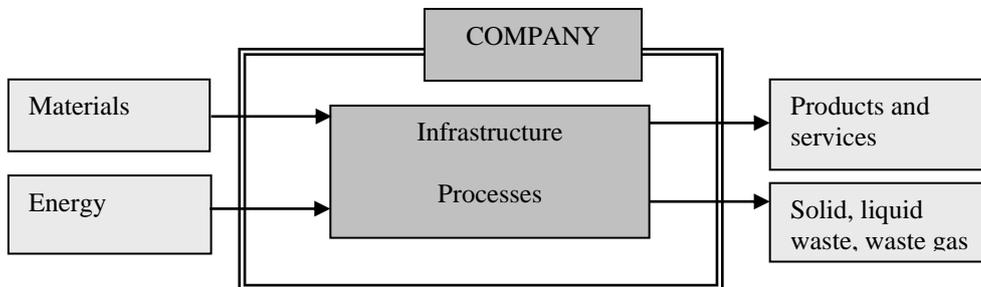
The conducted research is a deductive type, which starts from a certain objective, theory, existent concept, continues with generalization and ends with the improvement of the practical side of environmental management, and even accounting.

2. ACCOUNTING PROFESSION: REALITIES AND CHALLENGES REGARDING THE ENVIRONMENT

One thing is certain and it has been proven throughout history, namely that man is the main determinant of disasters, but also of progress and quality of life in general (Oprean & Suciu, 2003, p.13). Man has the solemn duty to protect and improve the environment for present and future generations.

Environmental management is the method that organizes the human activities that impact the environment in order to maximize social welfare and to prevent and minimize potential environmental impacts by treating the generating causes. Environmental problems can't be view as isolated; they should be approached together with development issues, taking into consideration the critical importance of maintaining an adequate balance between economic development, demographic growth, and rational use of natural resources, environmental protection and preservation (Ionescu, 2003).

Underlying environmental management has the organization and the environment as reference points, which are represented in the figure below (fig. no. 1):



Source: *Manual de practici europene în managementul mediului*,
http://www.ngo.ro/img_upload/b247143d65c7290473692bc6171e3654/manual_final.pdf

Figure 1. The economic system – environment relationship

Environmental management implies conceiving, designing and ensuring in economic practice the facilities that determine taking into account the efficient use of energy and materials, the consumption of renewable resources in terms of the sustainable development concept, etc. In our opinion, the accounting professional plays an essential role in this process.

The way in which economic development will affect the state of the environment depends on the measures and actions taken by the current and future

managers that hold responsibilities and have concerns related to environmental protection, based on accurate and complete information provided by accounting professionals.

In a democratic society, any entity (economic, non-profit, etc.) should conduct its activities in a transparent manner, and the efficient management of resources puts pressure on accounting, which can't hide "behind confidentiality" (Todea, 2009, p. 9).

The scientific approach of accounting involves identifying additional methods and tools to obtain economic information (useful in environmental management) that is relevant, credible, comparable and usable for the participants in the economic process.

The current context (economic and social, etc.) imposes the need to identify ways to receive and approach on long term the major contemporary problems, determined by the interaction between numerous economic, technical, political and social processes and phenomena and envisioning their solutions in a broad perspective by the international community (Horomnea & Rusu, 2009, pp. 8-16).

In case the complex problems generated by the global crisis target issues like the efficient management of diminishing resources, the identification of the means and resources needed in this respect, the assessment of the obtained results, the recording of the environmental costs and the presentation of financial statements, the accountants will get involved "on the environmental protection scene".

The accounting profession is regulated and distinguished from other professions by the fact that it takes responsibility in front of the public, having a major role in the development of global and domestic economy (Toma & Potven, 2008, p. 10). It includes the set of activities/services that create an indivisible whole (they are stipulated by GO no. 65/1994 on the organization of accounting expertise and chartered accountants) and requires accounting knowledge. It consists of experts that perform/provide activities/services, united by cohesion (to satisfy public interest and achieve a social role), homogeneity (by structure and level of education), solidarity (in undertaken missions – optimizing the use of resources, improving general economy), as well as their professional bodies.

Globalization is a reality of today's world, with complex connections and multilateral economic, social, political and human relations. The success of the international endeavour to achieve an adequate and sustainable environment, in harmony with human beings, is the attribute of environmental management, which also involves the human resource in the area of accounting. This supply information that complies with fundamental qualitative requirements of relevance and exact representation (OMPF 1802/2014).

The efficient management of information regarding environment is an accounting challenge and, as the main component of the economic informational system, it can't be absent. As Dimiter Jeliaskov, a certified accountant in Bulgaria, stated in a study called "Accounting can and should be involved in environmental protection": "the only subdivision that could meet this challenge would be the accounting department, as reflected by the financial and economic condition of the entity and the changes of this condition in the most comprehensive and multilateral manner" (Todea et.al., 2010, pp. 207-217).

In Romania, the involvement of accounting in the activities of environmental protection has become more visible with the implementation of the provisions included in the OMPF no. 3055/2009 for the approval of Accounting Regulations in accordance with European Directives, which included issues regarding the environment).

Among the issues stipulated by this regulating document that have implications over the environmental accounting information, are included:

- introducing a technical accounting tool to highlight expenditure with environmental protection (environmental taxes, other expenses related to environmental protection, acquired greenhouse emission certificates whose costs may be determined);

- off balance-sheet recording of the received greenhouse emission certificates, which don't have a value, and therefore cannot be recognized in balance-sheet accounts.

3. THE INFORMATIONAL SUPPORT PROVIDED BY THE ACCOUNTING PROFESSION FOR ENVIRONMENTAL MANAGEMENT

Environmental accounting is a method of treatment of environmental information. It assesses the system, it analyses the procedures, it verifies the good functioning of environmental management and of its internal audit in accordance with the EU directives and recommendations.

Environmental accounting is perceived by the accounting profession in our country as a system composed of next parts: reporting (aims to present information in financial statements, whose objective is to provide an accurate picture of the financial position, financial performance and changes in the financial position of the entity; this information is useful for a wide range of users in making economic decisions), management accounting (approaches the issue of environmental costs, the analysis of the product's life cycle, environmental performance and its implications on the entity's financial performance) and environmental audit.

In terms of the analysis levels used to interpret individual and inter-individual behaviours and collective behaviours, we can distinguish microeconomic environmental accounting (which includes financial environmental accounting, management accounting and part of environmental audit) and macroeconomic environmental accounting, namely national accounting. In our opinion, environmental audit may be signposted to both forms of accounting.

Top level management should define with the help of accounting professionals the measuring methods of the organization's performances to achieve the aimed objectives. To face the challenges of environmental management, the activity of accounting professionals is subjected to numerous challenges, among which are included:

3.1. Computation of macroeconomic indicators relating to the use of natural resources to assess the impact of national environmental policies. With their help it becomes possible to conduct the integrated analysis "economy-environment" at national level. Domestically, the following components of this activity have been identified:

- a. Accounts of environmental goods that highlight the stocks of natural resources;
- b. Material flow accounts (energy and resources), which provide information at the level of economic activities regarding the use of energy and materials as production inputs and the final consumption, the emissions of pollutants and waste;
- c. Satellite accounts of expenditure for environmental protection and resource management that identify the expenditure of National Accounting incurred by industry, public administration and households to protect and manage environmental resources. They provide national accountants with the opportunity to change certain conventions of the System of National Accounts by using environmental data without influencing the consistence of the information in conventional accounts;
- d. Macroeconomic indicators adjusted with environmental elements, leading to composite indicators that are part of sustainable development indicators (Voineagu, 2010).

3.2. **Assessing environmental costs**, which is an extremely complex process that requires among others:

- a. Collecting information to assess costs and environmental risks against a horizon that goes far beyond the economic one, the need for comprehensive knowledge of the type of pollution resulted from a certain activity, the absence of a market for certain natural resources, followed by the concern to obtain profit.
- b. Identifying the criteria that make the difference between environmental expenses and other type of expenditure
- c. Assessing future losses or expenses with the help of provisions by considering a wider time horizon. In this case, risks and expenses “are due” in approximately 30 years (demolition of nuclear plants, rebuilding open pits, etc.). In addition, there are uncertainties related to technological advancements, changes in prices and legislation, etc.

3.3. **Individualization of environmental investments**, namely for depollution (which aim to eliminate pollution at the end of the production cycle) and anti-pollution (which seek to avoid the emission of pollutants in the production cycle).

3.4. **Individualization** of current environmental **expenses** (for example, human resources expenses at the level of organizations and control expenses in the area of pollution).

3.5. **Preparing** (in a standardized form) **financial reports** used by the managers of the company, by investors, suppliers, clients and other decision-makers involved in the managerial cycle. These reports generate information about financial position, performances and the changes of the financial position related to the environment.

3.6. **Identifying, collecting, computing (estimation), analysing, internal reporting and using information related to materials and energy**, to environmental costs, as well as other information regarding costs occurred during the decision-making process, in order to make convenient decisions that will also contribute to environmental protection. The following are taken into consideration: internal costs of the organization, costs associated with the environment, information relating to the circulation and consumption of material resources and energy, to the assessment of benefits, to strategic environmental management planning, in other words, the

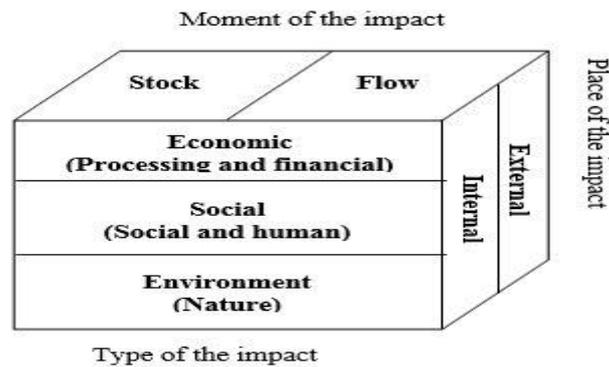
information that can be used in most types of managerial and decision-making activities taking place within the organization.

3.7. **The systematic examination of the interactions between economic operations and environmental operations** (emissions in water, air, soil, effects over neighbouring areas, landscapes, etc.), the analysis of legal provisions, of management systems and processes developed for environmental protection, the evaluation of compliance with environmental policies, including the achievement of the environmental objectives, etc.

Both the restructuring process of a few conventional national accounts, in the sense of extending to a “satellite” system, called System of Integrated Environmental and Economic Accounts, as well as the implementation process of an accounting system of the environment (Şendroi, 2006, pp. 945-949) require going through different stages, doing a specific algorithm where the contribution of the accounting professional is absolutely necessary. As a mean of managing the entity, the audit completes the range of tolls of intervention of the accounting profession over environmental problems and aims to assess and contain the environmental impact.

The presented aspects confirm the perception of environmental accounting, namely that of “an efficient information system about the thinning degree of natural elements, determined by the activity of entities and used to reduce this thinning and to inform third parties. The provided information is useful to the extent to which it allows: to assess environmental risks, to determine the projects that aim to establish these risks, to determine the impact of environmental performances on financial results” (Beţianu, 2008, p. 361).

The full reporting of this information should capture the aspects of an activity in economic, social and environmental respects, namely the three dimensions of sustainable development illustrated by the environmental accounting cube developed within the Sustainable development program of the Forum for the Future Organization:



Source: The SIGMA Project, after L. Betianu, p.126

Figure 2. Environmental accounting

Thus, reporting of information should be presented in the larger context of ecologic and social limits or constraints, a context that amplifies the meaning of the reported information. Also, individual performances must be related to broader ecologic systems in which the organizations function. For reporting environmental

information, accountants have a lot of information sources, because: “human society evolved from using stone, wood and wildlife in early times to fossil fuels, electricity and atomic energy, reaching today to the use of the most productive resource: information (Teiușan, 2017, pp. 23-40).

It is believed that currently the content of sustainable development reports tends to emerge in forms and units of measurements that are not easily converted in financial terms. But the rapid advances in areas like environmental management accounting, the assessment of intangible assets and the report of value are prone to make the information about sustainable development useful for decision-makers.

Practicing environmental accounting implies the accumulation of information to assess the cost of externalities that should be borne by the entity, as well as the development of strategies that fit into the logic of the sustainable development. (Caraiani & Jianu, 2007, pp. 21-26).

Using professional reasoning also allows identifying revenues or cost savings opportunities (spending cuts) that haven't yet been considered; issuing proposals to amend the existent accounting system; considering the capital consumption as depreciation of the physical capital, but by taking into account the regeneration possibilities of natural goods. Therefore, environmental accounting brings additional information to management by seeking and identifying relevant, complete and credible solutions about the aspects mentioned previously.

The green approach of environmental accounting makes it more than a passive recording tool of immediate or future flows, of certain or potential flows, being also a lever that encourages entities towards activities and strategies that are consistent with the concept of sustainable development.

4. CONCLUSIONS

Compared with any other information system, the accounting profession is the closest to the economic truth; it is accessible only to those certified by the competent authority; it covers a wide range of sectors and specializations (statutory audit, accounting, legal expertise, counselling, tax and investment advice, information management and technology, etc.); it provides high quality services and contributes to the global economic growth and development.

Despite its negative effects, the global crisis may be an opportunity for affirmation for the accounting profession through the support that it may provide to economies. With the help of international accounting referential, accounting has acquired a common language for all the countries that apply it, which means “convergence towards unity” for the accounting professional and the institution they represent.

We believe that the involvement of the accountant in this extremely complex and responsible process is an antidote to mitigate the subjectivity of reality; new opportunities to identify the costs of activities (not resources) are identified. With the accountant's help, the costs and benefits of managing environmental issues are closer to the perception level of managers.

The key to success of international environmental protection measures is a wider participation of the global community, the cooperation on technical problems and the functional implementation of financing mechanisms that will back up developing countries.

The economic-financial communication of entities turns out to be very important in gaining credibility, trust and the legitimacy of the being more responsible towards the needs of their companions, including environmental management. Our existence depends on the wealth of natural resources of the environment in which we live, on our ability to exploit them, on the provided and created conditions related to regeneration and conservation.

Environmental accounting contributes to improving the environment by explaining how natural resources may be used in a sustainable manner. Its role is to increase efficiency and the effects of the environmental protection measures and to keep track of the expenditure and revenue implied by environmental protection, to report and to reflect them in financial statements by introducing new green columns in the balance sheet, in the results account or in the explanatory notes. In other words, it is the basis for improving green performances of organizations.

Global natural resources are limited, and mankind is facing a dramatic choice: destruction or protection. In everything we do, we should consider with the help “of the most ingenious creation of the human spirit” the implications of our action on the environment.

“On the road to progress and civilization, human society can’t avoid the idea of order, discipline and foresight in terms of economy”, (Horomnea, 2008, p. 348) in other words ... the accounting profession.

5. REFERENCES

- [1]. **Bețianu, L.** (2008) *Calitate totală în contabilitatea mediului*, University „Al.I.Cuza” Publishing House Iași, pp. 126, 361
- [2]. **Caraiani, C.; Jianu, I.** (2007) *Contabilitatea verde – o perspectivă a schimbării în contabilitate*, Contabilitatea, expertiza și auditul afacerilor Review, CECCAR Publishing House, 4, pp. 21-26
- [3]. **Horomnea, E.** (2008) *Fundamentele științifice ale contabilității*, TipoMoldova Publishing House, Iași, p. 348
- [4]. **Horomnea, E.; Rusu, G.A.** (2009) *Criza financiară globală și perspectivele profesiei contabile într-o nouă abordare*, Contabilitatea, expertiza și auditul afacerilor Review, CECCAR Publishing House, 12, pp. 8-16
- [5]. **Ionescu, C.** (2003) *Politici de management de mediu*, [Online], Available at: <http://www.hydrop.pub.ro/polcurs6.pdf>, [Accessed 20 June 2017]
- [6]. **Oprean, C.; Suci, O.** (2003) *Managementul calității mediului*, Academiei Române Publishing House, Bucharest, p. 13.
- [7]. **Stuparu, D.; Vasile, T.; Dăniașă, C.I.** (2010) *Bayesian Approach of Decision Problems*, Annals of the University of Petroșani, Economics, 10(3), [Online], Available at: <http://www.upet.ro/annals/economics/pdf/annals-2010-part3.pdf>, pp. 321-332, [Accessed 20 October 2017]
- [8]. **Șendroi, C.; Roman, A.; Chițu, A.** (2006) *Contabilitatea managerială a mediului: analiza costurilor de mediu și procesul decizional al organizației (Environmental*

- Management Accounting: environmental cost analysis and decisional organizational process*), [Online], Available at: <http://steconomice.uoradea.ro/anale/volume/2006/management-si-marketing/24.pdf>, pp. 945-949 [Accessed 20 June 2017]
- [9]. **Tabără N.; Horomnea E.; Mircea M.C.** (2010) *Contabilitate internațională (International Accounting)*, TipoMoldova Publishing House, Iasi, p. 94
- [10]. **Teiușan, S.C.** *Internet Resources for Accountants*, Annals of the „Constantin Brâncuși” University of Târgu Jiu, Economy Series, Issue 5/2017, http://www.utgjiu.ro/revista/ec/pdf/2017-05/03_Teiusan.pdf, pp. 23-40
- [11]. **Tiuzbăian, I.N.** (2004) *Managementul mediului (Environmental management)*, Universitas Publishing House, Petrosani, p. 105
- [12]. **Todea, N.** (2009) *Teorie contabilă și raportare financiară (Accounting theory and financial reporting)*, Aeternitas Publishing House, Alba Iulia, p. 9
- [13]. **Todea, N., Stanciu, I., Joldoș, Șt.** (2010) *Environmental Accounting - A Tool Used by the Entity for Determining Environmental Costs*, Annales Universitatis Apulensis Series Oeconomica, vol. I, Alba Iulia, pp. 207-217
- [14]. **Toma, M.; Potven, J.** (2008) *Elemente de doctrină și deontologie a profesiei contabile (Doctrine and deontology elements of the accounting profession)*, CECCAR Publishing House, Bucharest, p.10
- [15]. **Voineagu, V.; Mîndricelu, C.; Ștefănescu, D.** (2010) “*Dincolo de PI”B - prin contabilitatea mediului (“Beyond the GDP” - through the environmental accounts)*, Romanian Statistical Review, 6, [Online], Available at: http://www.revistadestatistica.ro/Articole/2010/A2en_6_2010.pdf, [Accessed 20 July 2017]
- [16]. *Manual de practici europene în managementul mediului (Manual of European Practices in Environmental Management)*, [Online], Available at: http://www.ngo.ro/img_upload/b247143d65c7290473692bc6171e3654/manual_final.pdf, [Accessed 20 October 2017]
- [17]. **Order of the Ministry of Public Finances no. 1802/2014** on the approval of the accounting regulations regarding the individual and consolidated annual financial statements, The Official Monitor no. 963 from 30th December 2014
- [18]. **Order of the Ministry of Public Finances no. 3055/2009** regarding the approval of the accounting regulations in compliance with the European Directives, The Official Monitor no. 766 bis from 10th November 2009
- [19]. **Government Ordinance no.65/1994** on the Organization of the Accounting Expertise and Licensed Accountants’ Activity, republished, The Official Monitor no. 13 from 8th January 2008