Preface

*Green Accounting Initiatives and Strategies for Sustainable Development* has the purpose to integrate accounting within transdisciplinary knowledge for green performance measurement, reporting and managing within an economic entity. Therefore, the authors advance the accounting information to high qualitative standards by combining economic, social and environmental objectives and by their ability to address new reporting and managing challenges. The accounting models regarding sustainability contribute to enhance the quality level of synergies between economic, social and environmental objectives. The cooperation of researchers around the world, in the green accounting area, contributes at involving relevant communities, stakeholders, practitioners in conducting and diffusion of research, and at providing relevant knowledge for economic, social and environmental policies for their integration, in the short or long term.

Within knowledge-based economies there is recognition for new approaches to decision-making to support sustainable development initiatives, along with an increasing acknowledgement of the limitations of cost–benefit analysis as a measure of the (un)sustainability of organizational activities. These are viewed as particularly inappropriate within the participatory settings that sustainable development proponents seek to foster. Evaluation models for sustainability are based on an interdisciplinary approach that recognizes the necessity of a new accountability to lead toward advanced forms of decision and responsibility. Sustainable reporting, also known as Triple Bottom Line (TBL) Reporting, evaluates the entity’s achievements, integrating the three areas: social, economic and environmental. Economic entities from different industries are becoming more and more aware of the environmental and social liabilities related to their operations and products, with associated financial effects. Uncertainties in measuring these financial effects can be addressed by using environmental accounting and evaluation techniques for environmental and social liabilities and related environmental and social costs.

The most comprehensive view on corporate reporting is based on the sustainable development concept and combines the three reporting dimensions: economic performance, social performance and environmental performance. In the first stage of our research we propose retrospection on the fundamental concepts used in the social and environmental reporting practice, ensuring a uniform terminology, as an entity – stakeholders (customers, suppliers, governmental agencies, employees families and special interests groups) communication bridge, and the promoting of the best reporting practices used in social and environmental decision making. Subsequently, benefits of the financial and non-financial information collected through this research, are used to build a documentary database on internal and external costs. To this end, the entity must initiate a strategy for including environmental costs and benefits in decision-making. Current expenses incurred by partial financial reporting may also be taken from the feedback system continuously monitoring current transaction-generated data. The operational feedback
systems’ elements allow periodical aggregation becoming useful to stakeholders. Thus, the system responds both to managerial issues and financial reporting purposes.

Advanced documentation on these concepts, policies and procedures of environmental EU aquis of global green performance measurement, of internal and external costs, and on managerial tools used by green accounting, enables to highlight green accounting issues and to extend the conventional accounting model towards social and environmental accounting. The need of accounting consultancy in environmental and social issues allows to identify the modern, green accounting integrated entities. Their experience is a much needed asset in future guidelines elaboration.

Next, by using the previous fundamental research results, the theme of global green performance correlated with GAIA theories is developed and advanced. These represent the scientific argument of the way our planet functions, as a living organism, a dissipative, self-regulating dynamic system. It motivates our main research goal, which is designing GAIA accounting innovative model. Managers use their professional knowledge to predict resource supply and spending levels for upcoming periods, and to calculate the expected future costs of products, services, and customers. In a permanent changing environment, an adaptive management is required; therefore a management by thinking must be taken into account.

The main objective is attained by generating transdisciplinary knowledge within the academic community thought educational innovative materials in the researched field, and also by promoting border-line research (organising social and environmental accounting panels, as a part of international conferences). The obtained outcomes provide the different managers, especially top managers with new abilities to perform, easily and inexpensively, special studies that translate an adapting management process into scenarios appropriate to various situations challenging the internal and external entity’s environment. The recognition and measurement concepts of evolutionary accounting represent the communication way among participants in the global social and environmental equilibrium, on different levels of information. The development of quantifiable indicators system for TBL performance allows designing GAIA accounting innovative model and complex modeling for social and environmental relations.

The research methodology used in this book is based on a multidisciplinary approach, which has worked out an advanced techniques set of education, economic, social and environmental dimensions. The background of this scientific approach is formed by information/data that arise from national, European and international literature and practice. This research is a pitch on a GAIA innovative environmental accounting model that wants to participate to the professional judgment construction and modeling according to free manifestation of entity’s green accounting policies. The book is based on the fundamental research that is related to inductive accounting theory and uses scientific methods for identification of green accounting theoretical and practical difficulties for European area. Also, it allows new approaches regarding green information reporting and its implementation into companies from emerging countries, ensuring premises for future research. The research team is undertaking a dialectical research, having as guiding point the entropy laws applied to social and environmental processes, from evolutionary and historical, often contradictory perspective. New concepts, reasoning and judgments emerge, that, by mathematical modeling, ensure the border-line research ideas. At the same time, the research purpose is extended from the description/definition of the qualitative structures, principles, conventions, characteristics and methods of green reporting to the searching of same explications for various conceptual changing, to release pro or con opinions related to same theories and also to assumptions and models for financial and non-financial reporting.

This research, work on material accumulation from the national, European and international literature, on empirical studies conducted on European companies and on requirements analysis of ecological
reporting standards issued by regulation or professional bodies is aimed to move beyond customized opinions, assumptions or models for financial and non-financial reporting. The goal is to examine the recognition of theoretical concepts towards the reporting practices of green information.

The quality of the underlying social interactions in terms of challenges, pitfalls and good practices is critically reflected against normative guidelines derived from the literature. Promoting the concept of transdisciplinary research as a third epistemic way - demarcated from involving laypersons in scientific research -the primacy of science- as well as from classical decision support -the primacy of practice - four challenges of joint knowledge generation are discussed: confounded agendas, separate data philosophies, reluctance to face exposure, and co-existing values.

The debate on transdisciplinary research has so far rarely addressed the epistemological and methodological issues of this new form of scientific practice. With this book, a contribution that attempts to fill this gap is offered. Previous research used the term transdisciplinary research for quite heterogeneous project goals and epistemic ends. Also, the methods of knowledge integration are used only on a small scale and participation often does not primarily serve epistemic ends. Thus, the notion of transdisciplinary research covers projects only in the sense of a family-resemblance, and does not represent a fertile methodological point of reference. Therefore, the book proposes to relate further methodological considerations with types of knowledge desiderata. A new type of mediated negotiation, so-called epistemiation, is proposed at the transdisciplinary interface between scientists and local experts, incorporating a new type of multi-layered peer review of expertise. Transdisciplinary research creates a specific site of negotiation in which both scientific and extra-scientific forms of knowledge are debated. There are already a variety of contributions focusing on the aspect of knowledge generation in transdisciplinary research.

Chapter 1, The Triple Bottom Line (TBL) Approach from the Accounting and Performance Measurement Perspective, presents the fundamental concepts used in TBL reporting practice, ensuring an uniform terminology, and identifies and promotes the best reporting practices used in social and environmental decision making. For the sustainable development of an entity, the strategy and the value creation cannot be analyzed in purely financial terms. Corporations must apply the principle of balanced development through disclosing economic, environmental and social combined aspects. Sustainability reports are sometimes known as Triple Bottom Line (TBL) reports or Triple P (people, planet and profit). A well-known example is the concept of multidimensional performance evaluation focused on the TBL theory. As conclusion, it is reiterated that the future of TBL reporting is the achievement and the acceptance of a conceptual framework and of normative-pragmatic standards to support a comprehensive and credible reporting of the three dimensions.

Chapter 2, New Dimension of Accounting Information: A Social and Environmental Approach, has as purpose to outline the status of development in social and environmental accounting literature and to establish the main trends adopted by the most important accounting journals. It is based on the idea that besides the principles exposed in traditional accounting, the set of principles that underpin the role of the society and of the environment in a sustainable development context will develop a holistic vision of the economic entity. The authors view is consistent with the social and environmental accounting research that has emerged as a significant part of the contemporary accounting research literature. Traditional accounting has lost its instrumental ability of entailing the informational dimensions that are requested in the process of comprehending the phenomenon of identifying and reporting entity’s activity in the context of sustainable development. The requirements for new information relate to economic, environmental and social sustainability of an entity.
Chapter 3, *European and International Standards for Social and Environmental Reporting*, promotes the need for reporting improvement to support stakeholders’ confidence. It presents, analyze and debate on the most used social and environmental reporting standards, as resulting from companies’ activity. It confers a high importance to establishing the way that social and environmental information published by an entity is identified and quantified, in order to be included into financial statements. Through the empirical studies presented in this chapter, the theoretical findings are correlated with practical appliance of corporate disclosure and assurance requirements in terms of social and environmental approaches. Results show that there are significant differences in voluntarily application of guidelines, principles, certification, and assurance standards. Future trends support the development of a single set of standards for reporting social and environmental aspects in order to ensure the comparability and reliability for the stakeholders.

Chapter 4, *Costs and Externalities in the Context of Social and Environmental Crises*, using an in-depth analysis of the current approach of global crises, reveals an obvious tendency to use nature as a resource rather than a stakeholder of human activities. The purpose of this chapter is a critical analysis of current knowledge in the field of accounting recognition policies and procedures, leading to a conceptual clarification of externalities induced by climate change. The most important result is an innovative framework for management accounting, based on a complex approach, triggered by the reality of social and environmental crises. The proposed component is the expanding of conventional costing model to an eco-costing model able to generate costs compatible with the sustainable development objectives. A fundamental inductive research is conducted to identify the theoretical and practical difficulties of externalities recognition in social and environmental accounting.

Chapter 5, *Models for Measuring and Reporting of Green Performance*, highlights the potential effects that an improved social and environmental performance would have on economic performance. The use of adapted managerial tools enables entities to extend the conventional accounting model of performance towards a sustainable/green performance. This chapter addresses the models for reporting and managing the three aspects of performance evaluation and introduces specific concepts for measurement referring to the Triple Bottom Line performance. Debates are conducted based on an exploratory and interpretive study on social and environmental performance reporting. The correlations with corporate various characteristics are emphasized.

Chapter 6, *Environmental Audit in Integrated Audit System*, is inspired by the niche of a narrow literature in the field. The core objective of this chapter is to develop a coherent and eco-efficient outline for environmental audit in an integrated audit management system. The research paradigm is based on the stakeholder theory refined with Hart’s vision of the entity based on natural resources in order to recognize the natural environment as the main stakeholder of any entity. The review of the literature enables ascertaining the determining factors for an environmental audit integrated in the audit management system. The result is built on the management component of the continuous improvement and creates knowledge for a way of action to implement an environmental management system and environmental auditing and implicitly, to react to social corporate responsibility. Future researches regard the increase the auditor’s role in integrating various areas of the sustainability reports.

Chapter 7, *Entity’s Sustainable Development from Adaptive Management Perspective* has as purpose to help managers be aware of the consequences of their decisions regarding the quality of all processes happening in the leded entity. Such decisions, taken in the current period, have important implications for changes in the activity levels and processes in the future. This chapter presents a model of thinking in which managers’ and accountants’ learning on the job and their choices of professional services
jointly affect performance. The management accounting and operations management literature argue that the adoption of the advanced techniques, that accomplish the total quality management, necessitates complementary changes in an entity’s management system.

Chapter 8, *Risk Management in Green Corporate Strategies*, presents a literature review of existing risks outlined by the main reporting frameworks. It debates the influence of social and environmental approach in corporate reporting models. Further, the chapter develops an analysis of specific requirements regarding risks and uncertainties reported into the financial statements according to different financial reporting standards and their connection to social and environmental information that an entity should disclose. The focus of this chapter is on fundamental research that is related to inductive accounting theory and uses scientific methods for identification of corporate reporting theoretical difficulties that could impact the practice in economic entities. The risk is almost always a major variable in a corporate decision-making. However, few can predict with any precision the future. Nevertheless, managers that ignore it are in a real threat. Relevant social and environmental risks and potential impacts should be considered in the process of sustainability policies implementation.

Chapter 9, *Quality of Corporate Communication in a Sustainable Environment*, is based on the idea that financial and non-financial reports are important communication tools which can ensure greater corporate transparency and can enable a better engagement with stakeholders, therefore, increasing the quality of information disclosed by companies. Through an empirical study, it is shown how corporate reporting objective interacts with social and environmental factors in reconsidering traditional disclosure during crisis period. Possible associations, between the quality of social and environmental disclosure and the size of the company, are tested. The results show that the impact of global crisis on reporting social and environmental information is extremely powerful. It signals an upward trend of pushing companies to provide to their stakeholders comprehensive, integrated, and certified information on sustainability of their activities. The stakeholders’ needs and requirements are the main determinants for companies to expand the unilateral reporting process, creating support for the development of dialogic communication, as a tool for knowledge transfer. A critical analysis for various aspects to which they address and a debate of those aspects in the context of usefulness to stakeholders are conducted.

Chapter 10, *Fractal Approach in Sustainability Modeling*, addresses conceptual modeling of sustainable performance designed to meet social and environmental accounting, through qualitative approaches in research of reporting tools. The debate is based on successive qualitative-correlative approaches, of fractal type, for complex phenomena. The research is completed with behaviors generating sustainability that may be used in performance management. The research method focuses on appropriate tools for complex and dynamic relations between the economic entity, society and environment. These interact to develop new relationships and new entities. The most important result of the research is modeling sustainability by cyclic structures and commutative diagrams explaining the complexity mechanisms which engage and generate the state of balance or imbalance, analyzed, controlled and corrected through crisis management. This chapter supports and argues the need for a new framework for corporate performance reporting, including risks and uncertainties arising from social and environmental factors.

Chapter 11, *GAIA Theory: Model for a Sustainable Society*, has as goal to propose the technical tools for determining all functions that need to be transferred from the biological organism to the social organism, the relationships between organs and functions, the number of dimensions required for a well-balanced cultural organism. Because of this purpose, the chapter contains medical terms, and medical analysis, that are useful in understanding the circulation of information in a living organism. As a result, the organic models were transferred to cultural issues on various directions, targeting the
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actual structures and other potential structures required in the future by GAIA. The research methodology of this chapter is based on a multidisciplinary approach, generating an advanced techniques set of educational, economic, social and environmental dimensions. The fundamental research that is related to inductive accounting theory and scientific methods for identification of theoretical and practical difficulties is used. This chapter allows new approaches regarding global green performance, ensuring premises for future research.

Chapter 12, Particularities of Social and Environmental Accounting Research in an Emerging Country, debates on a number of research questions drawn from previous fundamental research conducted on social and environmental accounting in emerging countries. Based on literature review, on practical studies of specialized organizations or associations, and on authors’ previous studies, another step is made in this research, by developing a pilot questionnaire intended to capture the willingness of companies to form an emerging country, to show interest in social responsibility disclosure. This helps to launch certain debates with regard to the principles, concepts and forms of social and environmental reporting. The pilot questionnaire was sent to a group of interested companies in Romania (the emerging country chosen for this study) and the reference points for discussions on a Framework for presenting and managing social and environmental information through corporate reports are developed based on their responses. Regarding Romania, the only choice for its development in the European Union is the incorporation of an environmental protection policy. During the process of Romania’s integration in the European Union, the policy of environmental protection was defined and finalized. Own strategies regarding environment protection management and the harmonization of legislation concerning environment, in correlation with European requests were integrated within the global policy. For the last half a century the human society has been reacting in an attempt to reduce the negative consequences of the ecological crisis. The insurance of the framework for creation, absorption, diffusion and exploitation of scientific and technical knowledge, and, to this end, education, research and innovation should be placed much higher on global policy agenda.

This book explores the combination of the social and environmental objectives, of the conditions under which they appeared, and of the skills to cause confrontation and to build new horizons for sustainable strategies. Without being a comprehensive approach, this book includes a series of studies and research oriented towards the discussion for a Green accounting. A sustainable framework for the creation, absorption, dissemination and exploitation of scientific and technical knowledge as the international scientific community’s response to these challenges requires that the research, education and innovation should be placed on the agenda of global policy priorities. The research team exposes the scientific approach by combining social and environmental objectives, the conditions under which they appeared, and the skills to cause confrontation and to build new horizons for sustainable development strategies.