Sustainability Accounting and Reporting

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The Centre for Sustainability Management (CSM) is an international competence centre for Sustainability Management at the University of Lueneburg, Germany. It is headed by Prof. Dr. Stefan Schaltegger and employs 18 researchers trained in environmental sciences, business management and economics.

CSM conducts theoretical, transdisciplinary and practice-oriented research projects. It offers the world wide first distance learning MBA in Sustainability Management and is involved in several national and international education programs. Furthermore, CSM organises knowledge and know-how transfer in corporate sustainability management.


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What is Sustainability Accounting and Reporting?

In a world where companies are expected to prove their performance in sustainability terms accountability and transparency have become major prerequisites to enable a cooperative and constructive participation of employees, customers, the financial community and further civil stakeholders. Environmental accounting has filtered down as an approach, within a decade, from a few academic think tanks and progressive companies to the corporate sectors of just about every region of the world. But what do we mean when we talk about sustainability accounting and reporting?

We define it as a subset of accounting and reporting that deals with activities, methods and systems to record, analyse and report, firstly, environmentally and socially induced financial impacts and, secondly, ecological and social impacts of a defined economic system (e.g. a company, production site, nation, etc.). Thirdly, and maybe most important, sustainability accounting and reporting deals with the measurement, analysis and communication of interactions and links between social, environmental and economic issues constituting the three dimensions of sustainability.

Living and doing business within the capacity of supporting social and natural systems information management and reporting is a vital concept which is sometimes forgotten in discussions about growth and competitiveness. However – for good and bad – business cannot escape the economic and competitive consequences of a large number of emerging sustainability issues.

Currently we still have an enormous potential to improve corporate sustainability which shows the importance for management to link value creation with environmental and social considerations. To realize this potential, sustainability issues must be adequately considered by information management, accounting and reporting. Hence we need to revise our conventional corporate accounting systems to incorporate environmental and social issues and their financial impacts.

Investigating corporate practice reveals that sustainability accounting and reporting is in some cases just seen as a new term applied to its environmental equivalent. Sometimes it constitutes a collection of two or three accounts or reports which are rarely linked with each other. Exceptions are eco-efficiency reports focusing on such a link. The question is thus in which direction sustainability accounting and reporting will develop. I see three possible paths.

First, sustainability accounting and reporting could just be used as a broad umbrella term gathering existing accounting and reporting approaches dealing with environmental, social, eco-efficiency, etc. issues. In this case sustainability accounting and reporting would be a buzzword without specific approaches.

Second, some people expect sustainability accounting and reporting to become an overarching “one-for-all” measurement and communication tool quantifying and covering all aspects of sustainability with one measure. Given the multiperspective character of the sustainability concept and the variety of goals and stakeholders it embraces such an approach must remain a technocratic illusion.

Third, sustainability accounting and reporting can be seen as a pragmatic goal driven approach which attempts to develop measurement and reporting tools for different integration levels and methods of environmental, social, physical and financial accounting and reporting. This includes the measurement and reporting of eco-efficiency, socio-efficiency, stakeholder value, shareholder value, contributions of corporate citizenship, etc. As a result various subsystems of sustainability accounting and reporting are currently emerging such as eco-efficiency accounting and reporting, accounting for social impacts and benefits, or accounting for socio-efficiency (e.g. measuring stakeholder value).

Sustainability accounting and reporting is in an early stage of development. It addresses a research challenge which we have chosen to deal with and it tackles a management challenge to develop pragmatic tools for clearly described business cases. The task for applied research and training is to develop a process of analysing sustainability challenges to business and to identify, create and test information and communication tools which help management to deal effectively with these challenges. CSM is conducting various projects in this field including a knowledge and training programme in South-East Asia (www.environmental-accounting.org) and the development of a societal control concept as a business approach together with corporate and academic partners in Switzerland.

We are looking forward to these research and training cooperations and hope that other readers will also find interest in this exhilarating field.

Stefan Schaltegger
Professor of Management
Head of CSM
EMA for small and medium-sized enterprises in South-East Asia

Capacity building for Environmental Management Accounting

The industrial situation in the South-East Asian region is characterised by increasing competition and cost pressures which are accompanied by high inputs of environmental resources. To help managers assess the impact of measures taken to improve both corporate financial and environmental performance, Environmental Management Accounting (EMA) offers a range of tools and methods. Since last year CSM accomplishes a project called EMA-SEA which focuses on the transfer of EMA know-how to enterprises through a range of structured and inter-related training activities.

EMA-SEA stands for “Environmental Management Accounting for small and medium-sized enterprises in South-East Asia”. The EMA-SEA project is funded by InWEnt – Capacity Building International, Germany. The overall goal of the EMA-SEA project addresses the implementation and dissemination of EMA in South-East Asian companies to promote sustainable business. In terms of content, the project focuses on the creation and continuous application of EMA training materials and on the transfer of know-how in EMA through training activities and company pilot projects. The target countries are Indonesia, the Philippines, Thailand and Vietnam.

Conceptual approach for EMA dissemination

The conceptual approach of CSM for the dissemination of EMA in South-East Asia includes four main steps:

- **Company case studies:** First, case studies covering a large range of different EMA tools (such as cost accounting, budgeting, investment appraisal, etc.) are developed in collaboration with Dr. Roger Burritt, Australian National University (ANU), Canberra. Existing EMA tools and methods are adapted to the special needs of South-East Asian companies and illustrated in 16 case studies (eight in 2004, eight in 2005). Depending on the management decision to be made, the most suitable EMA tool for each company will be selected and implemented.

- **Training materials and training program:** Based on the case studies, practice oriented EMA training materials are developed. They build the basis for EMA-SEA training seminars as well as for computer based training. The first EMA training seminars start at the end of 2004, while people who are more interested in e-learning can improve their EMA skills through computer-based training in 2005.

- **Qualification of local EMA trainers:** The participants of this professional education program with so called “training of trainers” seminars are selected high potential participants from the initial EMA training seminars and the computer-based training. The goal of the “training of trainers” seminars is to qualify environmental and accounting professionals as local EMA trainers.

- **Further EMA dissemination process:** The participants of the “training of trainers” seminars act as multipliers of EMA know how in South-East Asia. They will prepare and offer their own EMA training to advise business people in using EMA for improving their environmental and financial performance. Through on-site training sessions the multipliers also transfer relevant EMA knowledge and skills to interested companies. At the beginning of this process resource persons of CSM will coach the local trainers to ensure high quality of training activities and successful EMA implementation. In the long run dissemination of EMA and its applications will take place independently without any external support.

To achieve a successful EMA dissemination the four step process was commenced by information workshops. In spring this year, twelve information workshops with over 500 participants from business enterprises, consulting companies, public authorities and universities have been conducted in the four target countries. They aimed at presenting the EMA-SEA project and participants were informed about EMA, its benefits and methods. Various managers from small and medium-sized enterprises have evinced interest in implementing an EMA tool and developing a case study in cooperation with CSM.
Project partners

CSM is supported by its main regional partner organization, the Asian Society for Environmental Protection (ASEP), Bangkok, Thailand, and further renowned local partner organizations (e.g. Indonesian Society of Environmental Professionals, Robautronix Co., Vietnam Cleaner Production Center, Federation of Thai Industries, Thailand Environment Institute) which manage industry networks successfully in their countries.

PCW training approach

All training activities of EMA-SEA are based on active training with the “Project Casework” (PCW) approach. The PCW approach was developed by Günter Tharun, InWEnt, and blends three types of active learning methods: the prospective project method, retrospective case method, and interactive group work.

The prospective project method includes a goal-oriented learning-by-doing and creative thinking process. The creative product achievements are required within a given time limit as they are conducted in real decision-making situations. In order to achieve this goal participants in PCW workshops analyse a given case or scenario which is based on a real problem situation and authentic data presented in a case study. Each of the participants takes a management role and interacts with other participants. The resource persons act mainly as observers facilitating the comprehensive and self-organized process.

Project results

The EMA framework developed by Burritt, Hahn and Schaltegger (2002), which has been awarded as article of merit by the International Federation of Accountants (IFAC), provides a structured overview of EMA tools and decision situations. Case studies are conducted for each of the sixteen decision situations described by the EMA framework. The development and improvement of a good set of EMA tools for different decision settings supports a suitable value creating application of EMA in a company. The case studies, based on the EMA framework, cover a large range of different decision situations and illustrate various EMA solutions adapted to South-East Asian needs. EMA integrates corporate environmental issues systematically into conventional management accounting and decision-making processes. It helps management to collect, analyse and communicate environment-related monetary and physical information. In particular, it reveals financial benefits and potential cost savings that can be gained from addressing environmental challenges of business. Thus, the EMA-SEA project attempts to initiate eco-efficiency and sustainable industrial growth and development in Asia.

Christian Herzig, Tobias Viere

Project: Environmental Management Accounting for small and medium-sized enterprises in South-East Asia (EMA-SEA)

Project duration: 10/03 to 10/07

Funding: InWEnt – Capacity Building International / German Federal Ministry for Economic Cooperation and Development

Methods: Company case studies, Project Casework (PCW) training workshops, computer-based training

Accomplishment: Christian Herzig, Stefan Schaltegger, Tobias Viere

Contact: Christian Herzig & Tobias Viere, emasea@uni-lueuneburg.de

Main project partner: Asian Society for Environmental Protection (ASEP), Bangkok, Thailand

Publications:

- Internet: www.environmental-accounting.org
The accounting for corporate sustainability and the reporting of the contributions of companies and non-corporate organisations to sustainable development are among the most important emerging issues in corporate accounting. This challenges management to develop and implement accounting, information management and reporting tools. Management should also design procedures to compute and communicate the organisation’s sustainability performance. Environmental management accounting (EMA) plays a core role in the development of corporate sustainability accounting and reporting. Its task is to embody social issues and to integrate all dimensions of sustainability (economic, environmental and social) to measure and report on corporate sustainability performance, both internally and externally. Tools which measure, analyse and report environmental and social issues and which are also economically rewarding are of particularly significance.

Conference theme
In this context the 7th annual conference of EMAN-EU addressed the issues of how companies and other organisations have implemented environmental, social and sustainability accounting tools and concepts, their experiences in practice, and the future challenges that lie ahead in the field. The conference was one of the first on Sustainability Accounting and Reporting worldwide. More than two hundred international researchers, business people, consultants, NGO and government representatives came from all over the world to attend the workshops and to network with others in the field.

Programme and EMAN book
Within two days a total of 73 presentations were discussed in 21 workgroups dealing with EMA Case Studies, EMA and Environmental Management Systems, Eco-Control, Empirical Studies, Life Cycle Assessment and Costing, Limits and Problems of Sustainability Accounting, Measuring Sustainability Performance and Financial Markets, Social Accounting and Reporting, Sustainability Accounting in Practice in Asia, South East Asia, Europe and America, Sustainability Accounting in the Public Sector, Communication Theory and Drivers of Sustainability Reporting, National Developments, Software Solutions, Standards, Frameworks and Internet based Sustainability Reporting.

The presentations of each workgroup can be downloaded: www.eman-eu.net, under Events and Conference. The workgroup presentations were introduced by several keynote speakers including Prof. Forest Reinhardt from Harvard Business School, USA, Ralph Thurm from the Global Reporting Initiative, The Netherlands, Anne Melchiorsen from PriceWaterhouseCoopers, Denmark, Dr. Ulrich Menzel from Volkswagen AG, Germany and Prof. Stefan Schaltegger from CSM, Germany. Following the tradition of EMAN an official EMAN book with the best papers selected from this year’s conference will be published. The 2005 conference of EMAN-EU will be organised by Prof. Jaap Bouma, Erasmus Centre for Sustainability and Management (ESM), Erasmus University, Rotterdam, The Netherlands.

Karina Hellmann
Research in Environmental and Sustainability Accounting

Environmental accounting and related areas have been a core area of our research for more than a decade. In the late 1980s when we developed the eco-efficiency concept in Europe, applied it at Ciba-Geigy Ltd. and published it for the first time in a scientific journal in 1990 (Schaltegger & Sturm) we would not have dreamt of the importance this term would receive.

Our focus was on creating a sound conceptual basis for research on measuring environmental performance. The basic goal, even though it has since been extended considerably, has remained the same ever since then – to measure environmental impact added and to link environmental performance measurement with economic performance in order to support the identification and realization of win-win solutions with eco-efficiency improvements for business.

At the same time as we were developing the notion of eco-efficiency, on the other side of the world Roger Burritt was raising and addressing the environmental deficiencies of conventional accounting. Roger, an academic accountant well versed in the Sydney based Chambers school of thought, raised concerns that conventional accounting was complicit in the environmental crisis besetting the world. He argued that the conceptual foundations of accounting needed to be re-examined in the light of the impact of environmental issues on organisations and the increasing evidence available about the environmental impacts of organisations on the environment.

The merger of ideas was settled with a visit of Roger to Basel, in Switzerland where we decided, after a cheese fondue and long walk in the mountainous woods, to produce a jointly authored textbook on environmental accounting.

In the last fifteen years our research activities on environmental accounting have been broadened through research on eco-control, strategic sustainability management, environmental auditing, indicators, the sustainability balanced scorecard, sustainability reporting and performance measurement. With our involvement in the steering committees of EMAN Europe and EMAN Asia-Pacific and acting as experts for the United Nations Division for Sustainable Development’s international working group on Environmental Management Accounting, the collaboration has also fitted into a broader institutional setting.

Among the various publications in this area, the book which has received most attention at business schools, universities and in companies on every continent is “Contemporary Environmental Accounting”. This textbook attempts to provide a comprehensive overview of the topic and has been translated into Japanese and Chinese. It is somewhat of an in house joke that we sometimes call the book a product of transglobal academic research productivity with twenty four hour shift work between Lueneburg and Canberra. When one author finished his work in the evening and sent the text by email to the other side of the world it was taken over by the second author: a file without rest.

This relationship between “old Europe” and “down under” has resulted in various publications and joint projects. Lately we launched a basic textbook entitled “An Introduction to Corporate Environmental Management: Striving for Sustainability” (with Holger Petersen) which has been received very well in many business schools and universities. Furthermore, the text “Towards a Comprehensive Framework for Environmental Management Accounting” published in the Australian Accounting Review (together with Tobias Hahn) has been awarded as an article of merit by the International Federation of Accountants (IFAC). Our most recent project is a book with a very clear internal company focus on Environmental Management Accounting (as a core part of corporate environmental accounting). In our current project on Environmental Management Accounting for South East Asia we are working together very closely in the conduct of various company case studies and seminars.

We are dedicated to entering new transglobal research adventures for sustainability, in order to enlarge this list of joint activities and we are looking forward to involving international researchers in new projects.

Roger Burritt, Stefan Schaltegger

Publications:
Sustainability in Corporate Reporting

Over the past years corporate sustainability reporting has undergone a rapid evolution. More and more companies have started to inform their stakeholders about the corporate environmental and social performance in addition to financial disclosures. Associations, consulting companies, academia and technical literature are driving the agenda of sustainability reporting. The topicality of this area is reflected in the recommendations of the European Commission on the recognition, measurement and disclosure of environmental issues in the annual accounts and reports of companies, in the discussion on Corporate Social Responsibility (CSR), and in the increasing number of guidance documents on sustainability reporting (e.g. GRI guideline or ISO 14063 on environmental communication).

In spite of all these activities and initiatives sustainability issues have not been integrated broadly into corporate financial reporting. Furthermore, environmental and sustainability reports are often not read by many or not by the main target stakeholders. Among the reasons for the weak acceptance and use are the poor stakeholder and target audience definition and orientation, a missing consensus on meaningful indicators, an overload of detail figures without sufficient explanation and links to the core societal issues, insufficient comparable and unreliable audit procedures, uncertain validity of data, etc.

The results of the expert dialog show that sustainability reporting should not be deemed to be an all-round tool to inform a general non defined kind of stakeholder. In order to achieve a minimum of quality and to reduce data uncertainties standardized core indicators could be useful. However, the experts underlined that a standardization of essential content elements and the definition of core indicators are not sufficient to improve the information quality sufficiently. To achieve comparability and credibility high-quality accounting methods measuring corporate sustainable performance are a must. To spur innovation and progress a big enough freedom of choosing and developing new reporting methods and communication channels should be secured.

Further aspects of sustainability reporting discussed by the expert group are: verification by third parties, challenger reports, integration of sustainability aspects in financial reporting, and internet based reporting.

Christian Herzig, Stefan Schaltegger
Interdisciplinary research team “Corporate Sustainability Communication and Reporting”

Corporate environmental accounting and sustainability information management is ever more driven by reporting guidelines and indicators such as suggested by the GRI guidelines. To be successful, reporting should be embed-
ded in a coherent corporate communication and information management strategy. Thus, the management of the links between information management, accounting, reporting, sustainability measurement and corporate communication becomes ever more important for a sustainable organization development.

Research and teaching related to this complex requires an interdisciplinary approach. This is why the Institute for Environmental and Sustainability Communication (INFU) and CSM decided to establish an interdisciplinary research team bringing together researchers in information and computer sciences, communication science, participation and sustainability management.

The communication theory perspective brings in questions of promoting individual and institutional competencies for planning a sustainable future. Main topics are the effects of different communication strategies to popularise the concept of “sustainable development”, the design of new practical uses and contributions to a theoretical framework of environmental communication or sustainability communication. This includes questions dealing with both, individuals and institutions.

The information technology perspective not only supports the production of reports. Corporate information and new media competencies constitute incentives and frameworks for software system development and application: The computer as a medium. New modes of communication are possible. The question is how to support sustainability communication processes in organizations by appropriate information and communication technology, e.g. community systems and groupware systems, modelling tools and modelling frameworks, monitoring systems and information systems.

Sustainability management, and especially information economics, accounting approaches as well as corporate reporting and information management provide with strategic sustainability management a direct link to economic thinking and the corporate reality. Accounting knowledge and the basics of information management play an important role in providing the necessary knowledge basis for high information quality and meaningful indicators for communication and reporting purposes.

Corporate communication and reporting covers the sum of all strategically planned and unplanned emerging internal and external communication activities of a company. Today companies not only declare sustainable development a corporate aim, they also try to adjust their corporate communication to this approach.

New professional applications emerge and new job descriptions create the demand for well trained information, communication and reporting managers. As a consequence INFU and CSM decided to develop a targeted interdisciplinary training in sustainability communication, reporting and information management.

As a first step working groups with students have been established dealing with the sustainability reporting literature and practice. Furthermore, the challenge of developing an integrated sustainability management system for the university campus and of writing a sustainability report will be faced by CSM and INFU in cooperation. Next steps include research projects and a PhD seminar with a specific sustainability communication and reporting focus.

Gerd Michelsen, Andreas Möller, Stefan Schaltegger
1 Fundamentals of Corporate Sustainability Management


2 Measurement, Information, Control and Communication


3 Management of Stakeholder Relationships

**NEW CSM PUBLICATIONS**

**4 Integrative Sustainability Economics**


**CSM DISCUSSION PAPERS**

**Christian Herzig & Stefan Schaltegger:**

*Nachhaltigkeit in der Unternehmensberichterstattung. Gründe, Probleme, Lösungsansätze.*

Discussion paper of the expert dialog “Sustainability in Corporate Reporting” (in German)


This discussion paper summarises core issues for the expert dialog of the German Federal Environmental Ministry (BMU) on “Sustainability in Corporate Reporting” which took place in Berlin in winter 2003/04. It gives an overview of current problems of sustainability reporting and formulates theses how to improve corporate sustainability reporting in future. Participants of the expert dialog were representatives from industries, trade and environmental associations, NGOs, research institutions, public authorities, and consulting companies.

**Marcus Wagner:**


Lüneburg: CSM 2003, pp. 44 Euro 12,00 ISBN 3-935630-38-7

This discussion paper assesses the famous Porter hypothesis with regard to the theoretical reasoning behind it (based on an analysis of different theoretical analysis and models) and concerning the results of influential empirical studies trying to test it. As a result, the paper firstly suggests conditions under which a favourable (i.e. mutually reinforcing) relationship between environmental regulation and competitiveness may exist. Secondly, different empirical studies are presented and compared with regard to their results. Finally, the paper summarises empirical evidence of the hypothesis.

**AWARD**

Roger Burritt, Tobias Hahn and Stefan Schaltegger have been awarded by the Professional Accountants in Business (PAIB) Committee of the International Federation of Accountants (IFAC) for their paper on the framework of environmental management accounting. The “article of merit” is:

This book identifies and analyses the association between environmental reporting and environmental performance on one side and environmental performance and economic performance on the other. Based on a survey in the paper and electricity industries in Germany and the UK it is found in its first part, that consistency between environmental performance and environmental reporting is rare, even though credibility of companies probably depends on it. Therefore, the book concludes that a direct analysis of environmental performance and its effect on economic performance is necessary and thus in its second part provides such an analysis.

Books in progress


- Also forthcoming in 2005 is a book on links between sustainability performance and competitiveness, jointly edited by Stefan Schaltegger and Marcus Wagner. This brings together contributions from international scholars in the field in a first attempt to comprehensively review possibilities for and evidence of a corporate triple bottom line.

Sustainability Management for the MSc “Sustainable Mobility” of Volkswagen AutoUni

The new corporate university “Volkswagen AutoUni” which has been founded last year is currently developing the master programme MSc “Sustainable Mobility” which is the world wide first of its kind. The international programme is planned to start in autumn 2005 and provides the management a high quality offer for the development of sustainable mobility concepts. The modules are being developed by international experts dealing with various topics covered in the MSc programme. CSM with Prof. Schaltegger was chosen for the conceptual development and pilot implementation of the module on corporate “Sustainability Management”.

For further information see: www.autouni.de

Management of societal information and societal control

The project “Management of societal information” aims at developing a concept of societal information management for companies to measure their social performance and to assess the links to the financial performance. Many companies are confronted with various societal issues like human rights, equal opportunities, business transparency, etc. but mostly do not have a comprehensive concept yet that allows them to measure these aspects systematically and economically. Existing approaches will be analysed, a concept developed, and a case study in cooperation with Novartis Ltd. will be conducted. Further partners include ABB and Coop and the universities of Zurich and Winterthur.

For further information see: www.uni-lueneburg.de/csm/english/research

CSM and INFU develop sustainability audit and control for universities

The research project “Higher Education for Sustainable Development” investigates the working and living environment on the campus as well as the academic activities of the University of Lueneburg. Coordinated by INFU six research units work on sustainability auditing and control, resource management, an interdisciplinary study programme “sustainable development”, the university as living environment, sustainability & arts, and sustainability communication. The challenge of developing an integrated sustainability management system and of writing a sustainability report for the university is tackled by CSM and INFU in cooperation. For further information see: www.uni-lueneburg.de/infu/engl