ANDREA MADARASI-SZIRMAI*

ENVIRONMENT PROTECTION IN THE EUROPEAN UNION ACCOUNTING

"The best thing if we give something from ourselves, that we receive back is always much better than we gave. The consequential effects are greater than the effects."

ORISON SWETT MARDEN[1]

1. INTRODUCTION

"A clean and healthy environment is essential for the well-being and prosperity of society, yet continued growth at a global level will lead to continuing pressures on the environment. Continued effort is required in order to meet the environmental objectives and targets already established by the Community."[2]

The question arises: what development and regulation processes has the world followed until today when environment protection and sustainable development have become a central topic? Several strategies and sets of objectives have been defined since the 1950-ies.

It is a further question, how this profession, and practical application handled these problems? Different environment reporting directives and guidelines have been published with an ever- increasing sphere of application, with worldwide significance and effectiveness.

Financial accounting, also, makes an attempt at the introduction of environmental information to financial statements, although in most cases it only appears in the form of off-balance-sheet items due to the high level of uncertainty and the problems of valuation.

---

* Budapest Business School, College of Finance and Accountancy, Department of Accounting, Lecturer.

[1] Founder of Success Magazine, is also considered to be the founder of the modern success movement in America, (1850-1924).

[2] From the Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme.

Effective reaction to environmental information is only possible if their communication and publication are done in an integrated system: the future convergence between the information content of environmental reports and financial statements would largely promote this.

2. THE MAIN STEPS OF THE INTERNATIONAL LEGAL REGULATION OF ENVIRONMENT PROTECTION AND SUSTAINABLE DEVELOPMENT

In relation to information given on the legal environment, consideration should not be given to the regulators of financial statements, but rather to the huge quantity of directives, regulations, conventions, declarations, and conferences, etc. that lay down the requirements for the upgraded representation of environmental information in financial and other statements.

The most important key words of these documents are *environment protection and sustainable development*. Sustainability means to satisfy the present needs of humanity together with the preservation of the environment and other natural resources for the generations of the future. (A Transition to Sustainability; the Declaration of the Academies of Science of the World, Tokyo, 2000). Sustainable development rests on three basic pillars: the social, the economic and the environmental pillars, and all the three together should be contemplated together with their interrelations in the development of various development strategies and programmes, as well as in the specific measures and actions.

The roots of the international environment protection movement go back to the second half of the 19th century, when the first environment protection movements started their activities in North-America. Later, beginning in the 1950-ies, a social debate has evolved in these countries on the impact of human activity on the environment and on nature.

The first global program dealing with the preservation of the human environment was developed *at the UN's World Conference on the Environment in Stockholm in 1972*. The conference adopted a declaration on the underlying principles and international tasks of environment protection. The UN Environment Programme (UNEP) was developed to manage the cooperation and to coordinate international efforts. The right to an environment fit to human life was first approved officially at an international level in the Stockholm Declaration. In this declaration, governments committed themselves to the safeguarding and improving of the human environment for the benefit of today's and future generations. The main result of the conference was an attempt to create a bridge between different approaches taken by developed and developing countries to environment protection and economic development. The conference also introduced the idea of an environmental approach and economic management in the interest of an ecologically "healthy" development.

In 1984, the UN established the Global Division for the Environment and Development, which made the so-called *BRUNDTLAND report in 1987*. It formulated the notion of sustainable development for the first time. The report outlined a development model that contained both quantitative and qualitative development, and stated that the economy could only grow with the preservation of the environment. The environment – the economy – and the society are interrelated, and all the three should be taken into account in decision-making.

In preparing the UN's World Conference on the Environment and Development organised in *Rio de Janeiro in 1992*, the findings of the report Our Common Future were taken as a starting point. This conference adopted several documents on sustainable development: the *Agenda 21* document, which is the overall programme of sustainable development; the *Rio Declaration* containing the principles of sustainability; as well as the principles of sustainable forest management.

In the framework of the so-called Rio Convention, the Convention on Biodiversity and the Framework Convention on Climate Change were declared. The UN Division for Sustainable Development was established in 1993 with the purpose of coordinating the implementation of the UN programme. As a result of the Rio Conference, the Global Environment Fund (GEF) was confirmed, among other things, with a mandate to operate the financial support system of the two Rio Conventions.

In 1997, the UN evaluated the implementation of the Rio Programme during the period elapsed since the world conference. The UN specialist organisations and other international organisations prepared their own programmes for sustainable development. The OECD adopted recommendations in 2001. The European Union also developed its *Strategy for Sustainable Development*, which was endorsed at its *Göteborg meeting in June 2001.*

The *World Conference on Sustainable Development* was organised in *Johannesburg in 2002*, where the ten years since the Rio Conference were reviewed, results and the achievement of the set objectives were evaluated, as well as factors hindering implementation, and reasons for failures were revealed.

It was ascertained that very little had been done for the integration of environmental and development aspects in economic planning and decision-making. Although significant progress had been made in several areas of the international environment cooperation, the general environmental state of the Earth had strongly deteriorated, and the gap between different societies in terms of development and average quality of life had largely widened. The conference adopted a political statement and action plan, which formulated urgent tasks and problems awaiting solutions in all sorts of different areas, e.g. water supply, public health, health care, energy, fishing, chemical materials, government, etc.

The *European Union* with more than 200 of its legal decisions wishes to ensure the highest possible degree of environmental regulation and its control. These pieces of legislation, and regulation cover all areas of the environment sector: water, air, nature, waste, chemicals and other areas, for instance the accessibility of environmental information, public involvement in environmental decision-making.

In *July 2002*, the EU published its *6th Environment Action Programme*[1] (No. 1600/2002/EC), in which action programmes were formulated for climate change, natural and biodiversity, the environment, health and quality of live, as well as natural resources and waste.

On June 9, 2006 a renewed strategy for *Sustainable Development* was published, in which a commitment was made to sustainable development, and the most important objectives (environment protection, social justice and cohesion, economic well-being, the fulfilment of international commitments), as well as basic principles

---

[1] Decision No. 1600/2002/EC of the European Parliament and of the Council the Sixth Community Environment Action Programme.

were identified. It mentions climate change, clean energy, sustainable transport, sustainable consumption and production, the preservation of natural resources, and their management, public health, social integration, demography and migration and the problem of poverty as the main challenges to be addressed.

There is an agreement between the European Union and the government of the Republic of Hungary on Hungary's participation in the *European Environment Agency* (EEA) and the related *European Environment Information and Observation Network* (EIONET).

The European Environment Agency was formally established by Regulation 1210/90/EEC in 1990. After the decision taken in 1993 on the establishment of its centre in Copenhagen, the Agency started its operation in 1994.

The EEA aims to support sustainable development and to help achieve significant and measurable improvement in Europe's environment through the provision of timely, targeted, relevant and reliable information to policy-making agents and the public.

3. INTERNATIONAL ENVIRONMENT REPORTING DIRECTIVES[1]

Based on the above, it is easy to see that the international legal environment brings up proposed solutions and strategies to resolve exacerbating environmental problems and the critical problems of sustainable development. The legal regulation, i.e. the formulation of directives, strategies and objectives is insufficient for implementation, control, and the evaluation of effectiveness. Therefore, various international industrial organisations have also reacted to the dilemma of sustainable development, making practical guidelines for environment reports (CSR, EMAS, ISO14001, GRI), accounts and analyses (EMARIC).

3.1. Corporate Social Responsibility (CSR)

The appearance of CSR in the European Union dates back to *the beginning of the 90-ies*. The European Business Network (CSR Europe) was introduced in 1995 with its still valid mission to promote CSR related exchange of experience.

The "*Gyllenhammar-group*", set up as a result of the decision brought by the Luxemburg summit, in its closing report made a proposal according to which companies with over 1000 employees should publish annual reports with their management techniques with special attention paid to their related social activities and the issues of employment and working conditions.

This topic in the context of sustainable development has been on the political agenda of the EU since 2000 so that the EU can achieve its objectives by 2010 to become the most competitive, dynamic and knowledge based economy of the world, where sustainable economic growth goes hand in hand with more and better work opportunities and a strengthening social cohesion.

The Commission published its Green Paper *"Promoting a European Framework for Corporate Social Responsibility"* in July 2001 with an aim to raise public awareness for this topic, to generate a broad discussion and exchange of opinions, as well as to detect reliable partners instrumental in keeping this issue on the agenda.

[1] Significant guidelines and rules issued in this topic by international specialist oganisations are summarised without aiming at completeness.

The consultation and discussion process of the Green Paper facilitated *the publication of the new CSR-strategy* by the European Commission in *July 2002*, in fact an action programme the form of an essay.[1]

In addition to the ever-growing number of *European initiatives* (e.g. UK Ethical Trading Initiative-ETI 1998, European Academy of Business in Society 2002, etc.), forums (CSR Europe is the most important one) and conferences (e.g. „Mainstreaming CSR across Europe", organised by the Italian presidency: "European Conference on Corporate Social Responsibility"), the member states also do more and more for this cause. A CSR-related campaign was launched in Denmark in 1994, and later, in 1998, a Copenhagen Centre (TCC) was set up, which aims at becoming the "European home" of CSR. This has been a ministerial responsibility in the United Kingdom since 2000, and an inter-ministerial group has also supported the related work of the government, while in 2002 a CSR bill was introduced, which did not become law, but has transmitted positive signs and is a good starting point for the future. In France, French companies are made to present CSR reports since 2003.

What is CSR? The most widely spread definition was introduced by the *Green Paper* in 2001: CSR (corporate social responsibility) is a concept in the framework of which companies integrate social and environmental aspects voluntarily into their business operation and shape their relationship accordingly with all parties affected by their operation, or having an effect on their business. All this is done because an ever-growing number of companies recognize that responsible business behaviour is the final key to sustainable business success and results. Companies also realise that today maximising profit, as a goal may not be sufficient for long term success, and that market, competition and growth oriented attitude should go parallel with social and environmental responsibility.

The *most important dimensions and tools of CSR* can be divided between three major areas: in-company, out-of-company and practical aspects.

- The in-company dimension
  - ⇒ Human resource management
  - ⇒ Health and safety at the work place
  - ⇒ Adaptation to changes, and the management of transformation, reorganisation, downsizing and crisis
  - ⇒ *Management of environment impacts, preference given to natural resources, environment protection:* The sixth environment action programme of the EU also called to the important dissemination of the "win-win" approach in the business sphere. This means that if, for instance, a company cuts back on the utilisation of different resources, or the discharge of contamination and waste, then in addition to acting positively from the point of view of environment protection, it can also be assumed that by this they will boost competitiveness and profitability. This is all the more obvious as the aforementioned self-limitations also reduce costs to be invested in energy and waste disposal.
- The out-of-company dimension
  - ⇒ Local communities
  - ⇒ Cooperation with business partners, suppliers and consumers

[1] Communication from the Commission concerning Corporate Social Responsibility: A business contribution to Sustainable Development.

⇒ Human right issues
⇒ *Global environmental considerations:* The idea of sustainable development clearly demands that in addition to states and the individual citizens, companies should also play a role in the management of cross-border environmental issues.

- The practical aspects of the notion of CSR

⇒ Creating a consistent CSR attitude among the management
⇒ Reporting-Auditing: there are several initiatives in the area of reporting on social responsibility related performance and operation, its control and monitoring of the entity. There are initiatives launched by government and central organisations (e.g. the Danish "social index"), and by different independent organisations (e.g. the so-called "Global Reporting Initiative"). Currently, however, the biggest problem roots in versatility: the sphere of information to be revealed, the form of the reports, and the evaluation mechanisms are not clear or consistent, and no system of independent verification has been developed. The aim for the future is to have a global (or at least EU-level) minimum consensus, coherence and convergence in the reporting-auditing initiatives.
⇒ Improvement of the work quality
⇒ Social and eco-labelling, product markings
⇒ Socially responsible capital and financial investments

The *CSR situation in Hungary* is now becoming stronger, although it has to be noted that the implementation and application of the CSR concept primarily affect large corporations. There are growing efforts to communicate social responsibility, to efficiently address social, economic and environmental challenges, to integrate this into the business strategy, and to involve all stakeholders in the decision-making. If, however, we look at the 26 Hungarian companies with the highest sales turnover, and the 5 banks with the largest bottom-line figure, *the application of the CSR concept does not seem to be really efficient*. From the best achievable result of 100%, even the best Magyar Telekom Nyrt (+ T-Mobile Hungary) was awarded 52%, the second MOL Nyrt reached 41%.[1]

3.2. Environment Management and Audit Scheme (EMAS) and the ISO14001 standard

EMAS, the *Environment Management and Audit Scheme* is one of the voluntary eco-management systems in the European Union, and in the European Economic Region (Norway, Iceland, Liechtenstein). Its aim is to support the evaluation and development of corporate environment performance, and to give information about the organisation itself, and the continuous improvement of the organisation's environment performance to the public at large.

The European Union issued a regulation known by the shortened name of EMAS[2] in *July 1993*. The Regulation gave an opportunity for industrial companies aiming at the improvement of their environment performance to voluntarily participate in the common registration system of the European Union, to have their environment protection declaration certified and to publish it. The EMAS regulation provides for

[1] Evaluation made by Braun & Partners, HVG 21 October 2006.
[2] Environment Management and Audit Scheme, EC1836/93.

mandatory tasks only at the member-state level, while the participation of companies and other organisations is voluntary.

The revised EMAS regulation was published in 2001 under the EC761/2001 number. The new regulation:

- rolled out the scope of EMAS to all the sectors, including also local governments and education;
- adopted the structure applied by the ISO 14001 standard, which facilitates the EMAS certification of ISO 14001 systems;
- made it possible for organisations certified by the EMAS regulation to disclose the new EMAS hallmark on their official documents and marketing materials;
- reinforced the role of environment management declaration in order to improve communication between registered organisations and their stakeholders;
- pays more attention to indirect effects, including capital investments, administrative and planning decisions, production procedures, the assortment and composition of services.

The EMAS regulation does not set forth any mandatory rules for the organisations; their application is voluntary, but if an organisation is to meet the requirements of the system, it should set out environment performance objectives, and it should pursue its activity in such a way as to move towards the fulfilment of the objectives. The most important basic principles of the system are the following:

- compliance with the related environmental legal requirements,
- continuous development, constant improvement of the environment performance,
- prevention of environment pollution.

Next to the EMAS system, there is another standard aiming at the management system and communication of environment protection: the *ISO 14001* standard issued by the International Standards Organisation. EMAS fully takes over the structure of the ISO 14001 standard in the development of the management system, but it applies stricter requirements in certain areas. The ISO 14001 standard may be the basic pillar of environment protection systems, from which it is expedient to move towards EMAS (*Table 1*).

Pursuant to the several times amended Government Decree 74/2003 (28. V.) tasks in relation to the registration of organisations in the *EMAS system in Hungary* are carried out by the National Supervision for Environment Protection, Nature Conservation and Water Management, the background institution of the Ministry of Environment and Water. Currently, there are two companies in the system, Audi Hungaria Motor Kft, which joined in 2005, and Dunapack Rt.

As the ISO 14001 standard can be considered to be the starting point for EMAS, there are more Hungarian companies meeting this standard: based on the data of January 2006, 992 companies have the ISO 14001 certificate. From these, the aforementioned two companies progressed to the higher-level EMAS system.

Table 1
A comparison between EMAS and ISO 14001

	EMAS	ISO14001
Ex-ante environment screening	Necessary before certification.	Not necessary.
Publicity	Publicity of corporate environment policy, programme, management system, performance data is mandatory.	Only the environment policy is public.
Control	Stipulates a time interval for the verification of the environment declaration.	Does not set out a time interval.
Contracted partners and suppliers	Provides for the examination of supplier activity also. The organisation should make efforts that its contracted partners also meet its environment policy.	Requires that communication with the contracted businesses and suppliers shall be done through the relevant procedure.
Commitments and liabilities	Sets a liability to meet environmental regulation.	Is content with the declaration of an intention to make efforts to meet environmental regulation.

3.3. Global Reporting Initiative (GRI)

GRI was started in 1997 as an initiative of Coalition for Environmentally Responsible Economies (CERES), an American social organisation, and the UN Environment Programme (UNEP). Its aim is to improve the quality of sustainability reports, and to make the reporting system stricter and more useful. The initiative cherishes the active participation and support of business and non-profit oriented sponsoring groups, audit bodies, investors' organisations, trade unions and several other institutions. GRI published the first *GRI Guidelines* in June 2000, which was revised after a set of reviews in 2002.

GRI is a long-term stakeholder undertaking with a mandate to develop and distribute the globally applicable *"Guidelines to the preparation of sustainability reports"* publication. The Guidelines have been made for the discretionary use by organisations for the preparation of their reports on the *economic, environmental and social aspects* of their activities, products and services. The aim of the Guidelines is to give help to reporting organisations and stakeholders to express or understand the extent to which the given reporting organisation contributes to sustainable development.

In the GRI Guidelines, a hierarchy has been set up for information to be published:

1. Economic information, in which direct environmental impacts have to be presented
2. Environmental information with the aspects of materials, energy, water, biodiversity, contaminant exhausts, suppliers, products and serviced, conformity, transportation
3. Social information, like labour practices and employment, human rights management, social implications and product responsibility.

The end of the 20th century witnesses *a global harmonisation of financial reports*. The development of GRI also roots in the continuous development of financial reporting to present and communicate the financial status of the organisation. Apart from all this, it also has to be recognised that today the traditional economic model of the past is an insufficient basis to understand the current information based economy; *the development of a new generation of accounting is necessary*. The valuation of traditional material assets shall be complemented with the valuation of human capital, environmental capital, alliances and partnerships, brand names and goodwill.

The GRI is capable of providing important information for business analysis missing in financial reports. This information adds future probabilities to financial reports: in-house training of human capital, corporate governance, treatment of environmental hazards and responsibility, and innovation capability.

In the framework of the GRI, *the holistic assessment of risks and uncertainties* may reinforce cost analysis, and especially in cases when key risks and uncertainties are closely linked to environmental and social concerns. Economic, environmental and social indicators appear with increased frequency, and provide information on the type and efficiency of management ideas in relation to future risks and opportunities on the market.

Sustainability initiatives and strategies also provide an opportunity *for product differentiation*, which is a key factor of the competitive edge. Intangible assets like mental capital, innovation capability, investment into research and development, networks and alliances are all organic parts of the analysis of an individual company's financial prospects. The whole range of intangible assets is more and more interesting for business analysts and auditors, who wish to assess and project corporate values.

GRI is also known and more and more widely used *in Hungary*. The Hungarian translation of the GRI Guidelines was published in 2005. According to the data of the Association for Environment Conscious Corporate Governance (Környezettudatos Vállalatirányítás Egyesület – KÖVET), 36 companies[1] have published their environment reports or sustainability reports for years.

The Green Frog award – a similar award exists also in the European Union – was established by Deloitte in 2001. Its purpose is to prepare the companies of the region for participation in EU environment or sustainability projects. Companies started to submit projects in 2005 that were prepared with consideration to the latest, GRI guidelines of the EU. In 2006, a total of 7 companies applied for the Green Frog award, and Audi Hungaria Motor Kft. was the winner.

---

[1] Naturally, KÖVET's list on the companies submitting environment and/or sustainability reports is not necessarily complete, and it is probable that more companies make such reports.

3.4. *Environmental Management Accounting Research and Information Center (EMARIC)*[1]

In 2002, the US Environmental Protection Agency (USEPA) funded the start-up of an Environmental Management Accounting Research and Information Centre (EMARIC) to take over and expand upon the activities of USEPA's in-house Environmental Accounting Project. EMARIC is now an independent centre.

The mission of the EMARIC is to promote the integration of environmental cost information and materials and energy flow information into routine management decision-making of private and public sector organizations, as a support for improved environmental performance

Environmental accounting is a sub-branch of accounting encompassing activities, methods and systems registering, analysing and reporting upon the environment protection problems, and the economic impacts of environmental protection activities of a given economic system (SCHALTEGGER).

Conventional management accounting systems provide cost information for internal decision-making within a company and so often do not provide adequate information on efficiency and environmental types of costs. As a result, many companies significantly underestimate the amount of raw materials lost in the form of waste, the true cost of waste management, and the cost of insurance, potential environmental liability, and future regulatory costs.

Environmental management accounting (EMA) provides a more comprehensive approach to management accounting, with a particular emphasis on costs related to environmental issues and wasted raw materials.

The *Table 2* compares the different levels and types of conventional accounting and environmental accounting.

Although the most common use of EMA information is for internal decision-making, the external reporting of EMA information is growing rapidly. For example, some financial accounting standards require the reporting of significant environmental liability costs to shareholders.

EMA can provide internal managers with a tool to minimize a company's costs and environmental impacts. Thus, EMA integrates two of the three building blocks of sustainable development -economics and environment. By focusing on environment-related costs, internal managers can more accurately identify, estimate, and allocate costs. In addition, managers can more easily identify cost-saving opportunities that would directly impact on financial performance. As EMA also obtains information on the quantity, it helps to characterize a company's impact on the natural environment.

[1] There are several trade organisations dealing with Eco Management Accounting (EMA), for instance IFAC, ACCA, national accounting and management organisations (Australia, Canada, New Zeland, etc). Most of these organisations are closely linked to EMARIC, and make references to its basic principles, objectives, recommendations and guidelines.

Table 2
The different levels and types of conventional accounting and environmental accounting

Types of Conventional Accounting	Environmental Accounting
Management accounting: Identify, collect estimate, analyse, and use cost and other information to facilitate internal decision-making.	Environmental management accounting (EMA): Internal management accounting with a particular focus on environmental cost data and materials and energy flow information.
Financial accounting: Develop and report financial information for outside stakeholders.	Environmental financial accounting: Financial accounting for external stakeholders that focuses on environmental liability costs and other significant environmental costs.
National accounting: The development of economic and other information to characterize national income and economic health.	Environmental national accounting: National-level accounting focusing on such issues as natural resource stocks and flows, environmental costs, and externalities.

The following tasks can be classified with the management accounting area of environmental accounting:

- identification of environmental cost types: ordinary costs, hidden costs, provisional costs, external costs,
- forecasting,
- risk assessment,
- lifecycle estimation,
- prevention of contamination,
- production and process analysis,
- allocation of environment protection costs to contaminating products and serviced,
- calculation of return indicators for environment polluting projects,
- calculation of annual savings achieved with cleaner production projects,
- eco-audit as a tool of management, a disciplined, documented, systematic and objective assessment on the proper operation of the environment protection organisation, management and technical equipment with a view to facilitate environment protection,
- environmental impact study, which is a process facilitating preparation for decision-making, in which the envisaged environmental impact of a planned activity is assessed and evaluated,
- description of liabilities related to environmental burdens in the annual report,
- internal reports on savings and costs with environmental projects.

4. THE APPROACH OF INTERNATIONAL FINANCIAL STANDARDS AND THE HUNGARIAN ACCOUNTING ACT TO THE REPRESENTATION OF SUSTAINABLE DEVELOPMENT

Section 3 summarised the way in which the presented international environmental reporting directives try – although in a voluntary way – to turn companies in the direction of making and publishing reports on their sustainable development, their economic, social, and environmental status, as well as their future and strategy.

Businesses, however, also make reports from other aspects: financial statements, annual statements with an aim to give a fair and true representation of their assets, financial position and financial performance. It is undisputable that this definition should also accommodate the presentation of environmental information. In the following sections I will investigate the way in which international accounting standards and the Hungarian accounting act regulate and treat environmental information at the level of financial statements.

4.1. The recommendation of the European Union

The EU legislation on financial accounting does not expressly deal with environmental issues. Basic principles and rules for the annual accounting of businesses with a specified legal entity are set by directive 4. 78/660/EEC, and for the consolidated accounting by directive 7. 83/349/EEC. Apart from creating and updating directives, the European Union does not significantly interfere with the regulation of accounting.

In spite of this, or apart from this, in 2001, the Commission issued Recommendation 2001/453/EC on the presentation and measuring of environmental issues in annual accounts and financial statements, and on the information to be published.

The Commission created this Recommendation as the lack of explicit rules has contributed to a situation where different stakeholders, including regulatory authorities, investors, financial analysts and the public in general may consider the environmental information disclosed by companies to be either inadequate or unreliable. Investors need to know how companies deal with environmental issues and regulatory authorities have an interest in monitoring the application of environmental regulations. The voluntary or obligatory disclosure of environmental data in the annual reports of companies is still running at low levels, even though it is often perceived that enterprises face increasing environmental costs for pollution prevention and clean-up equipment and for waste clean-up and monitoring systems, in particular those enterprises operating in sectors that have significant impacts on the environment).

In the absence of harmonised authoritative guidelines in relation to environmental issues and financial reporting, comparability between companies becomes difficult.

As the scope of information to be published is not regulated in a uniform and approved way, no definitions, basic principles and concepts have been formulated in relation to this topic, therefore, the value of the information presented by companies is decreasing, and it often provides mere data without any effective benefit or content for the stakeholders.

The costs of collecting and reporting environmental data and the sensitiveness or confidentiality are frequently regarded as deterrent factors for disclosure of environmental information in the financial statements of companies.

Nobody, however, questions the requirement that the users of financial statements do need information on the effect of environmental hazards and their liabilities, as well as on corporate environmental performance.

The EU Recommendation treats directives 4 and 7, and several International Accounting Standards (IAS) as a source, which have a special significance in environmental issues. It also notes, however, that there is little guidance given by IAS, and that there are no specific International Accounting Standards on the treatment of environmental issues.

The Recommendation gave consideration to a report with a similar topic made by the United Nations International Standards for Accounting and Reporting group (UN ISAR group).

The Recommendation

- contains definitions,
- formulates ideas for the disclosure of environmental liabilities and contingent liabilities,
- the accounting of environmental expenses and their possible capitalising,
- deals with the question of loss of value,
- touches upon the significance of provisioning,
- and summarises the information to be published.

4.2.IFRS

The International Accounting Standards (IAS) in several of their effective standards formulate provisions for environmental issues. Although these standards do not provide proper in-depth information to stakeholders, they can be taken as a starting point. As mentioned in section 4.1, there is no separate standard for the disclosure of environmental issues in financial statements, their evaluation, or the information to be published.

IASC (the predecessor of the current IASB: International Accounting Standard Board, standard making Committee) expressed their intention back in 1998 to put the question of treating environmental issues in the accounting. FEE (Fédération des Experts Comptables Européens) reacting to the IASC intention in May 1999, prepared a summary material with the ramification how environmental information can be integrated into the IAS system.

In our days the 5-year plan of IASB contains an annex to complement IAS/IFRS rules, which will process the aspects of integrating environmental information in financial statements:

- environmental expenses,
- liabilities,
- provisions,
- risks,
- environment-related taxes,
- financial instruments,
- and the application of the principle of materiality.

Among the effective international accounting standards the main provision for taking environmental information into account are:

- IAS 16: Real estate properties, machinery and equipment,
- IAS 37: Provisions, contingent liabilities, contingent receivables.

Further, I will discuss the provisions of the two highlighted standards with a focus on rules for the accounting of environmental information.

IAS 16: Real estate properties, machinery and equipment standard

This standard specifically deals with the issue of *disclosing assets serving safety and environment protection objectives*. In the framework principles and in the IAS standards, a main precondition for the disclosure of assets is that the keeping and use of these assets should bring future economic benefit and economic advantage for the business. The assessment of this, however, often causes problems; economic benefit cannot always be measured precisely, because the utilisation of the asset does not bring further profit, it rather creates the opportunity of production, operation and sales for the business unit. On the basis of this logic, safety and environment protection assets can be disclosed in a value whereby the book value of these assets and their related assets together shall not overrun the forecasted returned value of these assets and their related assets.[1]

Accounting of environmental information is also reflected in the historic value, although this standard also projects the provisions of IAS 37 on provisions, contingent liabilities and contingent receivables.

Pursuant to standard IAS 37, *provisioning* is mandatory if a current liability comes from a past event, the settlement of which will probably cause the flow-out of resources, and the amount of the liability can be reliably assessed. The estimated amount of provisions related to real estate properties, machinery and equipment shall not be accounted as expenses pursuant to standard IAS 16, but rather *as part of the historic value of the asset*. Moreover, the value of the provision shall be disclosed at a discount value, i.e. at present value if the effect of the time value of the money is considered to be material. A provision shall be made on the given asset for instance to cover the costs of disassembling, after-use decommissioning, transportation and territory remediation costs. *(See Box 1)*

Standard IAS 37 on provisions, contingent liabilities, and contingent receivables

A *provision* is a liability[2], the time of occurrence, time scheduling and amount of which are uncertain. In the interpretation of the standard this liability is a current liability from a past event of the business – with a legal or assumed nature – the fulfilment of which will probably result in the outflow of resources personifying economic benefits.

[1] The returned value is the higher of the net selling price or the utilisation value of these assets. The net selling price of the assets is the selling price net of the projected sales costs. The utilisation value is the present value of future cash flows estimated on the basis of the continuous use of the asset and its selling price at the end of its useful life.

[2] Provisions shall be disclosed as part of the long-term or short-term liability, pursuant to the IAS rules.

Pursuant to the standard, *provisions shall be made* under these conditions among other things for *environmental expenses* (or other events, which are irrelevant in the current topic).

In the light of the above, provisions shall be made for the environment liabilities of the business coming from contracting, legal obligations or other legal procedures (a legal liability). For instance, in the case of fees, penalties or product warranty liabilities in relation to environment protection as defined in the relevant legal regulation.

BOX 1
A business unit itself constructs a storage facility to store hazardous materials, the investment cost of which is 20,000,000 HUF. According to plans, materials classified as hazardous will be kept at the store for six years. After the disposal of the materials, it will be mandatory to clean the facility. The estimated cost of this activity is 8,000,000 HUF. The time value effect of the money is deemed to be material by the business. The discount rate assessed is 12%.
The present value assessed on the basis of the evaluation in line with standard IAS 37 of the projected cleaning costs:
PV = 8,000,000 HUF (12%, 6 years) = 8,000,000 HUF x 0,50663 = 4,053,000 HUF.
This will make the historic value of the storage facility = 20,000,000 HUF + 4,053,000 HUF =24,053,000 HUF

Provisions shall also be made if on the basis of the practices pursued to date of the business, or its published guidelines, the business entity communicates to the stakeholders that it will undertake certain liabilities, and thus the partners rely on the fulfilment of the liability (deemed liability). For instance, if there is no legislation for the mandatory remediation of environmental damage, but if this is publicly undertaken by the business entity, then it will have a deemed liability.

Provisions are basically estimated data in financial statements, but in most cases business units can provide reliable estimates. The standard applies the so-called *best estimation principle* to assess the amount of the provision. According to this, the best estimate is the amount that the business entity would realistically pay to settle its liability or would pay on the balance-sheet date for transfer to a third party. When calculating the best estimate, all risks and uncertainties related to the given estimation shall be taken into account.

The standard does not specify methods for the implementation of the estimation. The applicable procedures shall ensure that all basic principles and quality expectations for the preparation of financial statements shall be affected. The estimation shall be made with the use of mathematical and statistical procedures, as well as estimates made by experts.

It may happen in rare instances that no reliable estimate can be given for the valuation of the liability. As a result of this, this item cannot be disclosed in the balance-sheet, but in such a case related information shall be presented in the complementary notes, treating the item as a contingent liability.

The standard also provides that if the time value effect of the money is material, then the amount of the provision, i.e. the amount of the projected necessary expenses shall be taken into account *at the present value*, i.e. the amount of the provision shall be *discounted*. This may happen if the provision relates to a long-term event, for instance, if it is an area remediation liability – from environment protection aspect – after the completion of an activity that caused pollution in the environment.

The time value of the money shall be applied as the discount rate, and a pre-tax interest rate shall be used that is adequate to express the typical risk related to the liability, and its market valuation. The discount rate shall not reflect any such risks that have already been taken into account for the estimation of the future cash-flow – for instance in relation to posting loss of value.

Future events that may have an effect on the amount necessary to settle the liability shall be taken into account for the estimation of provisions, but only if there are sufficient and adequate facts showing that the events will really take place.

For instance, the business unit may judge that the amount of area remediation cost following the closing down of the plant may be significantly reduced as an effect of *future technological development*. In such a case, the business entity will consider, for the purposes of provision estimation, the cost reducing effect of technological development; however, they can only do this if they are certain that the technical development will actually take place, and if their calculations are not based on mere ideas for the future.

Legal amendments or even the effect of draft legislation may also be adjusting factors in the estimation of provisions. Similarly to the points described above, however, draft legislation shall only be taken into account if it is basically certain that the projected draft amendment will be approved and brought into effect. In many cases, the suitable level of certainty can only be established when the legislation is brought into effect.

Environmental liabilities do not necessarily appear in the balance-sheet, they can also be disclosed as off-balance-sheet items among complementary information as *contingent liabilities*. A contingent liability may be

- a possible liability arising from a past event, the occurrence of which are confirmed by the occurrence or absence of one or more future events that cannot be fully controlled by the business;
  (For instance, if a site of the company is in a flood area, it will have to face the possibility that it may have a damage prevention or remediation liability in the case of flooding. This event, however, is not under the control of the business entity.)
- or a current liability arising from a past event that was not recognised as provision, because it was not probable that its settlement would cause an outflow of resources, or the amount of the liability could not be assessed in a reliable manner.

In the information to be published pursuant to standard IAS 37, the changes of the provisions during a given period should also be tackled, with the identification of the nature of the liability. On that basis, the business entity shall disclose the provisions individually under the different subtitles, thus they will have to show the amount of environment protection related provisions, their changes, the uncertainties and the main assumptions.

IFRS/IAS considerations relating to other environmental information

Unfortunately, the IFRIC 3 resolution was withdrawn in June 2005. It tackled the accounting and valuation of emission related rights1. In spite of the withdrawal, I think that a few interpretation ideas should be highlighted to reflect the accounting perspective of emission rights.

Based on the interpretation, emission rights shall be accounted for in the following way:

- Allocated rights should have been capitalised as intangible assets pursuant to standard IAS 38 on intangible rights.
- The historic value would have been the market value applicable at the time of the allocation, which needs to be documented at the time of entry.
- The asset disclosed among intangible assets should have undergone a loss of value if its value does not reflect market reality any more, and loss of value shall always be accounted to reflect the current market value on the given market.

On the basis of the repealed interpretation, the method of valuation for emission rights corresponded to the valuation methods specified in standard IAS 38 on intangible assets, i.e. they have to be recorded either on the basis of the historic value model or the revaluation model.

In the case of effective pollution, apart from intangible assets, provisions shall also be made. In line with this, when a company causes effective pollution, a provision should have been made to the extent of the pollution.

After the repeal, no consensus has been reached yet for the accounting treatment of emission rights.

4.3. US GAAP

Compared to the provisions of IFRS/IAS, US GAAP treats the disclosure of environmental information in financial statements and annual accounts a rather sloppy manner.

Standard no. 69 was issued in November 1982 in relation to mandatory disclosures of oil and gas producing companies, which operate with environmental implications.[2]

In addition to this, an EITF *interpretation* was issued in May 1990, which examines *the costs of handling environmental pollution*, with a focus on the possible capitalisation of costs.

A company incurs costs to remove, neutralize, or prevent existing or future environmental contamination. Those costs may be incurred voluntarily or as required by law. They include costs of removal of contamination, such as that caused by leakage from underground tanks, costs to acquire tangible property, such as air pollution control equipment, costs of environmental studies, and costs of fines levied under environmental laws.

---

[1] Emission rights are rights received or purchased by a given business in line with the environment pollution level approved by the government of a given country. These rights are allocated in a preliminary way, and they will have to be accounted for at the end of the period.

[2] Statement of Financial Accounting Standards No. 69: Disclosures about Oil and Gas Producing Activities (November 1982).

The issue is whether environmental contamination treatment costs should be capitalized or charged to expense. This issue does not address when to recognize liabilities related to environmental contamination treatment costs, the measurement of those liabilities, or whether environmental contamination treatment costs that are charged to expense should be reported as an extraordinary item.

According to the proposal of the interpretation, these costs basically have to be disclosed as costs, and can only be capitalised if, on the one hand, they can be recovered, and if, on the other hand, any of the following requirements is fulfilled:

- The costs extend the life, increase the capacity, or improve the safety or efficiency of property owned by the company.
- The costs mitigate or prevent environmental contamination that has yet to occur and that otherwise may result from future operations or activities.
- The costs are incurred in preparing for sale that property currently held for sale.)

For instance, a piece of equipment for the control of air pollution purchased due to the air pollution generated during the production activity can be capitalised because it meets the following requirements, but the fines payable for the breach of law shall not be capitalised.

FASB is the standard making organisation of US GAAP. It issued a statement in *June 2001* on the accounting of assets with retirement obligations. (Statement no. 143: Accounting for assets for retirement obligations). In the case of a mandatory environmental retirement, which does not arise from proper operation, the possibility of provisioning arises. The retirement obligation of the asset shall be disclosed at the real value in the period when this cost was capitalised as part of the historic value of the invested asset.[1]

4.4. The provisions of the effective Act C/2000 on accounting relating to environmental information

Similarly to international accounting provisions, the Hungarian accounting act does not put enough emphasis on the disclosure of environmental information. It deals with liabilities, provisions, and the information to be published in the supplementary notes and the business report, but it does not give an overall solution to the problem of disclosing environmental information.

Contingent liability (3 §.) is a liability undertaken – normally – vis-à-vis a third party, which is outstanding on the balance-sheet date, but its disclosure as a balance-sheet item depends on a future event.

For instance, the business entity commissions to one of its partners a task that will cause pollution in the environment. The task can be legally implemented, and the permission is available. The partner undertakes the implementation of the task with the proviso that any responsibility for environment pollution, remediation and cleaning shall be borne by the business entity, which confirms that with a statement of commitment.

Certain (future) liability (§ 3) is an irrevocable liability, which exists on the balance-sheet date, but the contract has not yet been fulfilled, therefore it cannot

[1] This FASB provision corresponds to the provisioning obligation of the IFRS 37 standard (see in section 4.2).

be disclosed on the balance-sheet. Operation related on-going costs do not belong here.

The example used for contingent liabilities also applies here with the modification that environment pollution will not probably but certainly happen.

Pursuant to § 41 of the accounting act, a *provision shall* be made – decreasing the profit before tax – to the necessary extent for liabilities due to third parties arising from past or current events or contracts, which are probable or certain on the balance-sheet date, but the amount or the due date of which are uncertain, and the business has not ensured the necessary coverage for these in any other way.

Legally, guaranteed liabilities, contingent liabilities, certain (future) liabilities and environmental liabilities specified in legislation, among other items, belong here.[1]

If, for instance, the environmental legislation provides for area clean-up every 5 years, then the projected amount of the provision has to be estimated for 5 years, and shall be disclosed as a provision. The accounting act does not speak about the issue of discounting provisions.

Provisions can be made decreasing the profit before tax for material and re-current future costs (especially maintenance, re-structuring costs, environment protection related costs), which – on the basis of balance sheet date information – probably or certainly will incur in the future, but their amount and the time of occurrence are still uncertain, and cannot be classified with accrued costs. Under this title no provision can be made for the re-current and continuously incurred costs of the normal business activity.

Environment protection related information shall be disclosed in the complementary annex (94.§):

- Data of fixed assets directly serving the purpose of environment protection
- Quantitative and value data and interim data changes of the opening and closing stocks of hazardous materials and materials dangerous to the environment
- The amount of provisions made during the year in question and in the preceding business year in a breakdown by subheading for environment protection liabilities, and to cover future costs in the protection of the environment,
- The amount of accounted costs related to environment protection in the given and the preceding business year shall be communicated, as well as the projected amount of environment protection and remediation liabilities not disclosed among liabilities.

In addition to the above, the complementary annex shall also cover off-balance-sheet items, thus also contingent liabilities and certain future liabilities.

The purpose of the *business report* (95.§) is to show, through the evaluation of the data in the annual accounts, the assets, financial and income position, business operation of the business entity together with the main risks and uncertainties arising during business operation, so that it could give an effective, objective, reliable and true image – on the basis of past actual and projected future data. The

[1] It is a significant difference between the IAS 37 standard and the Hungarian accounting act that IAS 37 does not allow for the provisioning for contingent liabilities, and the Hungarian accounting provisions make it mandatory.

business report shall contain an analysis on the development of the business, its performance and position in line with the size and complexity of the business entity.

The business report shall cover the projected development, the known and expected development of the business environment in the function of the expected effect of in-house decision-making. Specifically in relation to environment protection, the following shall be disclosed:

- The role of environment protection having an impact on the financial position of the business entity, and its responsibility in relation to environment protection;
- Developments made and expected in the area of environment protection, and the related grants;
- The policy with regard to environment protection applied by the business entity;
- Environmental measures, and their implementation.

The problem is that while provisioning for environmental liabilities can be estimated and controlled basically in a reliable manner, the information of the complementary annex is mandatory, but the business report can be viewed on the site of the business unit. This basically means limited publicity, and the content of the business report is often imprecise, and contains the mandatory elements only in minimum detail. This kind of information for the purposes of stakeholders is not disclosed in detail in the annual accounts, but in the form of other reports on the business environment, or sustainability, etc.

At present, there are no (global) international accounting standards requiring the automatic and comprehensive disclosure of environmental liabilities, provisions, contingent liabilities, environmental costs. In the absence of a common, recognised and mandatory reporting requirement, the recognition, measurement and separate disclosure of environmental expenditures and liabilities are governed by the accounting concept of materiality.[1]

SUMMARY

As it is presented above, the international legal regulation of environmental issues is quite comprehensive and up-dated. The international environmental reporting directives, international industrial organisations reacted to the dilemma of sustainable development, making practical guidelines for environment reports (CSR, EMAS, ISO14001, GRI), accounts and analyses (EMARIC).

All this is done because an ever-growing number of companies recognize that responsible business behaviour is the final key to sustainable business success and results. Companies also realise that today maximising profit, as a goal may not be

[1] Although some EU member states (Denmark, the Netherlands and Norway, Hungary) have recently introduced mandatory disclosure requirements in respect of some aspects of environmental information and performance. France has recently announced its intention to introduce mandatory environmental reporting through the annual report and accounts. But these requirements are generally exist is non-financial forms in nature and therefore do not directly affect the financial reporting process.
In the United States, the Securities and Exchanges Commission (SEC) has issued a range of disclosure requirements relating to environmental provisions, liabilities and expenditures. Similar extensions to reporting guidelines also exist in the Netherlands.

sufficient for long term success, and that market, competition and growth oriented attitude should go parallel with social and environmental responsibility.

All of the guidelines, systems, directives are created to support:

- the presentation of sustainable development of an entity in economic, society and environment dimensions in sustainability reports, but not in a monetary, financial form, but with quantitative and qualitative data.
- the evaluation and development of corporate environment performance, and to give information about the organisation itself, and the continuous improvement of the organisation's environment performance to the public at large.
- to promote the integration of environmental cost information and materials and energy flow information into routine management decision-making of private and public sector organizations, as a support for improved environmental performance.

The international and national accounting bodies try to treat the environmental issues in financial statements, but in a very low level, almost in the way of disclosures and provisions. There are not uniformly used regulations for disclosures or valuation. To improve the information quality of financial statements on environmental issues it should be think over in what extent the information given in sustainability reports can be used or appear in financial reports and in financial statements. Economic, environmental and social trends all can appear in the parts of financial reports that relate to the contemplation and analysis of future risks and opportunities.

The biggest challenge in creating a link between financial and sustainability reporting is in the way how economic, environmental and social performance indicators can be translated into measuring instruments of financial value. Several of the sustainability indicators are of a qualitative nature, and are difficult to interpret by financial evaluation. The outcome of sustainability strategies and related capital placements is uncertain to the extent that it is difficult to project benefits. Financial analysts are mainly interested in information that is material for the activity expressed in financial indicators and which is projected into the future. The performance indicators used in sustainability reports often do not directly meet these criteria.

New methods shall be developed to create links between economic, environmental, social dimensions and financial performance. It would also be expedient to harmonise the two types of reporting because it would be good to compare data that are in line with expressions and names figuring in financial statements, which would make the language of communication more consistent.

In other study of the author the presentation of environmental information in financial statements: opportunities and problems is analysed.

LITERATURE

KUN ATTILA: A vállalati szociális elkötelezettség tematizálásának alapvonalai az Európai Unióban (Jogelméleti Szemle: 2004)

JOSÉ M. MONEVA, PABLO ARCHEL and CARMEN CORREA: GRI and the camouflaging of corporate unsustainability (Accouning Forum: 2006. június)

ACCA: Industry as a partner for sustainable development (2002)

Business and the Environment: A Primer on Environmental Management Accounting (2003, Vol. XIV.)
2000. évi C. törvény a számvitelről
Magyar Könyvvizsgálói Kamara szerzőcsoport: Nemzetközi Számviteli Tankönyv (2006)
Verlag Dashöfer (Matukovics, Madarasiné, Rózsa): IAS versus US GAAP
DR. CSUTORA MÁRIA: A vállalati környezetvédelmi költségek számbavétele (Tisztább Termelés Kiskönyvtár, 2001)
GRI Útmutató
Az EU 6. Környezetvédelmi Akcióprogramja
A Johannesburgi Fenntartható Fejlődési Világtalálkozóról szóló kiadvány
Az Európai Unió Fenntartható Fejlődési Stratégiája
EMAS magyarországi weblapja: www.emas.kvvm.hu
Környezettudatos Vállalatirányítás Egyesülete, www.kovet.hu
A fenntartható fejlődés honlapja (www.ff3.hu)
EMARIC weblapja: www.emawebsite.org
European Union homepage: www.ec.europa.eu