4 Self-regulation and Voluntary Corporate Initiatives

4.1 Voluntary Business Initiatives

4.1.1 The Challenges of Improving Environmental Performance

This chapter will review a number of voluntary corporate initiatives that have been developed partly as private sector initiatives and partly as a joint industry – government ventures. The objectives of the initiatives vary considerably in scope and influence across the subjects, countries, and regions. They go from supply-chain management, over product development and operational standards, to reporting standards and consumer information systems. They are still developing.

As the companies establish environmental management systems in order to minimise environmental impacts caused by internal production processes, other environmental management concepts have been developed to address two other issues. Firstly, the problem related to managing the environment performance of the suppliers or *entire life cycle* of the product, and secondly, the *communication of the environmental performance* from the suppliers to the consumers (often a company) or from the company to customers as illustrated below.

The global division of labour has increased the risk of environmental dumping, since the enforcement and the level of environmental regulation varies globally. Corporations that seek to prevent environmental dumping as an effect of their outsourcing strategies must include the suppliers in their environmental management. They do this by setting up standards for environmental performance and working conditions at the suppliers, called "codes of corporate conduct".

The challenge an organisation or company is facing today when striving to improve its environmental performance is thus two-fold. First *in time*: the entire life cycle of the product or service need to be understood in order to know when the most significant impact occurs. Is it during the production phase or the use phase, or perhaps at the end-of-life? For which of these different phases is it most important to achieve improvement? Upstream and downstream environmental impacts become dominating in the life of the products.

Secondly *in space*: the globalised economy of today forces the company to ask which actor in the chain is the one that is

In this Chapter

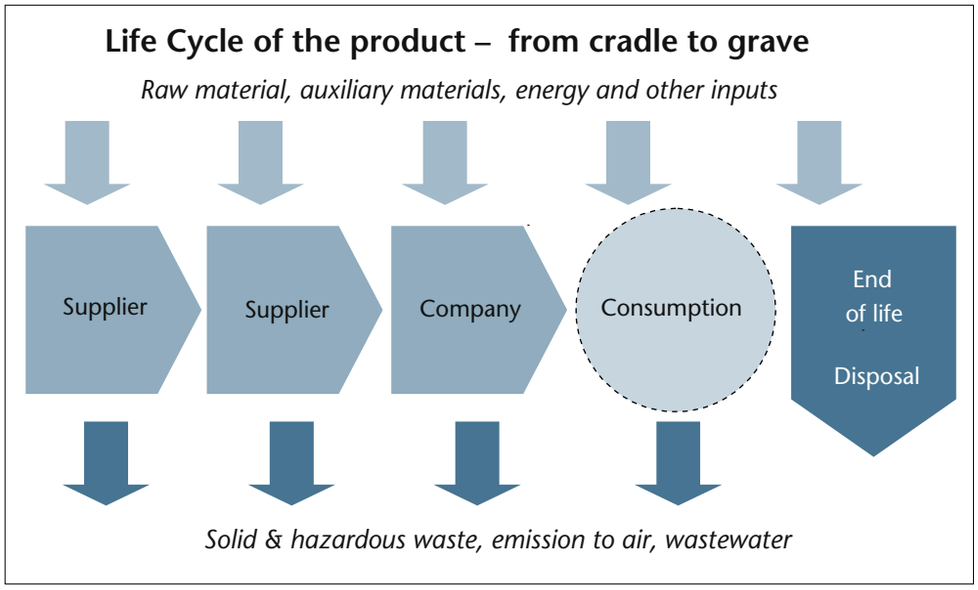

Figure 4.1 The life cycle perspective. *During the entire life cycle of a product material flows (from up to down) impacting on the environment takes place. The extraction of raw materials is most important for a copper cable, but the consumption phase for e.g. a car. Recycling, not shown here, should be promoted whenever possible.*

causing the most impact. Is it resource extraction, supplier's production or the use phase? Again, what role does each one of these have in the efforts to achieve improved environmental performance? How can it be controlled?

4.1.2 The Life-Cycle Perspective

A number of tools are available to systematically review and find environmental improvements for existing products, product development. One of the most comprehensive of these is *eco-design or design for the environment, DfE*. It is a concept that addresses the product's environmental performance from cradle to grave by changing the design of the product. In an eco-design the impact of the product in several different aspects, such as resource use, transport, toxicity, waste etc, is reviewed over its entire life cycle. Ways to improve the product in all these different aspects is then made. Eco-design is a managerial tool that can be used by all companies. Experience is that a product development using eco-design most often also leads to improved economy. Eco-design, pioneered by Delft University of Technology in the Netherlands, has been much promoted by UNEP in the so-called *Promise Manual* first published in 1997 and further developed since.

A technically more advanced tool for studying the environmental impact during the life cycle of a product is *Life Cycle Assessment*, LCA. In an LCA the entire material flows connected to the life cycle of the product is quantitatively assessed. Typically the environmental impacts of several hundreds of materials are measured. LCA was pioneered by beverage companies, which wanted to see which was more environmentally friendly, a recyclable glass bottle or a non-recyclable plastic bottle. During the 1990's it was further developed by the Society of Environmental Toxicology and Chemistry (SETAC), which defined standards etc needed. It is today established as an important tool for larger industries.

Both eco-design and Life Cycle Assessment, LCA, is treated in detail in book 3 in this series.

4.1.3 The Communication Perspective

The eco-design reviews and LCA results are not well suited for information about environmental performance of a product to the average consumer. They are too detailed and technical. Therefore a series of simplified tools for communicating environmental profiles of products to the customers have developed. These are *eco-labels*. Eco-labels exist in a large variety of shapes. Some of them use criteria formulated and monitored by governmental agencies. Most of them are established by NGOs or as a business undertaking in trade organisations.

Another way of communicating the environmental performance of the company is green reporting, that is, *environmental reports*, together with economic reports.

Also the results of codes of conduct, that is the social performance of the company, needs to be communicated to the customers, or in general to the stakeholders of an organisation. Otherwise they would loose an essential part of their meaning. The reports of a company have the increasingly important task of building trust and goodwill. For this reason a number of tools for social reporting have developed. These are in most cases based on company initiatives and thus part of the culture of self-regulation and voluntary corporate initiatives that is in focus in this chapter.

4.2 Instruments Based on Corporate Responsibility

4.2.1 Codes of Conduct

Along with growing global trade and production, a number of companies, shareholder associations, unions and intergovernmental organisations have established *codes of corporate conduct*. The codes of conduct state the corporate policy on environment, labour conditions etc. They were established to respond to the societal concerns about the level of safety and working conditions and the environmental impacts of the company activities [OECD 2001].

Several attempts have been made to make common codes of conduct by trade associations and intergovernmental organisations, in order to prevent the dumping of environmental standards and working conditions, which tends to be one of the negative effects of global production. The United Nations Centre on Trans-national Corporations made a draft in 1988, and in England a proposal on a common national code of conducts was made. It seems, though, that these common standard codes are not fully accepted, and still an increasing number of organisations make their own codes of conduct. These include IKEA and Nike. Some enterprises adopt very broad codes of conduct made by institutions like the UN. The codes of other companies are much more specific and related to the problems connected only to their area of business [OECD 2000].

A code of conduct is a statement that must be followed by management instruments, such as EMAS and ISO 14001, and guidelines on best practices to be fully implemented. Depending on the company's activities, the implementation could take place within the organisation itself and/or at the suppliers. Internal and external implementations bring different challenges and require to some extent different sets of instruments. The management of a corporation or company has the power to allocate the necessary resources when it is an internal implementation of a code of conduct. When the implementation is taking place in an external company, a supplier, there are other managers in charge who may not be devoted to the code of conduct, which can put a brake on the implementation. A similar situation can develop in a large multinational corporation, which is characterized by geographical as well as cultural differences dividing the corporate head from the divisions in other countries. Furthermore, the implementation of the code of conduct will compete with the purchasing and financial departments' demand for price reductions, the production manager's lack of time etc.

4.2.2 Environmental Stewardship and other Codes

In 1998, 246 codes of conduct from organisations in OECD countries were reviewed by an OECD workgroup in order to investigate which organisations developed codes of conducts, what objectives the codes set for themselves and by which means these objectives should be addressed. According to the workgroup the codes were mainly made by (multinational) companies (148), but some were made by industry and trade associations (92); partnerships of stakeholders, such as unions and NGOs (32); and international organisations (4).

Environmental stewardship (145) was the second most frequently mentioned issue in the survey, next to labour standards (148). Consumer protection was mentioned in 117 cases, bribery in 56 cases, competition in 50 cases, information disclosure in 45 cases, science and technology in 26 cases and taxation in 1 case [OECD 2000].

According to the OECD investigation, the coverage of the codes varies much. Some codes mention the environment briefly, while other codes (26) are completely devoted to the subject. The three most common attributes discussed in the environmental stewardship [OECD 2000] are:

- Compliance with the law.
- Openness to community concern.
- Environmentally friendly products and services.

In 51% of the codes it was stated that the code is an attempt to protect or enhance the reputation of the enterprise or its products. For larger companies their public reputation is a valuable asset. The code of conduct is a way to make a statement about the ethical issues related to the production and is a part of the concept of corporate social responsibility. Fewer codes described how the code should be enforced, and only one enterprise mentioned that two suppliers have been excluded as a result of non-compliance with the code [OECD 2000].

It remains to be investigated whether companies actually implement their codes on their suppliers or if it is just a piece of paper for suppliers to sign that free the corporations from their legal responsibility but with no actual practical implications. The enforcement of the codes may be a future challenge for the companies, if they want to live up to the corporate social responsibility that they have declared by making a code of conduct. Additionally, a public monitoring of this process should make sure that the companies are committed to and fulfilling their own standards.

4.2.3 Corporate Social Responsibility

The need for organizations in both public and private sectors to behave in a socially responsible way is increasing in society. This has led to the development of the notion of *Corporate Social Responsibility*, CSR. It is based on the understanding that an organisation or company has responsibility for the effect of its activity in the surrounding world. A widely quoted

Figure 4.2 Corporate Social Responsibility. *Koffie Kàn is a small-scale Coffee Roasting House in Belgium that strives to minimise the company's impact on the environment, while at the same time giving support to small-scale farmers in social development projects in Honduras and Mexico. In 2002 Koffie Kàn was honoured with the Solidarity award [http://www.koffiekan.be]. (Photo: © Co-op Fairtrade)*

definition (World Business Council for Sustainable Development) states, "Corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large."

The organisation Business for Social Responsibility (BSR) defines corporate social responsibility as "achieving commercial success in ways that honour ethical values and respect people, communities and the natural environment." A variety of terms are used when talking about CSR: business ethics, corporate citizenship, corporate accountability, and sustainability. In this sense, CSR is viewed as a comprehensive set of policies, practices and programs that are integrated into business operations, supply chains and decision-making processes throughout the company and includes responsibility for current and past actions as well as future impacts.

CSR is linked to sustainable development, and many argue that CSR obliges companies to take not only business interests into account, but also all dimensions of sustainability, in particular environmental and social aspects, in addition to economic ones.

Corporate responsibility has a moral background but also a very factual one. It reflects an increased importance of factors other than the purely economic, including environmental performance, the situation of the workers, the concern for the customers, and the society in general. "Society" in this context is often meant to include all the stakeholders of a company.

Another factor is the increased role of so-called *ethical investing*. Financiers prefer to invest in companies that have a certain ethical standard. Basic standards include legal compliance, e.g. human rights, respect for workers rights, and respecting environmental regulations, but it may also consider a company's CSR. Social performance may also be considered when selecting providers of goods and services. Ethical investments represent an increasing share of all investments, e.g. in Sweden alone some 20 billion dollars in 2004.

It is no surprise that CSR has grown exponentially in the last decade. It is important to say that more often than not companies that have a well-developed CSR programme underline that this is good business. It is profitable in economic terms contrary to conventional thinking.

CSR is starting to be included in the general management agenda. There is an array of different opinions as to the right approach ranging from strict legislation at one end to complete freedom at the other. Government regulation in this area is increasing, and sometimes international, such as EU, legislation. ISO, the International Organization for Standardization, has decided to launch the development of an International Standard providing guidelines for social responsibility (SR) to be published in 2008 as ISO 26000. It will be voluntary to use, that is, will not include requirements and not be a certification standard. ISO says "Our work will aim to encourage voluntary commitment to social responsibility and will lead to common guidance on concepts, definitions and methods of evaluation."

4.3 Calculating Environmental and Societal Costs

4.3.1 Sustainability Accounting

The first experiments with "green accounting" were carried out in the 1970s by enterprises trying to calculate how they were obliged to take societal responsibility. The statements were called corporate social accounting or social responsibility accounting. Among the large number of problems related to these accounting systems were the lack of detail and commonly accepted standardisation of the systems, which made a comparison of statements nearly impossible for stakeholders. In the early 1980's, the number of experiments declined, but in the late 1980's the environmental movement returned and the development of green accounting is still going on in many forms [Ulhøi 1997]. The most recent initiatives are EMA (Environmental Management Accounting) and GRI (Global Reporting Initiative), both sponsored by the UN.

Along with the Brundtland Report in 1987 several attempts were made to develop sustainability accounting systems. One of the efforts was a continuation of the social responsibility accounting from the 70s. It balances up the economic, social and environmental activities of a company to identify if they are

sustainable or un-sustainable. This has lead to attempts at calculating the societal cost of the un-sustainable activities [Ulhøi 1997]. The problems related to these efforts are mainly to set the scope of the impact assessment, and calculate the value of the irreversible environmental impacts on nature. There is, however, no self-evident scope of impact studies, which makes it difficult to calculate the costs of impacts.

4.3.2 Environmental Management Accounting, EMA

For environmentalists conventional accounting practices have several shortcomings. They hide environmental costs, e.g. in overhead accounts; they often allocate environmental costs incorrectly; they see environmental costs as fixed when they may actually be variable; they do not account for volumes (and thus costs) of wasted raw materials correctly; and, especially they do not include relevant environmental costs in the accounting records at all.

As good environmental and sustainability management by business and other organisations become increasingly important, good accounting and financial management techniques have developed. Environmental Management Accounting, EMA, is among the most widely practiced. It primarily supports the information needs of the organisation's own management, but is also used for company reporting.

The concept combines the environmental and economic accounting of the company into one tool. Environmental management accounting is an instrument that is used to describe the environmental efficiency or performance of the company. Here the mass balance is an inventory of the activities carried out in the company. The environmental management accounting is an instrument to support managerial decisions. For example it provides economic cost assessments when making new investments.

EMAN, a network of researchers, policymakers and business promoting EMA, defines EMA as "the identification, collection, estimation, analysis, internal reporting, and use of materials and energy flow information, environmental cost information, and other cost information for both conventional and environmental decision-making within an organization".

As an example Novo Nordisk's environment report accounts for environmental costs and investments which summarise the costs of running the environmental department; the costs of waste water treatment; biomass management; costs of handling and disposal of solid waste; energy taxes and remediation costs for polluted sites, so-called brown fields.

The environmental manager too often performs green accounting without any connection to other parts of the company. But green accounting alone is not efficient in supporting managerial decisions, as it was developed only to provide green information. Environmental management accounting, on the contrary, is first and foremost a decision-making instrument, which can be used by the company management to prioritise environmental tasks and investments.

EMA can be used also by other organisations, e.g. local authorities.

4.3.3 The Triple Bottom Line

A relatively established type of sustainability accounting is the *Triple Bottom Line*. The "triple" refers to the economic, environmental and social aspects of sustainability. The phrase was coined by John Elkington, co-founder of the business consultancy SustainAbility in 1994. It was later expanded and articulated in his 1998 book "Cannibals with Forks: the Triple Bottom Line of 21st Century Business".

One example of how it is applied is the Novo Nordisk, a Danish medical company that produces insulin and devices related to diabetes care. Since 1991, the company has worked on developing green accountings. The report on the triple bottom line from 2001 contains a financial report and social and environmental accounts. The idea of the triple bottom line is also said to represent *profit, people and planet*; the thought is that the enterprise or organisation can reveal a truer image of its assets through the combination of the three accounts. The environmental report describes the key environmental performance indicators. These are input of raw materials; packaging energy and water; and output in the form of air emissions, liquid and solid waste and the total amount of products produced. The indicators of the mass balance are compared with the mass balance from previous years [Novo Nordisk 2002]. On the basis of the account it is possible to conclude whether the enterprise is more or less eco-efficient than the previous year.

Legislation mandating a Triple Bottom Line is under consideration in some countries, but most argue that businesses should be able to voluntarily adopt a "Triple Bottom Line" as part of their bylaws.

4.3.4 The Global Reporting Initiative, GRI

The GRI, Global Reporting Initiative, is perhaps the most recognised format for reporting in which economic, environmental and social aspects are all covered, that is, sustainability reporting guidelines. GRI, created in 1997, today works with ISO and UNEP. The GRI is supported by many important organisations, such as Business for Social Responsibility (BSR). BSR writes "the independent Global Reporting Initiative's Sustainability Reporting Guidelines (GRI), which promote disclosure on a broad set of management policies and performance indicators, have emerged as an important benchmark for

many companies' CSR reporting. Globally, some government agencies and even stock exchanges have begun requiring more public disclosure of companies CSR performance."

The Global Reporting Initiative's (GRI) vision is that reporting on economic, environmental, and social performance by all organizations becomes as routine and comparable as financial reporting. GRI accomplishes this vision by developing, continually improving, and building capacity around the use of its Sustainability Reporting Framework. An international network of thousands of organisations from business, civil society, labour, and professional institutions create the content of the Reporting Framework in a consensus-seeking process. BSR has helped lead the development of CSR reporting as a professional discipline. Staff has participated in collaborative efforts by entities such as the Global Reporting Initiative (GRI), AccountAbility and the U.K. Company Law Review to develop and refine CSR reporting guidelines and standards.

The Guidelines should be used as the basis for all reporting. They are the foundation upon which all other reporting guidance is based, and outline a core content for reporting that is broadly relevant to all organizations regardless of size, sector, or location. The Guidelines contain principles and guidance as well as standard disclosures – including indicators – to outline a disclosure framework that organizations can voluntarily, flexibly, and incrementally, adopt. The guidelines from 2002 have in 2006 been replaced by Guidelines v3.0. Protocols are the "recipe" behind each indicator in the Guidelines and include definitions for key terms in the indicator, compilation methodologies, intended scope of the indicator, and other technical references.

In 2006 more than 1,000 companies reported according to the GRI guidelines, most of them large, or very large. For some time there have also been guidelines for public institutions, to make it possible for local authorities in particular to adopt a uniform set of principles for sustainability reporting.

4.4 Product-related Measures

4.4.1 Eco-design

Eco-design is a tool to improve the environmental performances of a product, just as the environmental management systems aim at improving the environmental performances of the company. Eco-design addresses the whole life cycle of the product.

While eco-design focuses on the product, there are other tools focusing on other parts of the manufacturing process. Thus Cleaner Production, CP, deals with the production process itself. Supply-Chain Management is looking in particular on the resources used for the manufacturing. Waste management is geared towards the end of the life of the product.

There are several different names for the concept of environmental improvements through product design, e.g. Design for Environment, DfE, Life Cycle Design and Eco-design. In the end these are essentially the same process and based on the original work of Delft University of Technology in the Netherlands. In general, eco-design is a set of techniques to reduce environmental impact from each of the different aspects of a product, such as material used, transport and packaging, function, recycling etc. It differs from traditional design by adding environmental awareness to aesthetics and functionality as criteria for success.

A work paper from a team at the International Organisation of Standardisation, ISO, suggests three eco-design strategies: 1) Strategy for optimising the function of the product; 2) strategy for conservation of resources, reuse, recycling and energy recovery; 3) Strategy for prevention of pollution, waste and other effects [ISO 2001]. The three strategies involve different instruments but by following one of the strategies the results will overlap.

As implied, there are innumerable factors that motivate enterprises to use eco-design. The motivation can be the wish for an easier end-of-life treatment; reuse/recycling of the product or the materials; or solving environmental impacts related to the product initiated by legislation. Other drivers can be the expectation of new market shares by promoting sustainable products or, as already mentioned, cost savings by reduced resource and energy use.

One of several factors that can promote eco-design is the response to new or expected regulations. Innovation will then be concentrated on complying with the new demands. An example is Siemens Mobile Phones that tries to respond to the demand for lead-free soldering in electronic equipment by experimentally launching 10,000 lead-free telephones.

Another objective of eco-design is to enable the producer to achieve systematic improvements of the function performed by the product or effects of the product, whether motivated by legislation or other factors. The most radical perspective is to rethink – not redesign – the product or service by starting out with the function of the old product and the expectations on the new product or service. This strategy could make completely new solutions possible that do not result in as great environmental impacts as the old product.

Yet another possible strategy is redesign. Redesign can be based on a life cycle assessment or screening, which points out the most problematic environmental impacts of the product. The concept of the product remains the same but substances and material can be substituted or production processes changed.

At the end of an eco-design process, the environmental performance of the new solution should be evaluated, e.g. by

Figure 4.3 Eco-design. *Eco-design and Life Cycle Assessment have become standard tools in many large and small industries. These tools have contributed to reduced material weight, environmental impact and improved recyclability of many standard cars. In the future we may see cars with advanced technology, such as this Daimler Chrysler using a fuel cell powered electric motor. The driver is the Czech commissioner for science and research Janes Potocnik. (Photo © European Community)*

comparing the new and the original product. The solution of one problem can easily be the cause of other environmental impacts, which need to be avoided.

The scope of eco-design embraces the whole life cycle – also called the product chain – of the product from extraction of raw materials, production, use, and finally the end-of-life treatment. The efficiency of eco-design varies a lot, depending on the strategy and the product type. Often radical rethinking of the product is far more eco-efficient than redesign [Brezet 2001]. For example it is more radical to use mobile telephones instead of building an entire conventional land-based phone system. This is now being done in several countries in Africa. Replacing a product with a service is another example, such as when a car company leases the cars instead of selling them. Shared use of products is a further possibility such as joining a car pool instead of using a private car,

A more detailed treatment of eco-design is given in Book 3 in this series.

4.4.2 Extended Producer Responsibility

The material flows in Europe and the world have resulted in a crisis of waste. Material flows were largely linear, giving rise to enormous waste heaps. The 1970's saw the first strict efforts to reduce waste flows, implemented in Germany. Today there are increasingly stricter regulations on waste in all of Europe, and costs for sending waste to landfills are increasing. A most important strategy for waste management is recycling.

Conventionally the local municipality has the responsibility to take care of waste. This is now being reconsidered. With the increasing amount and complexity of waste, the OECD and the EU Commission have introduced the concept of *Extended Producer Responsibility*, suggesting that the producer holds the responsibility for a product after its end use. In other words, the producer is obliged to ensure a reasonable waste treatment. This means that the company that manufactures, imports and/or sells products and packaging is required to financially or physically be responsible for the products after their useful life. They may take back spent products and manage them through reuse, recycling or in energy production. Another possibility is to delegate this responsibility to a third party, a so-called *producer responsibility organization* (PRO), which is paid by the producer for spent-product management. In this way, EPR shifts responsibility for waste from local government to private industry, obliging producers, importers and/or sellers to internalise waste management costs in their product prices [Hanisch, 2000].

Extended Producer Responsibility has been implemented in many forms, which may be classified into three major approaches:

- Regulatory
- Negotiated
- Voluntary

In the EU's WEEE-directive (waste of electrical and electronic equipment), the environmental producer responsibility, including demands for recycling of more than 50% of the products, is an example of the regulatory approach. To respond to the legislation, enterprises can use the eco-design strategy, for example by selecting the materials used in the product on the basis of their recycling potentials. In this way it is possible to reduce the use of virgin raw materials. This could also be beneficial to the companies as it saves the costs of resource extraction. Depending on the expected regulation, the enterprise can use one of these three eco-design strategies.

In Sweden much waste management is the result of a negotiation between industry and the government. In response a multitude of waste management companies have developed. They have organised waste collection stations in cities, collect and return e.g. glass, paper, and plastics etc back to industry as

Box 4.1 Eco Labels

The Flower is the official EU eco-label award, introduced in 1993, inspired by the Swan. So far, more than 250 licences have been awarded products in 23 product groups.

Objectives:
To assist consumers in their shopping choices, identifying which products are environmentally preferable, thereby enabling the consumers to act for the benefit of the environment, by purchasing environmentally sound products.

To make manufacturers compete in developing the most environmental sound products as a result of the greater focus on environmental issues by the consumers.

Means:
Creating, upgrading and maintaining a common EU-wide eco-label with clear, regularly updated criteria that have to be met by manufacturers. (Criteria are set by the Eco-labelling Board with representatives of different interest groups.)

Criteria:
Should guarantee the lowest possible impact on the environment through the entire life cycle of the product in question, without lacking behind compared to similar products, in terms of quality, duration and functionality.

Product groups:
All purpose cleaners; Clothing, bed linen and indoor textiles; Copying and graphic paper; Dishwashers; Dishwashing detergents; Hand dishwashing detergents; Hard floor coverings; Laundry detergents; Light bulbs; Mattresses; Paints and varnishes; Personal computers; Portable computers; Refrigerators; Shoes; Soil improvers; Televisions; Tissue paper; Tourist accommodation service; Vacuum cleaners; and Washing machines.

(Further reading: European Eco-label catalogue)
Source: http://www.eco-label.com/default.htm

The Swan is the official Nordic eco-label and was developed by the Nordic Council of Ministers in 1989. The eco-label of the Swan can be found on more than 800 products within 70 product groups in Scandinavia.

Objectives, Means and Criteria:
Objectives, means and criteria are quite similar to the ones of the EU Flower. A main difference compared to the Flower it that the awards are reviewed every year.

Product groups:
Adhesives; Audiovisual equipment; Automatic dishwashing detergent; Batteries (primary and rechargeable); Building materials; Car care products; Car wash installations; Cleaning products; Cleaning services; Closed fireplaces for biofuel; Closed toilet systems; Coffee filters; Composts; Compressors; Copying machines/printers/fax machines; Cosmetic products; De-icers; Detergents for textiles; Dishwasher detergents for professional use; Durable wood (Alternative to conventionally impregnated wood); Filmforming floor care products; Flooring; Furniture and fitments; Grease-proof paper; Hand towel roll services; Hand washing up liquid; Hotels; Industrial cleaning and degreasing agents; Kitchen appliance and equipment; Laundries; Lawn movers; Light sources; Lubricating oils; Marine engines; Microfibre cloths and mops; Oil burner/boiler combinations; Outdoor furniture; Packaging paper; Paper envelopes; Personal computers; Photo finishing services; Printed matter (brochures, catalogues, magazines); Printed wiring boards; Printing paper; Sanitary products; Shampoo/conditioner; Small heat pumps; Solid biofuel boilers; Supermarkets and grocery stores; Textiles; Tissue paper; Toner cartridges; Washing machines; Vehicle tyres; Windows; Working machines, park and garden; and Writing instruments.

Source: SIS Ecolabelling 2004 ; http://www.svanen.nu/Eng/

material recycling. A minimum level of recycling for various waste categories was agreed on with the government, which has been achieved. In particular the recycling of aluminium beverage cans, using deposits, has been very successful (more than 90%).

4.4.3 Eco-labelling

An eco-labelling award scheme is a market-based instrument that should stimulate both the supply and demand of products with reduced environmental impacts. An eco-label provides the consumer with an easier way to find ecologically or environmentally friendly products. The idea is to provide the consumer with enough information to act in an environmentally sound way without creating an information overload that will only serve to confuse the consumer even more. The other objective with the eco-labelling scheme is to attract companies to take environmental precautions in their product chain, because the scheme provides the companies with recognizable information about the characteristics of the product, an environmental brand. Information about products is one of the cornerstones both according to the economic theoretical understanding of an open market with free competition, and the concept of the political consumer.

The eco-labelling award schemes are voluntary and are often based on a multi-criterion approach. The latter means that the criteria are selected from life cycle considerations, which can be a combination of energy savings, material-efficiency, and reduced amounts of hazardous substances or heavy metals. An example of a label that only has a single criterion is the US energy-star on electric and electronic equipment, which demonstrate the products with a low level of energy demand in the use phase.

The eco-labels are awarded by independent third-party organisations that check if products meet the criteria of the scheme. Other types of schemes exist, with various labels and criteria. The International Organization for Standardization (ISO) has identified three broad types of voluntary labels, of which eco-labelling could be categorised under the Type I group:

- Type I -- a voluntary, multiple-criterion based, third party program that awards a license that authorizes the use of environmental labels on products, indicating overall environmental preference of a product within a particular product category based on life cycle considerations.
- Type II -- informative environmental self-declaration claims.
- Type III -- voluntary programs that provide quantified environmental data of a product, under pre-set categories of parameters set by a qualified third party and based on life cycle assessment, and verified by that or another qualified third party [GEN].

Though the idea of eco-labels is to guide the consumer to products with certain environmental characteristics, the jungle of different labels sometimes tends to confuse more than provide guidance. Both the schemes of the EU and the Nordic Council are evaluated and tightened up every third year. It has been discussed if the award schemes can be used as a regulatory push to urge companies to improve the environmental performance of their products. The problem is, on the other hand, the desire that as many producers as possible should apply for the eco-label. The experience from the EU eco-labelling on textiles shows that the committee evaluating the criteria chooses to keep the criteria at the same level, so that more producers would apply for the eco-label. If this is a general tendency it speaks against the eco-labelling schemes as a regulatory push. The eco-labelling schemes then do not motivate the producers to improve the environmental performance of products.

4.5 Evaluating Corporate Voluntary Initiatives

4.5.1 The Positive Sides of Voluntary Measures

Corporate voluntary initiatives are interesting from a policy perspective because companies have the power to improve their environmental performance by changing the organisation of production, the demand to suppliers, and investing in environmentally sound technologies. Voluntary instruments can serve as strategic management systems for implementation of these improvements with regard to the economy and specific technical possibilities of the company. Even if corporate self-regulation cannot replace legislation, the implementation of voluntary initiatives is partly motivated by the pressure from environmental regulations. In addition, voluntary initiatives are motivated by a need to build corporate images. Finally it may allow a company to manage the flow of resources within the corporation as a whole, at single production sites, and through linkages to the supply chain.

A certificate or a corporate code of conduct does not by itself lead to environmental improvements. Only by a thorough implementation throughout the whole company, from the managing director to the worker on the floor, can it contribute to environmental improvements. It is an ongoing development process, which does not stop but rather begins when implementing the environmental management instruments. In order to benefit from voluntary initiatives, it is of great importance for the management to realise and commit to this continuing process.

4.5.2 Which Environmental Management Instrument to Choose

Environmental management instruments can be used to change the perception of the relation between environmental problems

Box 4.2 Reports on Voluntary Instruments in Press

Xerox Saved $2 Billion Through Eco-Design and Manufacturing [www.greenbiz.com]

Japanese Eco-Design May Help Businesses Meet New EU Standards [www.edie.net/news/news_story.asp?id=6285&channel=0#]

Novo Nordisk: Companywide Commitment to Triple Bottom Line Safe [Climate Case Study, 2003]

Future 500 Upgrades Software Tool for Better CSR Strategy, Reporting [www.greenbiz.com]
SAN FRANCISCO, June 15, 2005 – The Future 500, a nonprofit network of major corporations and NGOs, has released the third version of its Global Citizenship 360, a software process designed to promote better CSR strategy and performance and help improve GRI and sustainability reporting.

Currently used by over 75 auto, food, beverage, banking, energy, and electronics companies in 60 countries worldwide, Global Citizenship 360 (GC360) helps companies measure, report, and improve performance against the Global Reporting Initiative (GRI), Dow Jones Sustainability Index, FTSE4Good, Global Compact, ICCR, and 16 other standards. With a built-in GRI reporting framework, the GC360 aligns a total of 20 sets of standards with the GRI guidelines to drive further value from GRI reporting efforts.

Formerly known as the CAP Gap Audit, the GC360 software also includes an analysis tool for performance assessment, information management, trend analysis, and strategy creation.

Report Examines Companies' Success in Applying GRI Economic Performance Indicators [www.greenbiz.com]
SAN FRANCISCO, Calif., Dec. 6, 2005 – Business for Social Responsibility has released a new report that reviews how well the Global Reporting Initiative (GRI) Economic Performance Indicators have been applied by 33 companies, including GE, McDonald's, Novo Nordisk, Shell, Starbucks, and Toyota. Reporting on Economic Impacts evaluates how the Economic Performance Indicators have been used and proposes recommendations for updating the GRI Guidelines.

BSR's new report addresses direct, indirect, and local economic impacts based on the most recent sustainability reports released by a cross-section of companies. For each of these dimensions, Reporting on Economic Impacts explains BSR's findings and conclusions, the implications for Guideline revisions, and recommended changes to ensure the clarity, comparability and assurability of the GRI Economic Performance Indicators.

and solutions, by changing the way the company manage their resources, product development, purchase etc. The applied management instruments, like environmental management systems, codes of conduct and eco-design can maintain the focus on the environmental issues that must be addressed. In addition, tools like input-output balances, environmental management accounting, and life cycle assessment can be used to reveal the financial side of the company's environment, or the main environmental impacts of the production, and of the product from cradle to grave.

Common to these voluntary instruments is that they can serve as indicators of the corporate environmental management approach. A more thorough analysis of the environmental management initiatives can determine whether the corporate initiatives address the most significant environmental problems of the company, or if they are only image building. Furthermore, a study can reveal if the initiative improves the environmental performance of production and products. Global Citizenship 360 has developed a software that can be used to study the relevance and effectiveness of the instruments a company uses (See further Box 4.2). It can also be used to study a company without environmental schemes, to locate what type of environmental approach the company should choose.

4.5.3 Do Voluntary Measures Lead to Compliance?

For their effect, voluntary measures are totally dependent on management intensions and the kind of use management makes of them. Whether under the heading of corporate responsibility, accounting principles or product responsibility there will always be a business element, or perspective, in setting up the measures in the first place. It may be cost reductions, image nursing or improved stakeholder relations, including relation to public authorities. Except for the cost reduction purpose, these business perspectives will, however, only work if there is substance to the environmental and corporate responsibility side of the initiative in the eyes of target groups and stakeholders. Setting up voluntary measures without the intention to make them work can easily become counterproductive for the company. Voluntary measures are at the same time expensive, or very expensive, to establish, and the cost reductions often aimed at as a central element to the initiative will only be met if they are effectively implemented and maintained. In these latter two aspects lies an implicit push towards fulfilling the environmental and social responsibility aims of the measures. This in turn will support compliance, which will always be a built-in *minimum* in any voluntary measure.

Study Questions

1. Describe the most important stages in the life cycle of a product and the environmental impacts, which may be caused by each of them.
2. Explain the concepts of environmental stewardship and corporate social responsibility (CSR) and argue for or against that these should be adopted by business.
3. Describe what issues are addressed in a code of conduct.
4. What instruments do companies use to communicate their environmental performance and social responsibility to their stakeholders?
5. Explain how environmental accounting and other forms of sustainability accounting may help companies to reach the goal of sustainable business.
6. Describe the concept of Triple Bottom Line and how it became a success in the business world.
7. Describe the different forms of sustainability reporting and what role they play for the companies and the stakeholders, in particular customers, owners and public authorities.
8. Describe in brief how the eco-design of a product is conducted, and what issues are addressed in the re-design of a product.
9. What are the reasons for a company to start working with eco-design?
10. Describe the most common types of eco-labels of products and what information they provide.
11. What are the reasons for companies to start using eco-labels on their products?
12. List the most important voluntary regulatory instruments in the field of environment and sustainability used by major business and other organisations such as municipalities; describe the role they have in achieving compliance with environmental legislation.

Abbreviations

BSR	Business for Social Responsibility
CP	Cleaner Production
CSR	Corporate Social Responsibility
DfE	Design for the environment
EMA	Environmental Management Accounting
EMAS	Eco-Management and Audit Scheme
GEN	Global Eco-labelling Network
GRI	Global Reporting Initiative
ICCR	Interfaith Center on Corporate Responsibility
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
OECD	Organisation for Economic Co-operation and Development
PRO	Producer responsibility organization
SETAC	Society of Environmental Toxicology and Chemistry
SR	Social responsibility
UNEP	United Nations Environment Programme
WBCSD	World Business Council for Sustainable Development
WEEE	Waste of electrical and electronic equipment

Internet Resources

European Environment Agency's guide to LCA

http://reports.eea.europa.eu/GH-07-97-595-EN-C/en

Environment Canada's website of life cycle management

http://www.ec.gc.ca/ecocycle/en/whatislcm.cfm

IKEA Code of conduct

http://www.ikea-group.ikea.com/corporate/responsible/conduct.html

Corporate Social Responsibility (CSR) web pages of the European Commission

http://ec.europa.eu/enterprise/csr/index_en.htm

International Institute of Sustainable Development, IISD, on CSR standards

http://www.iisd.org/standards/csr.asp

CSR Europe

http://www.csreurope.org/

Business in the Community – UK Network of 700 companies site of CSR

http://www.mallenbaker.net/csr/

Business for Social Responsibility, BSR

http://www.bsr.org/

Environmental Management Accounting (EMA) Research and Information Centre

http://www.emawebsite.org/

The Environmental and Sustainability Management Accounting Network, EMAN

http://www.eman-eu.net/

Global Reporting Initiative, GRI

http://www.globalreporting.org/Home

European Union Eco-label Homepage

http://ec.europa.eu/environment/ecolabel/index_en.htm

European Eco-label Catalogue

http://www.eco-label.com/default.htm

The Swan Ecolabel

http://www.svanen.nu/Eng/

Global Ecolabelling Network (GEN)

http://www.gen.gr.jp/index.html

Pre Consultants Eco-design

http://www.pre.nl/ecodesign/default.htm

The Global Citizenship 360

http://www.future500.org/audit

GreenBiz.com

http://www.greenbiz.com

Edie

http://www.edie.net

World Business Council for Sustainable Development, collection of case studies

http://www.wbcsd.ch/templates/TemplateWBCSD2/layout.asp?type=p&MenuId=MTYx&doOpen=1&ClickMenu=LeftMenu