

Unit B 21: Ecological Management

1. Summary

Management always operates in an environment of society and ecology. Although corporate interests do not readily coincide with the interests of the (ecological) environment, long-term and sustainable corporate goals do coincide to a large extent with the interests of ecology. But in this context, the growth paradigm, which has so far hardly been questioned in business administration, must be critically scrutinized. Approaches such as environmental certificates can help to introduce sustainable and environmentally compatible management. Increasingly, sustainability reporting and responsibility management efforts are gaining ground today, especially among large companies.

2. Ecology, sustainability and corporate management

In management and business studies, capital primacy is generally assumed. This means that narrow business management thinking is focused on profit maximization and accordingly externalizes as many costs as possible, i.e. tries to pass them on to third parties. However, it could be argued that such a strategy is also detrimental to the interests of the owners of capital, because the externalization of corporate costs sooner or later calls the state onto the scene in order to avoid or at least reduce such costs through market regulations and intervention. Thus, the company suffers a twofold damage: Firstly, from this point onwards at the latest, it has to bear some or all of these externalized costs itself, which leads to a reduction in profits, and - far more importantly - the company suffers a not inconsiderable loss of image, which can significantly reduce its brand value, for example, and which is difficult to make up for.

In contrast, in sustainable companies, the costs of maintaining natural and social capital are charged internally and therefore appear in the income statement (cf. Scherhorn 2010:134). Although this reduces the immediate monetary profit, the contribution to the stabilization of the commons is noted positively - and incidentally makes it more difficult for low-cost providers to access the market in the medium term, either because they have to comply with the same standards and thus require more capital or otherwise fail to meet customer

expectations, or because the state already adopts this practice as a standard and makes it obligatory for all market participants. The fact that this can certainly pay off for companies was demonstrated, for example, in the area of the former Warsaw Pact states, when their outdated production facilities, which often had massively damaging effects on the environment, were unable to hold their own in the free market after the fall of communism in 1989. To this day, companies in Russia that are technically obsolete and not environmentally friendly have to contend with massive image problems and ultimately a lack of acceptance among their customers in the West. In 2011, for example, Axpo stopped importing reprocessed fuel rods from Russian production for Swiss nuclear power plants when the disastrous effects of these reprocessing plants on people and the environment became known in Switzerland.

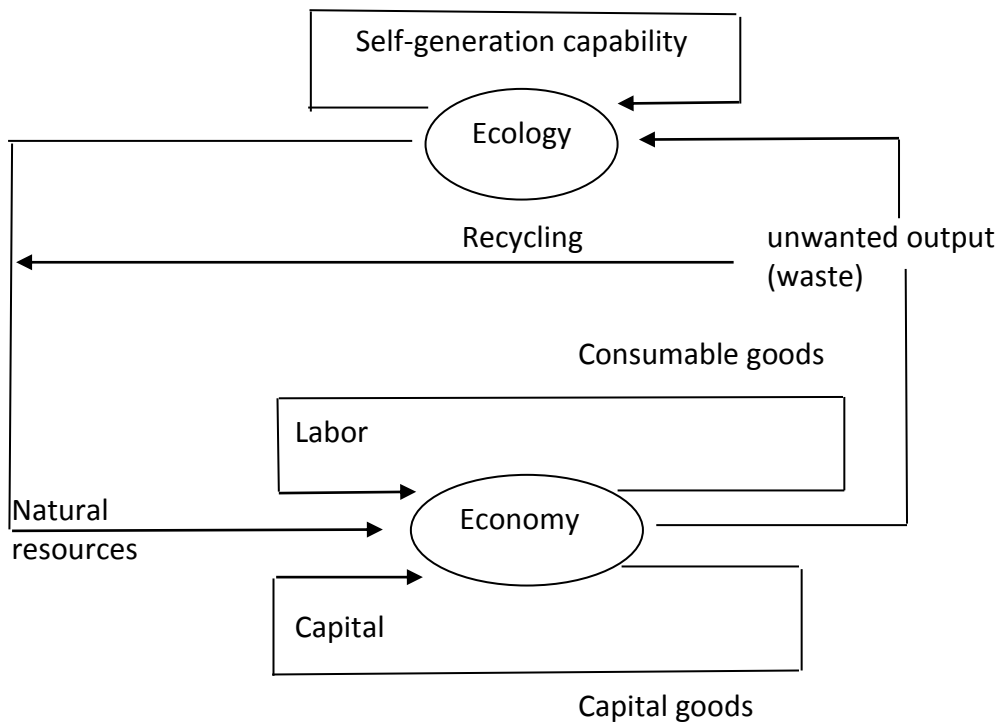
Scherhorn (2010:134) contrasted this practice with a concept of internalizing so-called external costs: "The concept of value-preserving and value-creating costs ensures and makes clear that sustainable development consists in preserving and, if possible, cultivating the productive forces of natural and social capital in their substance, their potential, in short: in their common good quality. In economic thinking, value-preserving and value-creating costs are replacement investments - even where they have a cultivating effect; the only thing is that this way of thinking is also applied to the commons" (Scherhorn 2010:134).

Ecology and economics are linked in multiple ways. Scherrer (2008:284) depicted this connection as follows:

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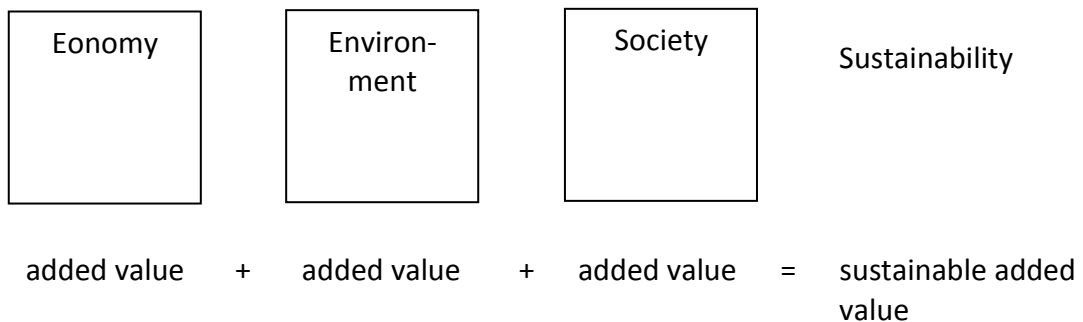
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Source: Scherrer 2008:284.

Sustainability concepts in management and business usually work with three dimensions or pillars of sustainability, the so-called triple bottom line (Weber-Berg 2007:104). These three dimensions are economy, environment and society. The English term "bottom line" means "end result of a calculation". Behind this concept is the conviction that resources should be used in such a way that their use is not at the expense of the future.



The Triple bottom line describes the concept of sustainability as creating added value in the dimensions of the economy, the environment and society. The bottom line is to create added value in all dimensions. Source: Weber-Berg 2007:104.

The problem lies in the fact that such an approach calls into question the classical corporate constitution. In the previous logic, the income statement of companies is structured as follows (after Scherhorn 2010:134):

Sales revenue - interest - wages - material - taxes - social expenses = increase in value of fixed and current capital + provisions + income of capital owners.

In a company committed to sustainable development and internalizing the previously externalized social and environmental costs, the income statement is as follows (after Kelly 2001:24, quoted from Scherhorn 2010:135):

Sales revenue - Cost of debt, consumables and inputs for current production - Expenditure on replacement investment in fixed capital - Expenditure on maintenance of natural and social capital = Increase in value of fixed and current capital + Increase in value of natural and social capital + Accruals + Income of employees + Income of owners of capital.

It can be seen immediately that this would mean that the whole previous ownership structure of a company would have to be redefined and its position in the social environment would have to be redefined. Not only are capital owners and employees effectively partners in such a company, but responsibility for the environment is also institutionalized, so to speak, and an integral part of the company's activities. This "**accountability**" - i.e., integration into the company's income statement - of **external costs** makes sustainable thinking an integral part of management - a completely new development compared to the current practice of even environmentally certified companies.

Ervin Lazlo (2004:147) believes that a company's ethical stance is reflected in the extent to which it assumes responsibility toward society and nature. "Today, it is impossible to say exactly where a company ends and society and the environment begin. The fundamental interests of a firm committed to sustainability and those of its social and ecological environment are the same" (Lazlo 2004:147). However - I think - the caveat must be made here that this is only true if the firm has a long-term strategy focused on stakeholder interests, but not - which unfortunately is still the case for the majority of companies today -

if the corporate strategy is focused on short-term maximization of corporate profits and on (short-term) shareholder value interests. This is demonstrated, for example, by disasters such as the 2010 oil spill in the Gulf of Mexico following the sinking of BP's oil production platform caused by short-sighted cost-cutting measures and sloppy management. It is not without reason that Josef Wieland (2004:215) identified four areas as drivers of the ethics issue in business:

- **Risk management against human error:** "It is a weakness of most risk management systems that they do not map this risk factor preventively: Fraud, embezzlement, price fixing and corruption cannot be prevented and detected by control and sanction systems alone. Decentralized corporate structures and the idea that every employee should also always be an entrepreneur set narrow limits. This must be supplemented by a sensitive and unambiguously attuned corporate culture, which cannot be had without value management" (Wieland 2004:215).
- **Broadly understood quality management:** This involves not only an ethical evaluation of the company's products, processes and suppliers, but also personnel issues - in other words, human capital. In particular, soft factors such as flexibility, responsiveness, entrepreneurship and innovation orientation are central to this.
- **Environmental management** and
- **Corporate citizenship:** This refers to the company's civic commitment and its roles and tasks as a citizen of society. According to Wieland (2004:216), this includes "company social benefits, sponsoring, philanthropy, socio-political commitment and worldwide initiatives such as the Global Compact".

Ecological management also in the supply chain: Walmart example

More and more companies are integrating sustainable management into their core operations. One example of how this can happen is Walmart. This company set three environmental goals in 2005: First, to purchase 100% of its energy from renewable sources; second, to stop producing waste; and third, to sell only products that do not harm the environment. In addition, in 2010 the company committed to saving 20 million metric tons of greenhouse gas (GHG) emissions in its supply chain over the next five years. To do this, Walmart had to work closely with its suppliers because 90% of emissions occur in that part of the supply chain that Walmart does not control itself. As complex and difficult as this collaboration was, it also made targeted advancements and innovations possible. The Carbon Disclosure Project (CDP) - a non-profit organization that studies sustainability performance in supply chains - came to the following conclusions, among others:

1. Investments pay off quickly: 60% of Walmart's suppliers reported that their efforts to reduce greenhouse gases also saved them money. More than 25% of these activities were paid back within one year and more than half within three years.
 2. Reputation is key: Walmart's efforts to comply with environmental and social standards had a positive impact on its reputation and the purchasing behavior of its customers. In addition, the inclusion of the sustainability criterion in the selection of suppliers resulted in massive water savings in agriculture.
 3. The data standard is crucial for ecological management. For example, one Walmart supplier received more than 28 data requests from its customers.
- Source: Holst/Cetinkaya in Schweizerische Handelszeitung, Nov. 28, 2013.

One can also ask which negative criteria can be considered as signs of a company's lack of sustainability. Thus, there have been repeated attempts to define and implement sustainability in entrepreneurial activity in an operational and practicable way. According to Kośmicki (1997), from a management perspective, sustainability can be summarized in three points:

- The utilization rate of renewable resources must not exceed their regeneration capacity;
- The utilization rate of nonrenewable resources must not exceed the regeneration rate of renewable resources; and
- Pollutant emissions must not exceed natural pollutant absorption.

Undoubtedly, a clear indicator of a company is the number of fatalities that occur in the course of its operations. In September 2011, for example, the sustainability report of Glencore, a commodities and mining company based in Baar, Switzerland, revealed that it is "one of the most dangerous mining companies in the world" (The Guardian, quoted by Keune in Neue Luzerner Zeitung, Sept. 13, 2011). A comparison of fatalities with other mining companies revealed the following:

Name of mining company	Number of employees	Fatalities 2010
Vedanta Resources, London, Indien	30'000	26
Glencore International, Baar	54'800	18
MMC Norilsk Nickel, Moskau	70'900	10
BHP Billiton, Melbourne	39'600	5
Rio Tinto, London	70'000	3
Xastra, Zug	24'000	3

Source: Keune in Neue Luzerner Zeitung vom 13.9.2011.

Between 2008 and 2010, a total of 56 people died in Glencore's mines. According to Glencore board member Peter Coats, most of these deaths were victims of landslides in Africa. In other words, in mines whose safety standards are below average. Considering that the mining of raw materials will become increasingly dangerous in the future due to more difficult mining conditions, the number of mining victims is likely to increase rather than decrease. Environmental fines paid can also be an indicator of a company's existing or non-existing sustainability. Here, too, the figures do not speak in favor of Glencore: in 2010, both Rio Tinto and BHP paid significantly fewer environmental fines, namely Rio Tinto \$540,000 and BHP Billiton as little as \$35,000, while Glencore still paid 780,000 Swiss francs (Keune in Neue Luzerner Zeitung, Sept. 13, 2011). Even if one defines sustainability very minimally - like Andreas Holzer, the sustainability analyst at Bank Sarasin: "On the whole, [sustainability] means that a company operates in such a way that it does not obstruct anything for the next generations" (quoted by Keune in Neue Luzerner Zeitung of 13.9. 2011) - by no means all companies meet this criterion: according to Holzer, in 2011 only just one mining company, namely Lonmin - a company that produces more than 50% of the platinum mined - met the strict investment criteria for sustainable companies at Bank Sarasin (Keune in Neue Luzerner Zeitung of 13.9.2011).

Between January and June 2014, members of Students and Scholars Against Corporate Misbehaviour in Hong Kong - Sacom - investigated five suppliers of smartphones, tablets, laptops and other electronic devices in China. The five suppliers, from Samsung, Hewlett-Packard, Asus and Lenovo, were all located in eastern China, in Beijing, Suzhou, Hefei, Kunsh and Huizhou. The Sacom people visited all five factories and talked to the employees. They found that all five suppliers violated workers' rights (see Liang 2014). In all five factories, the maximum 36 hours of overtime per month prescribed by Chinese labor law were regularly far exceeded. For example, in one plant - at Pegatron Suzhou - 170 to 200 hours of overtime were worked per month in peak months. Employees worked from 8 a.m. to 10 p.m. and rarely received a day off. The reason was that the company refused to build up stocks in order to save on storage costs (see Liang 2014). Wages consisted of a basic statutory wage

of the equivalent of Fr. 168 per month, plus overtime compensation and in some cases allowances. Because monthly costs in the cities are around Fr. 446, incomes are just barely enough to survive (cf. Liang 2014). Many of the employees were subcontracted workers with significantly worse working conditions - at Pegatron Suzhou even 90% of the entire workforce (cf. Liang 2014). Most of the workers did not have proper employment contracts - or did not get them back after signing them (see Liang 2014).

Such problems are common in many emerging states.

In contrast, studies have shown that companies with a dedicated sustainability strategy performed significantly better than companies without a sustainability strategy (cf. Staub-Bisang in Neue Zürcher Zeitung, 23.8.2012).

From 2000 to 2010, the number of companies that published standardized sustainability reports in the sense of the Global Reporting Initiative (GRI), which was founded in 1997, increased from only 44 to around 1800 companies (cf. Staub-Bisang in Neue Zürcher Zeitung of 23.8.2012). However, one should not confuse standardized reports with effective sustainability, even though these figures show that interest in sustainable management has increased massively.

2.1 Economic growth and sustainability

After the topic of growth was hardly questioned in economics for decades after the Second World War, critical voices have increasingly been voiced since the 1970s and the studies of the Club of Rome, and the "growth mania", the "exploitation of the environment" or the "finiteness of resources" have been addressed. Yet to this day, virtually all companies pursue the goal of increasing the value of their operations as an economic objective and promote growth accordingly. Yes, according to Coenenberg/Salfeld (2003:102), "sustainable value enhancement ... cannot be achieved without profitable growth."

Neither from a business nor from an ethical point of view is there anything to be said against companies trying to increase their value. The only question is whether profit maximization - especially short-term profit maximization - is the right way to do this.

On the one hand, studies of companies represented in the Dow Jones Index in terms of their annual average growth increase for the years 1992-2001 have shown that the fastest-growing companies also had the highest increase in stock market value (cf. Coenenberg/Salfeld 2003:103). Other studies have also shown that a lack of growth destroys value.

However - and this is the other side of the coin - sales growth without corresponding earnings growth does not produce above-average increases in stock market value. For example, a study of 223 U.S. companies over the period 1983 to 1993 showed that only the combination of high sales growth and high profitability leads to sustained increases in value (Coenenberg/Salfeld 2003:104).

However, two things need to be said about this: the stock market value of a company is only an expression of shareholder value, i.e. a measure of the - monetarized - countervalue of the owners. From a stakeholder perspective, a company - even if it is valued low on the stock exchange - can have a considerable and sustainable value. In addition, falling sales can also be an expression of falling prices, for example when market prices are successively lowered.

To regard the stock market value - as the only indicator - for the sustainable success of a company is - to put it mildly - one-sided and simplistic. In addition, a large proportion of SMEs are not traded on the stock market at all.

The growth paradigm seems to be firmly anchored in people's minds. One of the reasons why it is seldom questioned is that many companies

- because many companies feel obligated to their shareholders to continuously increase the value of the company;
- because growth strengthens the company's position in the marketplace;

- because personal reasons such as vanity and pressure to succeed on the part of management play a role;
- because the pursuit of greater profits through expanded corporate activity is considered a social norm and thus desirable; and
- because, from an evolutionary perspective, growing systems are considered healthy (after Pillkahn 2007:61).

Be that as it may, in any case, short-term growth strategies should be planned along three time horizons: The core business, the growth business and the future business should be combined into a balanced overall program (cf. Coenenberg/Salfeld 2003:115).

2.2 Integrated environmental management systems

In the last 15 years, environmental thinking has become increasingly important in the management field. Even if it is not always clear to what extent the introduction of an environmental management system in companies is merely image maintenance or to what extent it provides a real competitive advantage - the topic has gained in seriousness due to the possible certification of the environmental management system of companies. Thereby, in the ISO 14000ff. series of standards, there is a practicable and recognized system for securing and recognizing the environmental management system of companies.

In spring 2014, the Parliament of the European Union decided that all companies with more than 500 employees would in future be obliged to publish information on social and environmental issues in addition to key financial figures (cf. Schmutz in Neue Zürcher Zeitung, 24.4.2014:32). About 6000 companies were affected by this new regulation. Already in 2013, 71% of the largest corporations worldwide published a report on their corporate responsibility ("Corporate Responsibility"), in Switzerland it was slightly less, namely 67%.

The sustainability reports usually include a wide range of internal company indicators on corporate governance, environmental aspects such as water and energy consumption, waste management, working conditions, human rights and product responsibility. Whereas previously only the company's internal suppliers and subcontractors were usually taken into

account, external links in the supply chain are now also to be considered - an undoubtedly useful addition.

2.3 Environmental certificates

One method that has been increasingly propagated in recent years to guarantee - at least in theory - environmental protection at the lowest possible cost is environmental certificates.

The most widespread certificate system to date is the EU's trading system for CO₂ emissions, which has been in force since 2005 and currently - i.e. in 2010 - covers around 11,000 plants. If a company produces more CO₂ emissions in one year than it holds emission rights for, it must buy additional rights in the following year and pay a fine of €100 per excess ton of CO₂ emitted. However, the system only covers about half of Europe's CO₂ emissions. The connection of further countries - e.g. Switzerland - is being discussed (Candrian/Schleiniger in Neue Zürcher Zeitung, 25.5.2010).

Already in force at the global level is the so-called Clean Development Mechanism (CDM) laid down in the Kyoto Protocol, which allows developed countries to fulfill part of their domestic reduction commitments in developing countries - in other words, to export CO₂ reduction, so to speak. In doing so, the Kyoto Protocol requires that the emissions reduced in the developing country must be in addition to any emissions development that is taking place anyway. This so-called additionality of the CDM project must be documented by the plant operator. In the process, the plant operator receives a number of certificates that it can then sell to demanders from developed countries. A central problem of the CDN system is that the additionality is ultimately always hypothetical, because the assumed development without CDM always remains fictitious (Candrian/Schleiniger in Neue Zürcher Zeitung, 25.5.2010). The purchase of a certificate can reduce the environmental impact, but the certificate does not provide a guarantee for this.

A third form of environmental certificates is the practice, now widespread among many electricity providers in Europe, of offering customers electricity products made from renewable energy - at a more expensive price and under names such as Aquastrom,

Solarpower, Naturstrom or Öko-Strom. Although such products are becoming increasingly popular, they are largely dependent on customers' trust in producers that a corresponding proportion really is produced under ecological conditions.

2.4 Risk management, crisis management and risk communication

Every company is confronted with a wide variety of risks that can influence the company's activities or, in the worst case, even make them impossible. The greatest risk lurks in the area of the supply chain and infrastructure, because both are becoming increasingly complex. The second largest risk is in the environmental and ecological liability area and the third largest risk area today is cyber risks (cf. Rüedi in Risk Management 2014a:17). Many of the main risks are interrelated and have a cumulative effect, such as the threat of terrorism, business travel hazards and liability issues.

Therefore, it is desirable for companies to prepare for potential business risks as best they can through integrative risk management. With regard to natural hazards, hazard maps, 90% of which have been drawn up by the cantons, can help (cf. Speck in Risk Management 2014b:20).

Accidents and catastrophes such as the fire on the Deepwater Horizon oil production platform in 2010 or the nuclear disaster in Fukushima in 2011 have shown time and again that corporate communication is of crucial importance in crisis situations. Not only do those who may be affected need to be informed, dense and transparent communication by the company is often the only way to enable targeted and efficient countermeasures against the often devastating effects. Particularly in the case of major catastrophes - such as the nuclear disaster in Fukushima in 2011 - those responsible often deny incidents as long as possible and, once they become known, do everything in their power to cover up the actual extent and the damage caused. In most cases, information is provided far too late and only in fragments - companies exploit their natural information advantage in the process. One of the reasons is that there is always the hope that the incident could prove to be limited in its effects. Union Carbide in Bhopal, for example, continued to deny that toxic substances had

leaked out even when people were already dying by the dozen in the streets (cf. Perrow 1987:3; see also ► Unit V14: "The Myth of Unlimited Economic Growth").

In an interview, the well-known journalist and company spokesman Andrew Gowers explained (in *WochenZeitung*, 26.5.2011:7) that many large companies have detailed internal risk registers - which at BP, for example, also included an underground blow-out of a deep-sea oil well - but that the probability of such an event is often assessed as very low. Accordingly, there is a lack of communicative preparation for an emergency. Companies whose activities are based on highly complex and technological processes absolutely have to pursue an offensive communication policy and, above all, a transparent information policy, on the one hand to minimize damage in the event of incidents and, on the other hand, to keep their image loss within bounds. However, this is only possible if the company's policy is long-term and sustainable and if the risks are realistically assessed. Unfortunately, however, the opposite is usually the case: nuclear power plants forego safety measures and facilities in order to save money, chemical companies are primarily focused on short-term profit, and ecologically problematic and risky raw material extraction - e.g. deep-sea oil production - is pushed ahead because of the short-term profit opportunities.

2.5 Ethics rating

The two aid organizations Fastenopfer and Bread for All have attempted to carry out an ethical rating for electronics companies and their suppliers (see Renaud 2014). For this purpose, the two NGOs examined ten labels that have the largest market share for computers and smartphones in Switzerland. They came to the following conclusion with regard to production and working conditions:

- "On track": Hewlett-Packard (HP) and Nokia.
- "mediocre": Apple and Dell
- "unsatisfactory": Acer, Lenovo, Samsung, Sony
- "unacceptable": Asus and HTC (Renaud 2014).

The author of the study pointed out that - despite some improvements since 2008 - more attention was paid to environmental protection than to employees' working conditions

(Renaud 2014). In particular, she identified deficits in health protection, living and secure wages, and labor law.

Fastenopfer and Bread for All demanded that the corporations,

- "specifically support the self-organization of all employees along the entire supply chain" (Renaud 2014) and cooperate with independent trade unions and NGOs;
- "use their market power to enforce improvements in their suppliers' ... working conditions and environmental protection" (Renaud 2014); and
- demand living wages from all suppliers.

3. Control Questions

1. Which three dimensions come together in the so-called triple bottom line?
2. How should resources be used in the process?
3. Under what conditions are the interests of a company committed to sustainability and the environment the same?
4. Which four areas are - according to Wieland - central for the implementation of environmental ethics in business?
5. What is the connection between the growth theme and the economic goals of the company?
6. For which five reasons is the growth paradigm hardly ever questioned in business administration?
7. Along which three horizons should short-term growth strategies be planned?
8. For what reasons do more and more companies practice environmental management?
9. How do environmental certificates work?

4. Links

Verband für nachhaltiges Umweltmanagement e. V.

<http://www.vnu-ev.de/>

Was sind Umweltzertifikate?

<http://wirtschaftslexikon.gabler.de/Definition/umweltzertifikat.html>

Umweltmanagement und Umweltmanagement-Systeme

<http://www.emas.de/ueber-emas/umweltmanagement/>

Umweltökonomie und Umweltmanagement: Aktuelles

<http://www.umweltbundesamt.de/umweltoekonomie/index.htm>

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