

**ECSR in SME:
Towards Effective Environmental Protection?!**
A Case Study Analysis



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Abstract

There is a large number of research work done on Corporate Social Responsibility (CSR) for Small and Medium Enterprises (SME). Also making CSR outcome measurable is a very recent approach by scientists, public institutions and organisations.

The aim of this research project is to conceptualise CSR as a valuable management approach for SME by examining the qualitative and quantitative effects of CSR-Engagement. It contributes to a coherent approach of CSR in SME by unfolding limiting and supporting factors of CSR-Strategies. The focus will be on CSR on environment as one CSR-Approach, which enables to unfold the effects of CSR on its stakeholders. For this purpose the research question “to what extent are the Corporate Social Responsibility-Strategies of Medium enterprises effective with regard to environmental impact?” is discussed.

Based on semi-structure interviews with two medium-sized companies the outcome with regard to effects on the environment, effects within the company and effects on CSR development will be analysed. Qualitative as well as quantitative aspects of CSR are discussed on the basis of a set of questions.

The research shows evidence that environmental CSR (ECSR) is one approach to become more competitive. It enables companies to structure their environmental approaches towards an integrated strategy rather than various loose strategies. It ensures resource efficiency through recycling and less material consumption. Consumer acceptance constitutes another aspect of competitiveness that supports the introduction of ECSR.

The strategic introduction of ECSR is supported by environmental management schemes that provide a basis for managing CSR for companies with fewer resources available for ECSR management and monitoring.

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1. Introduction

Problem Background

The impact of companies on social life and the environment is undeniable: First corporations are impacting social life through e.g. providing workplaces and producing goods (Porter & Kramer, 2006). Second production processes are producing externalities on the environment like e.g. polluted water, smog and waste (Bressers, 2004).

Globalisation of economic activities, as well as the changes of the national welfare state governance imply an increased need for the engagement of corporations into social life (Albers, 2011). The need to take over responsibilities for society also beyond regular governmental regulation is increasingly expected by several societal groups (stakeholders) like employees, civil society, Non-Governmental Organisations (NGOs), and politics (Christen Jakob, 2012; Riess, 2006). There exist different attempts to meet the stakeholders' demand for social involvement by the economy. One is the concept of Corporate Social Responsibility (CSR); a management strategy for corporations to meet stakeholders demand and exercise their responsibility towards the society with regard to social, environmental and economic concerns (Hoffmann & Maaß, 2008; Stoll, 2003).

But CSR as a concept is contested within society as well as corporations. Society claims that CSR is a modern form of selling indulgence meaning that corporations are buying themselves compo-
sure from stakeholder demands (Ramthun, 2005). For companies the inability to measure the causality between CSR and profits let CSR appear as a rather flimsy concept (Riess, 2006). CSR is claimed to be the concept of big enterprises (Lenzen, 2011). Many Small and Medium Enterprises (SME) do not know that the strategy they are actually using could be defined under CSR (Institut für Mittelstandsforschung Bonn [ifm], 2007). Furthermore SME lack the resources (monetary, time & management capacities, knowledge, and information) to actively implement CSR into business strategy (Williamson, Lynch-Wood, Ramsey, 2006). At the same time SME account for 99% of companies within the European Union (EU) and therefore for a high stakeholder impact (European Commission, 2003). This implies a discrepancy between the number of businesses and the capabilities to implement CSR for SME in Europe.

Research Goal

This research is aiming at filling the gap of knowledge on CSR in SME. It is gathering inside information on how SME implement CSR. This provides a basis to the effective instrumentation of CSR for SME. Based on the research findings, recommendations for SME on how to conduct CSR effectively could be given. To limit the scope of this paper the focus of this research will be on the environmental dimension of CSR.

Research Questions

What has been discussed so far leads to the research question. The main question is dealing with understanding the impact of CSR-Strategies on its stakeholders: *"To what extent are the Corporate Social Responsibility-Strategies of Medium enterprises **effective** with regard to their environmental impact?"* To discuss the effects of the existing strategies one needs to discuss the existing strategies beforehand. The first sub-question to be answered within this research project is asking for a description of the existing strategies: *"What are the Corporate Social Responsibility-Strategies on Environment and Sustainability in company x and company y?"* When discussing the strategies another focus is on the management of these strategies within the company. Therefore the second sub-question is *"How is the management process of CSR-Strategies implemented*

in company x and company y?“. This research wants to measure not only the strategy and its outcome but also give a statement about the relative impact of the strategies which leads to the third sub-question: “How are medium size companies approaching the environmental corporate social responsibility (ECSR) strategy”

Research Design

For a matter of comparability the focus will be on medium size enterprises (ME) as part of the group of SME. To fill in the gap of research on CSR in SME and provide empirical data on how SME design ECSR. This research is an explorative case study. In a semi-structured interview two exemplary ME are interviewed on their CSR-Strategies to test the relationship between CSR-Strategies (as independent variable) explaining CSR Performance (dependent variable).

The research is divided into three parts. The first is discussing internal and external factors that drive CSR development. The second is on the environmental impact of the cases’ CSR-Strategies. In the third step explanations and recommendations for the impact with regard to the influencing factors will be given.

This research is divided into six chapters. Problem background and theories around the research purpose are included in chapter one and two. In Chapter three the research methods on case selection and concept operationalisation are discussed. The description of the cases under study, their CSR strategies and impact are introduced in chapter four. Chapter five discusses the research results of the case studies with regard to the research questions and provides an answer on the qualitative and quantitative effects of CSR. From this, conclusions and recommendations could be drawn from.

2. Theoretical Framework

This research project provides a discussion on the outcome of CSR-Strategies with regard to the environment.

In this chapter the theoretical framework for the analysis is build up. For this purpose the independent variable “Corporate Social Responsibility” which is thought to influence the dependent variable “Outcome” are introduced and defined on the basis of existing literature. Section 2.1 gives a definition of CSR as it is understood by literature in general. Advantages and disadvantages that are contested aspects of CSR are introduced.

2.2 discusses CSR as a management strategy and the different ways to approach it in general practice. 2.3 is concerned with the environmental aspects of CSR in particular.

2.4 specifies the dependent variable or effect of the CSR-Strategies.

The definitions enable to refer to the concept within the analysis of this article.

2.1 Corporate Social Responsibility

In the following section an introduction of the concept of CSR is given with regard to scientific and official literature. First the general approaches by official and scientific literature are mentioned to give an overview definition over the concept. This includes also a discussion on the advantages and disadvantages of CSR as they constitute the determining basis for implementing CSR.

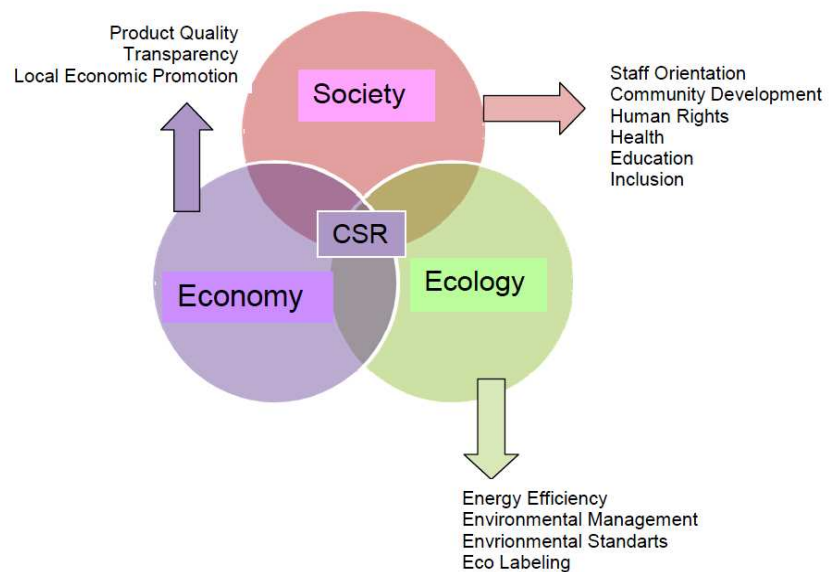
2.1.1 Defining the Concept “CSR”

Before providing the revision on the Corporate Social Responsibility (CSR) strategies the CSR concept definition is relevant to mention in order to frame the approach of this research:

CSR is a management concept that serves as the basis to integrate economic, social, and environmental concerns into the business activities in mutual interdependency with its stakeholders

(European Commission [COM], 2001 & 2004).

Figure 1 shows the triple-bottom line as the basis understanding of objectives for CSR-Engagement. These are social, economic and environmental spheres of business activity. Possible spheres of activity within the three dimensions are mentioned within the figure. For this research project the possible activities under ecology are discussed in more detail in 2.3.



CSR is a contested, dynamic concept. There exist different definitions on it. Some see CSR as an altruistic form of companies' activities whereas others define it as a competitive strategy (Münderlein & Welzel, 2006; Albers,

2010); again another definition is focusing on the discretion of CSR-Strategies that leaves much space to dynamic evolution others define CSR as a superordinate business strategy (Ministry of Labour and Social Affairs [MLSA], 2010; Mathis, 2008) ; some state it should be voluntary whereas others see CSR as an obligatory instrument (Hoffmann & Maaß, 2008; COM, 2011). The International Organisation for Standardisation (ISO) defines Social Responsibility as “the responsibility of an organisation for the impacts of its decisions and activities on society and the environment through transparent and ethical behaviour (...)” (Wieland, 2011, pp.174). This definition correlates with the newest European approach which defines CSR as “the responsibility of enterprises for their impacts on society (...)” (COM, 2011, pp. 6). They operationalize the conduct of CSR as an obligatory approach for corporations. For this research work this definition goes beyond the general, and still prevailing, understanding of CSR within governments and corporations.

Serving as basis for most literature on CSR the initial definition by the European Union (2001) is most applicable within this context. Furthermore it is applied by companies as the new definition is very recent and yet not accepted by some national governments nor companies (MLSA, 2010). The definition is very liberal in its understanding of CSR and has no normative determination.

2.1.2 Competitive Advantages

The concept of CSR is assuming that through “discretionary responsibility” (Carroll, 1979, pp. 500) a Win-Win-Situation could be created. This is through enabling for a competitive advantage based on the following main arguments for CSR as defined by the literature. Those are (1) reputation, (2) enlightened self-interest, (3) stakeholder-dialogue, (4) improved risk-management, (5) moral obligation, (6) worker commitment (see also Annex 2&3) (amongst others: Mathis, 2008; Porter & Kramer, 2006; Palazzo, 2010; COM 2011; MLSA, 2010). Those arguments could be assumed to be mutually interdependent to some degree (Porter & Kramer, 2006). This interdependency becomes obvious when discussing the advantages in more detail: *Reputation* means “corporate identity as defined by others (...)” (Lenzen, 2011, pp. 9). Positive reputation creates values (Porter & Kramer, 2006; Lenzen, 2011). Positive reputation helps to strengthen brands, improve the business image, enlivens moral and raise stock value (Porter & Kramer, 2006). Also consumers are increasingly buying values meaning that through a positive reputation a company can develop a competitive advantage towards its rivals (Lang, 2010; MLSA, 2010)

Enlighten self-interest is based on the idea of the triple bottom line: through CSR companies are able to operate sustainably in a long-term perspective that safes resources and improves environmental and social impacts which in turn enables to reduce costs and impacts reputation positively (Porter & Kramer, 2006).

Stakeholder-dialogue is the discourse with individuals and organisations that are affected by the companies’ activities (Lang, 2010). It allows companies to identify possibilities of innova-

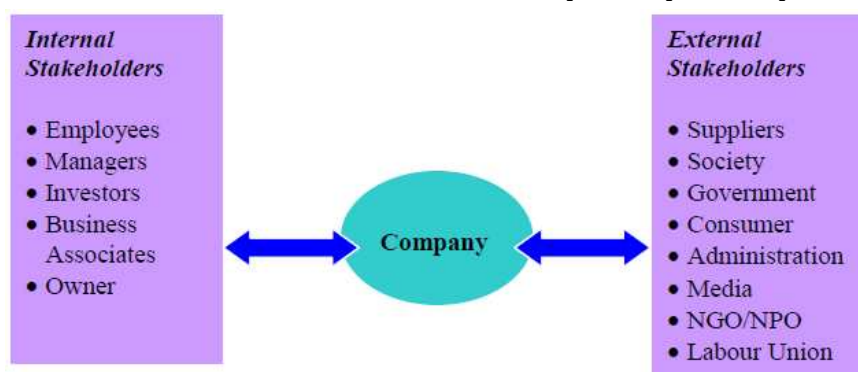


Figure 2: Stakeholder Dialogue (Own Illustration, 2012)

tion. It allows reflection on own performance within the political and social context to adjust, if necessary, its activities and improve internal practices as well (Lang, 2010; Palazzo, 2010). The figure above shows the different stakeholders from in-/outside that could be included in stakeholder-dialogue (Dresewski, 2004).

In correlation with reputation CSR can constitute a part of *risk-management* since companies are able to improve their market position but also to receive legitimacy for operation that helps to protect against public campaigns e.g. environmental campaigns (Riess, 2006; Porter & Kramer, 2006).

The *moral obligation* a company has is about the ethical values represented by the company. It deals with the necessity of companies to tackle their social impact which affects employee commitment positively (Mathis, 2008).

Employee Commitment to a company has a twofold impact for the company. On the one hand the company is able to motivate its employees for the company's objectives (MLSA, 2010). On the other hand employers are capable to draw on a greater stock of qualified human resources (Albers, 2011).

2.1.3 Competitive Disadvantages

In society as well as within organisations there exist different objections against the concept of CSR. One of the main arguments by society deals with the accusation, that CSR-Action is just marketing-, a *greenwashing strategy* of corporations (Taubken & Leibold, 2010). Greenwash, meaning the unjustified claim of being socially responsible, could be a disadvantage for marketing and CSR-reporting. Figure three outlines the "Trap-Door" of Greenwash-reporting. Based on increasing talk about CSR-Strategies but no action people may get suspicious whether CSR-Strategies are having any impact at all (Taubken & Leibold, 2010).

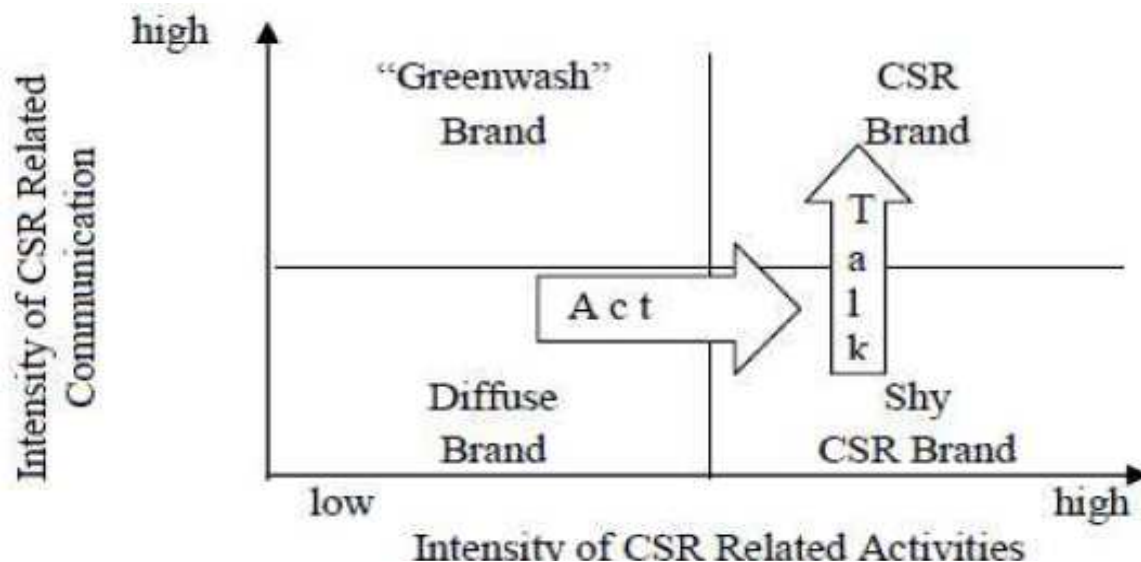


Figure 3: Classification of Corporate Brands in the CSR Area (Taubken & Leibold, 2010)

CSR is a "nice to have" in financially good times but not affordable as soon as times are not as good for the company (Mathis, 2008). Surveys show that CSR-Managers as well as CSR-Activities are reduced in financially unstable times (amongst others: Cartland, 2010). This implies that stakeholders could not rely on company engagement or sufficient implementation.

Critics see the risk of *companies gaining too much power* over society and private life which could have a reverse effect on society (Mathis, 2008). Businesses are not thought to be the most suitable actor to solve social problems since social problems are not only a question of money but also of capability (Mathis, 2008).

Disadvantages for corporations could be the possible threat to be a "*victim of information leaks* (...)" (Palazzo, 2010; pp. 28) and negative reputation implying that performance stands under even greater supervision of society. Additionally it contains the *loss of competitive advantages* as information about business practices reach external actors (Palazzo, 2010).

Another disadvantage for companies is the *risk of wasting effort and money* if the partners or chosen strategy are not fitting the company's and/or stakeholders' needs (Palazzo, 2010).

An immediate impact of CSR-Activities is important for both actors to *justify their operation*. Interests and demands towards CSR-Activities are differential and blurry. Many companies try to react on the various demands by the different actors through the setup of many short-term incentives without adequate goal objectives. This is costly and low in effect due to short term strategies and effects (Riess, 2006).

Legitimacy of CSR-Activities is impacted by the outcome of the activities. Until today experts struggle with operationalizing the impact of CSR-Activities (Lenzen, 2011).

2.2 Strategy Development

Within this part of the chapter an outline of how to develop a CSR-Strategy with regard to scientific and official training literature is given. For this purpose the management circle is introduced that enables to organise and monitor CSR development based on the different steps of managing CSR.

The following section introduces the spheres of activity of CSR.

2.2.1 CSR as a Management Approach

It should be self-explaining that developing a strategy has to start from an initial vision about the goal objectives (Löw & Braun, 2006). Figure 4 describes the management circle that is leading through the discussion on CSR management within this research project.

To develop a strategy it is necessary to define a topic that is close to the general business operations to ensure understanding and implementation (Hoffmann & Maaß, 2008). There may be various possibilities for CSR-Strategies to be explored that would fit the company. The important need is to decide for one (set of) strategies. This is also true for the partners for dialogue.

Through stakeholder consultation companies are able to use the evolving synergies: They make decisions on their strategy with regard to stakeholders' needs (Albers, 2010). The advantage is that companies receive information about what is really needed, for a better access to strategies as well as having reliable partners when implementing the strategy (Lang, 2010).

After having analysed the situation and decided upon a strategy as well as on the partner for cooperation, the execution of the strategy starts (Ascigil, n.d.). To ensure a successful implementation ongoing communication and auditing within the company is necessary. Communication and reporting of CSR-Activities enables to receive feedback from stakeholders to adjust if necessary. Further adjustment and optimisation is also conducted through the evaluation of the strategy and its impacts based on that new goals/strategies could be explored (see also Löw & Braun, 2006).

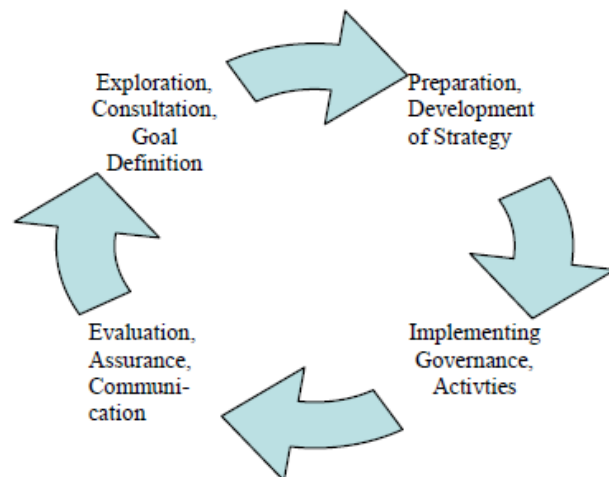


Figure 4: Development of a CSR-Strategy
(Own Illustration, 2012)

2.2.2 CSR Management Instruments for E&S

After having discussed *how* to develop a CSR-Strategy, the different CSR-Formats are introduced in this section.

Instruments on CSR range from simple donations to certification of business performance.

Donations are understood as a kind of an altruistic act that have no further impact on internal or external performances. Furthermore it does not have any long-term effects (Albers, 2010).

Corporate Volunteering is concerned with the active support of employees in their social engagement (Albers, 2010).

Cause Related Marketing (CRM) is a strategy where the marketing of a product is linked to a social purpose that increases the products' value (Klein, 2010).

Other ways to implement CSR is to use *certification systems* (ecolabels). There exist different certification schemes for products as well as production processes. Courville (2011) defines voluntary standardisation or ecolabelling as "consensus-based voluntary standards defined through global multi-stakeholder processes and with enterprise compliance assessed through independent third-party certification (...)" (Courville, 2011; pp. 30). Three main functions of ecolabels are the drive and confirmation of performance standards; the creation of assurance and trust that improvement takes place; change demand and improving the awareness (Watanatada & Lee, 2011). In relation to certification schemes also *auditing and reporting schemes* developed and gained importance. There exist several national and international approaches to set up a guideline for codes of conduct for businesses (Bartels *et al.*, 2010). They set out principles and indicators to measure sustainable business operation to support transparency of businesses. The International Organization for Standardization (ISO) develops standards for organizations by experts and international institutions. With the ISO 14000 series it has developed a standard on environmental management that is also used in the EU Eco-Management and Audit Scheme (EMAS) (Bartels *et al.*, 2010).

2.3 CSR on Environment

CSR could be applied in social, economic and environmental spheres. For the purpose of this research the focus is on the analysis of the ecological dimension as this is the one, very controversially discussed in the past and subject to increasing attention and prominence. To understand the aspects of environmental CSR this is introduced in this section.

2.3.1 Environmental Dimension of CSR

Strategies related to environmental aspects mainly concern the reduction and recycling of resources. The environmental dimension of CSR-Engagement is concerned with the following environmental indicators that could be approached separately or combined (see also EMAS, 2001; ISO 14000, 2004).

Strategies on *biodiversity* are on the protection of the regional environment and support for bio diverse areas. *Emission* is on the reduction of greenhouse gas emissions within the production process. The dimension *energy and water* concerns the reduction of energy demand of the company. *Resource consumption/material efficiency* is approaching the recycling and re-usage of material within the production processes. This is related to *waste disposal* that is concerning correct separation of waste for recycling.

The impact of the production process on the environment could be observed in table one. This allows having an impression on how to structure environmental strategies.

Table 1: Environmental Impact of Product Chain (EMAS, 2006)

Level of Production Chain	Business Activity	Environmental Impact
Procurement	>Strategic purchase of material for the production >Purchase of material for administration and marketing	>Depletion of non-renewable raw resources >Depletion of biodiversity, water pollution, Emissions
Production	>Production of product	>Discharge of Emission >Waste production >Water pollution >Impact on local biodiversity
Marketing and Administration	>Development of marketing products >Administrative activities	>Waste production >Emissions through usage of office and office equipment
Distribution of Products	>Usage of packaging >Road/Air/Rail/Sea transport	>Waste production >Emission and air pollution >Usage of non-renewable resources
Waste Disposal	>Disposal of Packaging >Disposal of surplus material >Disposal of surplus products	>Increase of waste >Emissions through combustion

2.3.2 CSR-Strategies in Environment and Sustainability

The basic idea of CSR in environment is to reduce the environmental impact of production processes and products (Hoffmann & Maaß, 2008).

CSR-Strategies include the obstacle of many interests and issues at stake, most importantly economic interests that is supporting and limiting factor for CSR (Bressers & Rosenbaum, 2003).

The European Parliament and Council in its regulation (EC) No 1221/2009 on an eco-management and audit scheme (EMAS) define environmentalist action as “the overall intentions and direction of an organisation relating to its environmental performance as formally expressed by top management including compliance with all applicable legal requirements relating to the environment and also a commitment to continuous improvement of environmental performance.” (EU Parliament & Council, 2009; pp. 4).

To sum the discussion of this section up, CSR on environment and sustainability contains the following objectives:

- Resource-efficient production;
- Support and Enforcement of environmental aspects within the procurement (Löw & Braun, 2006);
- Development and diffusion of environmentally friendly innovation (UNGC, 2011);
- Development and Usage of energy efficient technologies and strategies (Stoll, 2003);
- Co-development of environmental management standards by government and management (Stoll, 2003);
- Participation in (international) standardisation programs (e.g. EMAS, ISO, UN Global Compact, GRI) (COSMICproject, n.d.);
- Attainment of sustainability standards through market based mechanisms like eco-labelling (Courville, 2011);
- Sustainability Reporting and increasing transparency (Bartels *et al.*, 2010);

Figure 5 outlines the different environmental dimension of CSR-Activities that a company is approaching with regard to its stakeholders. These spheres of activities are important to know to determine the activity and goal objectives that are approached within the CSR-Management process.



Figure 5: Environmental Dimension of CSR-Activities (Loew & Braun, 2006)

2.4 Specification “Outcome”

This section discusses literature on models and measures on CSR outcome. In particular the concept of outcome is relevant to this research project because it is the dependent variable that is thought to be influenced through the CSR management process.

The definition of outcome that is approached for this research is:

“(..) what happen(s) when the outputs reach the addressees, the actions of the addressees included, but also what occur beyond the addressees influence. We may distinguish between immediate, intermediate and ultimate outcomes. (...)” (Vedung, 1997; pp. 5).

For managers as well as scientist the exclusive and direct valuation of CSR is not sufficiently developed yet (amongst others: McKinsey, 2009). There are different attempts of making the effects of CSR-Activities visible and measure their value respectively their effectiveness. This is not without problems. The outcome of CSR-Activities is concerned with soft indicators like reputation, improved risk management and motivation.

By looking at the outcome of the specific strategies this research provides one approach on how to make effects of CSR visible. Overall outcome is determined by the power structures and interests of the actors. Furthermore it is dependent on the distribution effects of the burden of the costs for the actors; the flexibility of the strategy and its actual capability of being implemented (Bressers & Huitema, 1999). As has been defined before, Vedung (1997) distinguishes between “immediate, intermediate and ultimate outcomes.” (Vedung, 1997; pp. 5). The Bertelsmann Foundation understands immediate and intermediate effects as outcome /effect but ultimate effects as “impact” (Bertelsmann Foundation, 2010). Here the input of resources (time/money etc.) and the output in terms of the realisation of activities affects the outcome and impact of the Strategy. (Bertelsmann Foundation, 2010; see also the figure 6). Within this research report the concept of outcome and impact will be synonymously used as it is not yet possible to distinguish sharply between the two.

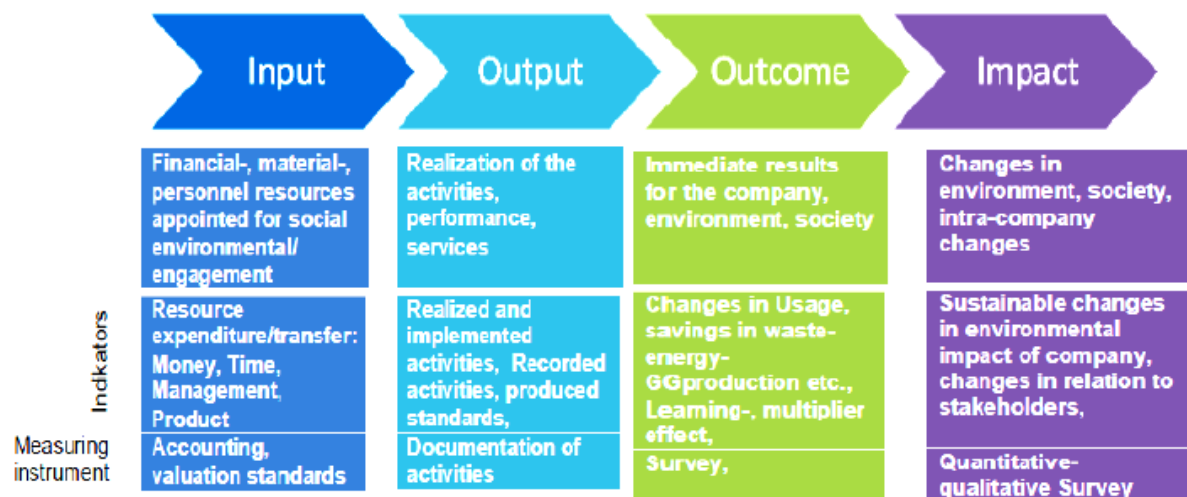


Figure 6: Measuring CSR with the iooi-Method (Bertelsmann Foundation, 2010)

This leads us to consider the following two aspects of outcome more in depth.

- Outcome and sustainability: Long/short term effect on stakeholder
- Outcome and efficiency: Weighting input/output and actual benefit for company

Sustainability is concerned with developing changes in key areas of economic activity towards an environmentally friendly behaviour (Mazmanian & Kraft, 1999). These changes presume a long term strategy for the sake of economic- and outcome efficiency.

The second aspect is “outcome and efficiency”. If an environmental strategy is demanding changes in the business’ operation the company is making a cost-efficiency calculation first: One has to calculate the monetary input and time output for realizing the strategy. If the effect will not outweigh costs the chance of being implemented is low. Also a high input does not assure a sustainable strategy. It shows that the effect may be dependent on cost-efficiency and vice versa: Sustainability depends on the efficiency of appointing resources within the project.

Summarising his chapter it is important to highlight that a conceptual framework for this research has been introduced which can be observed as a whole and how its components interact and impact the CSR-Strategy as shown in figure 7 below.

The two variables under study “CSR” and “outcome” have been defined. A frame of understanding the variables and their relation for the discussion on CSR within this thesis has been developed.

First of all the independent variable ECSR has been introduced: The current discussion on the concept of CSR or ECSR; also concerning the advantages and disadvantages of conducting CSR as a determining aspect of CSR implementation have been discussed. Then the general management structure of CSR and the particular strategies for ECSR are introduced. This leads to the dependent variable that is the outcome of approaching CSR within a company.

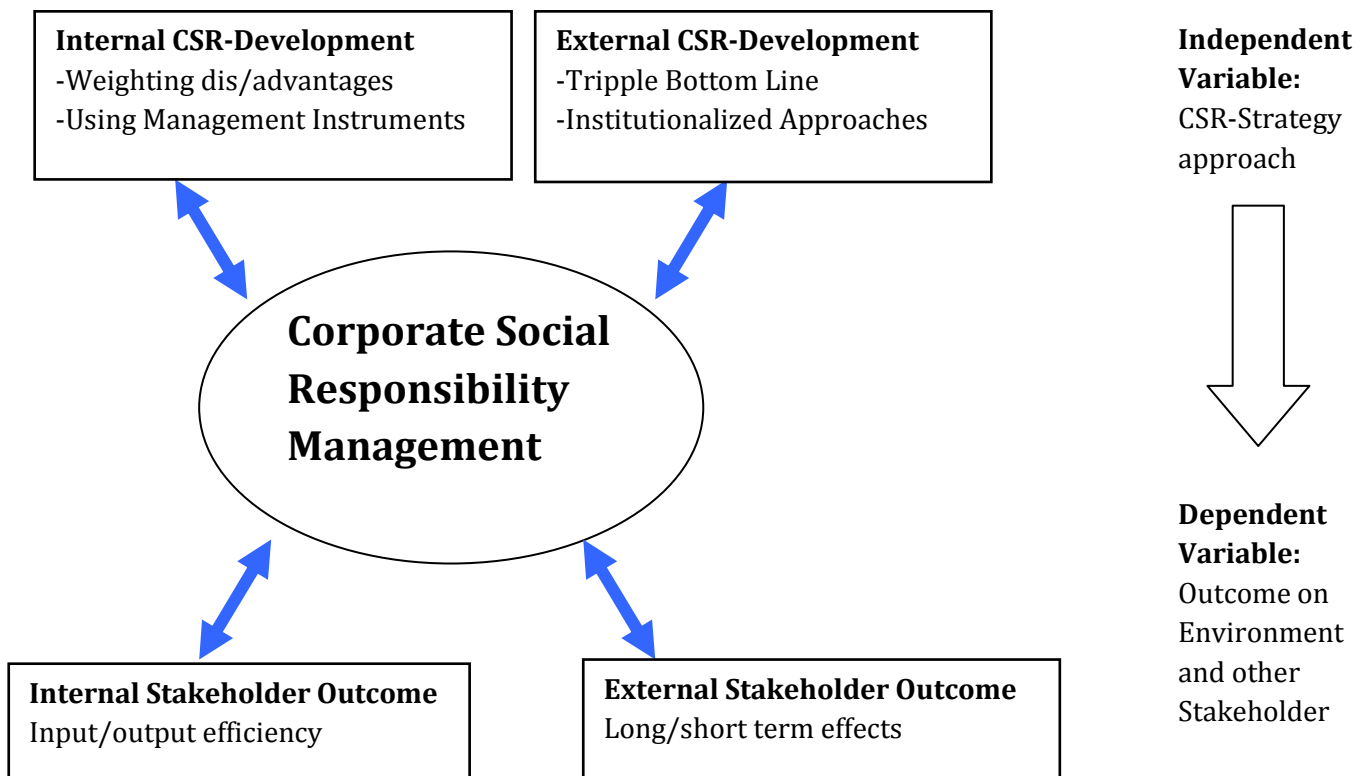


Figure 7: Theoretical Framework- Putting CSR in a Context (Own Illustration, 2012)

The next chapter will be concerned with the operationalization of the concepts. This provides a basis for measuring the collected data.

3. Methodology

This chapter is explaining the research design and discussing the choice for methodology of this research.

Furthermore, it includes a section on operationalizing the two variables with regard to the research question on the effects of CSR on its stakeholders as a basis for measuring the collected data empirically for this research.

3.1 Research Methodology

Providing a revision on the research design is relevant in order to frame the approach of this research, which is outlined in table 2: The sources of information used for this research were both, primary and secondary data. As for the primary data the researcher carried out semi-structured interviews to experienced staff members within the companies involved in this research. For this project the environmental managers of the company were interviewed because they might be the most capable to answer questions on CSR on environment as they are connecting all company levels for strategy development. The environmental manager is pooling information of all levels therefore interviews with staff and departmental heads have been renounced. Additionally the companies' environmental audits and scientific literature are used as part of secondary data sources. An overview of the research methodology applied is illustrated in table 2. The outputs expected are disclosed in the last column such as the identification of CSR-Strategies for the first sub-question.

Through information on the implementation, indicators for embeddedness of CSR within the company, level of information flow and quantitative data on CSR impact one is able to answer the main question of the effects on the environment but also on other stakeholders. Scientific literature ensures further empirical foundation of the findings and serves as basis for explanations and recommendations for the outcome of CSR.

Table 2: Research Design (Own Illustration, 2012)

Research Question	Sub-Questions	Target Group	Research Method	Outputs
To what extent are the Corporate Social Responsibility-Strategies of Medium enterprises effective with regard to their environmental impact?	What are the Corporate Social Responsibility-Strategies on Environment and Sustainability in company x and company y?	ME with Environmental Managers	Interview with semi-structured questionnaire	strategy identification; aspects of CSR implementation; indicators of internal embeddedness
	How is the management process of CSR-Strategies implemented in company x and y?		Environmental audits	level of information; quantitative data on CSR impact

	How are medium size companies approaching their ECSR Strategy?			
			Literature Review	empirical data on CSR management

3.1.1 Case Study Approach

In this section a discussion on the case study research approach is conducted to understand how it works and what biases and possibilities are connected to this kind of research.

Case study research is a “detailed investigation, (...), of phenomena, within their context. The aim is to provide an analysis of the context and processes which illuminate the theoretical issues being studied.” (Hartley, 2004, pp. 323). It investigates predefined units but does not include direct control of the units rather assesses them within its real life context (Darke, Shanks & Broadbent, 1998). For this purpose the researcher takes the different parts of understanding separately and relates them to each other to understand the interaction within contexts and circumstances (Stake, 1995). “Both qualitative data collection and analysis methods (which are concerned with words and meanings) and quantitative methods (concerned with numbers and measurement) may be used.” (Yin, 1994, pp. 14) or combined for case study research.

The units of analysis may be constituted of single or multiple cases (Eisenhardt, 1989). Through choosing units of analysis that are comparable with regard to basic requirements the survey generalization is possible for members of the same group (Eisenhardt, 1989). This is because case studies deal with issue questions rather than the case under study (Stake, 1995).

Case study research is subject to criticism and biases. Those concern the external reliability and the bias of limited generalisability and the problem of subjectivity within analysis (Flyvbjerg, 2006). These biases can be overcome by using both qualitative information and quantitative data to undermine the findings. Also generalization is possible as a certain phenomenon could be subject to varying contexts but the major circumstances and needs remain the same for all cases. It provides the opportunity in gathering information on qualitative information on the effect of CSR on corporate culture and other soft effects directly.

3.1.2 Case Selection Process-In Theory

Eisenhardt (1989) introduced a “roadmap” for case study research. According to Eisenhardt selection of cases may be consciously selected based on certain characteristics or even better based on a similar context. This has the advantage that irrelevant variations are constrained which in turn increases external validity (Eisenhardt, 1989). This means that the cases could “replicate or extend theory by filling conceptual categories.” (Eisenhardt, 1989, pp. 533). Therefore selection of the cases of this research project has been done through matching according to size, volume, industrial sector or location. The characteristics taken into account when choosing the cases are:

- SME
- Sector Specific
- Main Location

Small and medium enterprises (SME) are not necessarily defined by its size and volume but more on their self-conception as an enterprise. Those medium sized corporations are mostly family owned although a clear distinction is not always possible (Bundesministerium für Wirtschaft und Technologie [BMWI], 2007). Those companies are able to react most flexible and are subject to economic circumstances (BMWI, 2010; Bertelsmann Foundation, 2007). Especially SME are engaged in different activities for the good of the community although their engagement is not necessarily strategically pooled (MLSA, 2010; Riess, 2002).

The choice to opt for *sector specific* cases enables to compare companies with similar environmental output. The strategies within the production chain could be compared. Since the cases have similar products that need similar units their environmental output is easily comparable. Also possible strategies and innovation to limit environmental impact is better observable when comparing companies from the same sector.

Location is another important characteristic as it decides about the legal framework under which environmental protection as well as CSR is conducted. Another crucial aspect of location is the regional availability of resources for production, accessibility for transportation and production area (Palazzo, 2010).

3.1.3 Case Selection Process-In Practice

In the following the case selection for the two specific cases will be discussed to provide information on why those two cases have been chosen for this research project and ensure empirical generalisability of the research output.

The choice for the cases is done with regard to half random, purposive sampling of typical instances (Shadish, Cook, Campbell, 2002). For time reasons the first case has been selected on the basis of pre-knowledge of the company representative. This constituted the determining factor for the choice of the second case. Based on the given criteria of the first case concerning the characteristics of medium size, family owned enterprise, furniture sector and location the second case has been chosen.

The selection process for possible partners is conducted via internet. From a classified directory companies that coincide in the predetermined factors have been chosen. From their websites one could gain an insight of possible environmental activities of the company. Those that provided a chapter on “sustainability” and/or “environment” have been contacted via e-mail and telephone. From the *seventeen companies contacted only three were able to connect with a person responsible for environmental matters* that could be able to answer. For all other companies a possible contact was not known which made an interview impossible. From these three one was available for the interview and provision of further information on



Figure 8: Map of Germany (Zonu.de, 2012)

the company's CSR-Strategies. Because the interview takes time and unfolds internal information this was expected by the author.

The other focus was on the size of the companies. Medium sized, family led companies have been contacted as they conduct business in a socially responsible way (BMW, 2007). Company X is having almost twice as many employees than Company Y and also double revenue. Still the self-perception and governance as a medium company enables for comparison of these two cases as medium size companies are not necessarily clustered by numbers but by their understanding of business operation (BMW, 2007).

Taking the federal structure of Germany into account legal requirements may differ, since one company is located in the federal state Niedersachsen (see red orbital, figure 9) and the other in Baden Württemberg (see black orbital, figure 9). This research project discusses environmental protection and environmental requirements which are centrally steered by the ministry of environment, nature conservation nuclear safety (BMU) (BMU, 2011). Therefore legal requirements are assumed to be similar for both cases.

Although both cases are located in different parts of Germany their environmental preconditions are similar. Both are located within a hilly forest area. This allows them to purchase woods regionally. Within both regions are great environmental protection areas and forests.

The market environment is differing for the two cases. While both are producing individual orders, one is emphasising high price segment also regulating the choice of material, the other is approaching a lower price segment for its consumers.

The choice for two cases is a matter of comparability and resources. Empirically the more cases the higher its reliability. For the scope of this paper two will be a sufficient number to determine factors and variations influencing the outcome of CSR that could be proven in subsequent research (Eisenhardt, 1989).

3.2 Operationalizing CSR

In the following section the development of the questionnaire is discussed. Then the operationalization of the questions will be given in order to measure the interview outcome empirically.

3.2.1 Development of the Questionnaire

Within this section the set of questions for the open interview is discussed. This methodological framework constitutes an opportunity to pose questions that go beyond regular CSR-Auditing. The questions are regarding the existing material from national and international organizations as well as scientific literature. These comprise the International Standardisation Organisation (ISO) ISO 14001 on environmental management systems the Environmental Auditing and Management Scheme (EMAS) by the European Union, RespAct (Austria), GILDE (Germany in cooperation with the EU Commission), Global Reporting Initiative (GRI), Danish Government. Also scientific literature on CSR e.g. Norberg-Blohm & de Bruijn, 2005; Riess, 2006; Pohl & Tolhurst, 2010 will be referred to. They provide a guideline for environmental management and reporting.

The choice for the development of an own questionnaire is due to the assumption that the existing stock of guidelines are having contentual and contextual limitations. The *contentual* limitations is that most guidelines measure the input-outcome relation of a certain strategy directly. The *contextual* limitations are related to political concerns. Most guidelines are developed by or in cooperation with public institutions. They have politically set objectives regarding environ-

mental impact of companies. This implies that a range of possibilities are factored out and possible potentials may not be seen by governments (Coenen, 2008).

The survey is divided into three parts. The first is concerned with the internal and external influences of CSR-Activities. It shows the mutual relation between the influences of CSR-Activities and the development of the company, the CSR-Strategies and stakeholders. Furthermore it enables to reconstruct the relation of CSR implementation and outcome. Secondly, CSR-management structure with regard to implementation is discussed as implementation has an influence on the development and therefore impact of CSR. The third part of the questionnaire is concerning the impact of CSR-Activities with regard to soft and hard aspects of CSR. Strategy and effect are thought to be mutually interrelated (Bressers, 2004). Therefore the answers of the three parts are assumed to affect each other to some extent and yield in an overall picture of CSR within a company. The fourth is concerned with the company in general. Size, profit, sectors, location and the like are prompted.

The three parts of the questionnaire are related to the general process of the management circle for CSR as discussed in 2.2 to understand CSR as a management approach.

One has to keep in mind that the processes emerge which makes a strict division between the different steps of CSR-Management impossible.

3.2.2 Operationalization: Semi-Structured Questionnaire

In the following the survey questions are framed with regard to the theoretical framework of this research to make the answers measurable for the discussion part of this research.

In Annex 4 the complete questionnaire can be consulted.

3.2.3.1 Question One to Five

Within the management process for CSR (see figure 4) questions 1-5 could be conceptualised



under the exploration, consultation and goal definition procedure of CSR processes within a company. Here the activities are explored internally and externally and affect stakeholders in their perception and commitment towards the company. Consultation and goal definition influences corporate culture as the means for CSR could be understood better and support rises.

Perception and commitment can have positive or negative effects on CSR activities depending on the positive or negative trend towards environmental activities. Corporate Culture is further thought to be a pillar of exploration. Through this the person responsible is able to retrieve information on the state of the activities to establish a strategy. This is influenced internally by the employees through perception and commitment but also externally through consultation of stakeholders and sub-contractors. Those aspects are classified according to their effects on the stakeholders which in turn influences the development of CSR.

With regard to perception positive awareness of CSR-Measures increase flow of information and innovation due to improved understanding and awareness for environmental matters (de Bruijn & Norberg-Blohm, 2005). Negative perception on CSR impacts a low environmental outcome due to low commitment to the goals (de Bruijn & Norberg-Blohm, 2005).

A positive tendency of the commitment on CSR-Activities influences CSR-Development with regard to improvement of strategies due to information flow and high quality implementation be-

cause of high motivation for the goals (Lang, 2010). Less commitment to environmental goals impacts CSR negatively due to low information flow on the state of art and possibilities of improvement. A low quality of implementation and therefore for the outcome could be expected as goal objectives are realized on a low standard (Land, 2010).

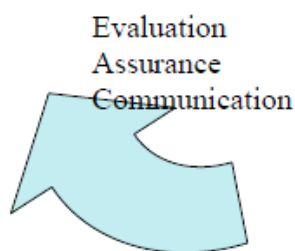
Corporate Culture affects CSR development positively as motivation for “own goals” is increasing. Flow of information, assurance and inclusion in strategy development enables for new ideas of CSR-Engagement (de Bruijn & Norberg-Blohm, 2005). Corporate Culture impacts CSR negatively if there is no knowledge on goal objectives which decreases motivation for set goals.

Negative (Albers, 2011).

Positive stakeholder demand enables for shifting attention for environmental matters and therefore for higher commitment to environmental strategy. Through this new development, investment, and innovation can be undertaken (Pohl *et al.*, 2010). If stakeholder demand does not have any influence the awareness and objectives within the company remain on the companies’ objectives (Palazzo, 2010).

A code of conduct can affect CSR-Development positively as it safeguards environmental aspects along the whole production line. It supports trust among partners that in turn affect innovation positively (Pedersen & Andersen, 2006). A code of conduct can have a negative effect on CSR-Outcome if there is non-compliance amongst the partners which interrupts the goal objectives (Pedersen & Andersen, 2006).

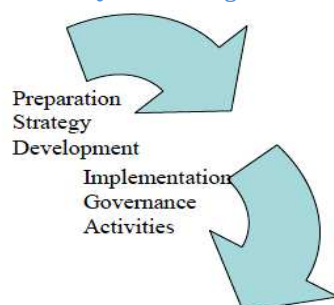
3.2.3.2 Question Six and Seven



Questions 6 and 7 concern the impact of evaluation on further strategy development. This is because theory assumes evaluation to influence the communication and assurance of CSR-Development. Based on internal and external communication new objectives could be developed which influence the development of CSR. The classification of the questionnaire answers as shown in table 6 enables to understand the role

of evaluation and communication on the development of CSR-Management. The effect on CSR-Development is high or low depending on the factors that are assumed to effect evaluation resp. development of the strategies. A high effect through evaluation is assumed to occur if it has been conducted on the basis of a guideline (Riess, 2006). Furthermore CSR is positively affected if the strategy is adjusted due to the evaluation outcome. If not stagnation and no-targeted strategy is assumed to occur (Riess, 2006). This is also true for the development of the strategy: a high effect for CSR occurs if the strategies are developed based on new issues, information and evaluation; low effect occurs is strategies are conducted next to business operation and not aligned to business strategy nor adjusted according to upcoming issues (Taubken & Leibold, 2010).

3.2.3.3 Question Eight and Nine



The next part of the questionnaire is posed to find out on what basis (information, knowledge, needs) the strategy has been developed. Implementation is a process which is mutually influenced by the actors involved affecting the process and outcome of CSR (Bressers, 2007). Question 10 is concerning the governance of CSR activities that influences the development of CSR within the company due to power structures and support.

If there is a person responsible for CSR preparation the effect on CSR is positive as its impact is able to increase due to a planned strategy, structured distribution of responsibilities, support from the executive board and production level due to direct communication and high information flow on all issues (Leadbitter, 2010). If there is no clear distribution of responsibilities the effect on CSR-Development is negative as strategy is not centrally steered and support from *all* levels is lacking (Riess, 2006).

Also implementation is assumed to impact CSR development. Positive impact on CSR is assumed to be approached through reasonable distribution of responsibility and steering capacities for implementation within the departments (Leadbitter, 2010). Impact of CSR is assumed to be low if implementation is not centrally steered and responsibilities for the processes are unclear. Also the non-existence of a time and goal frame affects CSR negatively as no structure for a strategy is given nor any measurable effects can occur (Leadbitter, 2010; Riess, 2006).

3.2.3.3 Question ten to thirteen

The third part comprises all different steps of CSR-Strategy development. It is assumed to be a result of the different activities ending in an outcome that could be both: quantitative and qualitative. Quantitative measures are based on the environmental aspects retrieved from the environmental audits. Qualitative effects are those related to internal motivation and commitment as asked for in part one of the surveys as well.

3.3 Operationalizing Environmental Impacts of CSR-Strategy

This section operationalizes the concept of environmental impact to be able to study the effects of CSR-Strategy on the environment.

Indicators could be determined, e.g. with the help of environmental auditing schemes like ISO 14001 or EMAS, to reconstruct and measure the outcome of CSR on environmental aspects. Within this research it is assumed that the outcome for CSR on environment is a product of all four steps in the management circle. Therefore the outcome of CSR-Activities on E&S is related to the strategy. The strategy in turn is concerning aspects of the environment possibly affected through production processes. Environmental aspects are energy-and material efficiency, water, waste, biodiversity, and emissions (GRI, 2006; EMAS, 2010). The outcome of the strategy is measured on the basis of these environmental indicators retrieved from the annual reports or company measures. The environmental effects of production will be measured in the associated scale unit of the different environmental aspects:

- Water polluted: Litre/Tons
- Greenhouse Gas Emissions: Tons
- Waste Disposal: Kilo/Tons
- Resource Consumption: Kilo/Tons
- Biodiversity: Area used for production in m²
- Energy Used: kilowatt hours (kWh) or Gig watt hours (gWh) (EMAS, 2010)

All data is based on the yearly output by companies to measure and compare the effect of CSR on the environmental performance over time. As briefly addressed it is also important to inquire the effects of the *whole* supply chain. This would go beyond the scope of this research so the interview tries to cover instances of environmental protection by focusing on the code of conduct or the purchase of eco-labels.

One has to bear in mind that an increase in the consumption of one source could also be due to an increase in production or the like.

The chapter has provided the methodological framework as basis for an empirical analysis. It enables to answer the research question on effects of CSR-Strategies.

It has been discussed how the research will be conducted and explained why this is the most applicable way to provide answers.

In the following section the case studies are described in connection to the question of what are the CSR strategies implemented within the two companies analyzed.

4. Case Description

In this chapter the units of analysis are introduced. In 4.1 the case selection process is approached to the specific choice of cases for this research. 4.2 describes the two cases under study under general aspects of business operation and their CSR Strategies with regard to their qualitative and quantitative impacts. It is important to ensure comparability of the units of analysis to provide an empirical statement on the effectiveness of CSR-Strategies. Furthermore it enables to distinguish limiting and supporting factors for the outcome/impacts of the CSR-Activities to assess explanations and recommendations.

Please note that the order of case description is without any valuation.

4.1 Company X

In the following section the first case under study is introduced with regard to the general structure of the company. Then its CSR engagement on environment as well as its impact with regard to the different environmental aspects is described. The provision of these information is important to cluster the case studies within the research framework.

Company X produces furniture with a special emphasis on office systems and chairs.

It has been founded in 1907 by two brothers in law in the North of Germany surrounded by the Weser Hills. This is located in a rural beech forest area nearby Hanover. Today Company X is operating internationally. It has round 600 employees all over the world with 50% of the benefits gained outside Germany. Still the company has the self-conception of a traditional family-run medium enterprise with its main location remaining in Germany. Its volume was round 80, 6 Mio. Euro in 2010 (Company X, 2011).

The company is a family run corporation. It is approaching a low hierarchy structure based on the inclusion of all employees no matter at which hierarchical level they are working (Company X, 2011). Regarding the environmental co-ordination the company started to orient and integrate environmental friendly production in the 1970s-1980s. Since 1989 environmental protection constitutes integral part of business operation (Company X, 2011). Since 2001 company X is validating its products under EMAS.

4.1.1 CSR Engagement in E&S

Within this part the corner points of the environmental strategies of company X are discussed with regard to the environmental aspect, goal objective, strategy, and implementation to be able to survey its impact and give explanations for the outcomes.

The listed objectives and outcomes are based on the annual environmental reports of the company with regard to the EMAS guidelines. Some strategies can be located under more than one environmental aspect. For the purpose of a manageable overview those are listed under the most applicable.

Table 3: ECSR on Material Efficiency

Environmental Aspect	Goal Objectives	Strategy	Implementation
Material Efficiency	<ul style="list-style-type: none"> ○ Reduction of waste ○ Take over responsibility from production until disposal of a product ○ Reduction of environmental harmful components ○ Reduced usage of chemicals ○ Procurement of EMS-certified products 	<ul style="list-style-type: none"> ○ Usage of recyclable and recycled material ○ ISO 9001 certification on quality management ○ Investment into product innovation “sustainable design” ○ Reusage of transportation systems ○ Easy deinstallation of particular components for replacement ○ Tagging of individual components for replacement and recycling ○ Usage of less material ○ Reduction of environmental harmful components ○ Procurement of material only from ISO 14001 certificated producers ○ Procurement of toxic-free fabrics ○ Low-emission leather ○ Non-tropic wood 	<ul style="list-style-type: none"> ○ Strategy on waste reduction and separation started before 1989 ○ 1992 eco-design guidelines ○ 1995 introductioneco-transportation packaging ○ 2001 installation powder coating facility ○ 2006 installation new fabrics cutter

Table 3 showed that material efficiency is on waste reduction through technology improvement and recycling of material. It is also on avoiding or supplementing certain harmful components of the products. Related to this is disposal reduction and waste separation for recycling shown in table 4:

Table 4: ECSR on Disposal

Environmental Aspect	Goal Objectives	Strategy	Implementation
Disposal	<ul style="list-style-type: none"> ○ less waste disposal ○ increased recycling of material ○ decrease of environmentally harmful waste ○ more efficient packaging system 	<ul style="list-style-type: none"> ○ Sustainable & individual design ○ varieties waste separation ○ multi way usage of oily cleaning rags ○ computer based mixing- and cleaning activities for solvent and other chemicals ○ recycling of paint and varnishes ○ reduction of solvent consumption through innovation 	<ul style="list-style-type: none"> ○ 1992 start waste separation system ○ 1992 eco-design guideline ○ 1994/2001 technologies to reduce waste paints and varnishes, solvents ○ 2006 cutter to reduce fabrics ○ 2011 administration on EDV

Table 5: ECSR on Energy Efficiency

Environmental Aspect	Goal Objectives	Strategy	Implementation
Energy Efficiency	<ul style="list-style-type: none"> ○ Reduction of energy consumption (electricity/thermal) ○ 66% of energy consumed from renewable energy sources (RES) by 2020 ○ Profit related electricity consumption reduced by 5% in 2013 	<ul style="list-style-type: none"> ○ Energy and environmentally friendly buildings for production ○ Local act with farmer to install a thermal power station based on alternative energy sources ○ new doors, windows and insulation of production pavilions to decrease energy consumption ○ more efficient light bulbs 	<ul style="list-style-type: none"> ○ 1989 building of energy efficient buildings ○ 2008 thermal power station based on renewable products ○ 2008 installation of insulating doors and windows ○ 2008 efficient lighting system ○ 2011 biogas plant

Table 5 summarises the strategy on energy efficiency. Reducing energy consumption through better insulation, and energy efficient material increase alternative energy sources are the strategic corner points.

Therefore emissions as a next aspect (see table 6) could be understood as closely related to energy efficiency because the emphasis here lies on emission reduction through higher energy efficiency and less output from fossil fuels.

Table 6: ECSR on Emission

Environmental Aspect	Goal Objectives	Strategy	Implementation
Emissions	<ul style="list-style-type: none"> low level of emissions 	<ul style="list-style-type: none"> Usage of Renewable Energy Sources (RES) Technological improvement and investment into energy efficient facilities 	<ul style="list-style-type: none"> 1992 accession greenguard® to increase air purification Since 2008 installation of RES-power plants

According to the environmental manager Hoffmann of company X, Biodiversity as defined under EMAS is not a real strategic emphasis. This is because the production area is located in an environmentally stable surrounding within the Weser hills. Therefore it is not explicitly discussed here.

Table 7: ECSR on Water

Environmental Aspect	Goal Objectives	Strategy	Implementation
Water	<ul style="list-style-type: none"> Decrease water consumption Decrease water pollution and serious water pollution 	<ul style="list-style-type: none"> Replacing water intensive machines by more efficient technologies Reuse of water Implementing innovative technologies 	<ul style="list-style-type: none"> 1994 new varnishing facility reducing solvent waste 2001 powder coating facility with closed process water recirculation

Technological innovation enabled for a considerable decrease in water consumption as discussed in table 7. Today the main water consumption is coming from the sanitary area. Since there is no reasonable strategy to reduce this water, does not constitute an important pillar in environmental strategy for the company anymore (Company X, 2002-2011).

4.1.2 Internal Effect(s)

“Environmental Protection has to be an intrinsic part of our work and behaviour” says Hoffmann. This is to support an overall understanding of the company’s objectives on environmental protection on every level to enable a good flow of information within the whole company. Since the beginning of CSR on environment, the company is including all levels through strategic inclusion via provision of information, rewarding system and an internal suggestion scheme. This active inclusion is thought to impact perception or awareness towards environmental aspects within the company. The submission of suggestions gives an impression of the awareness for environmental matters within the company as shown in figure 9.

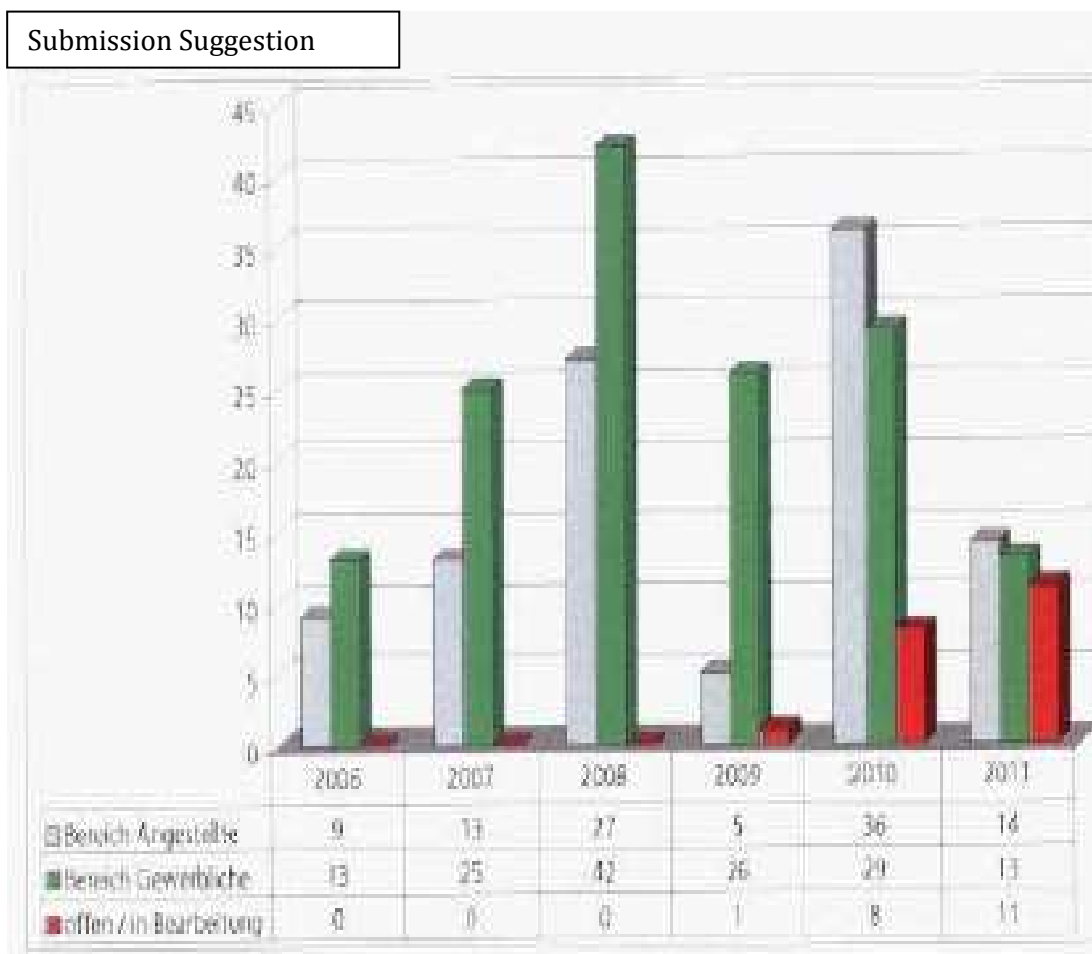


Figure 9: Submission of Suggestions (Wilkhahn, 2011)

The green column shows suggestions from the production area, grey stands for the members of administration. Although there is variation over the years one can clearly see high awareness and commitment of the internal stakeholders to environmental goals especially from production level.

Corporate culture and commitment to the companies' goals are influenced through the ongoing qualification of employees in environmental matters. Through the provision of transparency and communication on environmental activities and active inclusion within the implementation process provides a impact on the internal development for CSR-Activities.

Especially at the level of executive personnel one can observe an increased awareness towards environmental matters says Hoffmann. They are reacting proactive not reactive. He leads this behaviour back to the direct inclusion of them into the CSR-Management process and implementation.

4.1.3 External Effect(s)

At this company, stakeholder awareness from media is very low. Hoffmann states that raising public awareness for environmental matters did not influence the company's environmental strategy as it is conducting environmental activities before the increased media coverage. Furthermore the furniture industry is not under the regular media radar. For company X stakeholder interest enabled to use media as "voluntary" marketing basis.

EMAS, and public institutions that have been described as other stakeholders by Hoffmann are providing clear guidelines and regulations for the company. This may affect a rather incremental shift in the strategy.

Internal stakeholders like employees are included through the suggestion scheme. They have been able to shift goal definition even further as they are able to know on potential strategies best.

Unless there is no real pressure from outside the company is extending its CSR-Activities. This is due to economic reasons: conducting a strict environmental strategy provides an advantage against competitors as environmental sustainability of products becomes an increasing aspect of purchasing decisions and calls for proposal according to Hoffmann.

To ensure the companies' claim of the sustainable product is reliable it is assumed to be necessary to establish a code of conduct for suppliers. This is done on the basis of a quality review. The standardised review is conducted regularly for suppliers. On site controls ensure the correctness of data. If a supplier is not able to confirm with the guidelines an official communication is conducted that asks for adaptation with the guidelines.

Suppliers do not have to provide certificated products but they need to produce under EMAS or ISO 14001 standards. Hoffmann states that certificated products like FSC (Forest Stewardship Council) certificated products would raise the price but do not necessarily ensure a better environmental outcome.

4.1.4 Quantitative Effects

Now the outcomes of the strategies with regard to environmental aspects are discussed to show quantitatively measurable effects of CSR-Activities. Strategy and output are compared over the years. The graphs are based on the companies' environmental audits.

EMAS is defining relevant environmental aspects for planning a strategy.

According to Hoffmann, the basic idea behind its strategies is to reduce wastage. The indicators under study have been chosen on the basis of the compilation of strategy and their objectives. The data of 2005 is not available due to a destroyed dataset. Still one is able to reconstruct the development between 2003 and 2007.

First material efficiency is prompted. Company X conducts different strategies that concern waste reduction, waste separation, recycling, and efficient usage of material. Figure 10 shows the input of the raw materials wood, fabrics and leather (**pink line**). It is conducting a waste separation system to ensure that the surplus can be reused either for energy production, or back into the production circle (**yellow line**). Design and production includes surpluses that cannot be avoided. Therefore the re-usage of material is more important than avoidance of waste. When studying the graph, one could see three important developments. First the fast decrease in input of material in 2003 due to the economic situation and the low amount of orders.

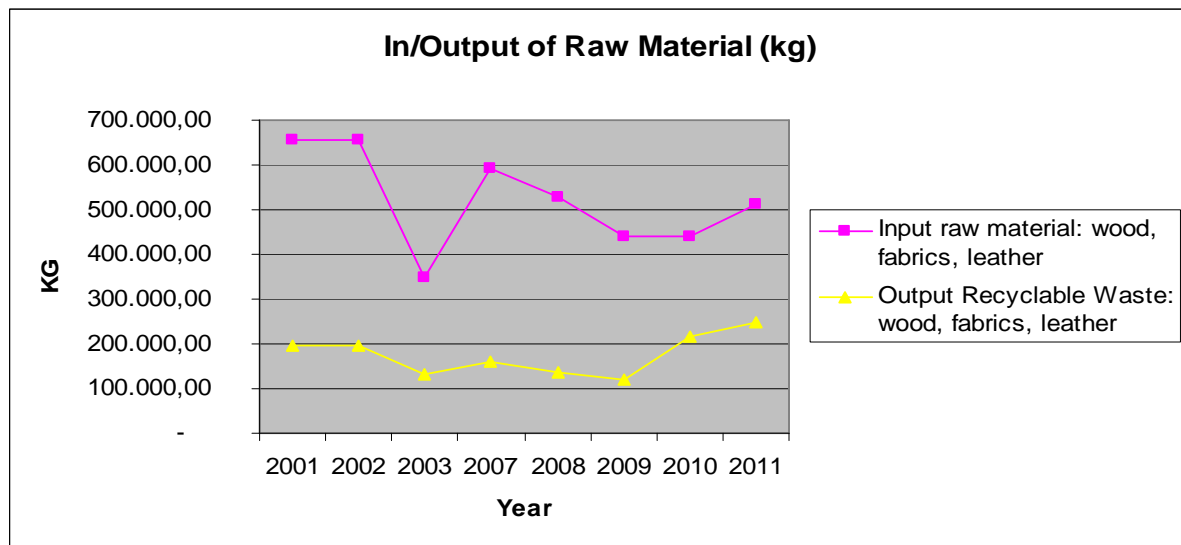


Figure 10: Reduction of Raw Material from 2001-2011 (Company data proceeded by the author)

More interesting is the development between 2003 and 2007: An increase in input with a correlated decrease in output. Due to the introduction of a new fabrics cutter in 2005/2006 the surplus could be decreased from round 30% output to round 10% after 2006. The leather surplus could not be reduced since it is a natural product that is subject to a lot of variation in its look and therefore the way to be cut.

Also the purchasing structure changed between 2005 and 2007 which impacts the material input. Through the introduction of conference room design more tables than chairs have been bought, which implies a higher input of wood for production.

The third important change is the increase of output in 2010 and 2011. While fabric and leather output remains the same wood waste amounts for over 50% of the output in these years. Although material in- and output is subject to economic and purchasing variations wood output used to be round 30%. The steep increase is due to order variations.

In comparison to 2001/02 one can observe a decrease in output in comparison to the input. This decrease in output can better be observed with regard to packaging material in figure 11. The strategy to reduce packaging material has been implemented 1995 for the first time. The company uses jute fabrics for the transport of big products like tables. The plastic packaging has been minimised and used as protective dust cover. Therefore a low amount of plastic material is used as can be observed on the pink line of figure 11.

In 2003 the amount of packaging material decreased in comparison to 2001/2002 due to a bad economic year. 2007/2008 and 2010/2011 an increase in orders increased the amount of carton. This is because for paper or carton packaging a suitable alternative has not been found yet.

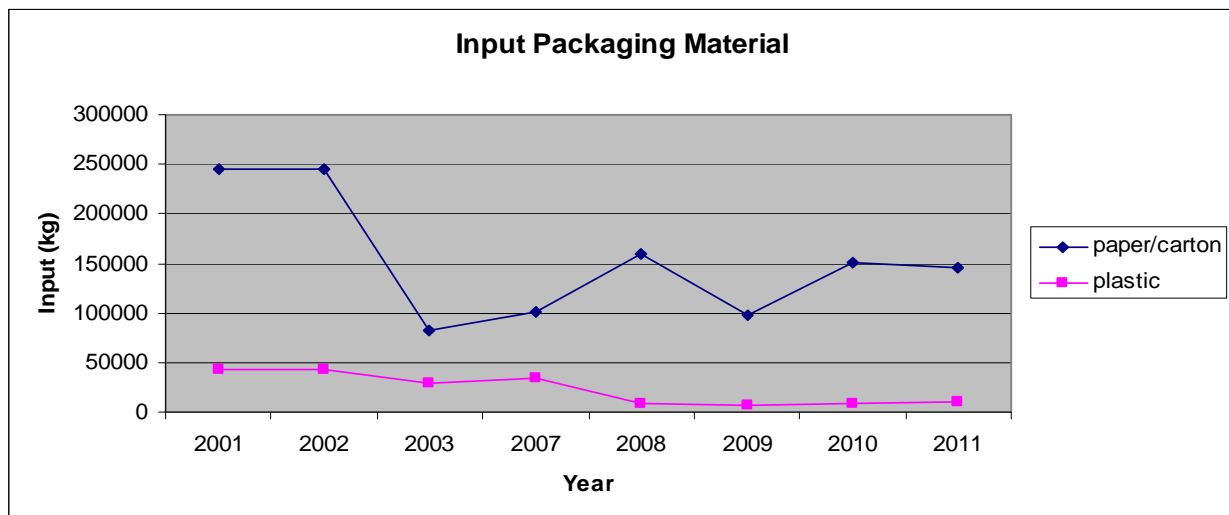


Figure 11: Consumption Packaging Material 2001-2011 (Company data proceeded by the author)

For paint, varnishes and solvents several developments can be observed. The strategy wants to reduce solvents in order to decrease toxic waste by increasing water based varnishes. For this purpose a new water varnish facility has been installed in 2001. It enables to reduce solvents towards 4-7% solvent output with regard to the paint and varnishes input. Instead of listing the input of water based paints the amount of solvent is discussed as water based paints include a highly varying amount of solvent, from >0.1% up to 60-95%. Figure 12 shows the amount of solvents used within the processes by means of the pink line. The mean lies at 3.800 kg solvent per year. A facility to minimise overspray, as well as a powder coating facility with a closed water cycle to reuse the powder have been installed in 2001. What could be observed is a decrease in powder paint with some variation due to external circumstances like the order situation. This is not fully true for solvent. Here an increase after 2007 is visible. This is due to the unsuccessful experimentation with solvent-free agglutinants as well as the variation of solvents within varnishes.

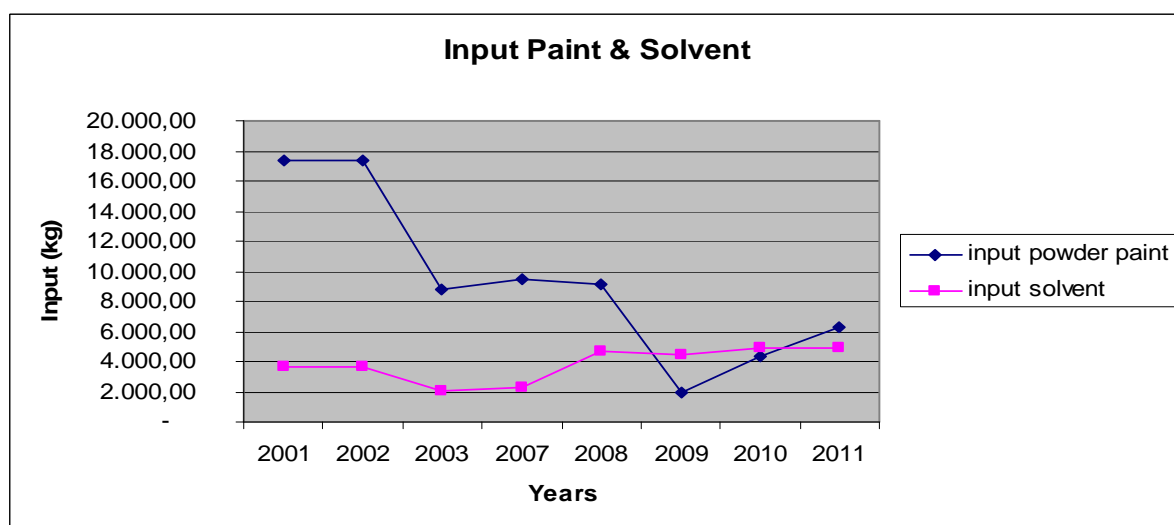


Figure 12: Reduction Paint and Solvent Consumption 2001-2011 (Company data proceeded by the author)

Another important aspect to paint, varnishes and solvents is, next to reduction and reuse of overspray, the disposal of waste. Because of the activation of the new spraying facility the aqueous paint sludge decreased from round 137.000 kg in 2001/02 to on average 21.000kg from 2007 to 2010 (blue line). The observed increase in 2008 is due to an increased need in cleaning the facility (Company X, 2008). The introduction of a new varnishing area that enables for Computer-based mixing and cleaning reduced the remaining quantities of varnish to a minimum. It is also not water based which enabled to decrease the output of aqueous paint sludge in 2011 down to 900 kg only.

The output of non-aqueous paint sludge is very low due to the efficient powder coating facility that enables for recycling of overspray and reduces output as shown in figure 13.

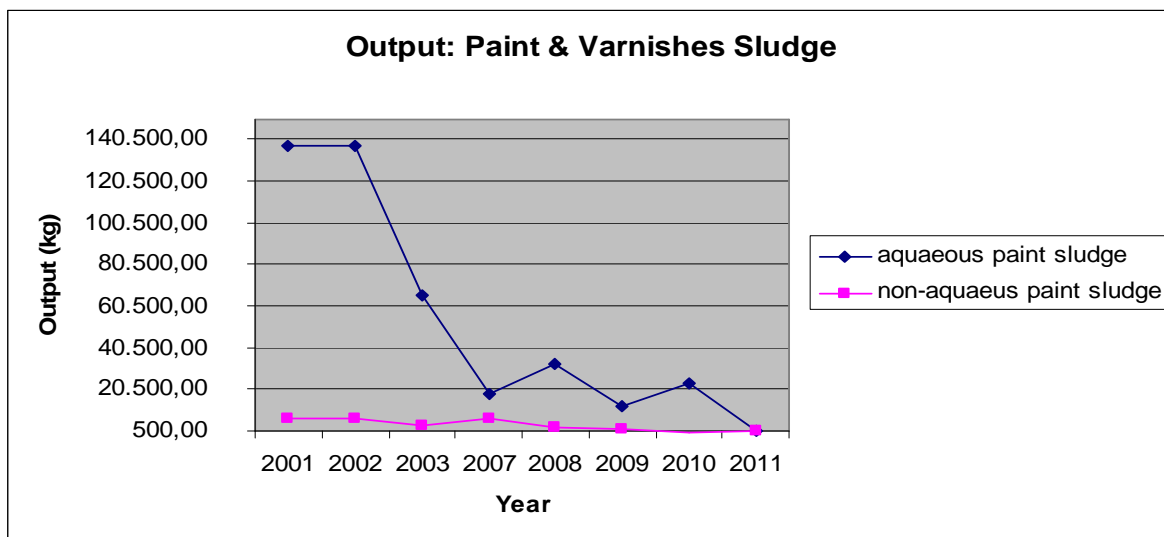


Figure 13: Reduction Harmful Waste 2001-2011 (Company data proceeded by the author)

Whereas material efficiency and waste disposal have been discussed on the basis of these examples, another environmental aspect that should be discussed in this regard is energy efficiency. The company is conducting energy efficiency with regard to two lines of action. The first one is providing sufficient insulation within the buildings to reduce energy consumption. The second is to increase consumption of renewable energy sources for electricity and thermal heat as shown in figure 14:

Already in 1989 the production pavilions were constructed under aspects of energy efficient architecture. The pavilions were equipped with roof windows for efficient usage of daylight. In 2008 new windows and doors with better insulation have been integrated. The impact on thermal energy consumption could be measured in 2009 already (blue line). The low thermal power consumption in 2007 is due to a mild winter with relatively high temperatures (Bundesministerium für Verkehr, Bau und Stadtentwicklung, 2012).

Also more efficient light bulbs have been integrated to reduce electricity demand reflected in the decrease in electricity consumption after 2008 (pink line).

For reducing the consumption of fossil fuels and increase alternative energy sources two solar heat facilities have been installed in 2007. Furthermore a thermal power station has been implemented in 2008. Figure 14 also shows the start and increase of RES production and consumption after 2007 (yellow line & green line). From 2008 on the percentile proportion of RES is round 30% and for RES-E even round 90% (in 2009 it has been 152%). One could also observe

that in 2010 the RES consumption decreased considerably. While fossil fuel consumption increased. This is due to the installation of a new biogas plant station that had a delay of activation.

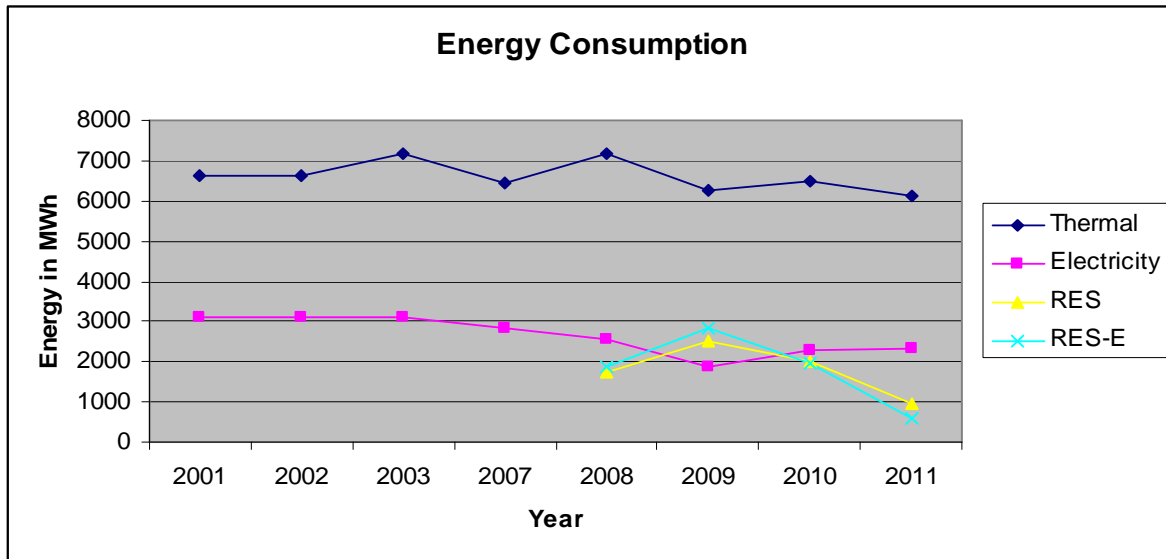


Figure14: Energy Consumption and Renewable Energy Sources 2001-2011 (Company data provided by the author)

Any production process is setting emissions free. Here the focus will be on CO2 emissions as these are the most prominent and therefore best for comparison.

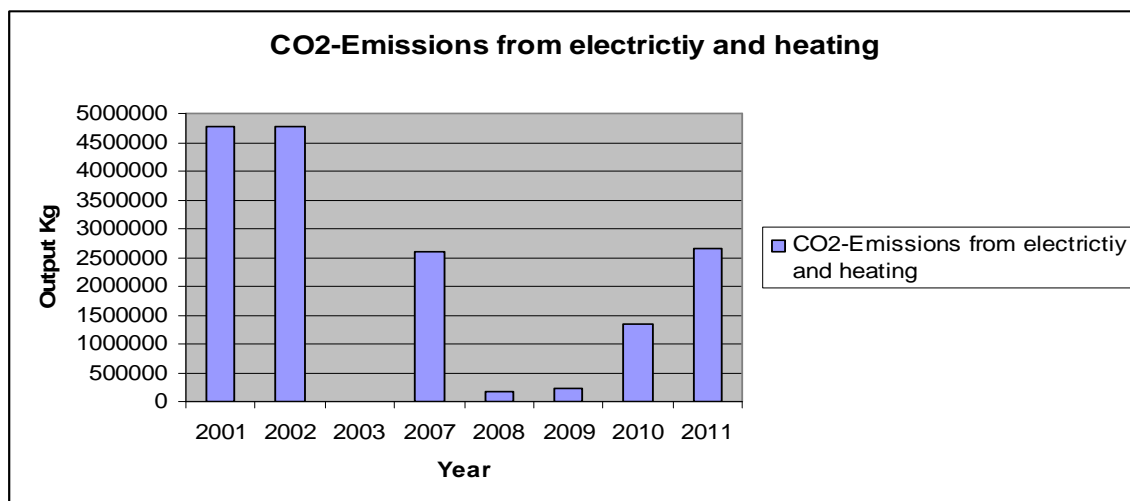


Figure 15: Reduction CO2 Emissions 2001-2011 (Company data provided by the author)

The consumption of RES impacts emissions from heat and electricity production and consumption considerably as could be seen on figure 15 (in 2003 no data on CO2 emissions has been compiled). In 2008, after the introduction of the first sustainable RES-power plants in 2007 the output of emissions decreased first to less than 50% compared with the output in 2001/02. This trend has been exceeded in 2008/09 through the installation of new insulated doors and windows as well as more efficient light bulbs. In 2010/11 the increase in emissions is due to the late introduction of the biogas plant which implied the consumption of emission-rich fossil fuels. Biodiversity is defined as environmental aspect under EMAS. For company X this aspect is not assumed to be relevant for the company.

In the following section the second case under study is introduced with regard to the general structure of the company. Then its CSR engagement on environment as well as its impact with regard to the different environmental aspects is described.

Company Y is a medium business that company which produces utility furniture and develops interior design for individual furniture production (Company Y, 2011). It has been founded in 1936 by two brothers and is still led in the family tradition.

It has round 250 employees and a volume of round 41 million Euro in 2011. Its main location is in the south of Germany directly within the Black forest. Since 2004 it is expanding European wide amongst others with an affiliated company in Austria. Still Company Y understands itself as a traditional company with a close relation to its region (Company Y, 2011).

Y is claiming to have a low hierarchy within its management structure. It is laying emphasis on the involvement of the employees (Company Y, 2011). Since 2010 the company has implemented ISO 14001 as an EMS to steer environmental development. For this purpose an environmental manager has been introduced at the company.

4.2.1 CSR-Engagement in E&S

On the basis of ISO 14000 environmental indicators, which are similar to EMAS, the strategic engagement will be discussed.

Table 8: ECSR on Material Efficiency

Environmental Aspect	Goal Objectives	Strategy	Implementation
Material Efficiency	<ul style="list-style-type: none"> ○ Usage of renewable raw materials ○ Usage of regional, certified woods ○ Procurement of certified fabrics only ○ Reduction of material ○ Reduction of packing material ○ Usage of certified paper in administration 	<ul style="list-style-type: none"> ○ Regional Procurement of certified woods ○ Procurement of certified products ○ Technological Innovation of cutting machines ○ Technological innovation and experimentation for varnishing facilities ○ Increased usage of water-soluble paints and varnishes ○ Usage of reusable “furniture-suitcases” and “furniture-blankets” for transportation 	<ul style="list-style-type: none"> ○ 1996 construction spray booth ○ 2008 introduction of reusable packaging material

Company Y emphasises the reduction and recycling of material as discussed in table 8. Raw material that cannot be used is burned for thermal heat production. This is also because selling wood to e.g. pellet producers constitutes an economic loss at the moment.

The spray booth is an invention by the company to reduce solvents and enable for the recycling of overspray.

Table 9: ECSR on Disposal

Environmental Aspect	Goal Objectives	Strategy	Implementation
Disposal	<ul style="list-style-type: none"> ○ Less harmful waste ○ Reducing waste ○ Recycling of paints and varnishes ○ Waste separation 	<ul style="list-style-type: none"> ○ Technological Innovation for recycling paint and varnishes ○ Separate treatment of different substances to enable for cost-efficient disposal/reuse ○ New waste-separation system ○ On-going control of waste and waste separation 	<ul style="list-style-type: none"> ○ 1996 introduction varnishing facility ○ 2011 introduction waste separation system

Related to material efficiency, the strategic approach towards disposal is to reduce waste by higher separation to introduce a better recycling mechanism shown in table 10. Also to make purchasing of recyclable material possible in the long run.

Table 10: ECSR on Energy Efficiency

Environmental Aspect	Goal Objectives	Strategy	Implementation
Energy Efficiency	<ul style="list-style-type: none"> ○ Decrease energy consumption ○ Decrease fossil fuel ○ Increase energy-saving production/behaviour ○ Decrease compressed air usage 	<ul style="list-style-type: none"> ○ Burning scraps for heating in winter ○ Directing awareness towards leakages of compressed air facilities and possibilities to turn it off 	<ul style="list-style-type: none"> ○ 2010 communication on energy awareness

The environmental strategy is fairly new for company Y but also because most machines and facilities are in a good state the goal objectives for energy efficiency are not further specified yet. In the long run facilities will be exchanged if necessary. Strategies on water and resource efficiency are clustered in table 11.

Table 11: ECSR on Water

Environmental Aspect	Goal Objectives	Strategy	Implementation
Water	<ul style="list-style-type: none"> ○ Decrease water consumption ○ Decrease water pollution and serious water pollution 	<ul style="list-style-type: none"> ○ Replacing water intensive machines by more efficient technologies ○ Reuse of water ○ Implementing innovative technologies 	<ul style="list-style-type: none"> ○ 1996 installation varnishing facility

As for company X, biodiversity is not assumed to be a necessary approach for company Y. This is because the company is located near the black forest within an ecological and bio diverse area. Also a biotope around the douse pond is given (Company Y, 2012)

4.2.2 Internal Effect(s)

At company Y most environmental measures are part of the company's business operation. They could be assumed as long grown part of the regular business operation that has been implemented due to economic reasons. They concern the reduction of waste and recycling of material. Strategies at Company Y are implemented on a top-down approach. Here the environmental manager can draw back on the support of the production manager of the different levels. They are committed to the implementation of environmental objectives within the production processes and able to provide the necessary information and knowledge for possible developments within the production. Within this level strategies are coordinated and communicated towards the production level. Although environmental measures are a part of business operation a clear communication between the levels is not conducted. Most ideas and strategies are developed and conducted based on a top down approach. Environmental awareness from production level is rather low, which can also be seen with regard to the business suggestion scheme rarely approached by employees from the production level according to Gut, the environmental manager. Therefore perception and awareness of environmental measures activities did not rise at the production level.

The opposite may be true for the management level. The company's management is supporting the development and implementation of environmental measures. Here perception towards the responsibility of environmental impact has been raised through ISO 14001 certification. Awareness has been directed to possibilities, problems and necessities of business operation that have an impact on the environment and could be developed somehow.

According to Gut, ISO 14001 has not that much been the provision of real strategies but rather on directing attention towards a preliminary schedule of problems and possibilities within the company. Still the emphasis for any environmental measure is on the economic justification. Gut stressed the problem that for Company Y, as for most SME, the economic factor is the most decisive factor for environmental activities.

Commitment to environmental goals is not yet visible since most strategies are top-down conducted and therefore obligatory rather than an additional commitment. Other activities are part of the regular business operation.

Corporate culture is rather achieved by CSR-Measures on workplace and employee orientation than through environmental activities.

4.2.3 External Effect(s)

Public awareness on environment and sustainability affected company Y partially. Consumers, especially public tender, are requesting certain environmental standards. ISO 14001 certification is providing a basis to communicate environmental engagement for company Y. For Y communication on environmental activities is part of marketing strategy. If this causes higher public awareness or higher environmental awareness within the company is not explicitly measurable according to Gut.

A code of conduct is not established for its suppliers yet. This is because enforcement is thought to be inefficient. "We're just a small number for suppliers. Therefore it would be hard to apply

pressure on them” says Gut. Still, Company Y is cooperating with certificated suppliers that he assumes to produce under a reasonable conduct. Furthermore company Y is laying attention on the procurement of certified woods under PEFC or FSC from regional forests as well as paints and varnishes without critical substances. Most suppliers are long-term relations; this presumes trust within cooperation and capability for innovation.

4.2.4 Quantitative Outcome

Now the impact of the strategies with regard to environmental aspects is discussed to show quantitative measurable effects of CSR-Activities. Strategy and output are compared over the years. The graphs are based on the companies’ environmental audits.

ISO 14001 is defining environmental aspects to be relevant for companies when planning a strategy. Since these are standardised guidelines every business has to separate between relevant, sufficient, necessary and non-relevant aspects regarding business operation and its environmental impact. Those aspects that are strategically approached recently are focused on.

The strategic environmental development is rather new at company Y as ISO 14001 has been started to be implemented in 2010. Still some quantitative environmental impacts could be observed due to early engagement in efficiency of production.

The strategy on material efficiency is based on waste separation for increased recycling. Traceable materials are sold for further usage. Wood surpluses are burned by the company itself.

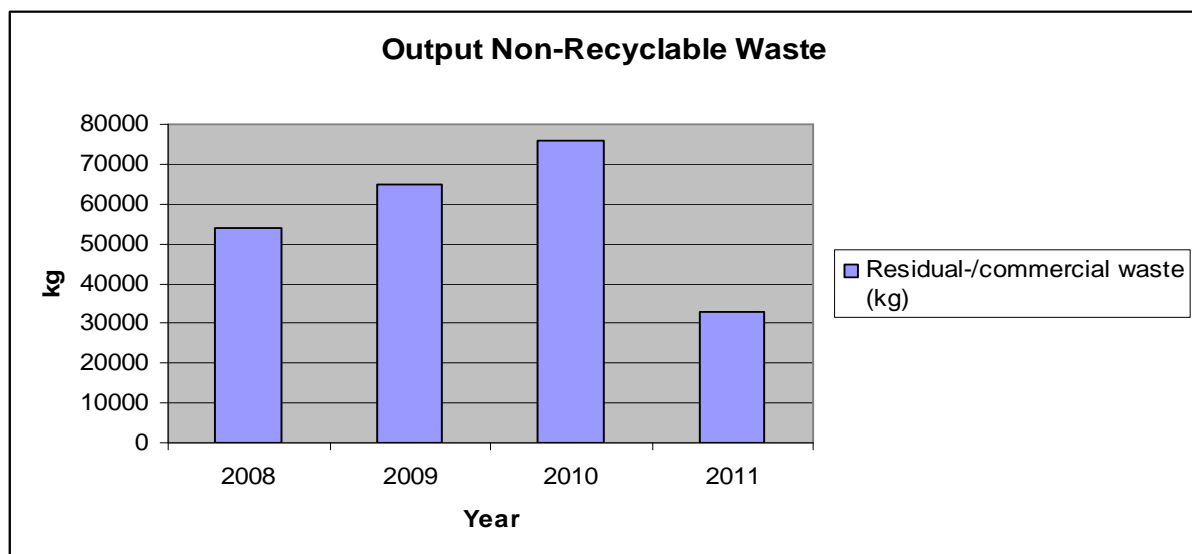


Figure 16: Development Waste Disposal 2008-2011 (Company data proceeded by the author)

Figure 16 shows a decrease in 2011 of non-recyclable waste that is not recyclable and therefore given to waste incineration plants. One could claim that this is due to the waste separation program installed in 2010 as 2008 was the year of economic crisis with less orders but the level of non-recyclable output is relatively high in comparison to 2011.

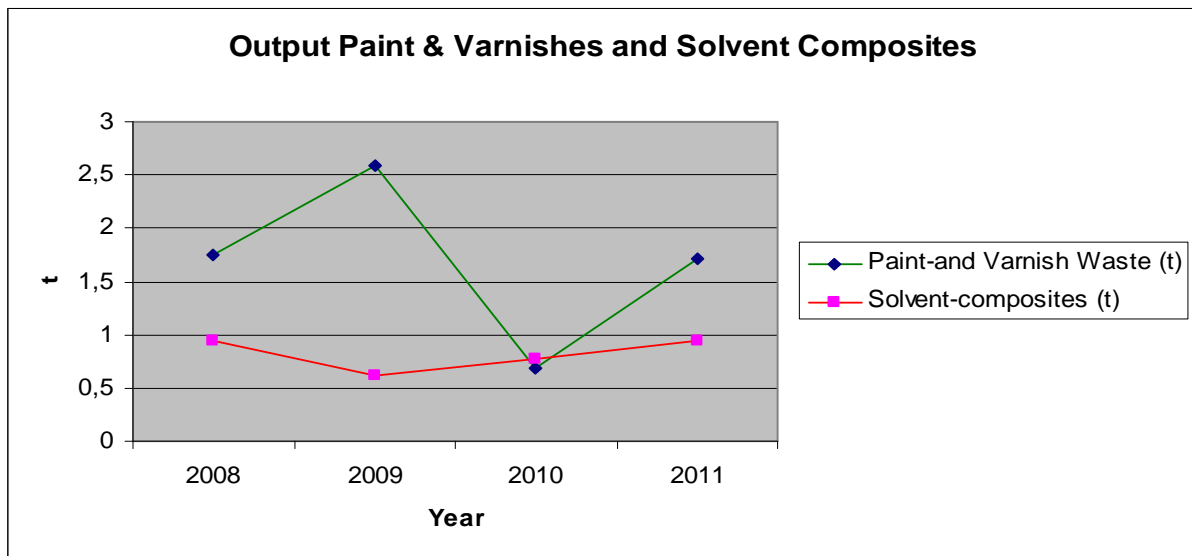


Figure 17: Reduction Harmful Waste 2008-2011 (Own Illustration, 2012)

Other products like overspray of paints and varnishes are recycled through partners, 40% of the output can be reused in new paints through the invention of a UV based varnishing facility since 1996. Non-recyclable output of paints is comparably low at company Y since 1996. Also output of solvents is reduced through the facility. Harmful and toxic solvents are abandoned from the solvent assortment as far as possible through the usage of water based varnishes. One can observe that the level of output is as low as the one of company X.

The variation in output is due to variations in amount and kind of order.

The company is burning its wood surplus for heat production in winter. Output wood and input oil are correlated as Oil is only used when the wood is fully burned. Less oil consumption affects the environmental balance positively as emissions could be saved through burning scraps instead of fossil fuel. The CO₂ output of oil is 15 times higher than that of wood (Offel, 2010). The observed shift in oil resp. wood consumption in 2010/2011 is due to an undetected default of the heating plant that did not conduct the switch from oil to wood power. A control system has been established to detect future defaults of the facility earlier which is also an important outcome for the environmental strategy.

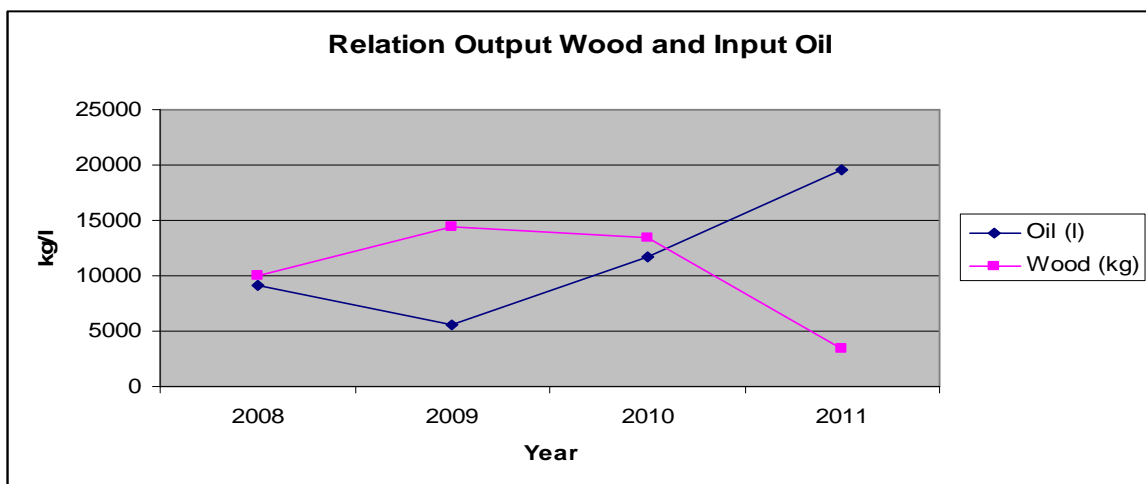


Figure 18: Reduction Fossil Fuel Consumption (Company data proceeded by the author)

In this section the selected cases under study have been introduced. Their approaches towards CSR in the environment have been discussed and the outcomes on its stakeholders have been described.

What do these outcomes on the stakeholders imply empirically will be discussed in chapter 5. Then a discussion on the effects with regard to the theoretical framework will be conducted.

5. Analysis and Discussion

In the following an assessment of the strategy outcome is conducted. All that is to be discussed within this part is based on the statements by the environmental managers of the two companies under study.

The development of internal and external influences on the management circle is discussed (section 5.1) as well as the quantitative outcome of these effects are summarised (see 5.2). Finally the effects are explained based on the theoretical framework of this research (corresponds to 5.3).

5.1 Qualitative Outcome of CSR-Strategies on E&S

In this section a cross case analysis is conducted. Providing an understanding of CSR outcome within and outside the company is relevant to mention in order to understand the relation of company attitude towards CSR and CSR-Impact on its stakeholders.

5.1.1 Internal Development- A Cross Case Comparison

The internal factors that have been prompted within this research project are perception-, commitment- and corporate culture towards CSR-Engagement. They are assumed to influence capacity building within the company towards successful implementation (de Bruijn & Norberg Blohm, 2005). According to the research methodology the discussion is clustered under the “exploration/goal definition” part of CSR-Management (see ch. 3).

Perception

Understanding the relations between activities and goals to be achieved is important to ensure implementation, attitude and innovation (Maon, Lindgreen, Swaen, 2010). Those factors are approached at company X through different incentives like trainings, rewarding and information systems for all employees. An enlightened behaviour or positive perception is attained, which can also be measured with regard to the high amount of suggestions in the company’s suggestion scheme towards goal definition. They are behaving environmental friendly due to self-interest and self-realization of “own” goals. Takeover of responsibilities at all levels (proactive behaviour).

Perception at Company Y is influenced by the following factors: communication is based on a top-down approach meaning that strategic approaches are directed to the production level whereas strategy development is conducted at the management level. With regard to the company suggestion scheme that is not frequently used, as well as Gut’s statement on perception towards environmental protection by the production level one can assume that perception for environmental measures is not high at the company yet. The opposite may be true for the management level that is proactively enabling for information flow and strategy development. Also perception towards the responsibility of environmental impact has been raised through ISO 14001 certification. According to Gut, ISO 14001 is on directing attention towards a preliminary schedule of goal exploration and definition. Gut stressed the problem that for Company Y, as for most SME, the economic factor is the most decisive factor when deciding about environmental activities.

Commitment

Commitment is achieved through a high level of transparency that is achieved through the inclusive work of the environmental manager. CSR in this company is understood as a co-

management approach that includes all levels rather than a top-down approach. Motivation for the “own” goals is high. The attitude towards environmental strategies is positive and implementation of activities may go even beyond the strategy. This is also because employees discern knowledge on how to transfer the strategy within the production level successfully (Bressers, 2004). Through transparent strategy development and implementation all levels are included and part of the strategy exploration. This ensures that the flow of information is constantly rising. Through this company X can implement targeted measures and invest into innovation very purposeful (Palazzo, 2010). This raises legitimacy and support for the activities. It also serves as basis for further discussion and subsequent measures to extend strategies (Maaß, 2007). Furthermore it makes pooling and presentation of information easier. This in turn has a positive impact on the support of the business management. Once support for further, extended measures is given it also influences commitment to environmental goals.

In company Y the strategic steps are communicated to the production level in a top-down approach. Commitment towards environmental goals increase with increasing knowledge on environmental matters: information flow is still too limited which implies that commitment is low and needs to be renewed through persuasive work from the environmental manager for every change in production process. A rewarding system to direct environmental awareness is taken into consideration to increase commitment for implementing activities.

Corporate Culture

The aspect of corporate culture is based on understanding and commitment of company objectives. Company X is registering a high commitment to the company objectives as information and knowledge on the environmental goals are high. Corporate culture is coined by its “green ambitions” according to Hoffmann which enables for successful implementation (Bressers, 2006). Furthermore it constitutes an important source for capacity of change as knowledge on environmental matters is available from every level but also willingness to develop changes within the production processes (de Bruijn & Norberg-Blohm, 2005).

For company Y corporate culture is rather influenced by social issues. Commitment to the company’s objectives is also given but the understanding for environmental matters is not far developed yet as the flow of information is limited. Motivation for further activities needs to be gained through experience and the exploration of benefits through the strategies (Jenkins, 2006). Still exploration of goal objectives is conducted on the management level and communication of the strategy is not developed yet which explains the low impact on the suggestion scheme by the production level.

5.1.2 External Development- A Cross Case Analysis

External factors that influence the development of CSR are stakeholder demand and the code of conduct. Those factors are influencing the exploration of goal objectives as well: through consulting external stakeholders the company receives new impacts for CSR-Development.

Both companies do not assume any stakeholder demand to be directly responsible for environmental activities. Rather both are able to include stakeholder demands positively within their business and marketing strategy. Both company representatives state that it is rather the economic need to be competitive. This includes strategic development towards resource efficiency and innovation for production (UNGC, 2011).

Common standards like EMAS and ISO make purchasing decisions easier as consumers base their purchasing decision increasingly on the sustainability of the product (Bressers & Ligteringen, 2007). EMS ensure certification of production with regard to stakeholder demand that con-

stitutes a competitive advantage within globalised market (Visser, 2010; Hoffmann & Maaß, 2007). It is an economic aspect when certifying its production which enables company X to exploit environmental issues within the communication with external partners effectively. Company Y is certifying under ISO to stay competitive in public tender.

Through consulting partners and stakeholders both companies are able to explore possibilities and set goals for their supply chain with or without enforcing a code of conduct actively. Company X enforces a code of conduct. This is important to avoid the risk of green washing and increase customer reputation because environmental protection constitutes integral part of its marketing (Andersen & Pedersen, 2006). Company Y is not conducting any code of conduct but emphasises the necessity of ISO or EMAS certification for its suppliers and ecolabels for fabrics and woods. In comparison to company X, company Y is not marketing its products as “green” which takes away the risk of greenwash accusation.

Goal definition is affected by the establishment of a code of conduct as it helps to explore its own objectives but also influences the capacity building towards higher environmental standards for suppliers (Ciliberti *et al.*, 2008; Pedersen & Andersen, 2006). X can always trace back environmental effects of their products within whole production chain. Y is assuring confirmation with environmental goals through stable long term relations that enabled for successful cooperation and innovation (see also Andersen & Pedersen, 2006).

5.1.3 CSR Strategy Development- A Cross Case Analysis

In the following section the impact of evaluation on CSR strategy development is discussed. Evaluation is important for assuring and communicating the strategy. Both environmental managers assumed EMS to be a valuable basis for data evaluation and assurance of the strategy. Company Y's EMS is introduced in 2010. Therefore the company is in the process of strategic development with regard to the guidelines and objectives. Its evaluation scheme on quantitative indicators is not yet developed. Assurance on the success of the strategy is conducted through the production managers. This implies the loss of important information on the strategy and delays adjustment. The case is that communication is not formalized at Company Y, yet. This constitutes a barrier to CSR-Strategies that needs to be overcome in the long run to ensure the sustainability of the strategy (Fassin, 2008). Company X evaluates on the basis of EMAS since 2001 so the company has a catalogue of environmental data at its disposal. Assurance is conducted qualitatively through communication with the employees. Due to its structure of a medium size company X is able to react flexible on upcoming demands and problems (BMW, 2010). Based on the evaluation scheme company X is able to communicate its strategies based on an operative data set. This is not fully developed and established but it would improve the legitimacy for strategies as data of any production process would be traceable. It would also improve knowledge on needs and possibilities for more efficiency.

As has been shown within the foregone part environmental protection strategy, its communication and evaluation at Y is new in comparison to X. What appears crucial to CSR implementation is the way it is managed (Prätorius, 2010). To implement a successful strategy communication with the different departments is necessary. This enables for assurance on CSR strategies as well. Furthermore evaluation of possibilities and obstacles to activities has to be conducted. CSR management, according to Prätorius (2010), involves coordination and steering. Furthermore environmental topics have to be integrated into the working procedures and decision making processes within a company (Prätorius, 2010). This is also supported by the research findings:

At company X perception and commitment is higher as could be seen through the high input into the suggestion scheme from all levels in comparison to a low input from the production level at company Y.

What became obvious is that the range of EMS introduction appears to influence the strategy and effects considerably. X is certified under EMAS since 2001 whereas Y has implemented the ISO 14001 norm in 2011. Although both companies are conducting several environmental activities for a long time the usage of an EMS provides a better overview on objectives and schedules. By comparing the two cases one could see that structuring CSR sharpens perception as well as commitment to environmental strategies over time. Through standardisation of measures the strategic corner points become visible for the actors involved. EMS could be assumed to serve as an internal and external "(...) statement of recognised environmental and social responsibility (...)" (Prätorius, 2010, pp. 197). It also enables for a better exchange between the departments which in turn enables for goal implementation.

5.2 Quantitative Outcome-Cross Case Analysis

The quantitative outcome of environmental activities has been discussed in 4.1.4 and 4.2.4. One crucial difference observable is the time scope of data collection. Through a more developed set of data the environmental manager is better able to establish a strategy. Further the strategy is internally grown and understanding for successful implementation is supported on all levels. Both companies claimed the accession to an EMS to be a helpful step in transforming informal environmental engagement into a formal strategy.

Due to the differences in the running of the strategies one can clearly observe a difference in the dataset. The environmental impact with regard to reducing externalities shows a similar development for both companies towards a decrease in material consumption and waste disposal. A quantitative difference between the input-output relations for our cases is remarkable and the cause is that company X has a relatively better outcome in comparison to Y. This is because SME are often conducting any kind of environmental engagement without a strategic background (Jamali *et al.*, 2008). These engagements are mostly based on economic decisions, market pressure, governmental regulation and companies' value to contribute to sustainable development (Apospori, Zografos, Magrizos, 2012).

5.3 Explanations for the Effects

In the following section explanations for the discussed outcome of the CSR strategies based on current CSR-Research will be given.

The outcome will be discussed with regard to internal and external factors that impact CSR-Development within the company. These explanations may help to uncover lacks and problems that can be overcome within the management process of CSR.

5.3.1 Explanation: Internal Factors

Information and knowledge management impacts the outcome of CSR as information on formalising CSR into a strategy is important for a coherent approach and a measurable outcome. How this is approached by the two cases under study is discussed in the following.

Exploration of objectives and goal definition constitute an important framework for effective CSR-Implementation. EMS provide helpful guidelines to detect environmental problems within the company and structure them into a strategy as confirmed by Gut and Hoffmann. It is not the

question on the strictness of the EMS but more on the managerial, time and economic resources of the company (Apospori *et al.*, 2012). This is related to the problem of high transaction costs for implementation, systemic monitoring and evaluation for SME as there is the need for information on the efficiency of certain strategies to avoid risks and costs and increase benefits and opportunities. (de Bruijn & Norber-Blohm, 2005; Camison, 2008). For example the discussion on investment on new production facilities at company Y based on economic decision; the recent installation of an environmental manager that is missing at many companies due to economic decisions. This is related to the availability of know-how and motivation to tackle environmental problems efficiently. Most research reveals that especially SME need to base their strategy on experiences from peers (Jenkins, 2006; Camison, 2008): although company Y used to have a rather informal set of activities until 2010 in comparison to X, many environmental activities like the reusable furniture suits, UV paint facility are established activities within the furniture sector.

EMS are the guideline for detecting problems and *developing* activities. For both companies' environmental managers' knowledge on the possible strategy is then retrieved from the production managers. Through common preparation of the strategies and definition of a time and goal scheme the understanding for both, management and production level is supported. Employee involvement is seen as one of the major enablers for CSR-Implementation (Apospori *et al.*, 2012). As could be seen at company X, not only the production managers, but also employees are included within strategy preparation through supporting suggestion. Also through their training- and rewarding programs X is able to increase support for all goals (Apospori *et al.*, 2012). Company Y does not include all levels in strategy preparation. Still it would enable the company to prepare a strategy that is improved and inspired by all levels with information on possibilities for change (Jamali *et al.*, 2008).

It is important for CSR to provide a consistent performance over time and introduce it into regular business operation for the sustainability of CSR activities (Maaß, 2007; Sarbutts, 2003). One approach of the successful *governance of implementation* that is conducted by the two cases is the sub division of responsibilities for sub-goals. Within both companies the environmental managers discuss implementation with the production managers and direct governing responsibility for sub-goals to them. Through this the level best capable for communicating the strategic implementation is reached. All strategic processes and data on their development is pooled and supervised by the environmental manager have a central responsibility installed for the overall CSR process.

Related to this is the *communication* of CSR-Strategies. Communication is concerned with *evaluating* the strategies for further development of them. Communication has to be conducted most directly between the levels (Riess, 2006). Company X is approaching incentives to all levels and retrieves information and suggestions for possible environmental activities from them. Through this X is able to aim for proactive, flexible CSR-Performance (Camison, 2008; de Bruijn & Norberg-Blohm, 2008). Company Y is in the process of monitoring and selecting information on environmental issues and strategies. For Y, as for most SME, the problem is to internalize companies' capabilities to tackle environmental challenges to create a flow of information (Camison, 2008). This is also due to direction of communication that is top-down approaches and may be too abstract in its complex outline that it could not be understood as a strategic process of the company but as a set of various independent activities (Taubken & Leibold, 2010; Riess, 2006). This enables to overcome limiting factors like the complexity of the implementation process itself (de Bruijn & Norberg-Blohm, 2005).

5.3.2 Explanation: External Factors

Cost-Efficiency: SME are more vulnerable to economic changes (Camison, 2008). Therefore every decision on environmental development constitutes an economic decision as well. As it could be observed for the two example cases, the most efficient strategies proven were those implemented first. Especially those that have been proven to be efficient within peer or due to the given circumstances e.g. local procurement; recycling, reusable packaging systems etcetera (Apospori *et al.*, 2012). Waste reduction activities, as conducted by both cases, are subject to economic considerations since waste disposal is costly and recycling saves money (at least zero sum game). It is the first strategic possibility with a low threshold, easy understandable and implementable for all levels, which explains the fast implementation at Company Y. Although green production constitutes a competitive advantage most SME do not have the financial possibilities to shift their product portfolio towards certified products as certification is time consuming and costly (Hoffmann & Maaß, 2008).

One important factor that is increasingly driving companies to become *certified* under ISO or EMAS is the increasing awareness on environmental matters and impacts of products. Although both companies did not assume stakeholder demand to influence their CSR-Engagement both are aware of the increase in “green purchasing decision” (amongst others: Apospori *et al.*, 2012). Especially for official orders an acknowledged environmental certification of the company is an important competitive advantage in Germany they state. This in turn raises the internal awareness towards environmental management as a necessary part of the company strategy.

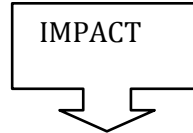
Also *long-term partnerships* with suppliers appear to be a promoting factor for a positive environmental outcome. Through mutual trust experimentation on products is possible. Shared construction costs, the outlook for mutual benefit from the end product enables to invest in common innovation for an improved environmental outcome and the creation of capabilities within and between the companies (de Bruijn & Norberg-Blohm, 2005). Two examples of capability creation are the common creation of the UV varnishing facility at Company Y which is still examining the creation of solvent free paints. Or the partnership of company X on the thermal power plant with a neighbouring farmer.

This chapter provided an analysis of the two companies under study. The internal and external factors influencing the companies’ CSR strategies are shown in table 14. Here the influence on CSR strategy and final effect on the outcome is summarised.

Table 12: Summary Case Study Outcome (Own Illustration, 2012)

Aspect	Company X	Company Y
Perception	High awareness & support for environmental matters on all levels	Awareness rising; High support from production managers
Commitment	High commitment due to communication, inclusion, rewarding system	Commitment to the communicated sub-goals
Corporate Culture	Co-decisional approach, inclusion of all levels	Top-down approach, low understanding for CSR-Objectives
Stakeholder Demand	No impact	Increased attention towards formalized environmental activities
Code of Conduct	Enforced for goal congruence of	No enforcement but long term re-

	green products	lation with suppliers
Evaluation	Regular under EMAS; Long environmental engagement and data set	Recently under ISO 14000; No environmental database yet



Environmental Impact	Overall Strategy; Decrease of environmental impact: Reduction of energy and raw material consumption, recycling of material	Development of Strategy; Decrease in waste disposal and dangerous waste; Need to increase resource and energy efficiency
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This summary shows that company X has been better able to implement its strategies and develop them further. The environmental impact is assumed to be high as the strategy is included into business operation. Company Y is performing environmental management recently. It used to have only scattered environmental activities based on economic decision. Y has recognized potential to reduce its environmental impact.

In chapter two CSR is put into a context of internal and external factors that are mutually influencing CSR-Strategy that in turn affects the stakeholders mutually. After having analysed the empirical data with regard to the CSR theoretical framework, illustrated in chapter two as figure 7, the author suggested to adjust the theoretical framework with regard to its dimensions (see figure 14). It became more evident that the organisational dimension, that are the internal stakeholder effects are affected first towards a positive or negative attitude on CSR. Then external stakeholders like the environment are affected through the internal effects as they determine the capacity of CSR development.

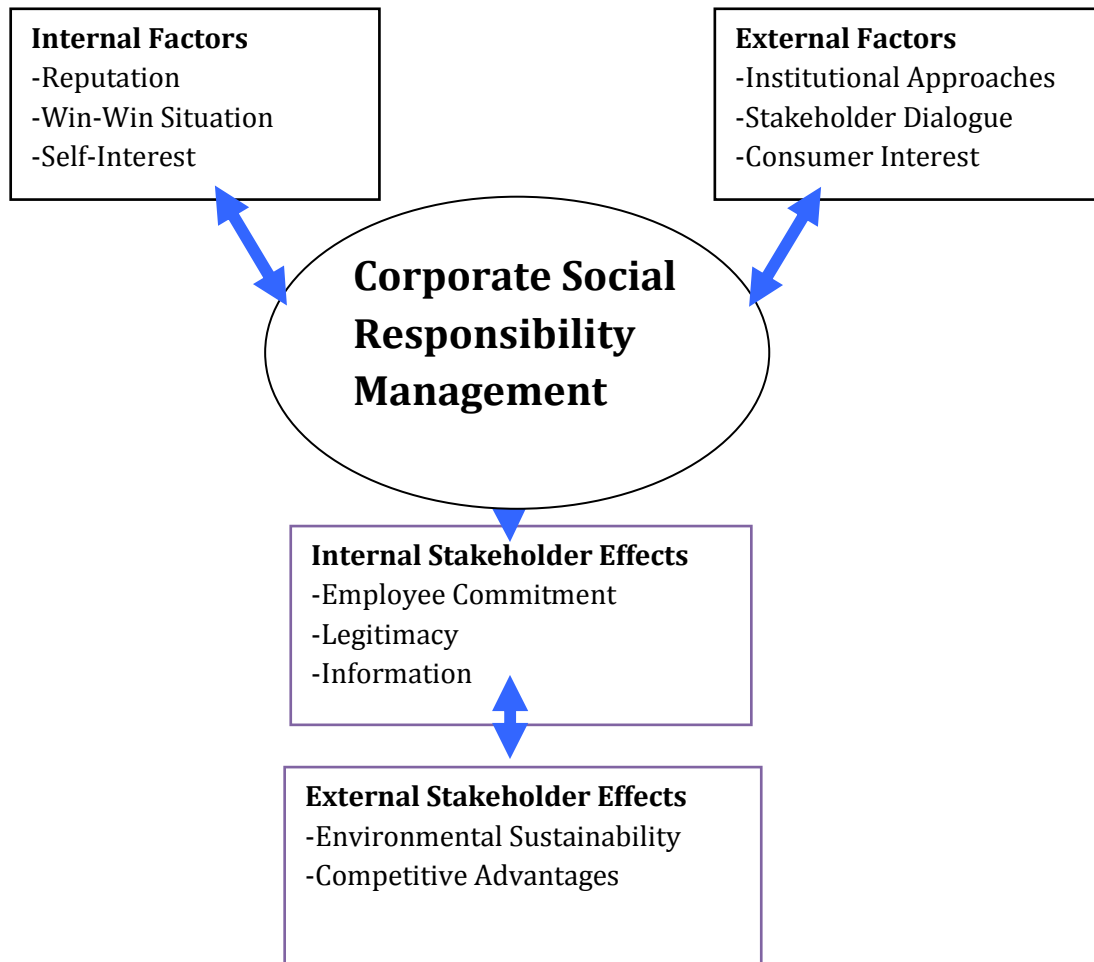


Figure 19: Re-Designing Theory: Putting CSR in a Context (Own Illustration, 2012)

6. Conclusions

The research question driving this project was related to the effectiveness of CSR-Strategies on environment in the context of SME based on the environmental outcome. It pursue to test whether CSR is a realistic and manageable concept for companies to improve its environmental output or whether it is just a misunderstood concept blowing up regular activities to green wash business operation.

For this research mixed research methods have been applied: two example enterprises and their environmental strategy have been examined based on semi-structured interviews and the companies' environmental audits. The impact of CSR-Strategies for the environment but also for the company itself has been subject of this research. The research design enabled for comparing two medium sized companies with a different scope and time range of environmental measures. Through this differences and similarities in approaching CSR were observed and explained on the basis of scientific literature.

One limiting factor of this research was the number of cases studied. To increase external validity explanations for CSR-Impact are discussed with regard to scientific literature of CSR in SME including foregone case-study research.

Based on the case study this research found out that through their traditional understanding as family owned company both have integrated several environmental activities. SME *struggle with low monetary and human resources to implement a coherent strategy* instead of many fragmented activities. Therefore EMS, as one approach to structure CSR towards an environmental framework in business operation are used to explore problems and needs and consult stakeholders to structure them into a management process. Enforcing a code of conduct is subject to resource decision as well as the marketing factor of products. If the product are communicated as "green" the company sees the urgent need to avoid green washing claims.

Economic decision and experience exchange within the industrial sector and suppliers enabled for *operational changes* that affected the environmental and economic outcome positively. This is because the main emphasis for environmental strategies lies on the reduction of waste through the recycling of surplus.

In opposite to most literature on CSR those two companies were able to distinguish their environmental engagement as a marketing factor. For both *communications internally and externally* is assumed to be integral part of strategy development. First it provides competitive advantages; second it is important to ensure the understanding of the strategy within the company to ensure a sufficient implementation. The higher the understanding for the strategy and objectives, the higher the support and information flow within the company. Therefore understanding for the goals and communication of activities is mutually related to the successful implementation of the strategy. Still the problem of high transaction costs for implementation, systemic monitoring and evaluation for SME as there is the need for information on the efficiency of certain strategies to avoid risks and costs and increase benefits and opportunities. Externally communication enables for a competitive advantage but also increases the pressure to certify as green products is felt by the companies.

Evaluation of strategies is based on EMS-guidelines but it remains a problem as measuring outcome is not sufficiently operationalized or instruments and techniques are very time and resource consuming. Also the data output needed is not clear interpretable within the companies that impacts the outcome measurement of CSR strategies and further strategy development.

7. Recommendations

Providing recommendations on CSR for SME should enable to design their CSR engagement more efficiently, avoid structural mistakes and provide an understanding of CSR in SME.

Further recommendations for subsequent research on CSR in SME are given on the basis of the recommendations for CSR-Management.

7.1 Recommendations for CSR-Management

It does not matter whether a company labels its environmental activities “CSR” or differently. It appears to be more important to communicate environmental activities and be able to give substantiate information on activities that are structured and understandable in purpose and strategy for every stakeholder. Information, training and rewarding systems ensure inclusion of all company levels and a high support for the strategies within the company. Based on what has been discussed within this research one is able to provide recommendations on CSR Management in SME for companies but also for experts and researchers. Those recommendations are the conclusion from the research findings of this research project.

Using EMS is an important instrument for SME to structure environmental issues related to business processes. Relies on the guidelines of EMS constitutes a basis for strategic framework. Also it provides an efficient basis to exchange knowledge on (best-)practices to avoid try and error of single companies.

Exchanging with other companies from the same sector enables for cost-efficient strategy development as experiences could be exchanged and low-threshold activities could be implemented easily.

Internal Communication on environmental strategy and active inclusion of all levels through e.g. rewarding systems, to ensure information flow between the levels and a successful implementation.

Introducing a *person that is responsible* for environmental questions, pooling information, and communicating the strategy in- and externally ensures that the strategy is “touchable” by stakeholders. It increases understanding of the stakeholders and supports strategy development.

Take *wording* into account: SME often do not label their environmental engagement as CSR. Furthermore they fear costs of CSR engagement instead of understanding the advantages and saving potentials of CSR in the long run. Scattered environmental activities are often conducted due to economic considerations. Therefore it would be more helpful for SME to *provide an approachable scheme* for SME that could be easily understood at all levels and is not concerned with abstract schemes and indicators. Table 13 outlines a possible scheme of setting up a CSR-Management strategy. This includes also to go *Incremental steps in strategy development* based on the idea of strategies capable to be implemented easily should be taken

Table 13: CSR-Strategy Scheme (Own Illustration, 2012)

	Possible Strategies
Reduction of (harmful) Waste	Recycling Reduce Energy Consumption Selling Surplus Technological Innovation
Reduction of Material Consumption	Recycling Technological Innovation

7.2 Recommendations for Subsequent Research

For subsequent research on CSR in SME the authors Grant and Arnold (1993) provide a scheme to categorise companies according to their CSR-Strategy level of sustainability orientation for environmental activities. This scheme could be used for further research to cluster SME's CSR engagement with regard to organizational factors of CSR-Engagement and environmental indicators. This makes quantitative assessment of CSR approachable while using an understandable wording. Furthermore it is more easily assessable even by companies themselves, than the questionnaire of this research as it includes all components in a manageable scheme.

The authors divide under inactive, reactive, responsibility and proactive behaviour towards CSR-Activities of the company. Table 14 outlines how these kinds of CSR-Engagement could be clustered with regard to structural and environmental indicators.

Table 14: Types of Enterprises According to their Level of Sustainability (Grant & Arnold, 1993)

Corporate Spirit Environmental Interaction	Inactive	Reactive	Responsibility	Proactive
Indicators	General <ul style="list-style-type: none"> • Dictatorial administration • Low Moral • "No matter" attitude • Weak consumer demand 	General <ul style="list-style-type: none"> • Hierarchical administration • Unconnected departments 	General <ul style="list-style-type: none"> • Administrative Participation • Consumer feedback 	General <ul style="list-style-type: none"> • Institutional ethics • Stakeholder Demand • Inclusion of Stakeholder feedback
	Environmental <ul style="list-style-type: none"> • Poor disposition • Problems ignored 	Environmental <ul style="list-style-type: none"> • Continuous accomplishment • Negotiation efforts and presence at management level • Other departments not involved 	Environmental <ul style="list-style-type: none"> • No constant efforts • Environmental Management • Marketing • Communication with ecological experts 	Environmental <ul style="list-style-type: none"> • Strategically long term planning • All departments involved • Strong communication programme

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Annexes

Annex1: Ten Principles of the United Nations Global Compact

The UN Global Compact asks companies to embrace, support and enact, within their sphere of influence, a set of core values in the areas of human rights, labour standards, the environment, and anti-corruption:

Human rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses.

Labour

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labour;

Principle 5: the effective abolition of child labour; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility; and

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-corruption

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

(UNGC, 2011, pp. 6).

Annex 2: Advantages of CSR

- Improve internal management practices
- Benefit from expertise on the issues of CSR
- Improve internal and external image
- Open up for civil society
- Escape from crisis situations
- Improved Risk Management
- Create innovation
- Facilitate community development
- Improved relations with government and communities
- Improve financial performance
- Operating cost reduction
- Long-term return on investments
- Long-term sustainability

(Mathis, 2008; Palazzo, 2010)

Annex 3: Soft and Hard Stakeholder Objectives

	Objectives of Society (high level of abstraction)	Objectives of Company (high level of abstraction)	Objectives of Company (low level of abstraction)
„soft“	CSR-Issues	Top Management	Functional Entities
	Values of the Company	Reputation	Amount of sustainability/certification reports....
	Human Rights	License to operate	Complaints, Objections...
	Corporate Citizenship	Innovation & Competitiveness	Costs for innovation, costs of capital...
	Human Resource	Attractiveness for Costumers	Customer satisfaction, Brand Equity, Sale of Products....
	Transparency	Risk Management; Competitiveness	Value at risk, sales increase...
	Employee Motivation	Human Capital	Qualification of employees, long-term employment...
	ecological production&products	Access to Capital	Cost of capital, bank line...
	local economic expansion	Productivity & Reduction of cost	Revenue...
„hard“	Value of Company	Shareholder Value	Accretion, market capitalization....

(source: Riess, 2006; pp.52)

Figure: Soft and Hard Objectives of the Stakeholders

Annex 4: Complete Questionnaire

Part 1. Building of Capacity for Change

1. In what ways did *perception on responsibility for the environmental impact* of your business operation change from the beginning of your activities until today? E.g. has the emphasis /importance on certain environmental issues changed?
2. Do you think that *commitment* on the implementation of CSR-Activities on E&S varies between the different company' levels developed as much as commitment to business objectives within the company?
3. In what ways did *corporate culture change*? For instance: relation to employees' motivation, commitment to company, higher standard of CSR-Activities etc.
(Norberg-Blohm & de Bruijn, 2005)
4. Do you think that *raising public/stakeholder awareness affected* the perception of responsibility for the environmental impact of your business operation? In what ways did perception change e.g. different emphasis of goal objectives, higher commitment from all company levels, more emphasis on environmental protection, increased attention to innovation and capacities for change?
 - 4.1. In what ways did a shift in stakeholder awareness/demand affect your activities?
5. Has it been necessary for you to *establish a code of conduct* to monitor your suppliers' performance in terms of environmental aspects? Have you established a code of conduct for your suppliers? On what basis did you develop the code?
 - 5.1. Do you think it is necessary for your corporation to *audit the implementation* of your codes of conduct? How are you enforcing your codes of conduct for your suppliers?
(Pedersen & Andersen, 2006; amongst others: RespAct, n.d.)

6. On what basis are you evaluating your environmental activities (EMS, own auditing system or the like?)
 - 6.1. What are the *effects of evaluation* for your activities? For instance, do you adjust your activities; do you stop them if inefficient; do you try other measures?
 7. Have you *developed your activities* further with regard to the initial activities?
 - 7.1. Could you give a number e.g. percentage expenditures/employees used for CSR- Activities? Is there a development visible with regard to the amount of expenditures spent on CSR- Activities?
- (Norberg-Blohm & de Bruijn, 2005, in: Pohl & Tolhurst, 2010)

Part 2: Implementation of CSR Strategies on E&S

8. How did implementation of environmental strategies take place? Can you describe the different steps that have been conducted?
 - With regard to the concrete strategies you are conducting: When did you start to plan the strategy? Did you plan all of them individually?
 - Have goals been determined?
 - How has implementation been conducted, who was responsible for governing the process?
 - Did you develop a schedule before? On which basis did you determine the schedule?
 - Have you evaluated during the running of activities? If so did you adjust if necessary?
 - Did you use expert advice? If yes, what kind of consultancy? At what stage of CSR development or implementation?
 9. Who is responsible or *how are responsibilities distributed* with regard to environmental protection activities within your organisation? E.g. who is deciding about a means and time frame?; Who is responsible for governing implementation?
 - 10.1 Did responsibilities for implementation change over the years regarding the department/level of responsibility? Why (e.g. due to increased experiences, dif. Environmental problems need different strategies etc.)
- (ISO 14001, 2004; Riess, 2006; Geschäftsstelle des Umweltgutachterausschusses [UGA], 2010)

Part 3: Outcome of the CSR-Activities

10. What *hard and soft indicators* did you determine to measure the outcome of your (individual) activities?
11. Related to the Strategy and the objectives for the strategy *what is the outcome* of your measures? Could you name hard and soft indicators?
12. Are you able to *trace back the (environmental) development* on your strategy?
13. Based on the means achieved for now are you *seeking to adjust* or improve your activities?
(GRI, 2006; UGA, 2011; InnoTrain, n.d.)