

MASTER'S THESIS

ENVIRONMENTAL ARGUMENTS
PRODUCT MARKETING OF PAPER MACHINE

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| Abstract <p>The aim of this study was to find the products that use less environmental resources than previous products of Metso Paper Inc., Jyväskylä, and how the found characters could have been used in the company's environmental marketing, i.e. product marketing. Metso Paper Inc., Jyväskylä manufactures paper machines products, and this study was made in 2007. The products were compared with older products of the company; the products that are older solutions or models of the products at the time of the study. The information was gathered by open interviews. At the time of the study the concept of environmental marketing did not exist in Metso Paper, Jyväskylä. The result of this study was that there are no such products that are more environmentally friendly compared to previous products. Therefore there were no characters that could be used in argumentation of product marketing of paper machine products.</p> | |
| Keywords environmental marketing, green marketing, ecological marketing, ecoproductization, environmental advertising claims, forest industry, paper machine | |
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1 INTRODUCTION

As it is mentioned in the publication of Valtonen, Juslin and Laine (1995) environmental organizations do not have direct influence in industrial customers within forest industry, but environmental organizations generally influence primarily in common opinion and consumers. Therefore environmental organizations cannot be included in the closest stakeholders of Metso Paper Inc., but they are influencing in the company through other stakeholders. In purchasing decision the technical and economical criterias are the most important for industrial customer. (Valtonen et al. 1995, 4-13, 23.) This was the situation twelve years ago. Due to the fact that especially forest industry is changing relatingly slow, this fact can still be current.

Friendliness to the environment is playing a role as a competitive advantage when the competitors have technically and economically equal offerings. Hence environmental issues have a great importance nowadays in marketing communication. An industrial customer has to explain additionally to their own customers about friendliness to the environment of manufacturing and raw material production alike. Generally in applying environmental marketing only isolated actions are done instead of collective marketing planning. The first reactions have been environmental argumentation in marketing communication. This is reactive behaviour, not proactive, and to make the message effective at all first the environmental issues must be included into products, target groups and market selection, and competitive advantages, and after that strategic decision to be made. (Valtonen et al. 1995, 118, 123-127.)

Environmental knowledge can be used as a competitive advantage. Twelve years ago it was not clear within the forest industry what is ecological marketing and how it should be used. Nowadays it is clearer, research has been done, especially for the use of the forest industry. What makes this issue more difficult to handle inside the industry is the fact, that generally gaining the information about the markets and taking advantage of it has been a common difficulty and default in the marketing of forest products. The opinions of end customers are hard to obtain and generally unknown in the Finnish forest industry. (Valtonen et al. 1995, 23-24.)

The forest industry has potential to gain sustainable business. The main raw material - wood - is renewable material. Emissions of the production are small and decreasing furthermore. The end product of the production - paper, bulk, board, lumber - are recyclable or disposable environmentally friendly way. Utilisation of waste is already quite good in the forest industry. In lumb and paper industry over 95 % of bark, woodships and sawdust waste is used in energy production or chemical pulp production. (Valtonen et al 1995.)

Valtonen, Juslin and Meriluoto (1998) have conducted a survey research about green consuming by interviewing about 900 consumers in Finland,

Germany, France, England and Canada. They discovered that consumers rely on the fact that they can affect to the environment by buying less packaged and environmentally friendly products, and by recycling paper and other products. Consumers trust that they can affect to forestry and raw wood logging by buying products that have made of wood which fulfils the requirements of sustainable and environmentally friendly forestry. The most suitable ways for affecting environmental matters consumers consider to be marketing mechanisms: consumers demand environmentally friendly products and companies compete by offering environmentally friendly products. They also found out, that the image of the Finnish paper industry is not very good: emissions to water and air, and the chemicals used in the process burden the image of the industry. The authors claim that both - green consuming behaviour and ecological marketing - are value bound. (Valtonen et al. 1998, 10, 29-30.)

Taloustutkimus Oy has conducted a Ympäristöasiat-survey in 1997 that states that 64 % of the Finnish are interested of environmental issues, and 77 % of the Finnish say that he/she is following the environmental issues from the media. Although the Finnish have a positive attitude towards environmental issues, it is rarely seen in practice. Only 33 % of the Finnish are tend to choose environmentally friendly product every time it is possible and 41 % when it does not require extra effort and the product will not be more expensive. In many foreign and domestic surveys a conflict has been perceived between the attitudes and action of the consumers. The consumers' conception of the friendliness to the environment was always somehow related to their own well-being. Seldom friendliness to the environment was seen as an objective, but as an instrument for achieving other objectives, like the person's own welfare or their children's welfare. The concept of the friendliness to the environment included mental and economic welfare, and health of present and future generations. According to the authors these aspects should be taken into account when planning the marketing of environmentally friendly products and services. (Laaksonen & Mäntylä 2000, 1, 49)

2 METHODOLOGY

2.1 Aim of the study

There is always a purpose or a mission in the study. The purpose guides the choices of the research strategy. (Hirsjärvi, S., Remes, P. & Sajavaara, P 1997, 128.) The aim of this study is to find the products that use less environmental resources than previous products of Metso Paper Inc., Jyväskylä. Thus this study is a descriptive one. The characteristics of a descriptive study are the following: to indicate exact descriptions of a person, event or occasion and to document fundamental and interesting features of certain phenomena (Hirsjärvi, S., Remes, P. & Sajavaara, P 1997, 130). Because of the fact, that the amount of the paper machine products, even those ones produced in Jyväskylä, is thousands, the idea of going through every and each one of them, was quite time-consuming. Therefore we decided to limit the amount with products, which the company is selling or trying to sell right now, at this moment, or about to start selling. The products were compared with older products of the company; the products that are older solutions or models of this present product. The company would have been more interested in comparing their own products to competitors' products, but impossibility of finding data or information of competitors' products would have made this study too challenging. It was discovered as well, that the products can affect in the whole process or in partial processes in paper production. Products were evaluated by the fact, if its environmental impacts (mostly water and energy usage) affected in the whole amount of environmental impacts of the process or not (the total usage of water and energy). For example transport was not included, the study focused strictly on the paper producing process, and how these products affect on the process.

Must be noted too, that because every paper machine is basically custom-made, it is impossible to evaluate all processes of the customers. In Metso Paper Service Business Line offers products and services that can be used for evaluating the whole paper machine process of the customer, and therefore make it more efficient. This study excluded Service Business Line, and concentrated on the products made of metal.

Metso Paper, Jyväskylä, has made a Life Cycle Assessment for paper machine, but not for every single paper machine product. Therefore using LCA research for this study was inadequate.

2.2 Research question

The research questions were revised as these:

1. What are the products of Metso Paper Inc, Jyväskylä, that can be found characters that use less environmental resources, i.e. are more environmentally friendly, than previous products?
2. How these characters can be used in argumentation of product marketing of paper machine products?

A hypothesis was that there exist products which maintain characters described in the research question in Metso Paper Jyväskylä. Because this study concentrates on only Metso Paper Inc, Jyväskylä, the results should provide answers for two questions described above. The company will use the results for creating marketing messages. It should be noted, that in another company these results could be very different.

2.3 Quantitative and Qualitative study

Quantitative study, which is also known as hypothesis-deductive or experimental study, is commonly used in social sciences. The basic features of quantitative study are for example conclusions from previous researches, defining different concepts, previous theories. It is important that the data collection has been planned detailed in beforehand and it should be based on quantitative, numerical measurement. An accurate focus group is determined and from this group there is a sample taken to be studied. As for the variables, they are formed in spreadsheet and data is conducted into statistically presented form. (Hirsjärvi, Remes, Sajavaara 2007, 135-136.)

Starting point for a qualitative study lies in describing real life. The reality is diverse and in a research must be taken into account that reality cannot be broken arbitrarily into pieces. The subject must be studied as comprehensive as possible. Results can only be conditional explanations related to time and place. Generally can be said that in qualitative research the goal is to find or reveal facts, not to prove existing statements to be true. (Hirsjärvi et al 2007, 157)

In qualitative research researcher trusts more rather in his/her own observations and conversations with his/her interviewees than the information gained by 'paper and pen' -tests. The target group is selected by relevance, not according to random sample method. Research plan develops with the research itself, plans can change. Cases are discussed as unique and therefore interpreted according to that. In this research material is obtained by interviews and interviews have been started without deciding beforehand how many interviews are going to be made. (Hirsjärvi et al 2007, 160) Documents and

databases, more precisely data, were supposed to be used aside interviews, but any data was not available for this research. The interviewees have been selected according to their position in the organization and the information what they might have about the products. Saturation was gained after the information started to repeat itself. The problem in this technique is to evaluate when all the viewpoints and information is found. In this research represented ultimate question to the interviewees was simple enough to assure adequate and sufficient information.

Based on this aforementioned information of Hirsjärvi et al the first research question of this study is quantitative and the second one qualitative. In this case, the qualitative part of the research question cannot be executed, though, due to the fact that the result to the first research question was 'none'. Therefore there was no continuity for implementing the second research question.

2.4 Interview

Type of interviews was open interview. It can be described as a free-floating, informal and unstructured interview. The main purpose was to find answer for the represented question. Secondary purpose was to receive data available when the answer for the represented question would have been positive. The interviews were executed as individual interviews in a room where other persons could not hear what was spoken within the interview, or by telephone. (Hirsjärvi et al 2007, 204-205; Hirsjärvi et al 2001, 34-35)

The ultimate question represented to the interviewees was "Is there any products in your product group that use less energy or water, or other significant environmental impacts, compared with previous products". The set schedule was six months within the interviews were supposed to be conducted. The set schedule was kept. The interviews were recorded by writing notes. Using a dictating machine was considered, and it would have been used when interviewing the key person Mr. Allo.

Problematic issue related to interviews is the assumption that interviewees can experience the interview situation threatening and alarming. Also, reliability of the research can be decreased by aptitude for giving socially positive response. (Hirsjärvi et al 2007, 201) Another problematic issue can be the motivation of the interviewee for the interview; some people have a tendency to avoid new situations (Hirsjärvi et al 2001, 85). An advantage of using interviews as data collection method is that amount of the research material can be flexibly regulated. Also, the research area in question was unknown and gained information most probably needed to be deepened. (Hirsjärvi et al 2007, 200)

2.5 The method of analyzing the research material

Research material can be analyzed in many ways. In this research the used analyzing method is comprehension. In this approach qualitative analysis and conclusion are made. (Hirsjärvi et al 2007, 219) The method was selected, because it is the most relevant for coming to a conclusion. The analysis methods can be used either during or after data collection. At first the provided preliminary conclusions about what is happening in the case – and how – are analyzed and suggest leads towards new data. Later, as fuller, more complete descriptions are in hand, these displays can supply the basic material for explanations – plausible reasons for why things are happening as they are. (Miles & Huberman 1994, 90)

Other analysing methods were not needed. The data collected by interviews proved that other data was not available, and therefore comparison with the new data was not possible to conduct.

2.6 Problematic issues related to the research

There exist few problematic issues related to the research. Researcher cannot be certain of the fact that the interviewees told her the truth. Receiving and gathering the information for the research question was difficult. One of the main problematic issues what happened during the research was the death of a key person Mr. Leo Allo. He was mentioned in many sources to be the key person to hold information related to my research. Before the interview was made – although the interview day was settled – Mr. Allo suddenly passed on. Another issue what could have an influence in the research is the corporate culture. The researcher could have been seen as an outsider and this attitude could have affected to the information provided. Problematic is, if the interviewees consider the interviewer as trustworthy.

2.7 Participants of the research

The interviewees were selected by the knowledge they possessed and by the position they have in the organization.

Persons that were interviewed were as following: Vice President (Marketing) Mikko Osara, Business Intelligence Manager Lauri Leinonen, Manager (Market Analysis) Marjariitta Rahkila, Communications Manager Elisa Lomperi, Information Technology Manager Risto Lahti, Product Development Manager Ari Puurtinen, Product Development Manager Petter Honkalampi, Product Development Manager Kari Juppi, Forming Section

Engineering Manager Antti Leinonen, Environment Manager Tuula Laitinen, Product Development Engineer Teemu Turunen, Manager (Product Technology) Samppa Salminen, Specialist (Energy) Elli Ikonen and Vice President (Technology) Jyrki Huovila. The person who was not interviewed was Senior Vice President (Communications) Leo Allo.

2.8 Outline of the study

In the first chapter the subject under study is introduced, the aim of the study explained, and the methods and concepts described. In the following chapter theories on environmental marketing, marketing strategies and advertising claims are reviewed. In the third chapter the environmental marketing in Metso Paper, Jyväskylä, is explained. In the fourth chapter results and conclusion are presented, and some development ideas for Metso Paper, Jyväskylä, are suggested.

2.9 Potential environmental advertising claims of Paper Machine

According to Carlson, Grove and Kangun (1993) developed environmental advertising claims, could be as follow, in a case that such products would be in Metso Paper, Jyväskylä.

Product Orientation: When this claim focuses on the environmentally friendly attributes that a product possesses, it is hard to adapt to metal products in Metso Paper, Jyväskylä. A product made of metal cannot be for example biodegradable, but it can be recyclable.

Process Orientation: This claim deals with technology and with production technique, and this type can be used when proving for example that some percentage of the raw material used in producing a certain product are recycled. Metal is often recycled, and can be used as a claim in marketing argumentation. Also this type of claim can be used in argumentation to the customers, how a certain product decreases client's energy or water consumption.

Image Orientation: The claim associates an organization with an environmental cause or activity for which there is broad-based public support. This kind of type can be used when announcing a fact for example that the company is committed to preserving our wildlife. Image orientation can be used when claiming that a company is decreasing the contamination of a plant. Elisa Lomperi mentioned in her interview that it is not news when Metso Paper announces that the company is following the rules and acting according to the law. She says the public is expecting the company to do so.

Environmental Fact: A claim referring to environmental fact is difficult use in Metso Paper, Jyväskylä. It could be more useful within the forest industry itself, paper production sector.

It is known fact that the customers of Metso Paper, Jyväskylä are interested in knowing how the products provided are making their paper production process more efficient and how the products will provide better quality. Customer of the customers of Metso Paper, Jyväskylä, in other words the clients who are purchasing the paper from the paper mills, are more keen of knowing about added environmental value of the products, how to make the process more environmentally efficient. It may be said, that the time is not far away when products are designed to be environmentally friendly from the beginning, instead of finding such characters later on.

If within this research would have found products to be sorted for this research, the results would have been illustrated as follow.

First would have been evaluated the significance of the environmental impact in paper machine according to life cycle assessment. How significant an impact is, more important is the claim in argumentation. For example the consumption of the water in a paper mill is significant and can be reduced by using a certain, specific product, that when functioning uses less water than previous product. Through this table argumentation for marketing could have been created. An example of a claim could have been "Product X decreases 25 % of your water consumption".

| <i>Product name</i> | <i>Environmental aspect</i> | <i>Significance in manufacturing phase</i> | <i>Significance in usage phase</i> | <i>Argument</i> | <i>Importance of the claim</i> |
|---------------------|-----------------------------|--|------------------------------------|--|--------------------------------|
| Product X | Consumption of water | 1 | 3 | Product X decreases the water usage in paper production 25 % | 3 |
| etc | | | | | |
| | | | | | |

1=not significant, 3=significant

3 TOWARDS ENVIRONMENTALLY ORIENTED PRODUCTS

In this thesis "environmental marketing" is generally used as a concept, and it includes concepts like sustainable marketing, economical marketing, green marketing, enviropreneurial marketing as well.

Environmental marketing means all the elements that communicate about the environmentally oriented characters of the product, for example how much the product burdens the environment, is the waste from the production line recycled and how the product is packaged.

Environmental or 'green' marketing is seen as one tool for sustainable development and satisfaction of multiple stakeholders. (Kärnä, Juslin, Ahonen & Hansen 2001) According to Valtonen, Juslin & Laine (1995, 118) the concept of marketing must be widened because of the increasing demands of the society. Instead of relying on the classical four P's (product, price, promotion and place) four new E's should be considered (ecological, economical, estetic and etical). As mentioned before ecological marketing has been reactive, not proactive; it has been used as environmental communication and environmental claims in advertising. (Valtonen et al 1995, 118) Advertising can be viewed as a subsystem of marketing practise. What is advertised and how it is advertised are driven by and interact with products, prices, and distribution practices. Thus, there can be no truly green advertising if there is not something green about the product (e.g. use of resources, packaging, energy efficient transport system). (Kilbourne, Banerjee, Gulas & Iyer 1995) In their article Kilbourne et al argue that while marketing technology has contributed significantly to the ecological crisis, mitigation of that same crisis is immanent in the marketing process as well. But does marketing have a conscience? Can marketing be set as a tool for saving us from the crisis? Marketing is a tool for selling items. In those items the solution for the salvation can be seen, not plainly in marketing, because people are not going to stop marketing all kind of products, also environmentally harmful.

Marketing connects the organization in a visible way to its environment. In the university of Helsinki in the faculty of Forest Product Marketing the researchers have developed a model for marketing planning and its operationalization. The structures of the model includes five sections, which are: 1. management systems that emphasizes environmental issues in all decision-making 2. Ecological orientation in organization, that usually means new vacants that are emphasized by environmental issues, means new knowledge that requires training and development 3. Information systems 4. Networking and transportation. Ecological dimension is attached into transportation (emissions are analysed). (Valtonen, Juslin & Laine 1995, 123, 126) It implies, that the construction of a profit center is modified by strategies. That is why the marketing strategy decisions belong to the upmost level of the organization. (Valtonen, Juslin & Laine 1995, 125-126)

- the holistic management process responsible for identifying, anticipating and satisfying the requirements of customers and society, in a profitable and sustainable way (Peattie 1995, 28)
- the marketing approach needs both to shape customer needs and expectations, and to provide customers with appropriate choices to meet their needs. Marketing's communication approach and techniques must help in informing, educating and channeling the needs of its current and potential customers towards ecologically benign products and services. One role is its ability to identify and develop such consumption choices that meet the current needs without sacrificing the ability to meet future needs. This means only looking for products which do not damage the environment but also developing such products/services as will improve the condition of the environment. Environmental marketing practice must redirect customer needs toward ecologically safe products and services through technical improvements. It must also encourage reconsumption of products e.g. through recycling. At the same time, environmental marketing has to both shape customer expectations and deliver them in such a manner which creates a win-win situation between cost-efficiency and environmental protection. (Polonsky & Mintu-Wimsatt 1995, 7, 19)

Environmental marketing can be seen as *sustainable marketing* as well. Sustainable marketing is the process of planning, implementing, and controlling the development, pricing, promotion, and distribution of products in a manner that satisfies the following three criteria: 1) customer needs are met, 2) organizational goals are attained, and 3) the process is compatible with ecosystem (Fuller 1999, 4)

Menon & Menon (1997) describe *enviropreneurial marketing* as a process for formulating and implementing entrepreneurial and environmentally beneficial marketing activities with the goal of creating revenue by providing exchanges that satisfy a firm's economic and social performance objectives. (Menon & Menon 1997)

3.1 Ecoproductization

Increasing amount of environmental regulations, growing demand for eco-products and own aspiration of business management have expedited organizations' actions towards environmentally oriented business. Focus in developing environmentally oriented business has been in life cycle assessment; not in the development of the whole content of the product. (Pallari 2004, 8)

Along with environmental issues in organization can be talked about *environment value*. Those are organization's values that are connected to productization in a certain place and in a certain environment. Generally means

matters that can be considered significant to wellbeing of the environment. (Pallari 2004)

Adding environmental values in a product is difficult to concretize. Environmental values are matters that can be considered relevant for environmental wellbeing. In a process of ecoproductization environmental values are values that are represented by an organization and which are related to productization in a certain place and environment. (Pallari 2004, 17-18)

A process of developing an environmentally oriented product can be set off from the idea of product differentiation (Aaker 1996, 15). In this case organization has to express its opinion about its values and the principles of sustainable development in creating environmentally oriented solutions. The products already placed on the markets can be re-positioned: the new-old-product -thinking is based on Crawford's (1996) idea of examining a product placed on the markets as a new product on the markets. (Pallari 2004, 18-19)

Reasons for investing in environmental marketing can be both external and internal. External motives are responding to customer's demands or reacting to competitors' environmental marketing. The reason can also lie in the supply chain. Internal motives can be economic savings by efficient resource usage. In addition to developing environmental know-how, an organization has to invest in marketing that contains environmental values. This means, that the impact in the imago and credibility of the organization must be clarified before ecoproductization. Environmental values are concretised also in environmental communication. (Pallari 2004, 21)

Above all, before developing a product differentiated by its environmental values, an organization must ensure that the product has a character of eco-product before it can be marketed as environmentally oriented product. One cornerstone in ecoproductization is to define the concept of an eco-product. If we approach the concept from technology oriented point of view, an eco-product can be seen as a product that burden environment less than a normal product as a whole. This way ecoproductization can be directed towards life cycle assessment like water and energy consumption and waste management. Another cornerstone is how we define ecological product development. Does it mean technical solutions, product identity or eco-efficiency? It can be highlighted that the product is not containing harmful ingredients or producing is not causing social or ethical problems. In marketing plain 'no' list is not enough; positive arguments are needed as well. For example the product can solve customers' problems in a new way or it can speak to customers about positive environmental choices. According to Pallari (2004) the general criteria of an eco-product are company philosophy (values and attitudes), culture, aesthetics, design, natural resources, decreasing the amount of raw material, reclaimed usage, disposal, recycling, re-manufacturing, laws and regulations. (Pallari 2004, 21-22, 62)

Metso Paper has done a life cycle assessment about a paper machine and therefore the results of the assessment can be used in their environmental marketing.

3.2 Integrating ecological issues into marketing planning

Marketing bridges the company and its markets in a societal context. How should environmental and social responsibility be integrated into traditional utilitarian business and marketing planning? (Kärnä, Hansen & Juslin 2001, 849). Marketing strategies are determined by making goal-oriented decisions about products, segments and market areas as well as competitive advantages. Ecological marketing requires conscious strategic decisions about environmentally friendly products. The concept of the product is broadened out by including eco-friendliness as one of the product characters. Eco-friendliness is considered through the whole life-cycle of the product. However the products which only contain the requirements of the authorities (e.g. legislation) are included in regular products and the benefits of eco-friendliness cannot be used. Competitive advantage is a crucial factor: especially the strengths that have a pulling force towards (or from?) the customers. When the advantage is gained it is used in all marketing of the company. (Valtonen, Juslin & Laine 1995, 125)

3.2.1 The marketing strategies and actions of ecological marketing

Valtonen, Juslin and Meriluoto (1998) made conclusions based on their research considering ecological marketing strategies and actions. In product strategies ecological marketing highlights the life cycle of the product. Important matters are the origin of the raw material and the manufacturing process. It is hard to evaluate how much of the customers belong to the greenest customers. That makes it difficult to evaluate the size of the greenest markets and decide the customer and market area strategies. Friendliness to the environment can be used as competitive advantage in the relationship with other products or competitors as well. Friendliness to the environment affects to large segments when the competing products are equal by their characters and price. In marketing actions publication and PR are central parts in ecological marketing. The knowledge of the eco-labels is minor among the consumers, as well as environmental knowledge. Influencing by offering facts on the markets is not a sufficient way of acting. Environmental matters are placed in value bound image markets. The forest certification has value only to the consumers who value environment. (Valtonen, Juslin & Meriluoto 1998, 31-32)

Valtonen, Juslin and Laine (1995) defined certain marketing actions:

The most visible part of ecological marketing are environmental claims in advertising and corporate environmental communication. It would be

a mistake if those two aspects would be the only ones used in ecological marketing. (Valtonen, Juslin & Laine 1995, 127)

Personal contacts are an important part of the marketing actions, the sales personnel must hold the information about the environmental issues of the product. An interesting part of environmental issues being part of the sale is the values and attitudes of the sales person. (Valtonen, Juslin & Laine 1995, 127)

A very important area is finding the relevant market information. It seems to be difficult and therefore neglected are in forest business. Industrial customers are pretty much unaware what the end customer wants, how they consume and what is their opinion. (Valtonen, Juslin & Laine 1995, 127)

In R&D the most relevant information is the needs of the customers and markets, which is provided by the marketing department. For example in defining what is environmentally friendly technical details are not quite enough, but the concept must be proved by the customers and markets. (Valtonen, Juslin & Laine 1995, 127)

Pricing is a central part of marketing decision making, but not often influenced only by environmental characters of the product. (Valtonen, Juslin & Laine 1995, 127)

3.2.2 It is not greenwashing!

Greenwashing is described as the act of misleading purchasers regarding the environmental practices of a company or the environmental benefits of a product or service. (Case 2007)

The growing demand for more environmentally friendly goods and services has led many manufacturers to find cost-effective way of improving their environmental performance and the environmental performance of their offerings. Unfortunately, not all manufacturers have made the investment necessary to provide more environmentally friendly products. In order to compete in a market that demands green products, some manufacturers have decided to rely on misleading advertising instead. Terms and claims were used without clarifying their meaning. Following numerous consumer complaints, the U.S. Federal Trade Commission (FTC), which enforces a wide variety of consumer protection laws, identified a variety of deceptive advertising practices based on their investigation in 1992. FTC published a booklet 'Guides for the Use of Environmental Marketing Claims'. (Case 2007) Kärnä, Juslin, Ahonen and Hansen (2001) emphasize as well, that green advertising without environmental emphasis in strategies and appropriate connections between strategies and marketing operations leads to greenwashing.

The FTC guidelines require manufacturers to provide specific details explaining any environmental claim without overstating an environmental attribute or benefit. Generic claims of 'environmental preferability', 'environmentally friendly', or 'Earth smart' are to be avoided, because they do not provide purchasers with any specific information that can be used to compare products. Such claims are unacceptable without an accompanying explanation detailing the specific environmental requirements necessary to justify the claim. (Case 2007)

The article of Case outlines six greenwashing 'sins'.

- Sin of Fibbing: e.g. claim that a product meet the environmental standards when it is clear they do not
- Sin of Unsubstantiated Claims: e.g. 'just trust us', 'green', 'eco'; inability to provide proof
- Sin of Irrelevance: e.g. 'CFC-free' claim even though CFCs have been banned in products since 1978
- Sin of the Hidden Trade-Off: e.g. product manufactured in a facility powered by renewable energy, but the product makes no claims about the potential human health or environmental hazards of the product itself
- Sin of Vagueness: e.g. '100 % natural'
- Sin of Relativism: e.g. a product can be the most environmentally preferable product in its class, but still be an inappropriate choice, like fuel-efficient sport vehicle vs mid-sized passenger car

Kärnä and Juslin (2001) have conducted a survey about how green advertising reflects environmentally sound strategic- and structural-level decisions. The empirical data for the study was collected from the Finnish forest industry, including advertising by the industry. A fact is that the credibility of green marketing is relatively low and that causes problems for marketers. It seems that consumers trust more in the sincere intentions of ENGOs more that they trust industry, who more often has scientific data about the issues.

3.3 Environmental advertising claims: creating a message

Peattie (1995) claims that any promotional message will contain a theme designed to appeal to the target audience. According to Peattie themes fall into one of three general types: 1. Rational appeals aim at the customer's self-interest by stressing the value or performance of the product, 2. Emotional appeals aim to create an emotional response in customers, which will motivate them to purchase. Green adverts relating care of the environment with children's welfare or stressing the dangers of environmental degradation are aimed at people's emotions. 3. Moral appeals aim at people's sense of right and wrong.

Carslon, Grove and Kangun (1993) have developed a sorting of environmental advertising claims, that includes five distinctive types. The sorting is based on content analysis. The claim type classification system was derived by examining a broad sample of environmental ads. This sorting is going to be adapted for environmental arguments which are going to be found through this research.

| | |
|---------------------|---|
| Product Orientation | The claim focuses on the environmentally friendly attributes that a product possesses. Example: "This product is biodegradable." |
| Process Orientation | The claim deals with an organization's internal technology, production technique and/or disposal method that yields environmental benefits. Example: "Twenty percent of the raw materials used in producing this good are recycled." |
| Image Orientation | The claim associates an organization with an environmental cause or activity for which there is broad-based public support. Example (a): "We are committed to preserving our forests." Example (b): "We urge that you support the movement to preserve our wetlands." |
| Environmental Fact | The claim involves an independent statement that is ostensibly factual in nature from an organization about the environment at large, or its condition. Example: "The world's rain forests are being destroyed at the rate of two acres per second." |
| Combination | The claim appears to have multiple faces, (i.e. it reflects a product orientation, process orientation, image orientation and/or an environmental fact). |

Table 1: Five Types of Environmental Advertising Claims

Kangun et al have also developed another typology; it delineates categories of misleading or deceptive environmental claims.

| | |
|--------------------|---|
| Vague/Ambiguous | The claim is overly vague or ambiguous; it contains a phrase or statement that is too broad to have a clear meaning. Example: "This product is environmentally friendly." |
| Omission | The claim omits important information necessary to evaluate its truthfulness or reasonableness. Example: "This product contains no CFCs." (when in fact it contains other environmentally harmful chemicals) |
| False/Outright Lie | The claim is inaccurate or a fabrication. |

| | |
|-------------|---|
| | Example: "This product is made from recycled materials." (when in fact it is not) |
| Combination | The claim contains more than one misleading/deceptive element. |

Table 2: "Green Washing": Misleading/Deceptive Categories of Environmental Advertising Claims

These typologies can be used in evaluating the contents of ads. Carlson, Grove and Kangun (1993) result, that there are a number of possible costs associated with the conclusion that some types of environmental claims are more likely to be perceived as deceptive or misleading. Organizations that develop and place advertisements which rely on certain kinds of claims may be increasing the risk that consumers will be confused by the advertisements or find the ads misleading. Environmental ads that are too technical or are perceived to manipulate through deception may cause the receiver to simply cease his/her effort to comprehend the message, resulting in an advertiser's failure to communicate with its audience. Further, it is possible that the confusion or deception that environmental advertisements generate may compromise the public's perception of the credibility of the sponsoring organization (i.e. detract from the organization's overall image). (Carlson, Grove & Kangun 199, 38)

The product and process orientations demonstrate an organisation's interventions in the marketplace that have a positive or at least a benign effect on the environment. They can be regarded as 'substantive' claims that present more concrete information about the environmentally responsible efforts of an organisation. The image orientation and environmental fact can be conceived to be 'associative' claims that are less tangible in nature. These claims help an organisation to establish an environmentally friendly facade by tying it with some positive environmental information, but without directly mentioning how it actually contribute to ecological well-being. (Chan 2000, 352)

Firms making substantive environmental claims relating to how their products impact on the natural environment may be indicative of the firms' overall willingness to behave in a less environmentally harmful fashion. In addition such firms, through their advertisements, would provide consumers with information that would enable them to modify their behaviour, so that they can reduce environmentally harmful consumption. (Polonsky, Grove & Kangun 1997)

When the functions and products of the company are truly less environmentally harmful its environmental marketing directs consumers as such towards sustainable consuming behaviour. If a company would start to act as a conscience, i.e. would direct consumers to boycott products which are more environmentally harmful than their own products - well, this strategy could act as an excellent competing strategy. Appealing to the emotions, conscience, facts and money saving of the consumers can be profitable to a company. People always want to do the right thing. Nonetheless image- and environmental-based claims do not require any modification of the firm's

environmental performance; posturing claims do not represent a “real” change in corporate behaviour at least not that minimizes the firm’s detrimental impact on the environment. Polonsky et al argues that the communication of real corporate environmental improvements and consumers consuming more responsibly is what environmental marketing should be about.

3.3.1 The effectiveness of environmental advertising

As one of the marketing actions *environmental advertising* is needed quite often. According to Polonsky, Grove & Kangun (1997) environmental advertising is making environmental claims in commercial advertisements. (Polonsky, Grove & Kangun 1997)

In general, researches conducted in developed countries show that green consumers are sceptical about advertisers’ environmental claims. Chan (2000) has examined how environmental claim type may affect the communication effectiveness of environmental advertising. Chan argues that marketers should also take into consideration how their target customers actually perceive the eco-friendliness of the relevant source country, when deciding which environmental claim type they should apply. Chan has perceived that to make product choices more consistent with their environmentally responsible desire, consumers would prefer to have more concrete information about the eco-friendly attributes of green products. When Chan examined empirical results along with the notions of substantive and associative claims, it appeared that substantive claims would generate more favourable consumer responses than associative claims. However, an assimilation effect and a contrast effect can influence in consumers’ opinions. A highly involved individual will interpret a message that is not congruent with his opinions as more positive than it actually is. This reaction represents an assimilation effect. Similarly, the theory also posits that a highly involved individual will interpret a message that is not congruent with his opinions as more negative than it actually is. This reaction is called a contrast effect. (Chan 2000, 352, 356)

4 IN SEARCH OF ENVIRONMENTAL MARKETING IN METSO PAPER INC, JYVÄSKYLÄ

Metso Paper Inc is a part of Metso Corporation. A net sale of Metso was 6250 MEUR in 2007. At the time of this study Metso had business operations in approximately 50 countries, and almost 27,000 employees. At that time Metso had three business areas: Metso Paper, Metso Minerals, and Metso Automation. Metso Paper brought 47 % of the Corporation's net sales in 2007. Metso Paper served pulp, paper and board manufacturers as well as energy industry worldwide. At the time of this study, Metso Paper has supplied over 1,500 paper machines and equipment for 800 pulping lines to customers worldwide. The organization of Metso Paper consisted of four business lines: Fiber business line, Paper and Board business line, Tissue business line and Power business line. In Jyväskylä operated Paper and Board business line. (www.metso.com, www.metsopaper.com)

OECD has made a classification of the characteristics of the environmental goods and services industry. According to Tuula Laitinen Metso Paper Inc has been conducting a project to define their environmental goods and services in their product range according to the OECD classification. Metso Corporation has done their estimation and Metso defines that approximately 70 % of their products are part of environmental business. For example the corporation have air pollution control, wastewater management, solid waste management, noise and vibration abatement, analytical services, cleaner/resource-efficient technologies and processes, recycled materials, renewable energy plant... (www.metsopaper.com/intranet.)

At the time of this study Metso Paper had different kind of environmental objectives and programs, and the company had done an eco-balance and a life cycle assessment for paper and board machines. The information gathered found out very useful inside the company and it will be used as a material when planning stakeholder communication, internal and external training, product manuals etc. It will also work as an information source when planning the strategy of the company and business lines, setting environmental goals, measuring the level of environmental protection and making a clearance of customer's activities (different source of energies and their impacts in environment). Metso Paper has measured that 98 % of the paper machine's environmental impacts are taking place in the operational period (when the product is in customer's use) and the rest are happening when manufacturing and transporting the product. The energy consumption is causing the major impact, although the emission to the water is great as well.

At the time of this study the concept of environmental marketing in Metso Paper Inc, Jyväskylä did not exist. After interviewing the marketing manager of the company Mikko Osara it was quite clear that any strategy or plan of environmental marketing has not been made. At the time of this research

intranet pages was lacking of a link “environment”, and under “marketing” link there was no reference to environment. On the front page of Metso Paper internet web pages there was no word “environment” presented. Clicking “About us” headline you could find a link “environment”, and there you were able to find the thoughts of Metso Paper about environment, and links to environmental technology and environmental management as well. Under the headline “Environmental technology” was a list of the technologies that help to control environmental impacts: noise control, dust control, moist and mist emission control, water management, coating colour recovery and heat recovery. None of these were produced in Metso Paper, Jyväskylä. For example noise control and dust and mist emission control were produced in Pansio. According to Osara and R&D managers there would have been few projects about to start where new products are designed and which environmental issues are considered from the beginning.

4.1 Paper machine and its environmental aspects and impacts

In the manufacturing process of a paper machine amount of impacts to air, soil and water are CO₂ to air 0,2 %, Nox to air 0,2 %, particles to air 0,5 %, SO₂ to air 0,5 %, Energy consumption 0,13 %. Altogether these are 3 % of the impacts according to life cycle assessment of a paper machine. Most of the impacts, 97 %, are produced in the usage phase, when the paper machine is used by a customer.

A paper machine is recyclable. A modern paper machine is made of 4940 t metals, 0,4 t polyethylene, and 0,1 t polycarbonate which are 100 % recyclable; 28 t mineral fiber insulators, 18 t rubber, 12 t polyurethane, 2 t ceramics and composites, and 0,5 t other plastics, which are not recyclable. This means 98,8 % of a paper machine is recyclable.

The most relevant environmental aspects of a paper machine are energy and water usage, material efficiency and waste management. The dichotomy facing the pulp and paper industry is simple; it has a renewable raw material but high consumption of water and energy. Survival and prosperity in a sustainable future will require substantial change to maximize the market acceptance of cellulose products, the minimization of water and energy use and the reduction of the overall environmental footprint of the industry. (Jopson 2001, 1)

Raw material production and the main environmental aspects of pulp and paper industry are presented here. There is an obvious relation between a healthy, productive forest and the paper industry. The desirable situation is to sustain and expand renewable resources that will be necessary to meet future consumers’ demands at reasonable price, while, at the same time, respecting other demands imposed by our society, as the protection of the environment. Sustainable forestry implies several aspects which mean protection of soils,

water quality, wildlife and endangered species. A good forest management can significantly contribute to efforts that redress climate change. (Blanco in 3rd Ecopapertech Conference 2001, 291-301)

The principal emissions of the paper industry are: emissions to air (including mal-odorous emissions), water discharges, and solid wastes, as well as acoustic contamination. Transport is a major cost in the production of pulp and paper, as well as an environmental aspect, accounting approximately for 10 to 20 per cent of the total operating costs of the companies, as every day wood and other raw materials, as well as finished products, are transported to and from the mills by innumerable lorries, trains and ships. The environmental impact of transport is global warming. Transportation is causing emissions to air: sulfur dioxide, nitrogen oxides, fossil carbon dioxide and particles. These emissions can be reduced dramatically, as for example MoDo Group did. MoDo Group sulfur emissions from shipping were reduced up to 75% due to the change to low-sulfur oil on all their ships. The water consumption in the process is major. The effort carried out during the last decades has allowed papermakers to reduce the water consumption by more than 50-80% per ton of product depending on the type of production, to reduce the loads of the water discharges by more than 90%, to virtually eliminate dioxin and furans, to reduce the chlorinated compounds by more than 70% and to reduce air emissions. The most significant emissions to air are sulfur, nitrogen and carbon oxides (being these two last ones mainly originated when producing energy). The principal emissions from production processes is sulfur dioxide and other sulfur compounds, many of which have a very unpleasant odor, disturbing the local communities if released from the mill. The main pollutants discharged to water streams by the paper industry are solids and dissolved (organic or inorganic) compounds, as well as colour. The discharges of organic material and nutrients (P and N) contribute to the eutrophication of water streams, and the consequent lack of oxygen in the water environment, which can cause real dramatic situations for the local fauna and flora. (Blanco in 3rd Ecopapertech Conference 2001, 291-301)

Production of pulp, paper and board also produces the generation of a certain volume of solid wastes as bark, sludge, ashes, plastics... which, in the past, has been sent to landfills. Normally these waste materials are generated in stages such as energy production, effluent treatment or in chemical recovery processes. Nowadays most of these wastes are re-used at the mill use or for other applications (fabrication of recovered paper or board, energy production, cement, bricks, landfill closure or agriculture). (Blanco in 3rd Ecopapertech Conference 2001, 291-301)

The pulp and paper business is able to generate a significant proportion of its own energy needs by burning parts of the wood that are not used to produce pulp (bark, sawdust and other residues) as well as some by-products, such as sludge from the effluent treatment. Purchased energy (even considering a significant degree of self-sufficiency) and energy-related investments represent a major production cost for the mills, varying between 10 and 30% of the total

production cost, depending on the type of product and manufacturing process. This is why some of the pulp and paper companies also manage –or at least partially finance- energy plants such as UPM-Kymmene, with nine hydropower plants all over Finland. Further improvements in energy efficiency are expected; an urgent priority is to improve energy efficiency in existing older mills and especially in developing countries where performance is less positive. Typical atmospheric emissions from energy production are: sulfur dioxide (SO₂), nitrogen oxides (NO_x), dust, sulfur compounds (total reduced sulfur, TRS) and carbon dioxide (CO₂). All the efforts to utilize own-produced biofuel for energy production is not merely a matter of cutting energy costs and emissions from fossil fuels, but a way of solving waste problems in an environment-friendly and cost-efficient way. (Blanco in 3rd Ecopapertech Conference 2001, 291-300)

The environmental impact from the energy use of paper making process can be evaluated in many levels depending on the objectives. The producer of paper making technology can consider the environmental impact through technology. The paper maker can either invest in new technology or improve its energy efficiency. The actions for decreasing environmental impact can be divided into increasing the efficiency of the energy use, increasing the efficiency of the energy production and increasing the amount of carbon-free energy. (Blanco in 3rd Ecopapertech Conference 2001, 302)

Recovered paper can be used as a raw material. The use of recovered paper has increased through the years, recycling rate was in 2002 53,9% in Europe, when the amount of recovered paper 43,7 million tons. (www.skogsindustrierna.org)

4.2 Paper machine and markets

The pulp and paper industry is one of the most important industries in the world, employing, directly and indirectly, 15-20 million full-time staff and with annual sales revenues of about USD 750 billion. The industry's raw material is renewable, recyclable and sustainable and yields a product with high environmental qualities, generating substantial long-term economic benefits for many stakeholders. (Stade in 3rd Ecopapertech Conference 2001, 363)

Paper machine is high-technology product, and requires many experts to be designed and produced, to be built up. It consists of four basic parts, and together these parts assemble a paper machine. These four parts are headbox, wire part, press section, and drying section. Additional parts are size press, calendering section, and reeling.

World paper and paperboard production has grown rapidly over three consecutive years, reaching 359 million tons in 2004. Historically, demand growth has varied considerably between regions. For example, the Asian markets have grown dramatically in the 1990s and 2000s, surpassing North

America and Western Europe in overall size. In 1980, North America and Western Europe dominated the world markets, accounting for 38% and 24% of total demand. At that time, the share of Asia was about 19-20%. Today, Asia accounts for 37% (131 million tons in 2004) of world paper and paperboard consumption, leaving both North America (100 million tons) and Western Europe (81 million tons) behind with 28% and 23% shares, respectively. The shift in growth from west to east and from north to south has been particularly dramatic in 2001-2004, with Asia accounting for 64% of the global demand growth, while North America and Western Europe contributed only 11% and 10%, respectively. Considering its relatively small share of only 4% of global markets, Eastern Europe has been another rapidly growing market with 9% of the global demand growth during 2001-2004. (Jaakko Pöyry Consulting 2005)

Jaakko Pöyry Consulting has evaluated that world demand for paper and paperboard is expected to grow from 359 million tons in 2004 to 494 million tons by the year 2020, corresponding to an average growth rate of 2.1%/a. There is a clear correlation between GDP and paper consumption per capita. Low- to medium-income regions with vast populations, such as Asia-Pacific and Latin America, represent the biggest potential for the paper industry's growth in the long term. Economic growth will be fastest in China, the rest of Asia and Eastern Europe. By 2020, the largest increase in paper and paperboard consumption (91 million tons, accounting for 67% of the global demand growth during 2004-2020) will take place in Asia, where paper consumption is projected to reach 222 million tons. Asia will account for 45% of the world's paper consumption by 2020. (Jaakko Pöyry Consulting 2005)

An interesting aspect would have been to reflect a strategy of paper machine products for environmental business against these market areas. Unfortunately the information was not available or any strategy was not created.

Lately some stakeholders of pulp and paper industry have been interested of the environmental impact paper machines produce. For example authors have been worried of the raw material of paper the publishing houses are printing their books on. How these companies protect forests and from where they receive raw material have been two important questions for the stakeholders.

Metso Paper has evaluated what are the paper machine customers' goals in influencing in the environmental aspects. The important goals are energy efficiency; producing paper with smaller amount of raw material and of raw material which quality varies, as well as using recycled fibre; decreasing air emissions (greenhouse gases, noise); decreasing the water usage, closed water loop; decreasing the amount of chemicals; recyclability of process machinery and extending the service life. The interest is rising, and one scenario is that soon every company in pulp and paper industry have to explain to the public the exact environmental impacts of their actions. Therefore companies that purchase a paper machine are soon interested in knowing exact environmental impacts of a single part of the machine; how a part contributes to the most

significant environmental impacts, the consumption of water and electricity of the whole process. This sets a demand for paper machine manufacturers, which cannot be easily satisfied. A paper machine consists of thousands of single products and for example life cycle assessment as a solution for this demand would simple cost too much and takes too much time. Another, preferably more practicable solution, is the experts of the product development to calculate and estimate the impacts. Every part is tested and pilot part measured as a part of the process; data should be found.

At the time of this study the concept of environmental marketing for product marketing of Jyväskylä products in Metso Paper Inc. did not exist. After interviewing Mikko Osara, the marketing manager of the company, it was quite clear that any strategy of environmental marketing has not been made. The marketing manager mentioned, that there would be a strategy if there is a product, and this can lead to a thought, was there an egg first or a chicken, with another words, were the demand rises, from the customers, or from the product management. Ideas among the product manager and management has risen to develop new environmentally friendly products, to satisfy the demand.

5 RESULTS AND DISCUSSION

In this research the aim was to find the products of Metso Paper Inc, Jyväskylä, that use less environmental resources, i.e. are more environmentally friendly, than previous products. The result of this research was that there are no such products. Therefore there were no characters that could be used in argumentation of product marketing of paper machine products.

5.1 Eco-products of Metso Paper

Forest industry claims for being forerunner in certificate and environmental matters. On the other hand in some sources it is mentioned, that it is behindhand of other industries. This can be seen in pulp and paper industry, and a question set "Why?". Valkonen (2005) mentions in his final thesis research, that practical experience have shown that environmental management tools (such as environmental management systems, life cycle assessment, environmental performance measurement, environmental reporting) have not caused as much improvements in corporate environmental performance as was expected. One reason for this is according to Halme (Heiskanen 2004, 147) slowness of the change in organizational culture. Technical product or manufacturing improvements or other tools are not enough for creating fundamental change, but organizations need to create new values and beliefs that direct towards environmentally friendly actions. In other words, organizations need to change the organizational culture. Forces that can cause change can be demand from stakeholders, tempting possibility of 'green market segment' or emission trade.

In Metso Paper Jyväskylä it was clear that the effort made for environmental business was made in Service Business Line. They offered energy audits and analyzing products, which can be used to make processes more efficient. The design of a paper machine itself, and its parts, was based on quality matters of paper.

In the process of finding metal products, which use less energy or water compared with previous products, different factors were taken into account. The subject was approached with eco-efficiency, how to define the qualifier, as well as product features and method of production, how these matters affects to the product utilization.

The information was gathered in the years 2007 and 2008 by interviewing and discussing with key persons, product managers, product development engineers and a marketing manager. The research lost ground during the first few months because one of the key persons, Leo Allo, passed unexpectedly away. This person was already gathering information for environmental business of the company, and was a senior member of the organization. This

research was completed based on the interviews of and discussions with Mikko Osara, Lauri Leinonen, Marjariitta Rahkila, Elisa Lomperi, Risto Lahti, Ari Puurtinen, Petteri Honkalampi, Kari Juppi, Antti Leinonen, Teemu Turunen, Samppa Salminen, Elli Ikonen and Jyrki Huovila, and the conclusions made based on the information received.

The conclusion of the discussions were, that there are no products, which use less energy and/or water or are otherwise sustainable or eco-friendly, compared with previous products, and manufactured in Metso Paper Jyväskylä. Several times it was pointed out by the interviewees that there were few ideas placed on the design table at the department of product development, where eco-friendly features are important part of the product design process. In Service Business Line were many analyzing products, where useful data would have been available, but this research concentrate on just metal products.

During the interviews I went through many interesting discussion how to make the water and energy usage more efficient in the paper making process. We found few products that would have been conceivable for this research, but in the end we concluded that the main point is to effect on the whole process of paper making instead of one part of it. For example if the product uses less energy in the beginning of the whole process, it often means that the energy usage will increase in the end of the process. For the question in what way the paper maker can get more paper with less money, the answer was to drive slow without breaks (best efficiency) instead of driving the machine fast (requires more money). Many paper manufacturers are competing against each by speed and quality, and of course by increasing speed they will produce more paper for less time.

The trend in advertising of one of the competitors of Metso Paper is to "launch" an old product again spiced up with environmental arguments. It is hard to tell, if the competitor managed to prove the claims. Measuring a paper machine is a very complex procedure, and for example simply asking a client to hand over its electricity bills does not tell the whole truth. Also, the way making a process more efficient is a business secret, and is not often told even to the supplier.

What are the factors the customers are looking for a product in the pulp and paper industry in the end? The fact is, that the quality of the paper, especially in Finland, it way too high at the moment. Comparing Swedish and Finnish basic copy machine paper, the difference is enormous. Swedish use paper, that is not as good quality as Finns, but one cannot see the difference in practise. Is this really what consumers want? High quality paper being wasted? I do not think so. I think there is nothing wrong with the attitudes inside the consumers, they are ready to accept less quality, if it does not affect to usage in practise. They are already using paper bags instead of plastic bags, canvas bags instead of paper bags.

One fact what came up in an interview of Mikko Osara was that Metso Paper did not need to sell as such. The customers contacted the company themselves by asking an offer, and all the customers were already old ones.

Advertising and marketing of the company was mainly image marketing and marketing communications; trade magazines presented new products and references through articles, and company organized conferences to customers where these issues are presented as well. Osara seemed to think that there was no need to advertise products with eco-friendly features, because there were no such products, and the company did not need to advertise to the clients; basically there was not product that could pay itself back by its eco-friendly features. The clients have been asking for good performance, what was made by technology or price, or new products were needed when the type of paper was changed, or the client wanted to increase quality or amount of production. According to Osara environmental laws set their boundaries as well for clients. There can be limits for the amount of the water that the client can use. If the client wants to increase the production capacity, it must not increase the water usage. A solution must be found to limit the water usage in spite of the increased output.

Juppi mentioned the scenario when a client will choose different energy sources in different countries. Some countries it was cheaper to use gas as a source, instead of electricity. This aspect affects also to the environmental aspects of the paper making process. Juppi clarified the product design process of Metso Paper by stating, that product development has been taken off of effectiveness, efficiency and quality. If the research will find a product that has eco-friendly features, according to Juppi, it will be an accident. By optimizing the paper making process, using right kind of parts and products, for example the amount of rejected ware can be decreased, and efficiency can become better. Puurtinen talked about renewals, how new technology in old paper machine makes the process more efficient, decreases costs and increases runnability. Puurtinen said clients were purchasing speed, not quality, from Metso Paper, and how speed pays itself back. Clients seemed to be thinking mainly the price of paper, and basing strategic decisions on that. Puurtinen mentioned also, that recycled fibre was not necessary the most ecologic solution: transportation and production waste can cause significant environmental impacts.

5.2 In what kind of material the found claims could have been used in?

Found claims could have been used in many materials in marketing purposes. Depending on the strategy, how deeply environmentally friendly thinking would have been wanted to associate into company's actions, claims could have been modified for a specific purpose.

Internally claims could have been used in internal bulletins, personnel magazines and guidebooks, and trainings. It is very important to clarify the facts behind the claims to the personnel; after the personnel are internalized claims the message can be delivered right to the customers.

Externally claims could have been used in product marketing for example such as brochures, company brochures, manuals, offers, customer magazines, posters and advertising, and in communications such as company web pages, bulletins, newsletters, and reports.

6 CONCLUSION

The answers to the research questions “1. What are the products of Metso Paper Inc, Jyväskylä, that can be found characters that use less environmental resources, i.e. are more environmentally friendly, than previous products? 2. How these characters can be used in argumentation of product marketing of paper machine products?” were found.

After analysing the interviews and the information received, the answer to the first questions is that there do not exist products in Metso Paper, Jyväskylä, that have characters that use less environmental resources compared to previous ones. The answer to the second question is that characters cannot be used in argumentation, because such products were not found, and therefore claims could not been made. Altogether, at the time of this study, Metso Paper, Jyväskylä did not sell or try to sell products that can be marketed as environmentally friendly.

A hypothesis set that there exist products which maintain characters described in the research question in Metso Paper, Jyväskylä was proved wrong. Such products are yet to be come. Although the answers to the research questions were found, they were not as expected. The set hypothesis was strong from the beginning, and after many interviews the results came clear.

It is generally known fact, that using green claims in marketing without an accompanying explanation detailing the specific environmental requirements necessary to justify the claims, is unacceptable. It is called green-washing. It has been seen, that the public does not approve using misleading marketing argumentation. The benefit what is planned to be gained through such a strategy is quickly lost when the public discovers how wide of the mark the marketing message is. Recently environmental business concept has been as a subject, and the term has been often seen in the public conversation. Could be said, that some companies have used large amount of resources for finding out how their present business activities would fit in the concept of environmental business. Oil companies have been criticised for using green claims although their products are at least 90 % fossil origin. Journalists and blog-keepers in business newspapers have already commented the situation, and like me, became aware of the question why companies are not creating new business within environmental business instead of trying to fit old business into it? Wouldn't it be rational?

“Diversity. Whatever.” That was department store Eaton's slogan in their advertising campaign 1998-99 in Canada. Pretty shocking, don't you think? The reality is, that in the human world everybody tents to follow each other, to behave in a flock, and it takes lots of courage to separate yourself, to be the first one on the new path, and just hope, that rest of them will follow. Today this slogan would not work. Modern world has used to get information now, not

tomorrow, and gets impatient very quickly. There is no need to prove you to be individual, everybody already is. Almost everything can be bought as custom-made. That is why companies must be custom-made too. Just the fact how much more talent that kind of company would attract compared with the flock-behaving companies, can lead the company further in business.

Generally Metso Paper, Jyväskylä should prove how their products are environmentally better than others. The company can make it easy for customers to choose their products, if the environmental claims are right and can be proved; it makes it easy to present the claims to their own customers who decide in the end what kind of paper and from what kind of processes they are purchasing. The claims can be related to whole business operations and processes or to products and paper making processes. If Elisa Lomperi is right, that the public is not interested in if Metso Paper, Jyväskylä is fulfilling the law and the requirements, then the arguments have to be found somewhere else. They can be from the overall environmental commitment of the company (standards like ISO is not enough) and specific green product claims communicating the environmental attributes related to a product.

6.1 Reliability and validity of the research

The aim of the research is to avoid causing mistakes. However, the reliability and the validity of the research may vary. The reliability of the research indicates the repeatability of measurement. In other words, the reliability of the research or measurement means the ability not to indicate random results. (Hirsjärvi, S., Remes, P. & Sajavaara 1997, 216.) As Hirsjärvi et al. describe reliability in their writing, if two different researchers research the topic within different times the results will be the same. If a converging research was carried out, the products related to the research could not be produced later than 2008. If this was the case, the reliability of the research would decrease. This aforementioned condition fulfils in the case of this research. Thus the results can be ascertained reliable in this synthesis and the reliability can be approved. (Hirsjärvi, S., Remes, P. & Sajavaara 1997, 216.)

The other concept that relates to evaluating the research is validity. Validity signifies the ability of the measurement and research method to indicate that what is meant to be measured. Sometimes the indicators and methods do not equal to the reality that the researcher is imagining to measure. For example, the questions of the questionnaires are answered, but the respondents may have perceived some of the questions in a different way than the researcher had in his or her mind. Should the researcher analyze the received answers from his or her own perspective the results cannot be considered true and valid. (Hirsjärvi, S., Remes, P. & Sajavaara 1997, 216-217.) In this research the research technique is valid. For example in this case there was no questionnaire for receiving answers, instead, there was an informal

interview being used among the key personnel. Therefore there was no possibility of misunderstanding the questions. In addition, the questions did not research opinions but factual information related to the product. The interviewees were such people as Metso Paper's product manager, R&D engineers and managers, environmental manager.

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