Marketing of environmentally sustainable ski center service

Marketing
Master's thesis
Laura Oja
2009

Department of Marketing and Management
HELSINGIN KAUPPAKORKEAKOULU
HELSINKI SCHOOL OF ECONOMICS

HELSINKI SCHOOL OF ECONOMICS
Marketing Master's thesis
Laura Oja

ABSTRACT

27.11.2009

MARKETING OF ENVIRONMENTALLY SUSTAINABLE SKI CENTER SERVICE

Objective of the study

The objective of this study is to explore ways how to utilize marketing to promote environmentally sustainable ski center services. I aim to answer this research question by studying the roles of green marketing practices, consumers and government in environmental sustainability development, integration of environmental sustainability in service marketing mix and utilization of sustainable tourism guidelines in ski center service marketing. The research is conducted from the viewpoint of a ski center service provider.

Research method

This research is qualitative by its nature. The empirical part was conducted as a case study and I executed semi-structured interviews with Lappish and Alpine ski center service providers. Semi-structured interviews enabled me to make sure that the specific topics get covered while simultaneously allowing me to obtain true understanding of the informant's conception how to implement environmental sustainability in ski center services. The interview outline was derived from the research questions and the interviews were analyzed following the theoretical framework, which was developed according to the theoretical findings.

Findings

The theoretical framework guided the empirical research, and contributed the following results to the study questions. Firstly, the roles of green marketing, consumers and governments are crucial for environmental sustainability development. Green marketing drives corporate philosophy in ski resorts, whereas consumers have an active role impacting on service sustainability with their consumption behavior. Government, for one, enables and regulates ski resorts towards environmental sustainability. Secondly, environmental sustainability can be integrated in the service marketing mix through implementing it comprehensively into each of the components. Additionally, the developed green service marketing mix can be used as a practical tool when promoting environmentally sustainable services. Finally, sustainable tourism guidelines can be used as benchmarks in ski centre service marketing, in Lapland and in the Alps.

Most importantly, the theoretical framework, which was generated with help of the sub research questions, comprehensively identifies the elements that affect the environmental sustainability of services. Therefore, the developed framework can be utilized in promoting environmentally sustainable ski center service.

Keywords

Green marketing, service marketing, environment, green consumerism, case study, ski center

HELSINGIN KAUPPAKORKEAKOULU
Markkinoinnin pro gradu- tutkielma
Laura Oja

TIIVISTELMÄ

27.11.2009

YMPÄRISTÖLLISESTI KESTÄVÄN HIIHTOKESKUSPALVELUN MARKKINOINTI

Tutkimuksen tavoitteet

Tämän tutkimuksen tavoitteena on tutkia keinoja, miten markkinointia voidaan hyödyntää ympäristöllisesti kestävän hiihtokeskuspalvelun edistämisessä. Pyrin vastaamaan kyseiseen tutkimusongelmaan tutkimalla vihreän markkinoinnin, kuluttajien ja valtion roolia ympäristökestävyyden kehittämiselle, ympäristökestävyyden integroimista palvelujen markkinointi-mixiin sekä kestävän matkailun ohjeiden hyödyntämistä hiihtokeskuspalvelun markkinoinnissa. Tutkimus suoritetaan hiihtokeskuspalveluntarjoajan näkökulmasta.

Metodologia

Tutkimus on luonteeltaan laadullinen. Empiirinen osa toteutettiin tapaustutkimuksena ja haastattelin hiihtokeskuspalvelujentarjoajia Alpeilla ja Lapissa puolistrukturoitujen haastattelujen avulla. Puolistrukturoidut haastattelut varmistivat, että tietyt aiheet tulevat käsitellyiksi, kun taas samanaikaisesti ne mahdollistivat todellisen ymmärryksen haastateltavan käsityksistä siitä, miten ympäristöllinen kestävyys voidaan toteuttaa hiihtokeskuspalveluissa. Haastattelurunko johdettiin tutkimusongelmista ja haastattelut analysoitiin seuraten teoreettisten löydösten perusteella kehitettyä teoreettista viitekehystä.

Tutkimuksen päälöydökset

Teoreettinen viitekehys ohjasi empiiristä tutkimusta, ja antoi seuraavat vastaukset tutkimusongelmiin. Ensiksi, vihreän markkinoinnin, kuluttajien ja valtion roolit ovat ratkaisevan tärkeitä ympäristöllisen kestävyyden kehittämiselle. Vihreä markkinointi ohjaa yritysfilosofiaa hiihtokeskuksissa, kun taas kuluttajilla on aktiivinen rooli palvelujen kestävyyteen vaikuttamisessa kulutuskäyttäytymisensä kautta. Valtio puolestaan mahdollistaa ja säätelee hiihtokeskuksia kohti ympäristökestävyyttä. Toiseksi, ympäristökestävyys voidaan integroida palvelujen markkinointi-mixiin sisällyttämällä se kokonaisvaltaisesti jokaiseen komponenttiin. Lisäksi, kehitettyä vihreää palvelujen markkinointi-mixiä voidaan hyödyntää käytännön työkaluna edistettäessä ympäristöllisesti kestäviä palveluja. Lopuksi, kestävän matkailun periaatteita voidaan hyödyntää parhaina käytäntöinä hiihtokeskuspalvelujen markkinoinnissa Lapissa ja Alpeilla.

Tärkeimpänä, tutkimuskysymysten avulla luotu teoreettinen viitekehys, identifioi kokonaisvaltaisesti palvelujen ympäristökestävyyteen vaikuttavat tekijät. Sen vuoksi, kehitettyä viitekehystä voidaan hyödyntää ympäristöllisesti kestävän hiihtokeskuspalvelun edistämisessä.

Avainsanat

Vihreä markkinointi, palvelujen markkinointi, vihreä kuluttaminen, tapaustutkimus, hiihtokeskus

TABLE OF CONTENTS

Index of Figures

Index of Tables

Index of Appendix

1 INTRODUCTION

Environmental contamination and climate change have made people anxious about the Earth's wellbeing and the effects of the possible global warming have been studied extensively during the last few decades. Consumers' environmental values, consciousness and claims have therefore strengthened considerably during the past years. The impacts of climate change have received considerable attention especially in the Alps, where glaciers are melting and biodiversity changing.

In recent decades, the Alps have become a magnet for tourism, which has led to congestion, pollution, and over-development in many areas. Similarly, the tourism orienting towards Lapland is forecasted to grow remarkably in the forthcoming years (Järviluoma 2001, 71), because tourists are increasingly heading north to guarantee reliable winter conditions. Pure wilderness nature is one of the most characteristic features of Lapland, but also a major factor behind the growth of tourism, which is becoming more and more international (Järviluoma 2001, 71; WWF 2007, 3). Taking transportation into account, especially air travel, the environmental problems related to ski tourism are even more significant.

Great amount of winter tourism pressure, in Lapland and in the Alps, is centered in ski resorts, consequently, they have a central role with regard to wilderness areas. Tourism is a strong driving force behind urbanization. Furthermore, other significant tourism-related threats are the increase in motor traffic and motor-based leisure activities, because they often interest areas previously untouched by tourism. Therefore, tourism poses very direct threats to biodiversity and disturbance to wildlife. (WWF 2005.) It is still possible to avoid the creation of megaresorts and urbanization as well as minimize the environmental contamination, which has happened in numerous places in the Alps. Hence, efforts towards environmentally sustainable development are needed.

1.1 Background

Travel industry is one of the fastest growing industries in the world. Moreover, it is heavily dependent on environmental resources and, on the other hand, has huge impact on environment. The most environmentally devastating form of leisure industry is the one connected with winter ski tourism (WWF 2005). The ski-industry uses enormous amounts of

energy to make snow, operate lifts, heat holiday apartments and move people to the resorts whereas the construction of ski runs causes irreplaceable damage to the landscape. This is paradoxical because the industry is also one of the most injured parties of global warming and deterioration of natural resources. Therefore, study of environmentally sustainable ski centre service is relevant.

Nowadays, when governments are enacting new environmental laws and environmental associations as well as customers are demanding higher levels of environmental stewardship, the environmental sustainability pressures for businesses are ever increasing. Therefore, ski centre service providers should fundamentally look-out for new research and new technologies for the purpose of better preventing negative impacts. Some companies are already starting to realize that proactive environmental management is ultimately more cost effective than reactive environmental management (Peaks to Prairies 2002).

Bridges and Wilhelm (2008) present that for many years, marketing has been perceived as part of the problem rather than the solution to societal problems such as pollution, overconsumption, the depletion of natural resources and unhealthy lifestyles, consequently the authors emphasize the need for managers to have the requisite motivation to implement sustainable practices. It is important for ski resort managers to identify the underlying elements, specific service features and actors, that affect the environmental sustainability of ski center services. This thesis aims at depicting the service marketing specific practices that can be utilized in promoting environmentally sustainable ski resort service. A comprehensive framework is developed to motivate practitioners in implementing environmentally sustainable practices and in promoting the environmentally sustainable ski center service.

When it comes to theoretical concerns, more research from the field of environmentally sustainable marketing is needed. Grundey and Zaharia (2008) as well as García-Rosell and Moisander (2008) note that there is still varied terminology used in the area of green marketing, which includes: Sustainable Marketing, Green Marketing, Environmental Marketing and Ecological Marketing. No one definition has been universally accepted and the authors (ibid.) see this lack of consistency of being a large part of the problem for how can the issue be evaluated if all researchers have a different perception of what they are researching.

Additionally, there is evident lack of research in the area of sustainable service marketing. Even though research where sustainability is incorporated into 4p's marketing mix exists (e.g. Grundey & Zaharia 2008; Bridges & Wilhelm 2008), the specific service features have left without notion. Chitra (2007), on the other hand, mentions all the 7p's of service marketing mix but does not give much detail. Moreover, Chitra's (ibid.) study suggests marketers to come out with eco friendly marketing mix. Similarly, new service development is among the least studied and least understood topics in the service marketing literature, and consequently there is absence of eco-efficient service development methodology (van der Zwan & Bhamra 2003, 350; Lynes & Dredge 2006, 120). Furthermore, there is currently a lack of qualitative research focusing on the environmental sustainability of service marketing.

According to Dolnicar et al. (2008, 208), the past research is mostly lacking in considering the impacts of all the actions that are carried out by the tourism industry to attract and serve tourists, as well as the transportation of the tourists to the destinations. Most commonly, the research of environmentally sustainable tourism, or ecotourism, is concentrated on local affects such as litigation whereas the global affects of tourism, such as related to transportation, have mainly been left without consideration. Therefore, in this study also transportation to the destination is incorporated into the marketing mix components.

When it comes to ski centers, some previous research exists considering; the attitudes of downhill skier about environmental concerns (e.g. Holden 2000), the future of the downhill skiing due to climate change (e.g. Moen & Fredman 2007) and the problems related to restructuring of winter sports resorts (Tuppen 2000). Also a short survey research of ski operators' perceptions regarding the impact of an environmental charter on their respective operations exists (George 2003; George 2004). Nevertheless, there is currently a considerable lack of qualitative research focusing on the environmental sustainability of ski resorts from the service provider's point of view.

Considering the previous discussion, there is evidently theoretical and practical need to further the understanding in the area of green service marketing in general, and in more practical level, to study how the environmentally sustainable services can be promoted in ski center service context. More specifically, demand exists for identifying the roles of the different background elements and actors affecting environmental sustainability, development

of environmentally sustainable service marketing mix as well as for practical guidelines striving environmentally sustainable ski center service marketing.

1.2 Objectives, research problems and delimitations

The objective of this research is to explore ways *how to use marketing to promote environmentally sustainable ski center services.* In this thesis, solutions are sought for the following questions:

- What kind of role green marketing practices, consumers and government have in the environmental sustainability development?
- How can environmental sustainability be integrated in the service marketing mix?
- How can sustainable tourism guidelines be used in ski centre service marketing in Lapland and in the Alps?

The research questions are examined from the viewpoint of a ski center service provider. In this research, I pursue with the help of green marketing and service marketing theory to define how the ski centre tourism pressure on environment could be minimized. I use NSAA's Sustainable slopes charter and environmental principles as guidelines to sustainable ski centre service marketing. By the aid of empirical study, and ski centre service provider interviews in the Alps and in Lapland, I examine what kind of practices are considered and applied with regards to environmentally sustainable ski centre tourism. Furthermore, the empirical study aims at satisfying the shortcoming of qualitative research focusing on the environmental sustainability of ski resorts, from the service provider's point of view. The theoretical as well as practical implication that this thesis strives, is to develop a comprehensive framework, which identifies the interacting elements affecting the environmental sustainability of service, and that can be used to market environmentally sustainable ski center service. After the analyses of my research, I aim to give recommendations to ski centre service providers about how to use marketing to promote environmentally sustainable ski center services.

Sustainable marketing requires a consideration of environmental, economical and social issues in all elements of marketing strategy planning, from objective setting to target market selection to strategic and tactical decisions regarding each of the marketing mix variables. Similarly the ecotourism concept includes economical and social dimension in addition to ecological aspect. However in this research, I concentrate only on the environmental aspect of

sustainability, excluding economical and social sustainability to meet the time and scope constraints. I will not discuss more deeply about strategic side of green marketing, instead I assume in this thesis that environmental sustainability should be integrated comprehensively into corporate strategy and not considered only as a separate marketing strategy. I focus on including environmental sustainability into the service marketing mix features and apply them especially to ski centre marketing in Lapland and in the Alps.

The interviews in the empirical part focus on Finnish Lapland, leaving Norwegian and Swedish Lapland without consideration. Even though Ruka, situated in the Northern part of Finland, does not belong into the province of Lapland, in this study it is considered as Lappish ski centre because of its long ski season and popularity among foreign visitors. The interviews from the Alps take place in France, Switzerland and Austria leaving Germany, Italy, Liechtenstein and Slovenia out of the interview sample due to resource limitation reasons.

1.3 Structure of the study

The purpose of this thesis is to examine how to use marketing to promote environmentally sustainable ski center services in the Alps and Lapland. The environmentally sustainable ski centre service is considered as an answer to this research problem.

The thesis is organized into 7 chapters. This introductory Chapter 1 has described the background of this study, claimed the centrality of the research problem, presented the main concepts and reviewed the related literature. Chapter 2 examines the role of green marketing, consumers and governments in environmental sustainability context. The paragraph discussing the governmental role stresses also the importance of cooperation. Chapter 3 presents environmentally sustainable service marketing mix, where green marketing literature is applied into service marketing literature. Chapter 4 is a transition from theory to practice and there the sustainable slopes charter and sustainable nature tourism guidelines are applied to ski centre service design with the help of green service triangle and “green” service blueprint. In the end of the chapter, the theoretical framework summarizes the previous Chapters 2, 3 and 4.

Chapter 5 presents the methodology of the study and describes the cases. Chapter 6 investigates empirical material which consists of interviews with service providers in Lapland

and in the Alps and presents the empirical results. The aim of the service provider interviews is to examine their potential measures to implement green practices in ski centre marketing and their beliefs about the consumer attitudes towards environmental sustainability. The final Chapter 7 returns to the aims of the study and discusses the findings and their implications for environmentally sustainable ski centre marketing in Lapland and in the Alps.

The Alps and Lapland have been chosen as examples in this study because in the Alps the mass tourism and climate change have already affected biodiversity and the glaciers; therefore improvements have been made in some ski centers. The amount of tourism is forecasted to increase also in Lapland, especially if the snowy season shortens in the southern areas, so practices for environmentally sustainable development are needed.

1.4 The central concepts of the study

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Center for a World in Balance 2009). Sustainable marketing is a holistic, integrative approach that puts equal emphasis on environmental, social equity, and economic concerns in the development of marketing strategies (Bridges & Wilhelm 2008, 35), but as earlier mentioned, the focus in this study is on the ecological aspect due to limitation reasons. According to Bridges and Wilhelm (ibid.), environmental sustainability is a key value and requires the long-term health and viability of our major ecosystems. Grundey and Zaharia (2008, 131) note that green marketing should look at minimizing environmental harm, not necessarily eliminating it. Deriving from the above mentioned, in this thesis ***environmentally sustainable marketing*** *incorporates the environmental concerns into the development of marketing activities so that the needs of the present consumers are met with minimal detrimental impact on the natural environment.*

According to the official definition Lapland would be the region of extreme northern Europe, which is largely within the Arctic Circle, including northern Norway, Sweden, and Finland and the Kola Peninsula of northwest Russia (The free dictionary 2009). Furthermore, in Finland the Province of Lapland is the most north province in Finland (Wikipedia 2009). However in this study, also Ruka, which is situated in Kuusamo in the north part of Finland, is considered as a Lappish ski centre due to its popularity among foreign tourists, long ski

season and northern location. Accordingly, in this research ***Lapland*** is defined as *the north part of Finland including Ruka in addition to the Province of Lapland.*

The Alps are a mountain range system of south-central Europe stretching from Austria and Slovenia, in the east, through Italy, Switzerland, Liechtenstein and Germany to France, in the west (The free dictionary 2009; Wikipedia 2009).

In this research, ***ski centre service*** includes all the services that are provided for customers to satisfy their needs before, after as well as during their stay in the ski resort. Examples of ski centre services are, in addition to ski lift and slope operations, tourism offices, hotels, restaurants, ski buses, excursions and other activities as well as tour operations.

Deriving from the special service features, intangibility, heterogeneity, perishability and simultaneous production and consumption, the marketing mix for services differs from the traditional four Ps marketing mix for physical products. The ***service marketing mix*** *includes people, physical evidence and process, in addition to the traditional four Ps; product, price, place and promotion*. (Zeithaml et al. 2006, 22-25; Chitra 2007.)

A service blueprint is a picture or a map that visually displays the service by simultaneously depicting the process of the service delivery, the points of customer contact, the roles of customer and employees and the visible evidence of the service. (Zeithaml et al. 2006, 267.) Green service blueprint is created by implementing environmental sustainability into the different service phases from different persons' points of view as well as ensuring it in the physical evidence. Therefore ***green service blueprint*** is defined as *a process mapping tool to ensure the environmental sustainability of the intangible service processes by simultaneously depicting the process of the service delivery, the points of customer contact, the roles of customers and employees and the visible evidence of the service.*

Services marketing triangle is a strategic framework visually reinforcing the importance of people in the ability of firms to keep their promises and to succeed in building customer relationships. The triangle shows three interlinked groups, the company, the customers and the providers, which develop, promote and deliver the service together by internal marketing, external marketing and interactive marketing. (Zeithaml et al. 2006, 355-356.) Environmental sustainability can be implemented into the three different marketing types by ensuring that

what is promised through external marketing is the same as what is delivered, and the enabling activities inside the organization are aligned with what is expected of service providers. Accordingly, ***green services triangle*** is defined as *a strategic framework that reinforces the importance of people in the ability of firms to keep their environmental promises by enabling them with internal marketing, by giving the environmental promises with external marketing and by delivering the environmental promises with interactive marketing.*

2 GREEN MARKETING, CONSUMERS AND GOVERNMENT

The following paragraphs, discuss the roles of green marketing, consumers and governments. First, the green marketing concept is defined and its role for companies as a common philosophy is argued. Thereafter the consumer's role as moral actor is considered, and finally the multifaceted roles of governments are deliberated.

2.1 Green marketing as a common philosophy

Business activities, including marketing practices, have a detrimental impact on planetary ecosystems. However, adoption of sustainable business practices can, and are, providing solutions to many of these problems with the qualification that managers have the requisite education and motivation to implement such practices (Bridges &Wilhelm 2008; García-Rosell & Moisander 2008). Sustainable marketing is a holistic, integrative approach that puts equal emphasis on environmental, social equity, and economical concerns in the development of marketing strategies. Green marketing, on the other hand, tends to be issue based and to emphasize the environmental dimension of sustainability. (Bridges & Wilhelm 2008.) Nevertheless, green marketing theory offers valuable knowledge about environmentally sustainable practices and therefore it will be discussed next and applied throughout the study.

Green marketing has arisen as an answer to the growing concern of the environmental state which has a huge influence on the society's well-being. Green marketing is a holistic management process responsible for identifying, anticipating and satisfying the requirements of customers and society, in a profitable and sustainable way. (Peattie 1992, 11; Chitra 2007, 173; Grundey & Zaharia 2008, 130.) Unfortunately though, as Grundey and Zaharia (2008, 130) express, a majority of people believe that green marketing refers solely to the promotion or advertising the products with environmental characteristics and terms like *Phosphate Free*, *Recyclable* and *Environmentally Friendly*. The previously mentioned terms are green marketing claims whereas green marketing is a much broader concept which can be applied to consumer goods, industrial goods and even services (ibid.). In this study the focus is on services and the green marketing theory is applied into service marketing theory in the following chapters.

Grundey and Zaharia (2008, 132) see the natural environment as a crucial component of the firm's marketing surroundings and consequently modern marketing must be environment-oriented. This certainly applies to ski centers where the natural environment is definitely an essential part of the service. Implementing a philosophy of sustainability in marketing practices most likely requires a change in orientation from short- to long-term as well as changes in corporate culture (Grundey & Zaharia 2008, 137). Moreover, green marketing is a complex tool that must be integrated across all organizational areas and activities if it is to be successfully implemented and long-term benefits achieved (Polonsky & Rosenberger III 2001, 22). Greening of the marketing activities includes for example product modification, changes of the production process, packaging changes, as well as modifying advertising (Grundey & Zaharia 2008, 130), which are marketing mix components and they will be discussed in Chapter 3.

According to Grundey and Zaharia's (2008, 131) definition: *"**Green** or **Environmental Marketing** consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment.*" Their (ibid.) notion, that green marketing should look at minimizing environmental harm not necessarily eliminating it, is important since as they establish, human consumption is by its very nature destructive to the natural environment. While it is not likely that human consumption decreases, rather it is expected to grow when welfare increases and more and more people start to demand for leisure services, more sustainable practices are required to satisfy these needs. For example ski centre services have unavoidable impacts on nature due to their resource dependant processes, like lift operations, and therefore the aim of green marketing is to minimize these impacts with the help of different kinds of marketing tools.

Van der Zwan and Bhamra (2003, 351) use the concept of eco-efficient service while adapting service marketing theory into developing green services. The aim of green marketing, or eco-efficient services, is to create additional value for customers while reducing environmental impacts (Peattie 1992, 93; van der Zwan & Bhamra 2003, 355; Chitra 2007, 173). For services, reducing environmental impacts is included especially into service process design (Grove et al. 1996, 57). The created additional value could, for example, be the remaining intact nature when increasing the efficiency of existing ski lifts instead of building a new one.

Similarly, for customers more efficient ski lift means less time spend in the lift, while simultaneously the energy consumption is reduced.

According to García-Rosell and Moisander (2008, 212) it would be important to identify the values and implicit understandings about ethics that guide and constrain thinking and talking about sustainability in organizations and which also provide legitimization for managerial practices. Moreover, sustainable marketing needs to be seen as a social process which involves multiple moral actors (ibid.). Consumers have an impact on environment with their choices and behavior and their role will be discussed next.

2.2 Consumers as moral actors

Ecological consumerism is often viewed to be only for radical hippies who live in a commune cottage and do not buy anything that is not absolutely necessary. Nevertheless, this can be called as radical green consumerism. More liberal way of viewing green consumerism is, as Moisander (2007) determines: "by carefully choosing products and services that are the least destructive to the environment it may be possible to have a positive impact on the environment without significantly compromising one's way of life". For this study, and in our consumption –oriented society, this is more appropriate way of viewing green consumerism.

Consumer behavior is normally purposive which means that people aim to satisfy needs or to attain some goals (Zeithaml et al. 2006; Moisander 2007). According to Moisander (2007), reasons for behavior are motivation, which consists of primary and selective motives, as well as ability, which includes personal resources and external opportunities (Figure 1). Environmentally concerned consumption is motivated by individual objectives of the consumer and collective long-term environmental related objectives of society. Consumers may or may not be aware of their motives for a given behavior, so the associated motives can be both *overt* and *hidden.* (ibid.)

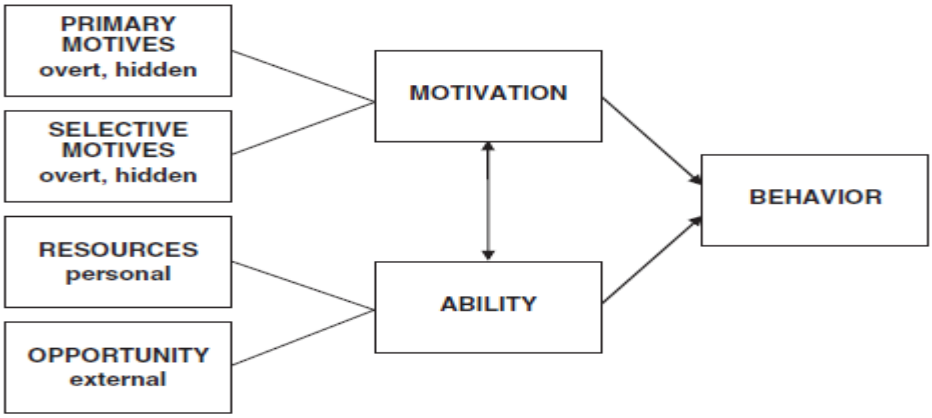

Figure 1 Motivation and behavior (Moisander 2007, 405)

A primary motive refers to the purposes behind consumers' decisions to engage or not to engage in entire classes of behavior, for example if to engage in ecologically responsible consumer behavior (Moisander 2007). The internal factors, that influence environmental related behavior, include attitudes, values, habits and personal norms (Zeithaml et al. 2006, 71; Becken 2007, 356; Haanpää 2007, 480). Moisander (2007) argues there to be little agreement upon what qualifies for environmentally sound behavior with respect to the general goal of protecting environment and there are no clearly defined criteria for what constitutes an ecologically sound or safe product or service. She indicates that this leads into that green consumers need to make difficult value judgments and they have to establish acceptable levels of negative environmental impact for their consumption activities. (ibid.) Thus, environmentally sustainable consumer behavior is highly individual where consumer's personal values and attitudes have a central role and therefore green consumer behavior is also an ethical issue.

Chan et al. (2008, 479) support the application of general ethics theories to explain green consumption-related behavior. According to utilitarian approaches to environmental ethics, consumers are assumed to judge their acts and decisions in terms of their utility or their usefulness in producing good consequences. However, utilitarian approaches are only one alternative way of deliberating on the ethical issues that green consumerism involves. Green consumers might equally well choose to act on principle, independently of its anticipated consequences, based on duties and rights or to base their deliberations on some sort of religious teleological reasoning. (Moisander 2007, 408; García-Rosell & Moisander 2008,

213.) Therefore, the motivations behind environmentally sound behavior are diverse and not easily feasible for companies.

Haanpää (2007, 480) points out that green consumers are more likely to control their consumption in comparison to more traditional consumers, for example the choice of not buying a car, and therefore, the environmental impact of green behaviors is direct. Nevertheless, even if a car would not be seen as ecologically sound product but if a family uses it for holidays instead of an airplane, then it can be considered as a greener solution. Therefore, Moisander's argument about difficult value judgments and acceptable levels of environmental impacts is justifiable.

Selective motives, on the other hand, refer to the purposes behind consumers' decisions as to exactly which particular behaviors they want to engage in, for instance in recycling, saving energy or buying eco-products. People's conceptions of what behaviors are considered ecologically relevant, and what is the weight or magnitude of each of the behaviors involved in their patterns of ecologically responsible consumption, vary. (Moisander 2007, 406.) The way how a car is used, could be considered as a selective motive, for instance whether driving the car alone or sharing a ride.

Personal resources are important for the ability to act in environmentally sustainable manner. Knowledge advocates beliefs and values, and therefore environmental knowledge involves what people know about the environment and the beliefs that they hold about key environmental aspects or impacts as well as how they asses their individual responsibility (Becken 2007, 356; D'Souza et al. 2007, 70). According to Haanpää (2007, 480), awareness of the consequences that consumption has on the environment inspires environmentally sound consumption decisions. Moisander (2007, 406), however, argues that often special knowledge about the causes of environmental problems and the trade-offs associated with the different measures that may be taken for environmental protection, is required in order to understand the environmental effects of various consumption activities. Also certain practical skills and task knowledge is needed, consumers for example need to know how to separate waste and where to put used batteries (ibid.). This is especially visible abroad, or in other different cultural environment than one's own, where distinctive rules apply to do the same practices. It would be important to guide consumers unambiguously and explicitly.

Moisander (2007, 407) suggests, that obscure environmental information offers consumers an abundant source of handy excuses for denying their personal responsibility in ethically demanding situations. Consumers might also possess incorrect information; some might for example believe that keeping lights on day and night consumes less energy than switching them on and off several times a day. There can be personal convenience motivations behind this kind of misunderstandings as keeping lights on all the time is less demanding than shutting them off when leaving the room. Therefore, it is particularly important to educate consumers about the facts of environmentally sound behavior.

The key issue in targeting green consumers lies in an understanding them and their characteristics (D'Souza et al. 2007, 70). For example by actively targeting tourists with low ecological footprints would be a feasible marketing strategy (Dolnicar et al. 2008). At the present however, according to D'Souza et al. (2007, 70), companies find it difficult to predict consumers' reaction towards green products with a degree of accuracy that is necessary to enable the development of new targeting and segmenting strategies.

It is acknowledged by many authors (e.g. Kinnear et al. 1974; Haanpää 2007; Dolnicar et al. 2008) that different lifestyles or psychographic factors explain green commitment better than using only socioeconomic background variables. For example, according to Kinnear et al.'s (1974) study, personality variables are better predictors than socioeconomic variables. They (ibid.) found that consumers, who perceive that individuals can affect pollution abatement, show more concern for ecology. Similarly, those who were more tolerant and who had strong desire to know how things work were more ecologically concerned than the average. In contrast, those ones who were highest in harm avoidance, were least concerned with ecology. (ibid.) According the authors (ibid.), this finding can be explained so that as harm avoidance becomes extremely high, a person reacts to potential pollution harm by ignoring the problem. Therefore, it seems important to highlight how consumers can affect the environmental quality by their choices.

However, according to D'Souza et al. (2007) consumers are price and quality sensitive when it comes to 'buying green' and consumers would compromise less likely on product quality than on somewhat higher prices of green products. Haanpää (2007, 484), on the other hand, got more or less opposite results when she surprisingly found that quality did not have any effect on green involvement. Both of the authors acknowledge that buying intent for green

products is associated with customer's personal characteristics as well as demographics but, in addition, Haanpää (2007) argues that consumption styles affect strongly the level of green commitment. Becken (2007, 358), for one, found travel costs to be important in tourists' travel decisions, whereas environmental factors are usually not considered. Also Moisander (2007, 407) argues that even green consumers might be tempted to choose the environmentally destructive alternative because ecologically sound products and services often cost more, in money, time and other resources, and because consumers often feel that their contribution to environmental quality is marginal. Therefore, as Haanpää (2007, 479) states, environmentally conscious consumers act in many different ways and they do not form a solid, homogeneous consumer segment.

Intentions to change behavior do not automatically result in actual behavior change (Cosmescu & Cosmescu 2007, 71). According to Moisander (2007, 406) only few ecologically minded consumers do everything in an environmentally responsible manner, rather the majority of green consumers do only what they perceive as their fair share and still they may consider themselves as ecologically responsible consumers. Furthermore, also the extent to which each ecologically relevant behavior is performed, may vary (Moisander 2007). Consumer might for example participate in an ecotourism trip but might use airplane as a travel method.

The strong growth in air travel raises the question of environmental awareness among air travelers, and it seems that knowledge of environmental problems associated with air travel seems low in industrialized societies (Becken 2007; Gössling & Peeters 2007, 404). The results of previous studies indicate that tourists are largely unaware of the consequences of air travel, while their perception is dominated by local, visible, immediate and comprehendible environmental problems, such as plastic bags deposited along roads (Gössling & Peeters 2007). Therefore, there is a strong need to raise awareness about the magnitude of the environmental impacts that each consumer has when they fly even a short distance flight.

However, according to Becken (2007, 363), even though information is important, it will probably not be sufficient on its own to induce behavioral change in relation to air travel. Tourists' engagement in international air travel seems to go well beyond individual dimensions of functionality (e.g. relaxation), attitudes and values, but participation in global travel has a high symbolic meaning and therefore it is a fundamental part of an individual's

positioning in society (ibid.). This finding fits with Moisander's (2007) argument that there needs to be a shift of the focus of environmental policy measures from individual consumers and their decision making to more collective forms of social action. Similarly Haanpää (2007) alleges that consumption styles representing lifestyles have a major effect on green behavior. Then the issue becomes of creating a change in lifestyles.

Gössling and Peeters (2007, 413) state that the apparent lack of public awareness of the environmental impacts of aviation might be due the fact that the aviation industry puts itself in a good light environmentally. Aviation discourses support attitudes that influence environmentally dependent behavior towards non-action, these attitudes include for instance; the need for personal comfort, the belief in technological solutions, the demand for a justifiable relationship between personal costs and social gains and the loss of trust in government, as well as in its capacity to deliver effective policy measures (ibid.). Likewise, Lynes and Dredge (2006, 134) found in their case study of SAS that despite the awareness of environmental issues in Scandinavia, environmental sustainability is not one of customers' criteria in choosing an airline. Becken (2007, 365) found accordingly that at the moment little can be expected from tourists in terms of voluntary initiatives and pro-activism to address the global impact of air travel.

D'Souza et al. (2007, 77) found in their study that there appears to be a fundamental customer expectation existing about all products to be green and friendly to the environment. Similar results were found in the research conducted by Lynes and Dredge (2006, 134) as they stated there to be a certain level of implied trust amongst Scandinavians that companies are 'working on it' in relation to air travel. Becken (2007, 356) claims the dilemma of air travel and global climate change of being an excellent example of collective denial, where everyone waits for someone else to do something. She (ibid.) believes tourists to be prepared accepting measures necessary to ensure the wellbeing of our planet and societies, but they take personal benefit from the current setup for as long as they can. Therefore, undoubtedly a need for governmental regulation seems to exist.

An ecologically concerned segment exists in a size large enough to represent market opportunities for many firms, however, also a substantial segment that exhibits little or no concern about the pollution aspects of products exists (Kinnear et al. 1974, 23). Despite the increasing eco-awareness in contemporary Western market economies (Haanpää 2007;

Moisander 2007), favoring of green products at an attitudinal level is often an expression of going along with social norms (Haanpää 2007, 484) and furthermore, there seems to be considerable barriers to the diffusion of more ecologically oriented consumption styles (Moisander 2007, 404). As noticed also in relation with global air travel, public awareness of the real environmental harm seems to be relatively low. It seems also that even though many consumers are at attitudinal level pro-environmental, it often does not lead to pro-environmental behavior. So, the task for marketers is more than changing attitudes, the greatest challenge is how to change behaviors. This could be improved with increased amount of accurate and understandable information to begin with, but also more profound changes to general lifestyles need to be generated. This could be done through cooperation between corporations and governments, and consequently with the help of behavioral mandates such as regulation and taxes. The role of government and cooperation between different market players is discussed in the next paragraph.

2.3 Government as regulator and enabler

In environmental policy-making, the dominant paradigm has traditionally been regulation and government control (Lynes & Dredge 2006, 118). Therefore, one of the roles assigned to governments is the regulation of externalities which are discrepancies between social and private benefits and between social and private costs (Kinnear et al. 1974, 24; Bramwell & Alletorp 2001, 93; Batta 2006; Becken 2007, 360; Weiermair et al. 2008, 10). Private investment often does not consider the exploitation of resources and is only short term oriented. Private sector has no incentive to supply public goods due to the free rider problems related to such goods. Free access frequently leads to an over-use, such as ski runs, and deterioration, furthermore private investments usually ignore distributional issues, particularly as regards their environmental impact. (Weiermair et al. 2008.) Likewise, as established in the consumer behavior chapter, consumers take the personal benefit of the current setup as long as they can, so a need for regulation exists.

Governments should encourage, or even compel, businesses to include the costs and benefits for the environment and society in their own internal accounting and decisions (Bramwell & Alletorp 2001, 93; Grundey & Zaharia 2008, 137). Government should first define the level of consumption-related pollution that is tolerable (Kinnear et al. 1974, 24). Kinnear et al. (ibid.) suggest that if the tolerable level is no or very little pollution, then regulation is

necessary, whereas if the tolerable level of pollution is higher, educational programs may be sufficient to alter consumer preferences.

Awareness of the environmental impacts of different consumption choices is crucial for environmentally sound consumer behavior. Similarly, the awareness of the owners and managers of tourism businesses about what they can do may affect their willingness to introduce more sustainable practices (Bramwell & Alletorp 2001, 92). Governmental encouragement can be carried out through information, education and general persuasion directed to tourism businesses (ibid.).

According to Kinnear et al. (1974, 24), the first target of governmental education programs should be to get those who are concerned to act upon their concern. The second target is those who are not yet concerned about environment and then the objective is to make them concerned and after to get them to act on this concern (ibid.). Batta (2006, 55) for example found in his study that one of the major factor for low willingness to pay for a nature park visit in Himalaya was lack of information among tourists. Therefore, as Chitra (2007) suggests, governments should come out with, in addition to advertising and publicity campaigns, policy measures to invest as much as possible to build awareness about eco friendly products. An educational program designed solely to demonstrate to consumers that they can be effective in sustaining environmental quality would seem worthwhile (Kinnear et al. 1974). For example, Keep Winter Cool is a partnership between a nonprofit organization, NRDC (Natural Resources Defense Council), and a trade union, NSAA (the National Ski Areas Association), in the United States to raise visibility and public understanding of global warming and spotlight opportunities that exist to start fixing the problem.

Another important governmental responsibility is, as Chitra (ibid.) also argues, to render incentives to organizations to commit in generation and distribution of green products. Financial incentives can be utilized to alter the prices that businesses are facing for environmentally damaging or beneficial behavior (Bramwell & Alletorp 2001, 93). Governments should for example offer incentives for the adaptation of more sustainable energy sources, such as subsidies for solar panels in sunny areas.

Lynes and Dredge (2006, 118) argue that neither governments nor private sectors have a decisive role in the environmental policy development and implementation because all the

actors and agencies bring values, beliefs, understandings and knowledge to environmental policymaking and management over time, and no single agency has absolute sovereignty over environmental policymaking and implementation. Governments are generally not able to provide up-to-date and consumer oriented tourism products or services (Weiermair et al. 2008). Therefore, market-based policies for example for aviation could be targeted at reducing demand, providing incentives for the airline industry to reduce emissions or generating tax revenue for the government that may or may not be used for climate-related mitigation activities (Becken 2007, 352). In practice, there could be a mix of governmental intervention and businesses making their own decisions in response to market forces (Bramwell & Alletorp 2001, 94). This would most likely enable innovations that are based on market needs.

Weiermair et al. (2008) suggest public-private partnerships (PPPs), which are specific types of co-ownership and/or cooperation between public institutions and private enterprises, as a policy solution to market failures to avoid serious negative external and ecological effects. The authors (ibid.) argue that especially in smaller sized tourism markets, such as the European Alpine markets, public institutions must support the private sector to allow them to develop dynamic competitive advantages through learning leading to entrepreneurial products and services. Also Bramwell and Alletorp (2001, 102) state that an integrated, proactive partnership approach to environmental management in destinations may help to develop competitive advantage by maintaining destination quality. PPPs are formed due to some synergetic advantages and they usually share both risks and revenues (Weiermair et al. 2008). The advantages of cooperation are obvious as private enterprises can profit from government supported strategies to raise capital at lower cost whereas public institutions can profit from professional management (ibid.) However, necessary prerequisite for successful cooperation is that the whole management team of both parties is fully committed in environmental sustainability.

The SSCM (Sustainable Supply Chain Management) framework, which will be discussed in Chapter 3 in the "place" context, is EU LIFE-funded program developed to introduce sustainability criteria into the supply chain of European tour operators. The idea is to provide a market-based regulation of sustainability eco-labels, and the framework is backed with sustainability assessments, training, action planning and reporting tools, and one single set of sustainability criteria to be used by all tour operators. (Schwartz et al. 2008, 299.)

Cooperation between tour operator and suppliers is also a specific task of the fifth step in SSCM framework (see Appendix 1), and it might include raising awareness about sustainability issues, providing technical support on sustainability improvements, offering recognition to sustainability suppliers and/or integrating sustainability criteria into suppliers' contracts (Schwartz et al. 2008, 308). Also openness and willingness to share information about sustainability innovations is essential.

Even though all tourists would not specifically demand so-called green labels on holiday products, they might not return to the destination that fail to offer reasonable environmental quality. Long-term cooperation for the environment between the many travel service providers in a destination, including public sector, would be extremely valuable for sustainable tourism development. (Bramwell & Alletorp 2001.) For example in the air travel context, tourists perceive that governments informed by scientists are charged with implementing and monitoring climate policies as well as overcoming barriers (Becken 2007, 358). Therefore governments should take a lead role, working together with scientists and airlines (ibid.) as well as tour operators.

Although the airline industry has a history of being highly regulated (Lynes & Dredge 2006, 117), according to Gössling and Peeters (2007, 403), governments are anticipated to continue deregulating air travel markets. Management of the severe environmental impacts of air travel through regulatory mechanisms is difficult given the complex international setting in which airlines operate and the long lead times associated with the development of new regulations (Lynes & Dredge 2006, 117). As outlined in the Kyoto Protocol, greenhouse gas (GHG) emissions from international air travel are not included in nations' compulsory reduction targets, therefore, there is no binding need for countries to address these emissions (Becken 2007). However according to the studies of Gössling and Peeters (2007) if there is no regulation for air travel, aviation will, as the only sector with continued strong growth in emissions, account for 40% of global total emissions by 2050 and deriving from that no other economic sector would have room to grow in emissions. For the sustainability and trustworthiness of environmental strategies of any tour operator, it is important to include aviation impacts into the action plan.

The primary inference for public policy makers seems to be that in some instances they are going to have to act to control the sales and use of polluting products as it is not likely that

consumers will voluntarily do this for them (Kinnear et al.1974, 24). Public sector is likely to play an important role in coordinating the destination's tourism management (Bramwell & Alletorp 2001, 101). Sustainable tourism in a destination, according to Bramwell and Alletorp (ibid.), could be advanced through coordination and recognition of mutual long-term interests between the providers of the many tourism products, including public sector. Moreover, governments should take the proactive role to promote environmental sustainability and to regulate and set environmental laws as well as enable innovation creation (ibid.).

2.4 Summary

Chapter 2 started with the introduction of green marketing which was seen as a holistic management process aiming at satisfying the requirements of customers and society with minimal detrimental impact on the natural environment. Moreover, modern marketing is required to be environment-oriented as natural environment is seen as a crucial component of the firm's marketing surroundings. To implement a philosophy of sustainability in marketing practices requires a change in orientation from short- to long-term as well as changes in corporate culture. For successful implementation, it is critical that green marketing is integrated across all organizational areas and activities. Thus, the role of green marketing in environmental sustainability development is to offer the common philosophy and practical tools for implementing environmental sustainability into the company practices.

As García-Rosell and Moisander (2008, 212) have stated, sustainable marketing needs to be seen as a social process which involves multiple moral actors. Therefore consumers, as moral actors, affect with their choices and consumption behavior into the environmental sustainability development. Green consumer behavior can be considered to be motivated by primary and selective motives which are individual objectives of the consumer and collective long-term environmental related objectives of society. In addition to motivation, ability is also needed to lead into behavior. Ability constitutes of both; personal resources and external opportunities. Attitudes, values, knowledge and lifestyles influence environmental related behavior and consumers need often to make difficult value judgments about what constitutes as environmentally sound behavior. Even though accurate environmental information is necessary for environmental sound behavior, it does not always lead into behavioral change. There seems to be barriers to the propagation of more ecologically oriented consumption styles. Apparently, no clear segmentation criteria exists, instead environmentally conscious

consumers act in many different ways and they do not form a solid, homogeneous consumer segment.

The third part of the Chapter 2 discussed the role of government, especially as regulator and enabler. Neither consumers nor companies are likely to act proactively, especially if it is more costly for them in money, time or other resources. Therefore, the first role of the government would be to set environmental laws and regulations. Thereafter, government should raise awareness, motivate and provide information for both, consumers and private companies. Thirdly, the government should enable consumers and companies to act upon these guidelines by providing appropriate incentives. It is important that government cooperates with private companies to ensure market based innovations.

Chapter 2 answered the first research sub question and discussed the roles of green marketing, consumers and governmental cooperation in environmental sustainability development. Next, the discussion will focus on integrating environmental sustainability in the service marketing mix.

3 IMPLEMENTING ENVIRONMENTAL SUSTAINABILITY IN SERVICE MARKETING MIX

This chapter first discusses the specific service features, and demonstrates why it is crucial to regard them in marketing. After, the service marketing mix is presented and some critic towards it is addressed. Finally, the environmental sustainability is implemented into the service marketing mix components.

3.1 Special service features and marketing mix

Services represent huge and constantly growing percentage of the world economy (Grove et al. 1996, 57; van der Zwan & Bhamra 2003, 344; Zeithaml et al. 2006, 4). Within the current services marketing literature, there seems to be very little attention to the environmental sustainability element of services as yet (van der Zwan & Bhamra 2003, 342). It is often argued that the green challenges are only a problem of goods manufacturers and do not apply to service providers because of the special features of services (Grove et al. 1996, 57; Peattie 1992, 89). Nevertheless, this is a delusion because travel industry, for instance, is world's second largest industry with an enormous impact and on the other hand almost complete dependence on environment (Peattie 1992, 89). For instance, air travel is among the fastest growing, most dynamic and volatile sectors in tourism and, furthermore, it is associated with some of the most significant environmental impacts of tourism (Lynes & Dredge 2006, 117).

According to van der Zwan and Bhamra (2003, 355), for the eco-efficiency the most important is the way how the service is planned and how the special features of the service are managed. Peattie (1992, 185) for one, states that a service can be green for example because the actions of the service company have become more environmental friendly or the company is more environmentally friendly than its competitors. However, the company should constantly look for ways to increase its sustainability and not just settle for the current improvements.

Intangibility is the most distinguishing characteristic of services, and deriving from that, they cannot be touched, seen or smelled in a same manner as tangible goods which results from services being performances or actions. Intangibility presents several marketing challenges, for example they cannot be stored and therefore fluctuations in demand are often difficult to

manage. Also, services cannot be readily displayed, so quality may be difficult for customers to asses. (Shostack 1977, 73; Zeithaml et al. 1985, 22; Peattie 1992, 108; Zeithaml et al. 2006, 33.)

All in all, while the processes that are reflected as services may be intangible, perishable, and consumed as they occur, they often involve the support of a wide spectrum of physical components and reliance on natural resources (Shostack 1977, 74; Peattie 1992, 8; Grove et al. 1996, 58; van der Zwan & Bhamra 2003, 347). Taking into account the growing size of travel sector and the strong resource dependence that it possesses, it is particularly important to pay ever more attention to the ecological sustainability of service elements.

Zeithaml et al. (2006, 4) define services as deeds, processes and performances, which provides added value in forms that are essentially intangible concerns for its first purchaser. Services are different by their nature from physical products so marketing of them is different. The special features of services are intangibility, heterogeneity, perishability as well as simultaneous production and consumption. The special features of services cause several challenges for the marketer from ensuring quality, matching demand and supply to selecting and motivating employees, among other things. (ibid.) Deriving from the special service features, service marketing mix includes people, physical evidence and process, in addition to the traditional 4 Ps, price, place, promotion and product (Zeithaml et al. 2006; Chitra 2007). By planning the components of the service marketing mix while utilizing green marketing theory, the environmental sustainability of the service can be ensured.

Nevertheless, some critic towards marketing mix has been presented. Constantinides (2006) identifies two main limitations of the traditional marketing mix as management tool which are namely the model's internal orientation and lack of personalization. According to his study, the traditional marketing mix is deemed by many researchers as inadequate to address specific marketing situations like the marketing of services or the management of relationships. For example Bridges and Wilhelm (2008, 39) state, that the 4Ps marketing mix is a useful means of categorizing the sustainability concepts and tools relevant to marketing decision making, however they leave the service perspective without notion. According to Constantinides (2006), all authors who he reviewed agree on the special character of services vs. tangibles and highlight the need for specific management attitudes when dealing with services marketing issues. Most of the reviewed researchers resist the idea of applying the 4 Ps as the

single tool for designing services marketing, proposing either the addition of new elements to the Mix or its substitution by different approaches (ibid.).

Therefore in this study, three service specific elements, which are people, processes and physical evidence, are added into the traditional marketing mix. Also earlier, the roles of consumers and government have been discussed to address the specific aspects to environmentally sustainable marketing. The marketing mix is seen as a tool to integrate environmental sustainability into each of the marketing components. Later on in Chapter 4 service blueprint and service marketing triangle are utilized to further address the special service features.

3.2 Service product, price, place and promotion

The components of the traditional marketing mix; product, price, place and promotion, differ in some extent by nature when applied to services resulting from the special features and process character of services (Zeithaml et al. 2006, 25), as established earlier.

3.2.1 Service product

The service product is defined by the features of the related physical goods, quality level, accessories, packaging, warranties, product lines and branding (Zeithaml et al. 2006, 26). Product or service can be seen as three leveled which include the core product, actual product and augmented product. The levels and elements of a product are demonstrated in Figure 2. Core product solves the problem of the customer and is the reason for buying the product. Actual product includes, among other things, brand name, quality, styling, features and packaging. Augmented product is surrounding the core product and actual product and includes extra benefits and services. Each product level increases customer's experienced benefits. (Kotler & Armstrong 2004, 279.) The environmental sustainability can be implemented into each of these levels.

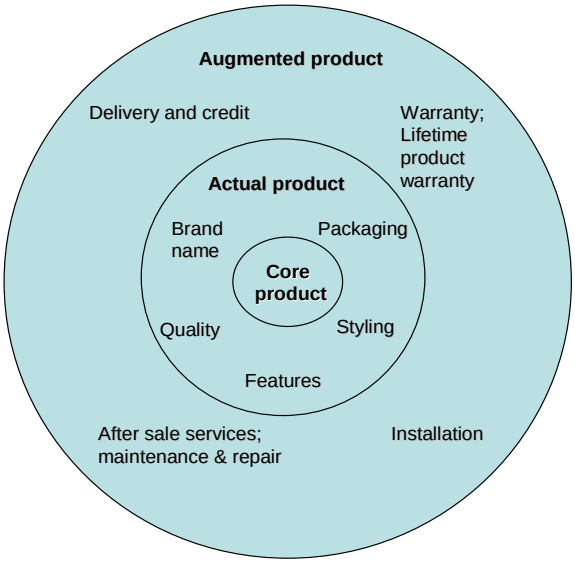

Figure 2 Three levels of a product or service (Kotler & Armstrong 2004, 279; adapted)

Core product is the actual benefit that customer gains and the reason for buying the product (Kotler & Armstrong 2004). For example for travel service, the core product can be relaxation, cultural experience or some other personal desire. For customer satisfaction, it is very important to note the role of the core product and the delivery of the core benefits. As an example, if the core product is a nature experience in intact natural environment, then the whole service needs to be developed accordingly. Thus, the core benefit is the foundation of the service marketing mix planning.

In green marketing, the environmental impacts of services and related physical goods have to be noted and reduced comprehensively from the raw material and energy use to obliterating and recycling the end product, the products should also be developed as long lasting as possible (Peattie 1992, 90-93, 103; Grove et al. 1996, 64; Grundey & Zaharia 2008, 130). Also Bridges and Wilhelm (2008, 37) point out that the company should be willing to change markets so that material flows become more circular through product take-back and recycling. Similarly the meaning of the eco-efficient services that van der Zwan and Bhamra (2003, 344) highlight, is to increase the added value of a service and to decrease the material and energetic

components of the product-service mix. According to Grundey and Zaharia (2008, 135) eco-efficiency refers to the proper timing for the use or consumption of the oftentimes scarce natural resources so that nature is afforded an opportunity to renew itself. The authors (ibid.) suggest managing the product life stages in an environment-friendly and eco-efficient manner.

Actual product includes brand name, quality, styling, features and packaging. Deriving from the special features of services, consumers have a more difficult time evaluating and choosing most services. Some services, such as vacations, are high in experience qualities because their attributes cannot be fully known until they have been purchased and are being consumed. This makes it ever more difficult for consumers to evaluate the green qualities of a service, and therefore consumers might search clues of service quality from the brand name. (Zeithaml et al. 2006.) For example using the term ecotourism trip is an example of communicating with brand name.

Similarly, according to Peattie (1992, 235), green *brand name* can be created by attaching some environmental meaning to it or something related to a product feature, such as clean or natural, production related, like recycled, or by relating some green symbols, colors or forms to the brand. Davis (1991, 17) in contrast, suggests to avoid vague terms, such as environmental friendly or degradable, without clear definitions because this kind of unspecified terms invite misunderstandings and confusion. For example the wild use of the ecotourism term has lead to distrust and suspicions among some consumers. Required by international law, any product communicating more than one environmental benefit must be backed by LCA (Life Cycle Assessment), similarly certification under ISO14000 standards requires a life cycle assessment (Bridges & Wilhelm 2008, 40). Bridges and Wilhelm (ibid.) suggest using third party product standards or labels to legitimize sustainability. Schwartz et al. (2008, 302) note that by bringing environmental and socioeconomic considerations into supplier management processes, the company also protects brand reputation and addresses corporate social responsibility.

As earlier mentioned, being branded as a green company can potentially be beneficial to business organizations and it might for example enhance the overall perception of product quality (Grundey & Zaharia 2008, 138). According to Peattie (1992, 177), the *green quality* features of physical products are energy and resource efficiency, minimization of the amount of waste and pollution, product life, reuse and recycling possibilities, so therefore by adding

these *features* to services, it would be possible to communicate about the green quality of the service.

As earlier stated, the assessment of green qualities involves complex value judgments and, thus, varies among people Moisander (2007, 406). The perceived risk could be reduced for example by service guarantees (Zeithaml et al. 2006) or by using eco-labels (Moisander 2007, 406). The importance of delivering service quality to customers must never be forgotten in making green marketing changes because if customers believe that an environmental change has reduced the quality of the service they receive, they will seek new service providers (Peattie 1992, 188; Grove et al. 1996, 64). Therefore, quality is an important product feature and environmental sustainability can be implemented into company's quality management processes which will be discussed later in this chapter in the service process context.

When it comes to *packaging*, there are several possibilities to reduce environmental impacts, for example by selling bigger unit sizes, offering products in refillable containers and reducing extra package layers (Peattie 1992, 222; Grove et al. 1996, 57; Grundey & Zaharia 2008, 136). Biomimicry offers interesting implications for product development and packaging decisions by studying nature's models and then imitating these designs and processes to solve human problems, a solar cell inspired by a leaf for example (Bridges & Wilhelm 2008, 37). The biomimicry could be a source of successful innovations also for travel service providers.

Augmented product includes after sales services, delivery and credit, installation and warranty. Van der Zawan and Bhamra (2003, 355) divide eco-efficient services into three categories, which are 1) product services, 2) use services and 3) result services. The aim of the *product service* is to increase the lifetime of the product to which they are attached by utilizing maintenance and repair services (see in Figure 2). The same applies with the *use services* with regard to which the provider no longer sells the product but only its use, like leasing and renting, and therefore the manufacturer has an incentive to design as long lasting products as possible (ibid.). Peattie (1992, 213) shares the idea with van der Zwan and Bhamra while using lifetime product warranties as an example of communication about environmental sustainability. The producer of *result service* owns and runs the product and therefore has an incentive to intensify and optimize the product's operation, and to increase its service life (van der Zwan & Bhamra 2003, 355). Similarly Bridges and Wilhelm (2008, 37)

suggest to move the emphasis on benefits from product use versus joys of ownership. It would be important to create cooperation networks between product manufacturers and service providers, in which all the parties would engage into ecological sustainability. For example in ski centers, repair and rental services could be promoted to reduce the need to buy new equipment.

3.2.2 Price

Price consists of flexibility, price level, terms, differentiation, discounts and allowances (Zeithaml et al. 2006, 26). Both, costs and demand, have to be considered in the price (Peattie 1992, 250). While developing environmentally sustainable practices, extra costs often arise, which normally diminish again with learning (ibid.). Therefore, as Bridges and Wilhelm (2008, 35) present, to practice sustainable marketing, practitioners will need to rethink assumptions and those necessary changes include lengthening corporate time horizons for return on investment and valuing financial continuity over profit. Moreover, companies are starting to realize that pollution is a sign of inefficiency and added cost, and that waste represents raw materials not sold in final products (Grundey & Zaharia 2008, 137).

Bridges and Wilhelm (2008, 35) support the adoption of environmental accounting methods to assess costs associated with product production, ownership, use, and disposal which will ensure that environmental costs are taken into consideration in product pricing decisions. Furthermore, they (ibid.) allege that the emphasis should be on cost instead of price. Also Grundey & Zaharia (2008, 141) note marketers to assess the cost of new laws and regulations as well as the cost of endless litigation as integral and critical components of an ecological approach. Therefore companies should be proactive and by focusing on costs they can improve their cost effectiveness and possibly gain competitive edge.

Cost savings occur from decreasing inputs as well as effectively reusing and recycling resources (Peattie 1992, 249; Polonsky & Rosenberger III 2001, 28; Bridges & Wilhelm 2008, 41; Schwartz 2008, 302), similarly profitability and competitiveness of travel sector improves while making more efficient use of energy and by reuse and recycling to minimize waste (Bramwell & Alletorp 2001, 92). For example in ski centers by investing into more energy efficient ski lifts or buildings, remarkable cost savings can be achieved in the long term. Hence against general belief, ecologically sustainable travel services are not necessarily

more expensive to produce than normal travel services; moreover they might even be cheaper to produce, at least in the long run.

Grundey and Zaharia (2008, 130), however, point out that prices for green products may be little higher. On average, consumers are willing to pay about 5 percent more for environmentally sustainable product or service (Davis 1991, 16). Nevertheless, Davis (ibid.) notes that the preferred alternative is to provide the environmentally sustainable or improved product or service at the same or lower cost as competing but less sustainable products. Especially when the service is already pricy, as air travel and ski centre services, consumers might not be willing to pay much extra.

Grove et al. (1996, 64) consider opportunities to make ungreen services fee based, such as fee for daily made services in a hotel, in addition, according to Peattie (1992, 253) price can be utilized to demarked usage of some natural resource. Pricing strategies can affect the usage of previously thought of "free goods," internalizing what used to be externalities, for example charging for water use and transferring emissions credits are forms of regulation through the use of incentives (Goodstein, 2004; Bridges & Wilhelm 2008, 41).

3.2.3 Place (distribution)

Distribution choices include decisions of channel type, exposure, intermediaries, outlet location, transportation, storage and managing channels (Zeithaml et al. 2006, 26). Peattie (1992, 93) states that the environmental impacts of distribution channels can be analyzed by capitalizing traditional value chain method by converting it into so called vandalism chain analyses and examining what each distribution channel participant takes away from the environment. Also Bridges and Wilhelm (2008, 35) highlight the need to take means of production and channel members' activities when making product development. ISO 14000 is an important development in sustainable distribution strategies and auditing the entire supply chain, which includes analysis of all upstream and downstream members of the supply chain in addition to internal processes, is another sustainable business practice that is catching on (Bridges & Wilhelm 2008, 42). Service providers encounter complex distribution channel, where greener marketing strategies can be implemented by paying attention to the participant selection (Peattie 1992). In this context the tour operators have an important role.

Schwartz et al. (2008) argue that most of the sustainability impacts take place in the supply chain, therefore any serious attempt by a tour operator to improve sustainability requires implementation of sustainable supply chain management, SSCM, framework. SSCM brings environmental and socioeconomic considerations into supplier management processes, including considerations relating to energy and waste management, conservation of nature and heritage. The sustainable supply chain management includes accommodation, transport, excursions/activities, food and craft and other ancillary services. (ibid.) For example the transportation sector accounts for a large and growing share of emissions in industrialized countries (Gössling et al. 2007, 224).

The management of supplier performance is especially critical for tour operators, since customers rarely differentiate between the activities of an operator and its suppliers (Schwartz et al. 2008). Schwartz et al. (ibid.) highlight three necessary conditions for SSCM, which are long term partnership, fair pricing and a consistent volume of operations. According to Lynes and Dredge (2006, 121), based on earlier research of Corporate responsibility in the UK tourism industry, factors driving environmental responsibility among tour operators are; industry structure and the level of competition that exists, legal requirements, market advantage and public relations benefits of 'being green', perceived importance of cost savings over the long term balanced against short-term nature of tourism business operations, and moral obligation. Tour operators should realize the market opportunity of proactively striving for sustainability to create competitive advantage before new laws and regulations make everyone do so.

In tour operations, a basic distinction can be made between 'specialists' as small operators and 'mass-market' operators. In general, mass-market operators offering mainstream packages have not traditionally considered sustainability in business processes in the same way as specialist operators that sell authentic products (Schwartz et al. 2008, 300). For example for excursion providers it is natural to provide authentic ski tours in the nature in contrast to mass marketers who provide tours and ski lessons on the prepared slopes. Specialist and mass-market operators have different potential for addressing SSCM due to their size and type of operations (Schwartz et al. 2008, 302). Therefore, the implementation of the framework is differentiated for small tour operators as well as for large and medium sized tour operators (see Appendix 1). The framework consists of the following six steps: 1) engage the business, 2) create a policy for SSCM, 3) integrate SSCM into the business, 4) conduct a baseline

assessment of suppliers, 5) prepare and implement an SSCM program and action plan and 6) monitor and evaluate the SSCM program and report on progress made.

When establishing sustainability-related goals and activities, it is critical that supplier capacities to invest in sustainability are considered because the overall potential of tour operators to address SSCM is dependent on their suppliers' resource capacities for implementation of sustainability actions. Hence, financial, operational and human resource capacity limitations faced by tour operators, both internally and in supplier operations, in addition to price sensitivity in the consumer market, challenge the implementation of SSCM. (Schwartz et al. 2008.) Also the true willingness of the supplier to engage into sustainable practices is important to evaluate.

The fourth step is to conduct a baseline assessment of suppliers' current sustainability performance to design an action plan and also to measure progress over time (Schwartz et al. 2008, 308). Assessments will need to be prioritized according to either key impacts, destinations or supplier types, and the assessments will need to be gradually phased into the business due to the large number of suppliers in different destinations. Accommodation and excursion providers are generally addressed first, in part because accommodation is the key to all packages and because it is more tangible and easier to measure whereas excursion providers due to both the obvious negative impacts on the animals and habitats, and because they are emotive issues (Schwartz et al. 2008, 308). However, with regard to travel services, the transportation to the destination should be increasingly emphasized.

Sustainability actions can be prioritized according to the characteristics of both operator and supplier businesses, however considering the fact that it is the supplier who makes the investment for the improvements, a mix of actions is generally promoted. A mix of actions could be, for example, combining cost-saving actions on water and energy efficiency as well as on waste management with actions on the environment that may require higher operating costs, or have longer or less obvious returns on investment. (Schwartz et al. 2008, 209.) For example solar panels are massive investment but later the savings on energy costs are remarkable. Ski centers could also cooperate with the transportation sector and they could share the costs and revenues by offering for example ski pass together with train ticket in reduced price.

Air travel is a key factor in transportation as well as in tour operator context. The tourism industry is increasingly heavily dependent on air transport (Gössling et al. 2007). Moreover, global air travel growth rates have been in the order of 5–6% per year in the period 1970–2000 and deriving from that, air transport volume is now five times as large as it was in 1970 (Gössling & Peeters 2007, 404). Tourism based on air travel needs to be seen as the most problematic global environmental impact of tourism (Gössling et al. 2005; Lynes & Dredge 2006; Becken 2007, 351; Gössling & Peeters 2007, 403). Air transport accounts for 12% of transportation CO_2 emissions (Lynes & Dredge 2006, 125) and 3,4% of global CO_2 emissions (Gössling & Peeters 2007). Furthermore, the emissions from air travel are even more severe because they happen in high altitude. Moreover, the analysis of Peeters and Schouten (2006, 157) for inbound tourism to Amsterdam showed that transport between the visitors' home country and Amsterdam represents 70% of all environmental impacts. In addition to air emissions, other environmental impacts related to airlines are noise emissions, congestion and waste (for a summary of the environmental impacts generated by the airlines, see Appendix 2). Clearly, the environmental impact of inbound transportation is a major issue which may dominate other impacts (Dolnicar et al. 2008, 209). According to Dolnicar et al. (ibid.), this finding does not decrease the need to seek mitigation of the ecological footprint arising from other causes, however it does show that transport is the dominating issue as a part of tourist behavior. Here the government has a leading role in supporting less polluting options as for example rail travel. Also environmental taxes for aviation are needed in order to compensate, at least in some extent, the environmental impacts of aviation.

Lynes and Dredge (2006, 133) found in their case study of SAS that it had not by then experienced first-hand pressure from others in the supply chain to implement environmental management measures, however they were starting to see demand from corporate clients who were trying to maintain or achieve some form of environmental certification such as ISO 14001. To respond to the anticipated pressure from supply chain, airline companies could develop an environmental emission calculator, as Lynes and Dredge (ibid.) found in their study that SAS had done. Similarly, ski centre service providers could have emissions calculators on their web pages.

Also integrated transportation systems which, like Polonsky and Rosenberger III (2001, 25) state, reduce the environmental impact of distribution activities by requiring fewer transportation modes. Similarly Polonsky and Rosenberger III (2001, 25) suggest that the

most complex advances in distribution are in the area of reverse logistics, where firms take back waste, which they can then again use in their production. A simple example of this reverse logistics is bottle recycling, where distributer takes back old bottles and cans at the same time as the new ones are delivered and customers can get their deposit back whereas the manufacturer can reproduce the bottles or cans. It would be profitable for the companies that operate in the same area if they integrated their shipments, so that unnecessary transportations could be avoided. According to van der Zwan and Bhamra (2003, 349) eco-efficient services and unique value can be created when cross industry networks are established.

Regardless the usefulness of SSCM, Schwartz et al. (2008, 303) believe in the medium term at least, it is likely that costs, facilities and service levels will be given priority over sustainability criteria in purchasing decisions by tour operators. Therefore cooperation with governmental institutions, for example, becomes critical in sustainability improvements as discussed earlier in Chapter 2.

3.2.4 Promotion

Promotion in the marketing mix of services includes promotion blend, the selection, training and incentives of salespeople, advertising which includes choices of media types and types of ads. In addition, promotion involves sales promotion, publicity and internet strategy. (Zeithaml et al. 2006, 26.) Grundey and Zaharia (2008, 130) suggest that the company should advertise the expenditures that it has used on the environmental protection and note that the ecological products probably require special attention. However, the basis of green marketing claims is genuinely environmentally sustainable products and services (Davis 1991, 16), and the truthfulness as well as specificity of the green marketing claims should be monitored and the claims should be informative by nature (Balderjahn 1988, 56; Peattie 1992, 103). Thus, advertising the expenditures is irrelevant and hypocritical.

Company can motivate consumers by their promotional activities. An important aim of promotion is to stress how consumer can have an effect on the pollution levels with their consumption choices and by using the product (Kinnear et al. 1974; Balderjahn 1988) or service. Marketers should demonstrate clearly that the product offered does not pollute and be specific where the environmental benefit lies in the product or service, is it for instance the production method or the packaging (Kinnear et al. 1974; Balderjahn 1988, 56; Davis 1991,

17). It is also important not to try scare consumers too much because strong fear appeals might be less effective in persuasion than minimal appeals since the strong appeals seem to create too much tension which leads to tuning out the communication (Kinnear et al. 1974, 23). Consumers might also feel themselves powerless if the problem seems overwhelming and therefore stressing consumer possibilities to make a difference with their actions is increasingly important.

Green promotion acts and sponsoring natural environments, for example sponsoring recycling, may have highly positive effects and possibly some market segments, unreachable with ads, could be better reached (Peattie 1992, 204; Grundey & Zaharia 2008, 133). Ski centers could for example use famous skiers in promotional activities or, for instance, organize ski competitions where the profits are donated to environmental protection. Schwartz et al. (2008, 307), on the other hand, emphasize the importance that the promotional opportunities associated with company's green policies are not confused with policies primary function, which is to set out company goals and direct the nature of the company's engagement in sustainability initiatives. Moreover, Polonsky and Rosenberger III (2001, 26) intensifies that green marketing claims need to have meaningful links to corporate activities. Ski centers, for example, can pursue to reduce their co2 emissions in order to slow down global warming. However, if a firm for example simply sponsors a local environmental program without modifying its other activities, the generated publicity could even make consumers more critical of the firm's other, less eco-friendly activities (Grundey & Zaharia 2008, 133).

Bridges and Wilhelm (2008, 42) note that it is evident that some firms are guilty of the unethical practice of "green washing" whereby firms promote the environmentally friendly nature of their products while making very few actual changes in its composition. Grundey and Zaharia (2008, 131) point out that when making green marketing claims, it should be stated that the products are "*less environmentally harmful*" rather than "*Environmentally Friendly*", because, as earlier noted, human consumption by its very nature is destructive to the natural environment. Similarly, airlines will never be really considered 'green' because of the amount of fossil fuels consumed by aircraft, and so, they can only be considered green*er* (Lynes & Dredges 2006, 134). For example in Becken's (2007, 361) study, tourists considered attempts by the airline industry to be involved in mitigation initiatives as green-washing, money-making or advertising. To address criticism of green-washing, Schwartz et

al. (2008) suggest that policies should be tied into monitoring systems. The ISO Environmental Management System can be used in developing guidelines and standards for environmental claims made in promotion and on packaging as well as to improve firm's image (Bridges & Wilhelm 2008, 42; Grundey & Zaharia 2008, 130).

Peattie (1992, 197) notes that while planning greener promotion, attention should be paid on the resources needed, that could otherwise possibly be used directly for the benefit of environment. Likewise the usefulness of direct postings should be considered and also shift to use recycled paper (Peattie 1992, 204). Nowadays, the use of Internet postings has somewhat decreased the need to use traditional mail but still many companies use paper. Bridges and Wilhelm (2008, 35) stress that marketers must also be willing to practice demarketing when necessary to manage consumer demand and expectations downward and to encourage responsible consumption (e.g., promoting energy conservation or decreased usage of certain ecotourism destinations).

3.3 Extended elements of marketing mix

Deriving from the special features of services, three service specific elements which are; people, processes and physical evidence, are added into the traditional marketing mix. In this thesis, customer needs are assumed to be considered in marketing strategy aside with environmental issues so therefore they are also taken into account in service marketing mix design. The expanded marketing mix components, people, physical evidence and processes, offer cues for customers especially when they have little on which to judge the actual quality of service (Zeithaml et al. 2006, 27).

3.3.1 People

People include all human actors who play part in service delivery and thus influence the buyer's perceptions: namely the firm's personnel, the customer, and other customers in the service environment. Therefore, while creating service marketing mix, attention should be paid on employee selection, motivation and training as well as customer education and motivation towards green practices. Customers themselves can influence service delivery, thus affecting service quality and not only their own satisfaction but also the satisfaction of other customers. (Zeithaml et al. 2006, 26.)

It is important that corporate environmental orientation is explicitly stated (Davis 1991, 15). By educating people on environmental issues the company actions and greening process are affected (Peattie 1992, 104). When purchasing services, consumers seek and rely to a greater extent on personal sources (Zeithaml et al. 2006). For example by asking friends or experts, the consumer can obtain information vicariously about experience qualities (ibid.), so by educating current customers also prospective customers may be reached. Marketing of ecological issues, both inside the company and in external marketing to customers and other interest groups, can be achieved with the help of *Service Marketing Triangle* (Figure 3) which will be introduced later while applying the sustainable slopes chart in ski centre design in Chapter 4.

In the service sector the contact employee is in crucial position resulting from the special features of services (Zeithaml et al. 2006, 355). Zeithaml et al. (ibid.) state that the contact employee often is the service or, at least, personify the firm in the customer's eyes since the customer forms the primary image of the firm by the interactions that he or she has with the employee. All the persons participating in the service delivery offer clues to the customer regarding the nature of the service itself, so the appearance, attitudes and behavior of the service contact person affect customer's perceptions (Zeithaml et al. 2006, 26). Accordingly, it is essential that the contact personnel communicate with their behavior, appearance and attitudes the green values and orientation of the company as well as fulfils them in daily actions with customers.

One of the distinctive service features is heterogeneity which stems from services being produced by human performances and, as a result, no two services are precisely alike instead they differ according the employee and across time. Ensuring service quality is challenging as a result of heterogeneity. (Zeithaml et al. 1985, 34; Peattie 1992, 8; Zeithaml et al. 2006, 23.) Common rules should be created into the company to ensure persistent environmental quality, and as it was stated earlier, the second step in SSCM framework (Appendix 1) is to create clear policy goals and feed them into a plan of action (Schwartz et al. 2008, 306). People are in critical role also in the third step of the SSCM framework, in which the SSCM is integrated into the business by clear definition of job responsibilities across the company, along with associated new company procedures and training requirements (ibid.) However, the company should avoid becoming too bureaucratic to enable environmental innovations and initiatives.

As Peattie (1992, 93) emphasizes, it is critical that corporate management commit fully to the environmental strategy and create organization culture that combines cooperation, social and environmental values. Similarly, Schwartz et al. (2008, 306) argue for gaining commitment at director level in order that time and resources are made available to implement green initiatives, which is the first step in the SSCM framework (see Appendix 1) discussed previously in the "place" context. It is important to create an open organizational atmosphere to allow organizational learning. The management needs to be sensitive to initiatives originating from all organizational levels. For example in the case study of SAS, Lynes and Dredge (2006) found that several positive environmental decisions in SAS had been the result of a few 'environmental visionaries' who put internal pressure on top management.

3.3.2 Physical evidence

Physical evidence is the environment in which the service is delivered and where the firm and customer interact, and any tangible components that facilitate performance or communication of the service (Zeithaml et al. 2006, 27). Due to the intangible nature of services, customers search service cues from physical evidence. The physical evidence design includes facility design, equipment, signage, employee dress, and other tangibles such as reports, statements and guarantees (ibid.). The company can communicate its environmental orientation with the help of tangibles like for example ISO14000, Life Cycle Assessment (LCA) and different kinds of third party eco-labels and certificates.

Eco-labels can cover a range of environmental attributes and they allow consumers to make comparisons among products/services as well as include environmental aspects as criteria in their purchasing decisions (Grundey & Zaharia 2008, 138). Grundey and Zaharia (ibid.) consider eco-labels to be a strong and effective method to market greener products and services. Also in the SSCM framework (see Appendix 1), the sixth step is to monitor and evaluate the SSCM program and report on progress made (Schwartz et al. 2008, 310). Furthermore, Schwartz et al. (ibid.) believe that reputational advantages from setting out SSCM achievements can be gained by providing a credible reporting system.

Environmentally sustainable service provider should use eco-labelled machines, durable furniture, clothes and materials as well as recycled paper. In a ski centre, physical evidence

would also include second hand shops and repair services to promote reuse. In general, the same principles apply to the physical evidence as previously mentioned in the product discussion.

3.3.3 Process

Processes are the actual procedures, mechanisms, and flow of activities by which the service is delivered. In the process planning, decisions can be made about standardization or customization approach, number of steps as well as the level of customer involvement. Most services are first sold and only after produced and consumed simultaneously. (Zeithaml et al. 2006.) For example, customer first buys the skiing trip and after the trip is consumed and produced in cooperation with the travel service provider. Since services are processes, when creating environmentally sustainable travel service, a special attention should be paid to the sustainability level of the service procedures. Nonetheless, van der Zwan and Bhamra (2003, 350) among other ones, state that there is considerable lack of process emphasis in the area of new service development, and therefore the eco-efficient service development is driven by the understanding of new product development.

Attention to the ecological soundness of the design of service processes could also play a key role in preserving the environment (Grove et al. 1996, 57). Grove et al. (ibid.) perceive the reworking or re-engineering of service processes to play a significant role in protecting the environment through reduced reliance on and more efficient usage of resources, such as energy. Likewise, according to Peattie (1992, 104) special attention should be paid to the energy consumption and waste production of processes, in addition to the previously mentioned, Grundey and Zaharia (2008, 136) encourage companies to attempt to find alternative sources of energy. For example in ski centers, solar and wind power are logical energy alternatives. It is also important to consider the environmental trade-offs while adopting green practices (Grove et al. 1996, 64). For example when replacing disposable plates with normal plates might not be benefiting the nature if the plates are washed with old, energy inefficient machines and polluting detergents. Similarly, the alternative energy solutions have trade-offs, hydropower plants for example help to reduce co2 emissions but often simultaneously have detrimental effects on local river environments (Moisander 2007, 406).

Perishability, a distinctive service feature, refers to the fact that services cannot be saved, stored, resold, or returned. Therefore demand forecasting and creative planning for capacity utilization are important and challenging decision areas. (Zeithaml et al. 2006, 24.) Successful demand forecasting is important especially with respect to environmentally sustainable service because through using capacity efficiently, the environmental impacts can be minimized for example by saving energy (Grove et al. 1996). Grove et al. (1996) note that by decreasing room temperature with couple of degrees or, for example in hotels, closings off floor during slow period, considerable amounts of energy can be saved. In ski centers, this can also be achieved by closing some lifts during offseason.

Customer's experience comprises interactions with multiple interconnected organizations that will likely influence consumers' overall impressions of their experience (Zeithaml et al. 2006, 62). Therefore, it is important that customer experience about the environmental quality of each organization is favorable. According to Schwartz et al. (2008, 303), especially in mass-market products, a focus on added value through sustainability measures is essential in order to overcome the challenges of low-cost competition.

Service providers could rely on the example of the total quality movement in Japanese manufacturing, where quality is instilled in products through carefully monitoring production input and output flaws as well as engineering quality through production processes. Service organizations could use the same stages to reduce, reuse and recycle resources and they could be developed in conjunction with an organization's general efforts to improve total quality. (Grove et al. 1996, 62; Grundey & Zaharia 2008, 136.) To implement total quality management approach service firms should, according to Grove et al. (1996, 62), learn how to critically evaluate their use of resources through and after closely examine the processes involved in their activities to discern opportunities to become more resource efficient. Grove et al. (ibid.) suggest that recycling can be accomplished for instance by collecting bottles etc. from restaurants as well as by separating waste whereas reusing can be put into action by using refillable packages. Nowadays however, these can already be considered as normal behavior and therefore a minimum what every company should do.

Grove et al. (1996, 62) present also benchmarking, which is quality improvement technique, as an extremely useful way for a service organization to develop green practices. Benchmarking is an elaborate and systematic process, in which a specific practice is selected

and then compared with the identified world class leader with regard to that certain practice (Grove et al. 1996, 63). For example Lynes and Dredges (2006, 135) found that a strong internal culture willing to embrace industry benchmarking and improve environmental performance, and one or more environmental champions have played a key role in the success of a company's environmental management in SAS.

The service mapping technique known as "blueprinting", which will be discussed in detail with service process design in the next chapter, can be valuable while improving service processes, evaluating environmental impacts and implementing environmental sustainability. Finally, service provider might consider designing entirely new processes that require fewer resources as inputs and place fewer demands on the environment overall. Processes can be developed so that they are more efficient with respect to resource use and saving energy, such as building a hotel with sophisticated energy efficiency sensors and controls. (Grove et al. 1996, 62.) According to Dolnicar (2008, 198), the planning and management focus should be on identifying acceptable levels of human-induced change.

Service economy comprises very diverse industries and organizations, not all of them are equally capable of contributing to the preservation of the environment. The service firms that have a greater reliance on tangible components and resource dependent processes, such as hotels and restaurants can be expected to have a greater environmental impact through the adaption of green practices than for example an accounting firm. (Grove et al. 1996, 64.) Schwartz et al. (2008, 301) argue that sustainability should not be seen as a 'luxury' or an 'altruistic motive', but a key issue in quality management, in which specialist and mass-market operators face diverse opportunities and challenges. According to them (ibid.) mass-market operators have considerable opportunity to integrate sustainability issues, such as quality and training, into existing management processes.

3.4 Summary

Chapter 3 soughed answers to the second sub research question: how can environmental sustainability be integrated in service marketing mix? In order to answer this question the special features of services and the need for extended marketing mix for services were presented in the first paragraph. The main focus of the chapter was on implementing

environmental sustainability into service marketing mix components with the help of green marketing theory.

The paragraph 3.2 focused on implementing the environmental sustainability into the traditional marketing mix components. The core *product* is the reason for buying the service, for example a nature experience, and it has to be delivered. The environmental impacts of service product can be minimized by effective use of raw materials and energy as well as paying attention to reusing and recycling the related end products. With the components of augmented product, such as different kinds of repair and maintenance services, the lifetime of the product can be increased. While creating a brand name, the goal should be clarity and specificity about the environmental benefit or claim, so that the consumer wouldn't be misled. Environmental sustainability can be seen as a part of service product quality and should therefore be integrated also into the company's quality management processes.

Price can be very effective tool to create more sustainable services because by the aid of price, for example demand can be pursued to direct towards more environmentally sustainable services. Environmental accounting methods should be adopted to ensure that environmental costs are taken into account in product pricing decisions. However, environmental sustainable services should not be more expensive than competing normal services. Therefore there should be a shift in focus from price into costs in order to improve cost efficiency. Cost savings occur for example because of effective use of inputs as well as reuse and recycling of resources.

Place as marketing mix component include some important travel service features such as location, intermediaries including tour operator specific services as accommodation, transport, excursions and food. Most of the sustainability impacts take place in the supply chain and therefore greener marketing practices can be developed by utilizing SSCM, vandalism chain and, consequently, by paying attention to participant selection. Also integrated transportation systems enhance the effectiveness of distribution activities. Public transportation should be supported by creating sufficient connections between railway station and the destination whereas flying should be minimized due to its severe environmental impacts.

In environmentally sustainable *promotion* the communication is informative and motivational, consumer opportunities to make a difference with their choices are emphasized and attention

is paid on the resources needed. The most substantial in the marketing communication is that company's ecological orientation is communicated as truthfully as possible to the audience. To avoid criticism of green-washing ISO Environmental management System should be used and in green marketing claims terms like "less environmentally harmful" should be utilized.

The paragraph 3.3 implemented environmental sustainability into the service specific marketing mix components; people, physical evidence and processes. *People*, which includes firm's personnel and customers, are in critical role in the service delivery and they affect the greenness of the service with their actions. It is important to educate and motivate both employees and customers about environmentally sound practices. In order to ensure constant environmental quality, the full commitment of corporate management as well as common rules are needed. Furthermore, the corporate management needs to create an open organizational culture which encourages environmental innovativeness, organizational learning and initiatives.

By paying attention to the ecological quality of the *physical evidence*; facility design, equipment, signage, employee dress, reports, statements and guarantees, the company can communicate its environmental orientation to customers. Examples of environmental statements are ISO14000 and Life Cycle Assessment, also third party eco-labels and certificates may help to convince the customer and other interest groups.

Services are delivered through *processes* and therefore re-engineering service procedures play a significant role in environmental sustainability implementation. Demand forecasting and creative planning lead to efficient capacity usage. It is important, however, to recognize the tradeoffs that exist while adopting green practices. Environmental sustainability can be considered as a quality feature and therefore it can be instilled into existing quality management processes. Ecological total quality management includes the effective use of natural resources, reducing waste, recycling and reusing materials in service processes. Environmental quality can be achieved, in addition to TQM, by benchmarking and service blueprinting.

4 APPLYING ENVIRONMENTAL SUSTAINABILITY IN SKI CENTRE SERVICE MARKETING

In this chapter, the environmental principles of the sustainable slopes charter for ski areas are applied in ski centre service marketing with the help of service marketing triangle and service blueprint. In the end of the chapter, the theoretical framework of the study is presented.

4.1 The sustainable slopes charter and environmental principles as guidelines

The skiing environment is ski operators' greatest asset; therefore all efforts must be made to protect its natural value (George 2003, 41). The magnitude and diversity of services and operations at ski areas create a multifaceted environmental impact for most ski areas that include chemical and water use, energy consumption and related air pollution, as well as solid and hazardous waste generation. Moreover, the environmental impacts are often difficult to measure, track and to address in a systematic manner. (Peaks to Prairies 2002.) In recognition of these challenges, the National Ski Areas Association (NSAA) of the United States of America launched its 'Sustainable Slopes Environmental Charter' for ski area owners and operators in the United States and Canada to implement best practices (George 2004, 59).

Ski resorts are well suited to accommodate large numbers of visitors thanks to their infrastructure and expertise in managing the impacts associated with those visits. Moreover, ski areas have the possibility to help limit dispersed impacts in more remote, wild areas by providing facilities for concentrated outdoor recreation in limited geographic areas. (NSAA 2005.)

The NSAA's sustainable slopes charter is a product of co-operative effort by industry, governmental agencies, and environmental groups and it establishes far-reaching voluntary principles designed to enhance the environment and to meet the expectations of the public while simultaneously meeting profit objectives (George 2003). The NSAA's environmental principles are meant to be a useful tool for all ski areas, from local ski hills to four season destination resorts, whether on public or private land. The charter regards that some smaller areas that endorse the principles may be limited in their ability to make progress in all of the areas addressed. Likewise, the principles recognize that ski areas have some unavoidable impacts. (NSAA 2005.)

Sustainable Slopes Charter features 21 Environmental Principles with associated best management practices (see Appendix 3) that address environmental issues associated with (1) planning, design, and construction; (2) operations; and (3) education and outreach (Peaks to Prairies 2002). The Table 1 summarizes key issues of the environmental slopes charter and demonstrates some example principles and implementations.

Table 1 The Sustainable Slopes Environmental Charter for Ski Areas

Key issues	**Example principles**	**Example implementations**
Planning, design and construction	- Plan, site and design trails, on-mountain facilities and base area developments in a manner that respects the natural setting and avoids, to the extent practical, outstanding natural resources	- Incorporate green building principles, such as using energy, water and material efficiency techniques and sustainable building practices
Operations; water resources	- Optimize efficiency and effectiveness of water use in snowmaking operations	- Use appropriate, modern technology and equipment to optimize efficiency
Energy conservation and clean energy	- Reduce energy use in lift operation - Use cleaner or renewable energy in ski area facilities	- Use modern, high efficiency motors - Purchase renewable 'green power' from energy providers
Waste management	- Reduce waste produced at facilities - Reuse products and materials - Increase the amount of materials recycled at ski areas	- Purchase products in bulk to minimize packaging materials - Purchase recycled products
Fish and wildlife	- Minimize impacts to fish and wildlife and their habitat and maintain or improve habitat where possible	- Limit access to, or set aside, certain wildlife habitat areas
Forest and vegetation management	- Manage effects on forests and vegetation to allow for healthy forests and other mountain environments	- Reduce or eliminate snow cat and snowmobile access to sensitive areas with limited snow coverage
Wetland & riparian areas	- Avoid or minimize impacts to wetlands and riparian areas, and offset unavoidable impacts with restoration, creation or other mitigation techniques	- Engage in restoration, remediation and protection projects
Air quality	- Reduce operations-related air pollution and greenhouse gas emissions as feasible	- Reduce air pollutants and greenhouse gas emissions through clean energy and transportation-related measures identified in these Principles
Visual quality	- Create built environments that complement the natural surroundings	- Design lifts and buildings to blend into the natural backdrop
Transportation	- Ease congestion and transportation concerns	- Provide and promote ski area guest transportation through shuttles or buses
Education and outreach	- Use the natural surroundings as a forum for promoting environmental education and increasing environmental sensitivity and awareness	- Train employees and inform guests of all ages about the surrounding environment

Source: NSAA 2005 (adapted)

George (2003, 43) found that the implementation of the charter has had a positive impact on ski area operators by raising the level of consciousness about the environment and helping in

performance measuring as well as by cost savings from energy reduction through efficiency improvements. However, the biggest challenges appear to be the implementation costs of the principles, the problems of communication and education of all stakeholders about environmental programs and the monitoring of the program effectiveness (ibid.). In this chapter, the environmental charter is implemented into services marketing triangle and service blueprint.

4.2 The green services marketing triangle

Because of their setting in an outdoor environment and the direct connection between that natural environment and customer experience, ski centers have an excellent opportunity to take a leadership role in environmental education and in enhancing the environmental awareness of their guests, employees and surrounding communities. As earlier established with service marketing mix, people have a central role in the service production and in some cases they are the service. Services marketing triangle (Figure 3) can be utilized while creating environmentally sustainable marketing practices. The triangle shows three interlinked groups which develop, promote and deliver the service together (Zeithaml et al. 2006, 356).

The three key players are the company, the customers and the providers. The company refers also to SBU, department and management whereas providers can be the firm's employees, subcontractors, or outsourced entities who actually deliver the company's services. Three types of marketing between these three points of the triangle must be successfully carried out: external marketing, interactive marketing and internal marketing. All of these three marketing types need to consistent with each other, that is, what is promised through external marketing should be the same as what is delivered, and the enabling activities inside the organization should be aligned with what is expected of service providers. (Zeithaml et al. 2006, 356.) Bridges and Wilhelm (2008, 37) indicate that the company should take responsibility for guiding customers, employees and suppliers toward more sustainable behavior. Ecological sustainability can be implemented into the three different marketing types which will be discussed next with the help of the environmental principles of the sustainable slopes charter for ski areas of NSAA (2005).

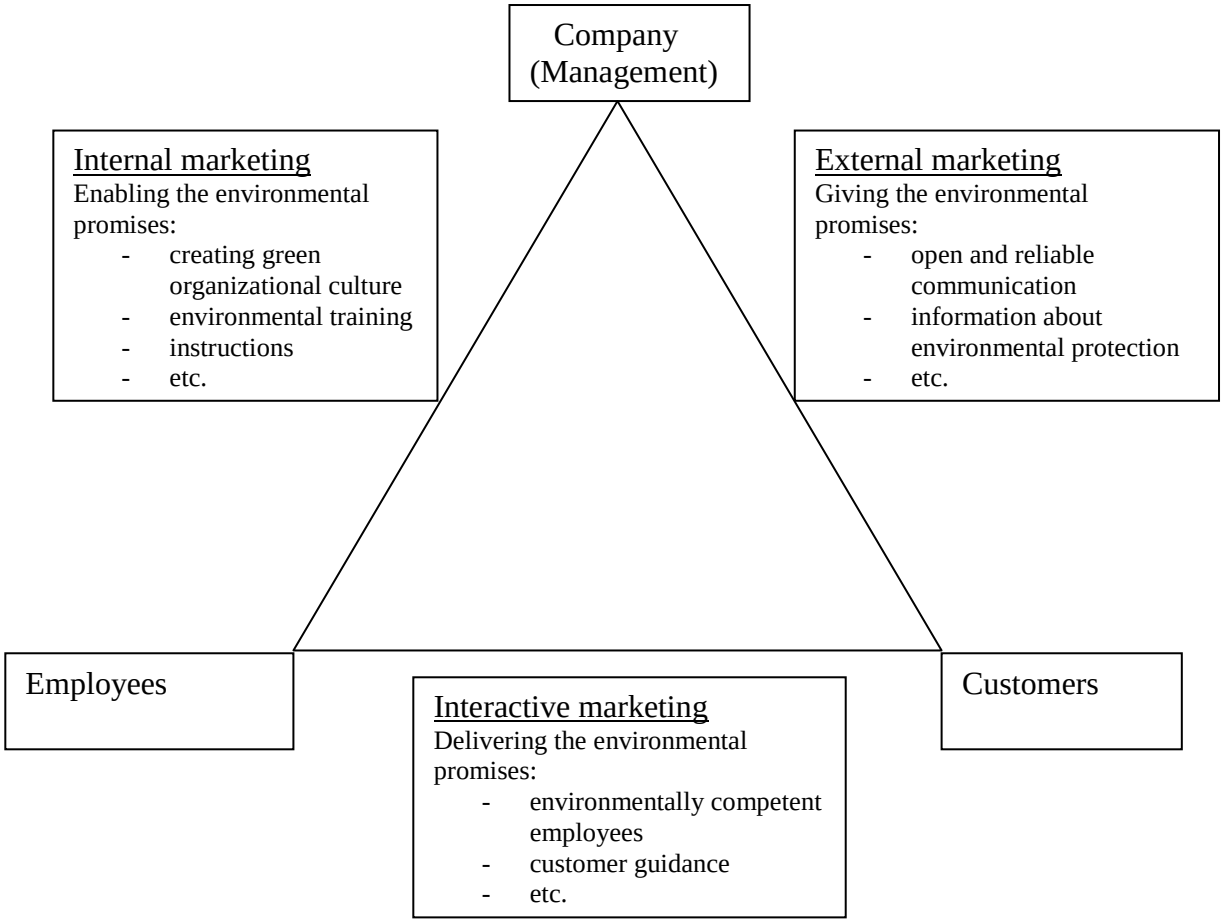

Figure 3 Green services triangle (Zeithaml et al. 2006, 356; adapted)

4.2.1 External marketing

Zeithaml et al. (2006, 356) states that external marketing includes the marketing efforts that the firm, or anyone who communicates to the customer before service delivery, engages in to set up customers' expectations and make promises to customers regarding what is delivered. Environmental considerations can be publicly addressed for example in stated company values, policies and mission statements as well as in an annual environmental report (NSAA 2005), as earlier discussed in Chapter 3 in the physical evidence context. However, according to George (2004), the release of the annual reports has not convinced conservation groups that significant changes are being made. To increase credibility, third party auditors should be used.

The company should provide information about nature and conservation for visitors and other interest groups before they come, and the information should be easily available and attractively presented (NSAA 2005). For example in ski centers, the natural surroundings and already existing material, such as ski maps, could be utilized to promote environmental sustainability. In addition, part of the ski area's website should be dedicated to environmental excellence (NSAA 2005). As earlier stated with the promotion context, marketing communication should aim to inform rather than just persuade and consequently customers should be educated what makes the product or service sustainable (Bridges & Wilhelm 2008, 37). In addition, it is important not to scare people because it might cause large groups to tune out (Kinnear et al. 1974, 24).

Dolnicar et al. (2008, 206) suggest regional identity to be particularly important indicator in the tourism context. They (ibid.) propose destination managers to develop communication strategies to increase regional identity which would then again increase levels of pro-environmental behavior. Regional identity could possibly be increased by promoting local products, which would also reduce transportation needs. Also the protected wildlife and biodiversity can be promoted to attract the guests to the mountain landscape (NSAA 2005). Then however, it is very important to educate guests how to behave in these protected areas.

The same green service marketing principles that have been discussed in the marketing communication context apply to the external marketing. The most relevant can be considered to be the trustworthiness of communication and paying attention to the resources needed to perform the marketing actions as well as demonstrating how the customer can contribute to the environmental quality by their actions.

4.2.2 Interactive marketing

Interactive marketing is where the promises are kept or broken by the firm's employees, subcontractors or agents (Zeithaml et al. 2006, 356). Thus, interactive marketing is the service encounter where the service is delivered and therefore it is essential to pay attention to the environmental knowledge of the customer service employees as discussed earlier. As Batta (2006, 58) states, lack of information among tourists causes problems of irresponsible behavior, for example in waste disposal and unsympathetic behavior towards flora and fauna,

therefore environmentally knowledgeable guides should be available to educate customers and answer their questions.

Because services are produced and consumed simultaneously, the customer is in and observes the production process and thus may affect the outcome of the service transaction (Zeithaml et al. 2006, 24). For example with the help of interactive marketing, similarly as Cosmescu & Cosmescu (2007, 68) suggests regarding to ecotourism, the visitor experience should be attempted to move beyond mere enjoyment to incorporate learning and to facilitate attitude and behavior change. Furthermore, Batta (2006, 58) notes that upon returning home eco-tourists may work as advocates for the area visited. It is also important to ask guests their opinions about ski areas environmental initiatives and use their feedback to improve programs and customer experiences (NSAA 2005).

4.2.3 Internal marketing

For services marketing triangle to work, internal marketing is very essential phase. Management should engage in recruiting, training, motivating, rewarding, and providing equipment and technology to aid the service providers in their ability to deliver on the service promise. (Zeithaml et al. 2006, 356.) The management should make sure already when recruiting people that the person is willing to learn and implement ecologically sustainable operations.

The management should create an organizational culture where ecologically sustainable values are the basis for activities and engage the whole organization to these values for example by motivating and rewarding as well as encouraging their employees to adapt sustainable principles. For instance, environmental performance measures can be incorporated into departmental goals (NSAA 2005). However, as earlier mentioned, one of the challenges of implementing the charter was seen to be informing all the stakeholders which also requires lot of company resources.

4.3 Ensuring ecological sustainability in service processes with service blueprint

Service blueprint is a useful tool to describe intangible service processes. A service blueprint is a picture or a map that visually displays the service by simultaneously depicting the process of the service delivery, the points of customer contact, the roles of customer and employees and the visible evidence of the service. (Zeithaml et al. 2006, 267.) With the help of service blueprint, the ecological sustainability can be considered in the different service phases and from different person's points of view as well as to ensure the environmental sustainability of physical evidence.

The Figure 4 demonstrates the components of service blueprint which are customer actions, onstage contact employee actions, backstage contact employee actions, and support processes (Zeithaml et al. 2006, 267). In the service blueprint, the previously mentioned four key actions areas are separated by three horizontal lines, which are line of interaction, line of visibility and line of internal interaction (Zeithaml et al. 2006, 269). In Figure 4, examples about considering environmental sustainability are also included.

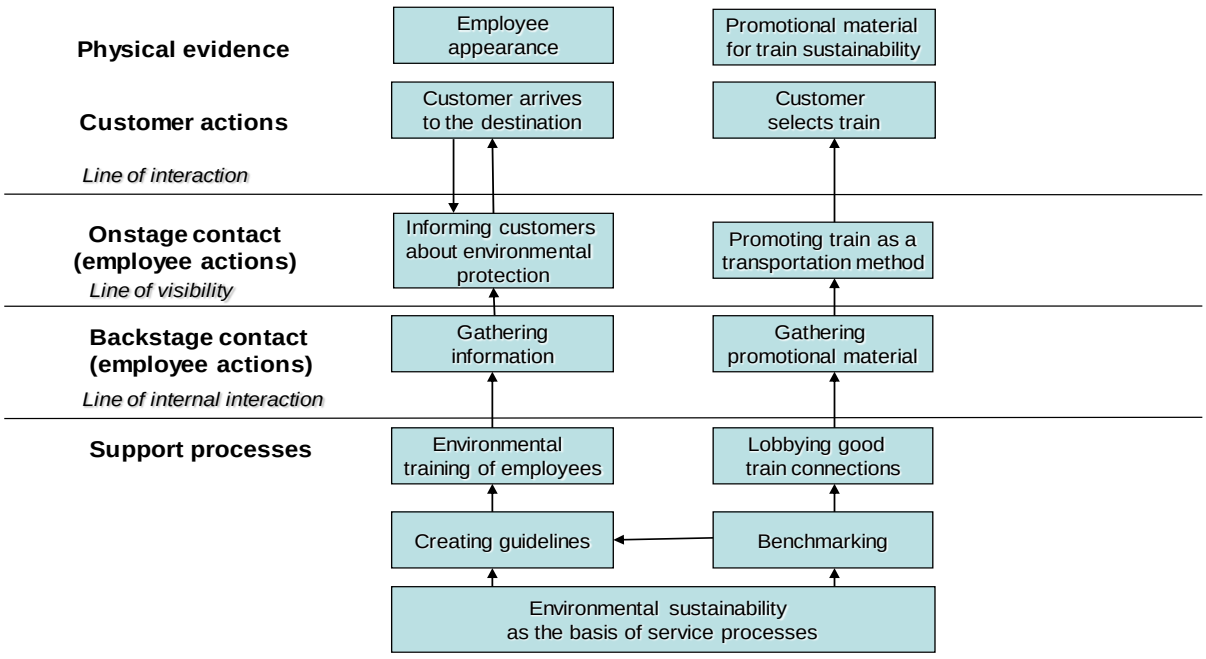

Figure 4 Green service blueprint (Zeithaml et al. 2006, 270; adapted)

4.3.1 Physical evidence

Physical evidence provides service clues as mentioned earlier in the service marketing mix context. In every customer contact, the customer observes the employee dress, equipment and other tangibles such as reports and statements and with the help of them, the ski centers can communicate about its environmental commitment. While creating the physical evidence of environmentally sustainable ski centre service, facilities should be designed to fit with the surroundings and the most beautiful natural areas should be left undeveloped, also possible disturbing noise should be avoided (Jokinen 2001, 145; Metsähallitus 2009). For example ski lifts and buildings should be designed to blend into the natural backdrop to ensure visual quality, which is the 9th key issue of the sustainable slopes chart (Table 1).

4.3.2 Customer actions

Customer actions encompasses the steps, choices, activities and interactions that customer performs in the process of purchasing, consuming and evaluating the service (Zeithaml et al. 2006, 268). In a ski centre service example, the customer actions might include visiting company web pages, watching advertisements, decision to contact a travel service provider, phone calls to the company, decision to make a reservation, receiving a bill, arriving to the destination and utilizing the different ski centre services. In all of these phases, environmentally oriented company should enable that the customer has the possibility to act as environmentally sustainable manner as possible.

Resulting from the simultaneous productions and consumption of services, the customer is often present while the services are produced and the customer may also participate in the service production and therefore he can influence the service outcome. It is important to increase the level of the consumer's confidence in his ability to contribute to pollution abatement (Kinnear et al. 1974, 24), for example by providing recycling possibilities. Ski centre should offer customers the opportunity to reduce their own environmental impacts associated with travel to and from the ski area (NSAA 2005). Thus, the customer should have the possibility to arrive to the destination in environmentally sustainable way, for example by train. Nevertheless, Jokinen (2001, 145) argues that the more complicated environmental problems, as transportation, have been left without consideration in companies. Similarly,

customers should be enabled and encouraged to use their own muscles in car free village centre. Therefore, activities such as snowshoeing, cross-country skiing and ski touring should be available.

4.3.3 Onstage and backstage actions of employees

Onstage actions are the steps and activities of the contact employee that are visible to the customer, whereas the backstage contact employee actions occur behind the scenes to support the onstage activities (Zeithaml et al. 2006, 268). Onstage actions include guided tour at the mountains and backstage actions include the route planning. Similarly, gathering promotional information and scientific evidence of the environmental sustainability of a train in comparison to other transport methods is a backstage action whereas promoting train in customer contact is an onstage action (Figure 4). In practice, many of the environmental strategies, including for example pollution prevention and energy efficiency practices, occur behind the scenes and therefore are not obvious to ski area customers (Peaks to Prairies 2002).

The onstage and backstage contact employee actions are more or less the same as covered in the services marketing mix's people section as well as in green service triangle's interactive marketing section. In brief, the environmental sustainability should be included into the onstage and backstage actions of employees comprehensively.

4.3.4 The lines of interaction, visibility and internal interactions

The line of interaction represents direct interactions between the customer and the organization. The line of visibility separates all service activities that are visible to the customer from those that are not, for example contact employee visible and supporting activities. The line of internal interaction, on the other hand, separates contact employee activities from those of other service support activities and people. (Zeithaml et al. 2006, 269.) On the line of internal interaction, encounter for example the waiter and a cook. In my opinion, these lines do not have significant meaning in the case of environmentally sustainable ski centre service because all of the processes should be environmentally sustainable regardless if they are visible to the customer or not. However, they offer a useful checkpoint in the service blueprint to make sure that all service activities are sustainable.

4.3.5 Support processes

Support processes covers the internal services, steps, and interactions that take place to support the contact employees in delivering the service (Zeithaml et al. 2006, 268). Most of the key issues, numbers 1-8 and 10 in the charter, are based on the environmental principles of NSAA's sustainable slopes charter (Table 1) are related on processes. While considering the processes of ecologically sustainable ski centre service, the previously mentioned recycling, reusing and reducing principles should be kept in mind. Support processes can for example include designing the service in a way that environmental sustainability is insured in every phase of the service process, in support processes as well as in onstage and backstage processes.

The starting point of sustainable ski centre service creation should be that the environment is subjected to as little pressure as possible (Metsähallitus 2009). While planning environmentally sustainable ski area, tourism should not disturb nature and it should be noted that all areas are not suited for tourism (Metsähallitus 2009). The base area and trails should be planned in a manner that that respects the natural settings and avoids, to the extent practical, outstanding natural resources (NSAA 2005). Therefore access to certain wildlife areas should be limited to minimize the impacts to the habitat of fish and wildlife, which is the 5th key issue of the sustainable slopes charter (NSAA 2005). Especially if the ski centre is in a national park or other protected areas, special attention should be paid on conservation. As the 7th key issue of the sustainable slopes charter suggests (Table 1), ski centers could engage into protection projects to minimize the impacts to wetlands and riparian areas. It should be noted that nature is normally an important reason for the visits in a national park or other; the visitors are most likely willing to learn about nature and conservation. It is also important to guide visitors not leave trace behind them (NSAA 2005; Metsähallitus 2009).

Due to the simultaneous service production and consumption, mass production is normally difficult and the operations need often to be somewhat decentralized so that the service can be produced directly in a place suited to the customer (Zeithaml et al. 2006, 24). However, ski services can be planned to be centralized for example by building village centers and leaving other areas in natural form. Similarly, when offering for example ski touring, snowshoeing and other related services, groups should be small and marked trails used wherever possible to minimize the disturbance to wildlife. It is important to plan the service according to demand

and destination so that no oversized facilities, for example too many lifts, are built that remarkably exceeds the local demand.

Paataja (2004, 11) suggests that decisions should be made between offering a pricy individualized quality product or selling travel service to masses, because when increasing the group size, the level of individualistic service decreases. Furthermore, Dolnicar et al. (2008, 200) proposes aiming at selective growth by actively attracting tourists with a small environmental footprint. They (ibid.) believe this demand-driven approach to offer an attractive management option for destination managers as it is in line with the profit maximization goal of the tourism industry. Nevertheless, they (ibid.), acknowledge that it is currently very difficult to know which tourists have low ecological footprint. Reliable calculation methods for measuring ecological footprint of tourists would be useful for segmentation purposes.

Generally in every service phase, attention should be paid to reducing waste, recycling and reusing, as earlier mentioned in the service process context in Chapter 3. The key issues 2-4 in the sustainable slopes charter (Table 1) are related to management of water resources and waste as well as energy conservation (NSAA 2005). Modern technology and equipment should be used to optimize the efficiency of snowmaking and lift operations, similarly renewable energy should be utilized in ski area facilities. The amount of waste can be reduced by purchasing products in bulks and by purchasing recycled products, likewise the amount of materials recycled should be increased and products and materials reused. (ibid.) In the ski centre, product reuse and recycling could be achieved by providing second hand shops for ski clothes and equipment as well as repair services.

As presented in Chapter 3, among other things, benchmarking can be utilized while designing sustainable ski centre service. For example, the target of ski centre service provider could be to minimize waste. The service provider would then identify a company which produces the least amount of waste. The benchmarking company does not need to operate in the same industry as long as it is the world leader regarding to the specific action. Next, the ski centre service provider would try to find the differences for the amount of waste and would plan its processes so that these differences disappear. The service provider could for example start composting and using biodegradable packages as well as increase the magnitude of recycling

and reuse. In general, emissions of all kinds should be minimized, and renewable energy sources preferred (NSAA, 2005; Metsähallitus 2009).

The effects on forests and vegetation should be managed by reducing or eliminating snow cat and snowmobile access to sensitive areas with limited snow coverage, which is the 6th key issue of the sustainable slopes charter (Table 1). According to Jokinen (2001, 141), one of the fastest growing travel service form in Lapland is snowmobiling, which has contributed several opinion differences between tourists, travel entrepreneurs, reindeer men, local habitants and conservationists. Even though the defects of snowmobile driving have been pursued to prevent by directing it on its own routes (Jokinen 2001, 141), the environmental pollution and noise disadvantages that it causes cannot be prevented. Therefore, the snowmobile driving should be minimized.

Travel to and within ski areas has some avoidable impacts, therefore congestion transportation concerns should be eased (NSAA 2005). Shuttles and buses should be available and promoted for guests and employees. The density in base area could be increased to reduce the need for vehicle use. Also cooperation with travel agents is very important to market "car free" vacation packages (ibid.), and furthermore, "plain free" packages should be promoted. Simultaneously while reducing air pollutants and greenhouse gas emissions through clean energy and transportation related measures, the air quality, which is the 8th key issue of the sustainable slopes charter (Table 1), will be assured.

4.4 Theoretical Framework of the Study

The theoretical framework of this study, demonstrated in Figure 5, is based on the theoretical discussion presented in Chapters 2, 3 and 4. The Chapter 2 discussed the roles of green marketing, consumer behavior and governments in the environmental sustainability creation. Chapter 3 implemented the environmental sustainability into service marketing mix. In Chapter 4, the environmental principles of the sustainable slopes charter were applied into ski centre marketing with the help of green services marketing triangle and service blueprint.

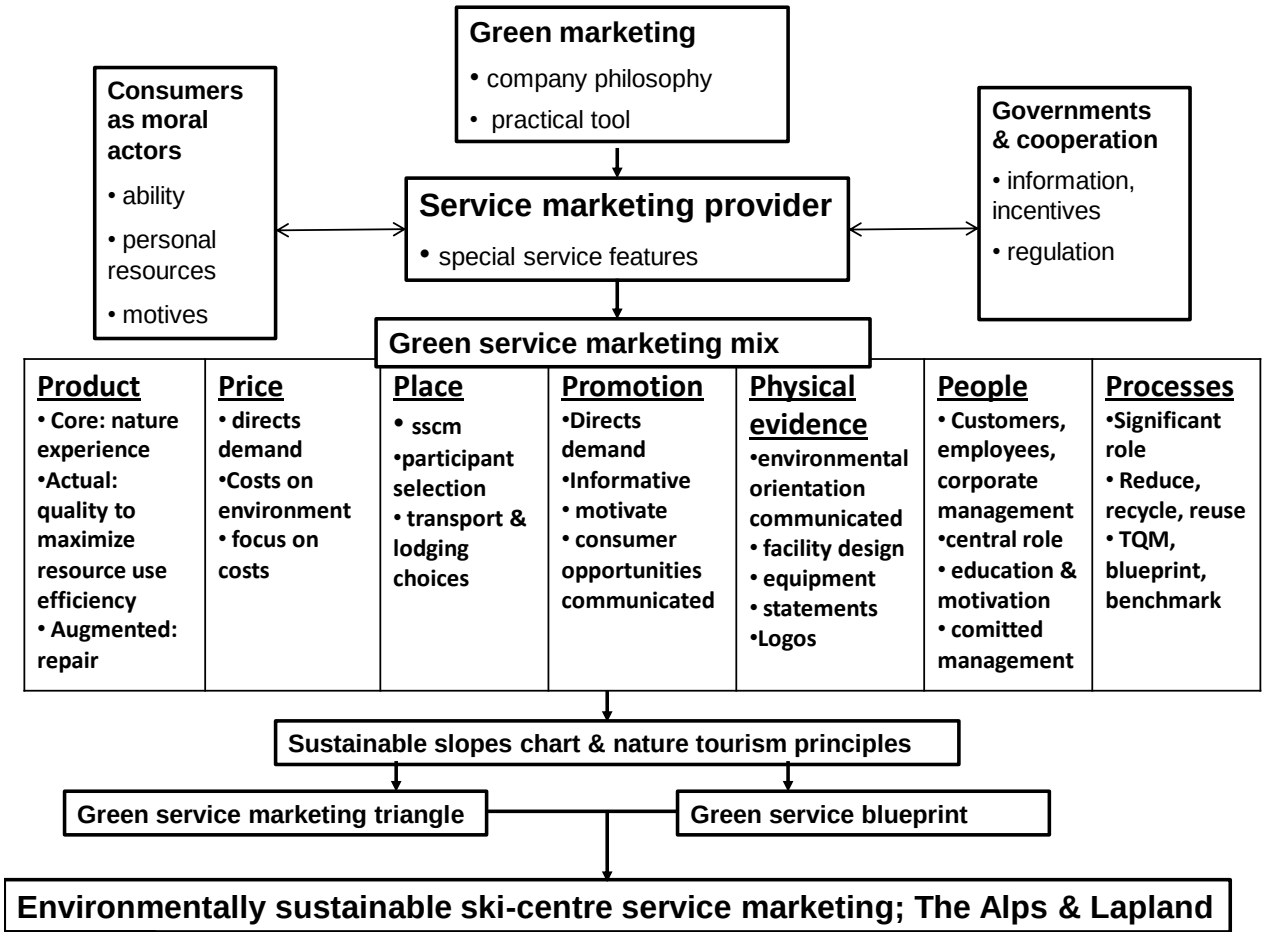

Figure 5 Theoretical framework

Green marketing theory works as a basis of the framework. Green marketing is seen as the guiding philosophy of the company as well as a practical tool to implement environmental sustainability into environmentally sustainable ski centre service. Services have some special features compared to physical products and therefore service marketing theory is utilized. Consumers can be seen as moral actors, because their behavior is affected by ability, motives and personal resources. Consumers affect the environmental sustainability development with their choices and consumption behavior. The green marketing practices of companies, on the other hand, affect consumer behavior by informing the consumers about environmentally sustainable practices and by enabling the consumer to act in environmentally sustainable manner. Similarly governments, not only by law and regulation but also by education and incentives, affect consumers and companies. Also companies affect governments while cooperating with them and by providing market based information.

With the help of green service marketing mix, companies can implement environmental sustainability into their service offering and practices. The quality of the actual *service product* can be developed in a way that the efficiency of resource use is maximized. The core product is the reason for buying the service, like a nature experience, and it has to be delivered. Augmented product, like repair service, can be used to increase the product lifetime. *Price* and *promotion* can be used to direct demand towards more sustainable practices. On the other hand, a shift in focus from price into costs is considered to improve cost efficiency, and also the environmental costs should be incorporated into cost accounting. Environmentally sustainable promotion should be informative, motivate and consumer opportunities should be communicated. By considering environmental sustainability in the *place* attribute, some important travel service related aspects are affected and the emphasis is on supplier selection and transportation choices. The theory suggested that most of the sustainability impacts take place in the supply chain; therefore greener marketing practices can be achieved by utilizing SSCM framework, integrating transportation systems, facilitating public transportation and minimizing flying.

By paying attention to the ecological quality of the *physical evidence,* like facility design, equipment, logos and statements, the company can communicate its environmental orientation to its customers. *People* are in a central role in service production and therefore it is important to educate and motivate both employees and customers about environmentally sound practices. The full commitment of the management is crucial in order to create environmental oriented organization culture and values. Similarly, because services are delivered through *processes,* re-engineering service procedures play a significant role in environmental sustainability implementation. Environmental quality can be achieved by implementing it into quality management processes like TQM, benchmarking and service blueprinting and by increasing resource reuse, reduction and recycling.

The environmental sustainability can be implemented into ski centre service marketing by applying the sustainable slopes charter and nature tourism principles into service marketing tools, like services marketing triangle and blueprint. The aim of the sustainable slopes charter is to provide overall guidance as well as best practices for ski areas in achieving good environmental stewardship. The ski areas can utilize the environmental principles according to their resources and local conditions as the principles are voluntary, they recognize that ski areas have some unavoidable impacts. The services marketing triangle is a useful tool to

insure the delivery of the environmental sustainability and the communication of the company's environmental orientation to different interest groups of the company. Environmental sustainability can be implemented into external, internal, and interactive marketing with the help of green services marketing triangle, the environmental principles and the sustainable slopes charter for ski areas. Likewise, the sustainable slopes charter and environmental principles can be implemented into service blueprint to insure the environmental sustainability of service procedures and from different person's points of view as well as to ensure the environmental sustainability of physical evidence.

The outcome of considering the interrelated parts of the theoretical framework should be environmentally sustainable ski centre service marketing. Next, focus is moved to the empirical part, which starts with a description of the research methodology followed by investigation of empirical material from Lapland and the Alps and finally presenting the cases.

5 RESEARCH METHODOLOGY

The aim of the theoretical part of the study was to answer the research questions: *what kind of role green marketing practices, consumers and government have in the environmental sustainability development, how can environmental sustainability be integrated in the service marketing mix, and how can sustainable tourism guidelines be used in ski centre service marketing in Lapland and in the Alps*. The answers were sought with the help of relevant literature and a theoretical framework was established based on the findings. In this chapter, the objectives of the empirical study and the development of the research method, the interview structure and process, as well as analysis method, are discussed and the study is evaluated. Finally, the cases of Lapland and the Alps are introduced. Thereafter in Chapter 6, the framework is examined in empirical context and modified according to the fieldwork results.

5.1 Objectives of the empirical research and development of the research method

The objective of the empirical research is to examine the research framework in empirical context and to gain some new understandings for theory building, and finally to answer the research question: *how to use marketing to promote environmentally sustainable ski center services.* According to Eriksson and Kovalainen (2008, 4), one way of categorizing qualitative approaches is to look at their study interests. Therefore, because the aim of the study is to interpret and understand how to implement environmental sustainability into specific services, the chosen research strategy is *qualitative* instead of quantitative.

This study has *a case study design* because a contemporary phenomenon is investigated in a real life-context, where the boundaries between the phenomenon and the context are not clearly evident. In addition, multiple sources of data are used. (Yin 2002 in Eriksson & Kovalainen 2008, 118.) More specifically, this case study aims at generation of generalizable theoretical constructs by comparing a number of cases, and at mapping common patterns across the cases, therefore this study has features of an extensive case study research (see in Eriksson & Kovalainen 2008, 118). Due to the aforementioned research interests, the cases of the Alps and Lapland are not studied in every detail, which is typical for extensive multi case study, as Eriksson and Kovalainen (2008, 123) establish. Moreover, the multi-case approach was selected to improve theory building (Bryman & Bell 2003, 60) and the ski centers, in

which the interviewed persons work, are considered as mini-cases. The individuals, working in ski centre service firms, are used as informants to study how the environmental issues are taken into account in the specific company, and after to describe the environmental practices that could be used in the ski service business context more generally.

As discussed earlier in this study, environmental concerns are considered to be highly value based and ethical issues, which appearance in the organization is presumed to be deeply embedded in the individuals working in the company, and hence they are assumed to be better understood through interpretation and cultural meanings, as Eriksson and Kovalainen (2008, 5) suggest. Qualitative interviews produce the kind of rich answers from interviewee's point of view (Bryman & Bell 2003, 343) that is the aspiration of this study. In addition, according to Eriksson and Kovalainen (2008, 80), a common reason for the use of interviews in business research is that they are efficient way of collecting information which cannot be found in a published form, as rich environmental information about ski resort service providers in this case. *Semi-structured interviews* were chosen as a research method not only to make sure that the specific topics get covered while simultaneously allowing flexibility to ask further questions when interesting new topics emerge (ibid.) but also to ensure cross-case comparability, as Bryman and Bell (2003, 346) suggest.

So, the primary data of the empirical research has been derived from the semi-structured interviews. However, according to Eriksson and Kovalainen (2008, 125-126), case studies are normally considered more accurate, diverse, convincing and rich if they are based on several sources of empirical data, furthermore, they suggest other sources than interviews sometimes to be even better in terms of evidence. Therefore, the empirical data has been collected from several sources such as web pages and documents in addition to the observations which were made in the visited resorts.

5.2 Development of the interview structure and data collection

The interview questions (see Appendix 4) were derived from the research questions, hence they focus mostly on the service marketing mix components, environmental appreciations and practices, the governmental role as well as perceptions about customers' attitudes towards environmental sustainability. Questions were formulated and presented in a neutral manner to

avoid pre-assumptions and pre-given typologies as suggested by Eriksson and Kovalainen (2008, 84).

The selection of interviewees was determined by accessibility and suitability. In general, the primary selection criterion for the interviewees was their suitability, therefore people responsible for environmental issues in the ski centre service organizations were attempted to get identified and contacted. However, accessibility limited considerably the interview possibilities because only few of the contacted organization members answered and agreed to participate. To increase diversity of the sample, the contacted Alpine ski centers varied greatly in terms of vertical differences, amounts of lifts and slopes as well as the lift tickets prices. Nevertheless, the location of the resort regarding to the possibilities to visit was somewhat restricting the selection. In Lapland, on the other hand, every ski centre was contacted.

The data collection in the Finnish Lapland took place mostly in Levi, whereas in the Alps the data was gathered in France, Switzerland and Austria. Time was spend during the empirical research process as follows: 1 week in Levi (Lapland), 6 weeks in Molines (France) and 10 weeks in Andermatt (Switzerland), in addition shorter visits to other resorts in Switzerland and Austria were made. The primary data (see Eriksson & Kovalainen 2008, 77) includes interviews and observations in several ski resorts. The secondary data has been gathered from the web, mainly from the resort web pages.

The first attempt to contact people responsible for ski centers' environmental issues happened during ski exhibition, Skiexpo, in Finland in the fall 2008. One interview was appointed with a CEO of Levi Travel Ltd., and contact information was gained for some other Lappish ski centers. Thereafter, the interview requests were emailed to all of the Lappish ski centers, including the ones with the already gained contacts; nevertheless no responses were received. Unfortunately, the lack of public transportation in Lapland restricted possibilities to visit other resorts during the interview trip in Levi in November 2008. After the return from Lapland, a phone interview with a project manager specialized in tourism in Lapland was gained. Next, a reply from Ruka was received, and a phone interview was scheduled with the environmental specialist of Ruka and Pyhä because he was in Canada. Some of the other Lappish ski resorts were later approached also by phone but no additional interviews were gained. It has to be acknowledged that the time period when the last interviews were requested occurred around Christmas, which likely increased the reluctance to participate.

Similarly in the Alps, many interview requests were sent by email but only few answers were received. The unwillingness to participate the research was apparent which is, according to Eriksson and Kovalainen (2008, 53), a common concern for accessing organizations. The busy winter season and language difficulties were probably causing the reluctance to participate in some cases. Nevertheless, unwillingness to discuss about environmental concerns related to ski centers in general was discernable. Thus also in this study, most of the interviews were gained by using personal contacts (Molines, Verbier, Elämysmatkat), additionally two were gained by contacting directly face to face (Schruns-Tschagguns, Andermatt).

Most of the interviews were carried out face to face, however two of them took place over telephone due to the long distance, and consequently time and money restrictions. The interviews, which are presented in Table 2, were recorded and after transcribed. They were held mainly in Finnish and English, however one was in French due to the preferences of the interviewed person. As Eriksson and Kovalainen (2008, 53) acknowledge, doing research with business companies means typically at least some compromise between what is ideal and what is possible. The interview held in French was conducted according the interview questions (Appendix 4) by another person, who also translated the recorded interview in English. Using another interviewee disabled the chance to ask further questions during the interview, however, it would have been possible afterwards if necessary.

Table 2 The interview facts

Interviewee	**Place**	**Organization**	**Title**	**Phone / Face to face**	**Duration**	**Date**
Töyrylä, Jussi	Levi, Finland	Levi Travel Ltd	Managing director	Face to face	35min	28.11.2008
Kumentola, Aila	Lapland, Finland	University of Lapland	Head of training division	Phone	36min	22.12.2008
Toivonen, Jusu	Pyhä & Ruka, Finland	Rukakeskus Oy / Pyhätunturi Oy	Environmental expert	Phone	47min	23.12.2008
Gacon, Bernard	Molines, France	Ski centre	Director	Face to face (by an assistant)	21min	15.1.2009
Bitschnau, Manuel	Schruns-Tschagguns, Austria	Tourism office	CEO	Face to face	29min	23.3.2009
Mandioni, Lara	Andermatt, Switzerland	Tourism office	Head of public services	Face to face	58min	20.4.2009
Délèze, Pierre-Yves	Verbier, Switzerland	Tourism office	Deputy Director	Face to face	28min	24.4.2009
Halme, Pette	Verbier, Switzerland	Elämysmatkat	Tour operator/ Mountain guide	Face to face	44min	24.4.2009

5.3 Development of the analyses method and evaluation of the study

The research approach of the study is interpretative, and therefore qualitative empirical data is content analyzed which comprises a searching-out of underlying themes and patterns in the empirical materials being analyzed and comparing them with the propositions pre-developed on the basis of existing theory (Bryman & Bell 2003, 417; Eriksson & Kovalainen 2008, 130). The interviews were first interpreted and common patterns were identified, after they were coded according to the theoretical framework and by new interesting topics that emerged from the data. The data is analyzed with the help of the theoretical framework. The extracted themes are illustrated with brief quotations from the interviews, as Bryman and Bell (2003, 417) suggest.

The case study in this research is a multi-case study because the number of cases examined exceeds one (Bryman & Bell 2003, 59). The main argument favoring the multiple-case study is that it improves theory building (Bryman & Bell 2003, 60). There are also features of comparative multi-case design and cross-cultural research (see Bryman & Bell 2003, 57) because the selected cases for qualitative interviews in this study are from different countries as well as from the Alps and Finnish Lapland. The comparison in itself is expected to suggest concepts that are relevant to an emerging theory, and therefore the key to the comparative design is its ability to allow the distinguishing characteristics of two or more cases to act as a springboard for theoretical reflections about contrasting findings (Bryman & Bell 2003, 60). However, the aim of this study is not solely to compare the cases, rather the objective is to enable richer data for analyses because culture is presupposed to be a major explanatory variable that exerts profound influence on behavior, as Bryman and Bell (2003, 57) suggest. Nevertheless, it is also acknowledged that people inhabiting a country under the same government may equally belong to quite different cultures that reflect historical or religious affiliations (Bryman & Bell 2003, 59). Therefore, the specific case context in which each of the interviewees work is presented in the next chapter.

According to Eriksson and Kovalainen (2008, 290), attempts to asses qualitative research with the help of evaluation criteria adopted from quantitative research, often leads too poor-quality research. Therefore this study is evaluated with trustworthiness which is an *evaluation criteria* developed by Lincoln and Cuba (1985 in Bryman & Bell 2003, 288; Eriksson & Kovalainen 2008, 290) specifically for a qualitative study. Trustworthiness contains four

aspects: credibility, transferability, dependability and confirmability (Bryman & Bell 2003, 288; Eriksson & Kovalainen 2008, 294). *Credibility* deals with the feasibility of the study and determines how believable the findings are (Bryman & Bell 2003, 288). The idea of *transferability,* according to Eriksson & Kovalainen (2008, 294), is about whether similar findings could found in other contexts. *Dependability* is concerned with responsibility to offer information to the reader that the process of research has been logical, traceable and documented (ibid.). *Conformability* is about linking interpretations and findings to the data in ways that can be easily understood by others (ibid.).

To ensure rich empirical data and *credibility* in this study, the data was collected from several relevant sources through semi-structured interviews, observations and electronic research. The aim of the study was to examine how to use marketing in order to preserve the natural surroundings of Lappish and Alpine ski centers. Therefore the purpose was not to specifically generalize the results elsewhere; however the generic nature of the generated theoretical framework allows its utilization also in other service organizations. The empirical data has been analyzed with the help of the theoretical framework (Figure 5) and therefore a connection between this research and previous results exists, consequently *transferability* can be declared.

Complete records have been kept about the phases of the empirical research process, selection of research participants, fieldwork notes, interview transcripts and data analyses decisions in accessible manner to ensure *dependability.* Additionally, Eriksson and Kovalainen (2008, 294) suggest offering information to the reader, that the research process has been logical, traceable and documented. Therefore, the theoretical decisions made, different phases of the empirical research process as well as data analyses decisions have been described in detail throughout this study. Quotations from the qualitative interview data have been presented in the analyses context to demonstrate from where the conclusions have been drawn in order to assure *conformability*.

Considering the above discussion about credibility, transferability, dependability and conformability, the research at hand may be declared as trustworthy. Moreover, several positive comments from the interviewees, about the interview questions, support the relevance of the study.

5.4 Introduction to the cases of Lapland and the Alps

In this chapter, both of the cases, Lapland and the Alps as well as the respective ski centers from where the empirical material was collected, will be presented mostly following the web page information. The case study ski center facts are presented in Table 3. In qualitative research approaches, the collection of data and its analyses are sensitive to the context (Eriksson & Kovalainen 2008, 5). Similarly, Bryman and Bell (2003, 295) present that the behavior and values of members of a social group must be understood in the specific environment in which they operate. Therefore, the interviewed persons will be presented in the case context according to the information gained through the interviews and observations.

Table 3 The case study ski center facts

Resort/ Feature	**Levi**	**Pyhä**	**Ruka**	**Molines**	**Silvretta Montafon**	**Andermatt**	**Verbier**
Location	Lapland	Lapland	Finland North	France, South	Austria, Vorarlberg	Switzerland, Central	Switzerland, Valais
Interviewee	Töyrylä	Toivonen	Toivonen	Gacon	Bitschnau	Mandioni	Délèze
Vertical drop	325 m	280 m	201 m	1100m	1700m	1519 m	1830m
Highest point	531 m	500 m	429 m	2900m	2400m	2963 m	3330m
No. of lifts	27	8	20	14	26	9	45
No. slopes	44	12	29	30	30	8	46
normal ski pass € / day	34 €	33 €	33€	23 €	40 €	36 €	43 €
Nordic skiing tracks	230 km	174 km	109 km	30 km	100 km	28 km	29 km
Environ-mental program	no	yes	yes	no	no	no	no

In Lapland, there are vast amount of protected areas and forests, therefore pure nature is one of Lapland's most distinct features. Furthermore, Lapland is scarcely populated, thus the distances are long inside Lapland as well as to Lapland from elsewhere, which then again increases the popularity of air travel. Due to the northern location, Lapland is known to be very snow secure winter destination. Permanent snow cover falls normally in early November when the ski season begins and it lasts until May. The average temperature for the winter months December – February is approximately minus 13.5°C, which increases the need for heating. In addition, Lapland specific features are short days between November and February, that creates the need for artificial lights for example in the ski slopes.

According to the Lapland Tourism Strategy for 2007-2010 (Lapinliitto 2007), the average annual growth rate in overnights in Lapland has been 5 %, and in 2006 Lapland registered 2.1

million overnights from which the share of foreign visitors was approximately 40 %. Major marketing areas are Great Britain, Germany, France as well as the Netherlands. In addition, the amount of Russian visitors has grown remarkably. The attractiveness of Lapland is based on genuine assets, such as unspoiled nature. (ibid.)

There are nearly 20 ski centers in Lapland ranging from small resorts with one hotel and couple of lifts to big ones with thousands of overnight possibilities and dozens of lifts. Cross-country skiing is popular in Lapland, and there are hundreds of kilometers of free tracks nearby the ski resorts. Even though, the highest point in Finland is 1,324 m (Halti) above sea level, all the ski centers in Finland are below 800 meters. The Lappish ski centers use mostly fossil fuels for energy and majority of them use artificial snow, however no chemicals are added**.** When it comes to snowmobiling, Finland is one of the most unrestricted areas in the world.

Levi is located in the Fell Lapland, in the middle of pure nature and large wilderness areas. Levi is not only one of the biggest ski centers in Finland but also in this research with regards to ski lifts and slopes, services and accommodation possibilities. In addition to cross-country skiing tracks and ski slopes, there are 886 kilometers of snowmobile routes. The nearest train station is situated about 80 kilometers from Levi from where there is a bus connection. The nearest airport, on the other hand, is a 15 minute drive from Levi. The person interviewed was Mr. Töyrylä, the CEO of Levi Travel Ltd., which takes care of the area marketing, central bookings, tourism information and runs a travel agency, which sells flights and travel packages to Levi. Mr. Töyrylä has education and previous work experience from tourism.

Pyhä is a relatively small ski centre in terms of lift and slopes as well as vertical difference. Pyhätunturi is located in the eastern part of Finnish Lapland nearby the Pyhä-Luosto national park. The nearest railway station is at Kemijärvi about half an hour by bus from Pyhä, whereas the closest airport with direct bus connection is located a little over 100 kilometers far from Pyhä. Pyhätunturi Ltd., which is responsible for the slope services and many restaurants in Pyhä, is owned by Rukakeskus Ltd. Mr. Toivonen works as the environmental expert of Pyhätunturi Ltd and Rukakeskus Ltd. He has studied environmental management of ski centers in Canada.

Ruka is located nearby Oulanka national park in Kuusamo in Northern Finland, just below the Arctic Circle. In Kuusamo area, there are 500 kilometers of marked, free-of-charge snowmobile routes. As mentioned already in the Pyhä presentation, Mr. Toivonen is in charge of the environmental issues also in Rukakeskus Ltd., which takes care of the slope services, Ski-Inn Apartments, caravan areas and many restaurants in Ruka. TuottoOmistus Ltd. and Pyhätunturi Ltd., on the other hand, are subsidiaries of Rukakeskus Ltd. The TuottoOmistus Ltd. is based on a popular concept used in North America. In this concept, the buyer of the apartment owns the whole apartment but he is committed to letting the apartment onward to guests when he is not using it himself. Renting and maintenance is done by a maintenance company, in this case TuottoOmistus Ltd. whose main task is to maximize the utilization rate of the apartments.

Mrs. Aila Kumentola is head of the training division of University of Lapland. She has a long career in Lappish tourism and she is consulting especially small travel enterprises. At the moment she is working also as a project manager in quality development of reindeer farm tourism.

The Alps are the most famous mountain range in Europe, stretching from France in the west to Slovenia in the east, with hundreds of ski centers. The ski centers vary from small traditional ski centers to megaresorts build just for tourism. The highest mountain in the Alps, and in Europe, is Mont Blanc rising to 4,810 meters. It is situated on the boarder of France and Italy.

The winter tourism in the Alps has long traditions. The period between 1955 and 1980 was characterized by mass tourism, the spreading of downhill skiing, a rapid increase in the number of ski-lifts and a decline of summer tourism in the seventies (CIPRA 2008). Several high-altitude ski-resorts with huge buildings were built in the French Alps, with some examples also in Italy and Switzerland. The image of many traditional resorts was seriously compromised by an over-development of buildings, mainly apartments and second homes. Since the 1980's a radical process of rationalization and renewal of lifts, with an ever-increasing per-hour capacity has been undertaken, as well as the interconnection of many neighboring skiing areas and a widespread development of snow-making machines. (ibid.)

Nowadays, the international arrivals in the Alps add up to about 30 millions, almost 7% of the Europe's total number. If the Alpine tourist destinations in those respective countries are grouped, the Alps rank virtually as the second largest tourist destination in the world after the Mediterranean coast. Therefore, tourism has a considerable weight within the economy of the Alpine space. The tourist resorts are increasingly dependent on the winter season and downhill skiing. (CIPRA 2008.) The length of the skiing season as well as the need for artificial snowmaking varies widely depending on the location and the altitude of the resort.

Molines- St. Veran en Queyras is a small, traditional ski resort located in a natural park of Queyras. There are several small ski centers in Queyras which are owned by the municipality. Mr. Bernard Gacon, who has a long career working in Molines, is managing the ski resorts in Queyras for the municipality. The nearest train station is Montdauphin-Guillestre in 35 kilometers, whereas the Marseille airport is 238 kilometers far from Molines. There is a bus connection once a week between the airport and the ski centre. There is no environmental program published on the company website, nevertheless there is a sustainable development section on the municipality website.

The Schruns-Tschagguns Tourismus GmbH is a privately run company, which is responsible for the whole touristic services in the two towns with regards to services to the guests and to the hosts of the hotels in addition to the sports and recreational facilities. Mr. Manuel Bitschnau, Master of Business Administration, is the CEO of the *Schruns-Tschagguns* tourism company. The Montafon alpine valley lies in the south Vorarlberg. Two ski centers, Silvretta Nova and Montafoner Hochjoch have recently become *Silvretta Montafon*, which is the largest skiing area in Montafon. Schruns-Tschagguns is one of the villages around the Silvretta Montafon ski area. There is a train station in the village as well as frequent bus connections between the different villages in the area. The nearest airport is 75 kilometers far from the village. In addition to Silvretta Montafon, there are five other skiing areas accessible by a free ski bus for those who possess a ski pass.

Andermatt is a small ski centre in terms of ski lifts and slopes, however it has relatively notable vertical difference. Ms. Lara Mandioni has been working in the Andermatt Gotthard Tourism office as a head of public services since the 1st of September 2008. She has a Master of Science degree in politics, also environmental issues and law were part of her studies. Mandioni has seven years work experience in tourism. Andermatt is located in central

Switzerland and it serves as a crossroads between southern Switzerland and the North, as well as between eastern Switzerland and Western Switzerland. Thus, there is a train station in the village from where there is a train connection to the nearest airport which is in Zürich, 116 kilometers far from Andermatt. Every ski pass includes skiing in the neighboring area of Oberalp/Sedrun, as well as free transportation with the train to the neighboring villages.

The ski centre has previously offered an alternative to the expensive skiing resorts in Switzerland. The village population is bit more than 1300 habitants. Andermatt has also served as a training centre for a Swiss army since the end of 19th century; however the military has been pulling out of the town since 2005. At the moment, there is a much debated development project going on. The development will be the largest of its kind in Switzerland concerning one million square meters of land with at least 5 hotels, 600 apartments, 100 villas, a world-class 18-hole golf course, alpine skiing, a tropical pool, an ice-rink, a sports centre and extensive retail facilities. The plan is to develop the resort into a premium Alpine destination with a year round tourist trade.

Verbier is situated in the south-western part of Switzerland, in the canton of the Valais and it can be accessed by road or by train. The nearest train station is in Le Châble, which is a village down in the valley, from where a cable car or a post bus goes up to Verbier. The nearest international airport is in Geneva, which is about 140 kilometers far from Verbier.

The person interviewed was Mr. Pierre-Yves Délèze, who is the Deputy Director of the Verbier Tourism Office. Délèze started in the tourism office ten years ago as marketing assistant and after he became the pr-manager for the tourist office. At the moment, he is specifically in charge of the communication and therefore he is the official speaker of the tourist office.

Verbier is one of the largest holiday resort and ski areas in the Swiss Alps. It is part of the 4 Valleys ski area, which includes the ski resorts of Verbier, Nendaz, Veysonnaz, La Tzoumaz, and Thyon offering over 410 kilometers of ski runs and 93 state of the art lifts, all covered in one lift pass. In 2006, Verbier had 2767 permanent residents; however during the winter season the number of residents can rise to 35,000. Regardless the size of the resort, the buildings in the village are traditional chalet-style houses which are harmoniously nestling in the hillside and its natural setting. Verbier is also recognized as one of the premiere off-piste

resorts worldwide and it counts among Europe's most famous resorts. In addition, it is a popular holiday destination for celebrities.

There is no environmental program established on the ski centre or tourism office website. However, there is an association in Verbier called BOTZA, which is established to support and promote projects, studies and activities that bring about positive impacts for the environment and sustainable development, particularly within the Commune of Bagnes. The aim of Botza is to work with local authorities, business, residents, tourists and young people to promote their environmental objectives.

Elämysmatkat, or officially Milargo Ltd Oy, is a Finnish tour operator, which was founded by Mr. Pette Halme in 1993. Mr. Halme, the CEO of Elämysmatkat, was the first official UIAGM educated mountain guide in Finland. In the Alps as well as in many other countries only the UIAGM educated mountain guides have the permit to guide on the mountains. Elämysmatkat employs 3 permanent employees in addition to several seasonal workers. The turnover of the company was 1 441 000 Euros in 2008. The average number of clients per year is 1800. There is no environmental program published on the company website.

During winters, Elämysmatkat offers skiing trips to the Alps, Canada, USA, Japan, Romania and Bulgaria. Throughout the year, the company provides different kinds of ski trekking trips around the world. On summer time, they organize for example mountain guiding and mountaineering courses in the Alps, skiing trips to Norway as well as surfing trips to Portugal and France. The winter destinations in the Alps include Verbier and Engelberg in Switzerland, Chamonix and La Clusaz in France as well as St. Anton and Flachau in Austria. Even though there is no official environmental program established on the company website, it is announced that the company has carbon neutral strategy which strives that the company would be carbon neutral in 2012, at the latest.

6 RESULTS OF THE EMPIRICAL ANALYSIS

Next, the findings of the semi-structured interviews are presented following the theoretical framework. The empirical information gathered through observations is utilized whenever relevant.

6.1 Green marketing, consumers and governments affect ski service sustainability

In the theoretical part, green marketing was seen as a holistic management process which aims at satisfying the requirements of customers and society with minimal detrimental impact on the natural environment. In addition, both consumers and governments were found to have an effect on the environmental sustainability of services.

6.1.1 Environmental programme drives corporate philosophy in ski services

According to the interview findings, long-term environmental orientation and the environmental sustainability implementation as part of the company philosophy could be achieved for example with corporate environmental program. Mr. Toivonen stated that the fact to have the program is already a very important practical achievement towards sustainability. This claim can be certified, as it has become evident during the course of this case study that the environmental sustainability has been implemented comprehensively into the overall marketing practices of Ruka and Pyhä, in a long-term perspective. Furthermore, Mr. Töyrylä perceives that already starting an environmental program brings the environment into the everyday work and into discussions, and consequently they are likely to get integrated across the organizational areas.

"There has been an own environmental program made for both of the ski centers and it is executed according to the objectives. But in practice, if you want practical actions, so already this environmental program in itself is one big thing, because in Finland, at the moment, there are probably no other ski centers, which would have their own environmental program" (Toivonen)

"...we have now a quality program going on where the emphasis is on environment, so that here in Levi area they will be in our discussions and in everyday work the environment will be

seen the next two years pretty strongly. So that we will develop this side now...it has maybe been left behind this growth and development, but now they will be put in order in the centre level." (Töyrylä)

In addition, it became evident in the case study, that the consumer demand oriented towards environmental sustainability and the economical value of the environment have obviously been realized in the companies. Furthermore supporting the theoretical discussion, the natural environment was seen as a crucial component of the firm's marketing surroundings and as a source of a competitive advantage, both in Lapland and in the Alps. For example, Mr. Töyrylä explained how the special features of Lapland, such as long snow secure seasons, cleanliness and quietness work as a competitive advantage of the resort. The following quote illustrate the importance of the environment in itself and as a source of a competitive advantage:

" ...our strengths, or the kind of general strengths of Lapland, which are difficult for many other places to copy, are long snow secure season, this cleanliness, nature, and in that, especially these environmental issues, so that they have to be taken care of. And if we take care of them well, and security issues, so they are difficult for other ski centre to copy, which aren't here, so in that sense this is going into a pretty good direction for us, that this environment and cleanliness, quietness and peace are nowadays more and more valued, so Lapland is also in the travel sense a winner" (Töyrylä)

In a personal level, all of the respondents claimed environment to be highly valuable for them. In this case study, the importance of the environment was rationalized most often by stating that the environment is the main capital or resource, as Mr. Töyrylä expressed. Additionally, the importance of environment was reasoned by the personal contact to the nature, for example by background or place of residence. Therefore, through enhancing the regional identity, the levels of pro-environmental behavior might increase, as suggested in the theory discussing external marketing. Mr. Délèze highlighted also the urgent need of environmental rethinking was:

"*Living here in the mountains and working in tourism, I realize that nature and environment is the main capital that we have, and each time I go to a big city I realize how lucky we are to have this nice environment, this fresh air and blue sky etc. So I think it's very, very important, it's the basic I think, and I'm pretty happy to see that there is a general rethinking of*

environment and this becomes really important in every level, and that's very good because I think that the earth needs something now very urgently". (Délèze)

"...and then of course when we are here in Lapland and live from the nature and it is big resource for us, so maybe the significance gets emphasized here." (Töyrylä)

6.1.2 Consumers affect ski center service sustainability

The case study supports the theoretical statement, that even if accurate environmental information and environmental awareness are necessary for environmentally sound behavior, they do not always guarantee it. In general, the respondents felt that although there is environmental awareness in the air and it is discussed a lot, the actions are too diminutive. Nevertheless, the respondents believed the environmental values to strengthen in the future. For example Mr. Töyrylä claimed that by modifying attitudes, also the behaviors would change in couple of years:

"...but they (environmental values) probably will become more and more important in the future, so that now the attitudes are being shaped and it has taken couple of years, and soon they will move more into practical level and into doings and choices, so that now we are kind of on the way there and in a process, but yet they maybe cannot be seen in behaviors that much, than if we go two or three years forward, I claim that the situation is quite different" (Töyrylä)

Furthermore, the respondents felt pressure from customers for greener practices, especially related to recycling and cleanliness in the resort. Mr. Gacon expressed their tourists to be very receptive to environmental issues and even felt that the customers are moving the company towards greener practices. In addition, he forecasted the importance of environmental issues on tourism to grow in the future. In this case, as Molines is situated in a natural park, the context might strengthen the consumer demand for environmental sustainability. Moreover, Mr. Gacon viewed that the customers want to continue during their holidays the same practices as they do at home. The experienced environmental awareness and demand can be perceived from the following quote:

*"**All of our customers are very receptive to green tourism and attracted by it**. We feel that they demand for it. I think that **the future of our tourism will be highly influenced by those***

***issues**, they want to see that we are part of environmental project. Our job is to give our customers all that they want to do because they come for holidays and they pay for it. And what we can see is that **customers want to continue the actions that they do at home during their holidays**… Yes, because more and more people ask for things that we don't do. From my point of view it starts to be a real must to go on. It would be a mistake not to follow what customers are asking for. And moreover, **I find it good that they are moving us.**"* (Gacon)

However, even if consumers demand for environmental quality from a holiday destination, they are not always ready to coproduce this quality. In contrast to Mr. Gacon's statement, some respondents felt that there is a difference between the behaviors that the customers execute during their everyday life and on holidays, which is consistent with what has been found in previous studies. Also the claim, that awareness and knowledge do not automatically result in actual behavioral change, gets further support. The person might for example be aware that he should separate the waste in a certain way but he might consider that he is on holidays and feels that the separating demands too much of his personal resources, time and effort for example. Therefore, companies should make green behaviors as easy as possible for the customer, for example by guiding and encouraging. In Verbier for instance, the different collection points are marked on the resort map. However, sometimes even the guidance is not enough as can be detected from the next quote:

*"...they (the consumers) are more and more concerned by the environment, but **there is still a cap between the theory and the practices we see every day**, it's simple things; the rubbish, the different collection points they are not, not everybody is playing the game, **I have sometimes the impression that because people are on holiday, they do not behave like they would behave at home**. I'm sure that some people at home, they will separate the paper, the different things, but here they put all together in the rubbish bag and **sometimes they do not even put rubbish back into the place, they let it just beside** so... there is this little cap but environment is definitely an issue for everybody even on holidays." (Délèze)*

The previous quote proves also that special knowledge might be needed; the person needs to know how to separate the waste in the specific cultural environment, especially when abroad. Similarly, in all of the visited resorts during the field research, one of the shortages in recycling was the lack of provided information how to do it correctly. The idea of showing the collection points on the resort map is clever; nevertheless, if people do not know how to

separate the waste in the apartment, they will not start the separation at the collection point. Therefore, it is crucial to put instructions, especially in foreign languages, into the apartments about the correct way to separate the waste.

Thus, as also noticed in the theoretical part, tourists' perceptions seem to be dominated by local, visible, immediate and comprehendible environmental problems, like recycling and public transportation in the resort. On the other hand, transportation to and from the destination, especially air travel, was not mentioned to be an issue for the tourists. This finding is interesting because many of the respondents, both in Lapland and in the Alps, stated that they get the green demand mainly from the Brits and Scandinavians who, due to their geographical location, most often are obliged to take the airplane to arrive to the destination. Therefore the argument established in the theory part, that people's conceptions of what behaviors are considered ecologically relevant vary, is also supported. The following extract illustrates the nature and the origin of the demand:

"Nothing special but maybe, as I said before, the little things we make regarding collecting points, public transportation etc. are specifically used towards certain tour operators asking for that kind of information because their guests seem to be aware of those questions. This comes mainly from Great Britain and Scandinavia at the moment..." (Délèze)

Similarly as in the previous studies, the segmentation of environmentally oriented customers was debated also in this case study. Ms. Mandioni reckoned the people belonging to the upper class could be more ready to pay extra for greener services whereas Mr. Halme believed it to be exactly the opposite, that is, the richer and more well of the person is, the less he cares about the environment. The following quotes illustrate this debate:

"...probably people in the city, above all the upper class, are probably more ready to do that. I think it depends a little bit to which social structure and class, if you can call that, people belong." (Mandioni)

"...I know hell of a lot clients that we have, who are high income, end of the market, and they kind of really don't care about these issues, they think that: "whatever it's going to go to hell anyway" or "the mankind will find solutions early enough", so they basically don't care about it any more than they did 5 or 10 or 20 years ago and there is, unfortunately quite big

percentage of clients are like this. I just hear from their remarks, when I ski with them sometimes, and unfortunately, generally speaking the richer, more well off people are, I would say, almost the less they care about the environmental issues." (Halme)

Additionally, the previous extract of Mr. Halme includes features not only about the distrust in mankind to find solutions early enough among the consumers, as discussed in the aviation discourse context, but also about the harm avoidance: "it's going to go to hell anyways", so why should one bother to use his personal resources for that.

The tour operator has obviously been thinking about the ethical side of the environmental issues and his personal concerns about environment get reflected from his answers. He continued his analyses and reasoned that the people, who are initially motivated by money, success and who value comfortable life, are more egocentric and therefore less concerned about the environment. These people are motivated by individual objectives, lacking the collective long-term environmental related objectives of the society, as discussed in theory. Therefore, the importance of proper environmental and ethical education is emphasized. The following extract illustrates the personal characteristics of one segment which is *not* likely to act green:

"I mean it comes from the whole essence of...how should I explain...they from the start, from the school from education they ***want to make money****, they have very comfortable, nice life,* ***it's all for themselves,*** *they don't usually think about other people that much, they are just more* ***egocentric****, and that's why they, generally speaking in my view, they are not so concerned about environment. And lots of our clients are like that."(Halme)*

This extract further supports the need to consider consumers as moral actors whose lifestyles and psychographic factors influence their behavior. It also shows that there is still a sizeable customer segment not interested in environmental values. However, the tour operator believes also to the existence of potential segments for more environmentally sustainable services. Kinnear et al. (1974, 23) has suggested it to possibly be successful to practice differentiated marketing for the environmentally concerned segment in comparison to the non-concerned segment. However, this kind of differentiating could also be seen as green washing. Thus, as green marketing is considered as a holistic management process in this thesis, the previously mentioned differentiated marketing is not regarded as an option. Neither did the tour operator

mention this kind of differentiation to be an opportunity, even if some bad publicity might emerge:

"…So I think, it would not only be positive to our company to introduce these environmental schemes that we are now planning to do. I think it might create also, little bit of ***bad publicity****, some of our clients, these more egoistic to be frank, they would think that: 'that's bullshit, that kind of thing, I'll just buy the product or go to some other company where they don't do this kind of bullshit, I just want my ski trip and I pay,* ***I don't start paying environmental when I don't have to'****, I think unfortunately there is* ***sizeable part of the clientele is like this****, unfortunately." (Halme)*

In the theory part, it was argued that travel costs are important in tourists' travel decisions, whereas environmental factors would not usually be considered. This certainly got support from the case study interviews when most of the respondents stated customers not to be willing to pay extra for greener services, and one established the customers unwillingness to pay even to be a barrier for environmental value implementation. The inconvenient truth, that people normally realize the real value of everything only after they have lost it, is apparent as Ms. Mandioni states that people are not ready yet to save the environment:

"At the moment it's difficult to implement the environmental values into touristic offer because here in Andermatt we are not big enough to be able to sell eco-label, we say: 'hey we take care of the environment, the nature, and it costs a bit more', people here are not already ready to pay more for saving nature or environment." (Mandioni)

Moreover, many of the respondents argued that greener services should not even cost more as environmental sustainability is nowadays more and more considered as a normal service. Instead of paying directly for greener services, some interviewees reckoned that customers might be willing to pay for things like organic food or environmentally sustainable houses. These are again more straightforward related to personal objectives and investments, than to the collective objectives of the society, such as clean air or preservation of the surrounding nature in a holiday destination. This finding supports also Becken's (2007, 356) collective denial view presented in the air travel context, where individuals take personal benefit from the current setup and wait for someone else to do something. The following quotes illustrate these concerns:

*"**I'm not sure that everybody is ready to do that** because it will be, or it is considered as more and more as normal to have green services and it **shouldn't be more** expensive in terms of services, maybe in more in the, I would say in the buildings, **somebody building a new house here would maybe agree to pay a bit more** to have a different system, maybe a solar electricity production or something in that way but not in the services directly. Because...**it will soon be considered as normal to have electric buses or things like that**." (Délèze)*

Mr. Gacon, on the other hand, suggested that if the extra price would be reasonable and clear part of a progress, then customers might be willing to pay little bit extra. For example, the physical evidence components such as labels and certificates could be utilized to establish the progress made. He also highlighted the importance of service quality, which needs to be ensured while developing and producing the service:

"It depends if the extra can be seen as something clear and as a part of a progress, then customers would be willing to pay little more but still the price has to be reasonable because it is obviously very important for them. But this extra payment has to be justified by perfect services." (Gacon)

As can be noticed from the previous price related extracts, there seems to be consensus about customers' price sensitivity. Mr. Halme took the price sensitivity issue even further and expressed clearly his fear about the future of the globe if the persons, who would have the resources to pay without any financial suffering from it, are not willing pay:

*"And for example, if someone goes heliskiing, has so much money that he can pay thousands of Euros for a day, or several hundred anyway, if he doesn't want to pay few Euros more for the luxury what he's doing, then I mean, then we can right away say that **we don't have any hope on this globe. If these people, who would have the means without any suffering for it and they're not interested**, then we don't have any hope." (Halme)*

6.1.3 Government regulates and enables ski resorts towards environmental sustainability

The importance of government became evident in the interviews when the respondents were unanimous about government's key role in environmental sustainability issues. In addition, the importance of local level decision making was highlighted in both Lapland and The Alps. The following extract aptly summarizes and verifies what was already argued in the theoretical part and what became evident also in the case study, that is, the governmental role as regulator, motivator and enabler:

"At every level in the Swiss system there is a department in charge of the environment and they have two rule aspects; one is the ***regulation****, they fix the rules regarding certain limits etc. and also checking that those limits are not over passed and under control. And the other one is to* ***encourage*** *people to take environment in consideration like with the Minergie rules I explained before, plus the* ***information****, it's really those two aspects. And locally speaking, I think this is really taken into account because there is* ***environmental department in the local political authority*** *and they are really developing projects like ones again the collection points for the rubbish or the water, how to say this, green treatment and etc. So little local steps but I think which can help the whole project." (Délèze)*

Furthermore, Mr. Halme strongly believes that people will not voluntary pay for anything that is extra, therefore he justifies the theoretical statement and highlights the key role and responsibility of governments in forcing the environmental laws and taxes. The governmental role as regulator by forcing laws and taxes gets further clarified in the following citation:

"So governments, counties, villages, I mean all those bodies, the authorities in all the countries, they should ***force these environmental laws and taxes****, absolutely, because* ***people don't voluntarily pay them,*** *it's very simple. So yeah, that's why* ***their role is very very huge****, and they have a huge responsibility that they should do something. Luckily they start doing, but slowly." (Halme)*

Thereafter, government should motivate and enable both consumers and private companies, by raising awareness as well as by providing information, infrastructure and incentives. The case study results, from both Lapland and the Alps, confirm this theoretical statement. In Lapland, the need for accurate information, pedestrian village planning and infrastructure for

basic services got emphasized. In the Alps, in addition to the basic services, subsidies for sustainable building, solar panels and public transportation as well as tax reductions were highlighted. In both of the cases, government was seen as responsible for giving the right example by their own actions.

"The political authorities are encouraging people to build new houses by using all the new aspects developed, there is a concept in Switzerland called Minergie which is a way of building with the goal to reduce the use of energy for lightning, for heating etc. and the political authorities really push this and it's normal system with the reduction on taxes and things like that. And they also want to give the example, for example the commune has renovated the school here in Verbier and the new building is made is with the rules of this Minergie system. So it's in that way that it works here. " (Délèze)

"The role of the municipality is really central regarding to the basic services as energy and these district heating centers and then recycling, in Kuusamo there just became a new, was it this year or last year, dumping place, where a lot more recycling varieties are collected than before. The role of a municipality and town is very central...They are really into this issue, municipality really is an essential player." (Toivonen)

The role of a government or a municipality gets highlighted ever more when there are some problems especially in the infrastructure or in the basic services. For example in Lapland, all of the respondents felt recycling to be a huge challenge because the municipality does not provide proper recycling possibilities. Even though the resorts have organized separated recycling points, the waste has still ended up into the same pile in the landfill. The lacking recycling possibilities were found in both cases. The following quotation illustrates the frustration of the respondent for the lacking recycling possibilities:

"Then in recycling, ***unfortunately it is not so much in our control than would be desirable and it is of course resulting from that the municipality, even how much the companies here would have recycled so far, so the municipality, or in the landfill it has then ended up into a same pile for long.*** *And this has been the kind of big shortcoming that has been talked about a lot and now, was it last year or this year…last year this kind of LAPECO was founded, which operates as a common community waste incorporation of many Lappish municipalities, and which then takes care of the waste management in the municipalities. So* ***they have now***

promised that we would get during this year the kind of recycling points *here in Levi, so that we could then start the recycling, and then they will take them into their correct waste points,* ***so that they certainly wouldn't end up with mixed-garbage.*** *" (Töyrylä)*

Long distances were seen problematic for the organization of recycling both in Lapland and in the Alps. Moreover, Mrs. Kumentola questions the whole waste collection due to the long distance problem. Surely, the transportation of the waste causes stress on the environment; therefore it would be essential to take into account the tradeoffs. Her response also calls for more qualitative design and decision making practices as she contests the computerized planning methods:

"…and then when we have terribly long distances in Lapland, so ***sometimes it feels that what is the point to collect them (the waste) and transport them awfully long, hundreds of kilometers*** *the garbage into some point, so is it reasonable in the long run. In that, there also becomes stress on nature and environment, so that* ***these are these our problems here*** *anyways, so that sometimes it feels that* ***modern human being designs with a computer and the use of common sense is disallowed,*** *pretty hard text but this is how it is." (Kumentola)*

One solution for the lacking recycling possibilities was considered to be an acquisition of an own bio composter, which came up also in the interview with Ms. Mandioni. Simultaneously, the local bio composter would solve the problem of transporting the waste long distances:

"But then, that we could recycle more varieties, for example in Pyhä we don't have the possibility at the moment to recycle bio-waste because no one collects ***it in the Province of Lapland, there is no bio-waste collection available****. It is a big challenge for us,* ***we have now tried to if we could acquire our own bio composter*** *where we then could compost the bio-waste." (Toivonen)*

In addition to what has been presented earlier in the theory part, some barriers for environmental sustainability were established in many of the case study interviews. These barriers include mainly *conservativeness and bureaucracy* of the governmental institutions, which were seen as problems in both, the Alps and Lapland. Especially in the Alps, there are strong traditions on farming long before tourism appeared and possibly deriving from that, conservativeness may be very strong. The following extracts emphasis the power of

conservativeness in preventing new thinking and consequently environmental sustainability creation:

"Corporation, is a ***very powerful and old society here*** *and only the people who are born here, who live in Andermatt since 50 years have the right to participate****, it's like a kind of original society of the locals****, and corporation belong all terrain, all landscape, all water, all mountains which doesn't belong to a private person. I mean, they have the right of all that you see here in the village, they are owner of all the water and obviously if they made a lot of energy* ***they can sell the energy and their revenue are quite a lot*** *and they are powerful here and* ***very conservative, very traditional*** *because* ***they don't think in a touristic way, they think like a farmer****. Because for...as a 30 years ago, everybody here was a farmer, almost, and so they wanted to assure for example that they had enough Alps for the cows, enough grass and enough terrain, enough water, just really substantial issues."*

The power of money, when dealing with the conservative guild, which is the Corporation, is apparent in the citations of Ms. Mandioni. She described the guild to be thinking in traditional, farmer like manner to secure the substantial issues and not being interested about tourism. However, when Mr. Sawiris offered to buy the land with over one billion Swiss francs for building a new year-round resort, not only the Corporation but also the Swiss government, abandoned its traditional way of thinking and the proposed resort was exempted from a law limiting the sale of property to foreigners as a precedent. She also highlights the need to cooperate with the conservative Corporation and to explain the positive the goals of the projects:

"And if you want to make something here, you have to go to there and ask for a permission, you have the official, well policy...and now for example ***Sawiris has bought a lot of terrain here****, but he wasn't allowed to buy terrains directly but he had to buy this from the Corporation, I mean it's not a contract between Sawiris and Mr. x, rather a contract between Sawiris and Corporation. And probably now you understand a bit,* ***it's very difficult to introduce new thinking****...****they are very conservative*** *but it is always important to talk with them and to explain and to show which are the plans and what you want with these plans." (Mandioni)*

Similarly, the tour operator reasoned conservativeness to be one of the reasons why he had not witnessed that much progress in the places where he operates. He argued the conservative

and bureaucratic nature of Austria and Switzerland to be the reasons for the slow implementation of new ideas because even for good ideas, it takes so long to go through the governmental bodies. On the other hand, he reasoned the English speaking world to be more eager to take up new ideas and to implement them into the culture through popularizing them.

*"…**The English speaking world**, even though they might start, especially USA start very...their records are very bad, they make the most pollution in this world but they, on the other hand, **once something is introduced, something that becomes popular, then it really goes through the whole society quite quickl**y and it might actually start develop but whereas in **Switzerland and Austria, such a conservative countries that new ideas, even though they might be very good ideas** and people think that, yeah this is a good idea, but **it will still take ages to go through the governmental bodies** that actually make the decisions so in these countries no, there's not much happening or of course there's things happening but too slowly." (Halme)*

Furthermore, he challenged some of the earlier statements regarding the current motivating and enabling initiatives of Swiss and Austrian governments as well as the perceptibility of the concrete environmental actions of the specific ski centers. He perceived the conservativeness to be a barrier especially for concrete actions towards environmental sustainability. The following citations illustrate his lack of trust into conservative ski centers:

"…then I think, none of the resorts, where we work at the moment, have been really on the forefront in been very environmental but I think one of them will for sure develop something and then we would like to be working together with them but I think Verbier, for example, won't do it for a while, they are too conservative to start thinking about things like that yet. They might talk about it little bit but before they actually start acting, I think it'll take a while." (Halme)

On the other hand, one of the governmental roles was established to be regulation, and successful regulation requires bureaucracy into some extend. The issue then becomes the appropriate amount of it. It was also acknowledged in the theory part that it is important that government cooperate with private companies to ensure market based innovations. However, it is crucial for successful cooperation that the organization members of a private company are willing to cooperate with other governments, nonprofit associations and other companies.

Therefore the cooperation belongs to the organizational factors of the company, and henceforth it is included into the marketing mix component *place* and discussed in the participant selection context.

6.2 Green services marketing mix helps promoting the environmental sustainability of ski center services

It was stated in the theory part, that even though service procedures seem as intangible and perishable, they often involve the support of a wide spectrum of physical components and reliance on natural resources. The tour operator clearly shared the common understanding about the intangible nature of service providers; however, he also acknowledged how the physical side of the business can be affected by participant selection and cooperation:

"So, but physical issues for us, we don't create anything, we don't have anything physical, we have our office in Helsinki and that's it. So…we just work with the companies that provide the physical side of the business, hotels, buildings..." (Halme)

Mr. Délèze, for one, recognized the central position of the tourism office in the ski resort, moreover, he argued for its responsibility to work as a role model and message spreader on environmental issues. He also insisted that they should take a proactive stance, which has come up in several other interviews as well:

"I think also a tourist office, ***we have a role to play*** *like in different projects is to* ***give a certain example,*** *we are in the centre of the life of the resort and we can, we have to* ***spread the message about environment as well****, the messages we have to spread to our partners here and we have to be proactive in that sense giving the right example and we start taking little things which can be important, for example on the map of the resort we start giving collecting points for the different rubbish; plastic, cans, glasses etc. and these are little things but which have I think a lot of importance. " (Délèze)*

It was argued in the theoretical part that with the help of green service marketing mix companies can implement environmental sustainability into their service offering and practices. The service marketing mix included product, price, place, promotion, physical evidence, people and processes. In addition, during the empirical study it became evident that the cooperation between different players on the service provider field is very important for

environmental sustainability marketing, therefore cooperation is now added to the green marketing mix *place* context.

6.2.1 Nature experience is the core product of ski center services

In the theory context, service product was seen as three leveled which included the core product, actual product and augmented product and environmental sustainability was implemented into each of them. Similarly in the case study, the respondents associated the environment into the service product features.

The importance of the environment was rationalized most often in the interviews by stating that it is the main capital, the best offering and the reason why the people come to the destination or as being the competitive advantage of the firm. Therefore, the environmental experience can be considered as the ***core product*** of a ski centre service firm. For example, one of the interviewees saw the environmental experience reflecting already in the company name, as Elämysmatkat means experience tours, moreover healthy nature was considered crucial for the company's existence:

*"As we say already that **for us elämys means something to do with nature** always, more or less always, surfing, **skiing, climbing, it's all to do with sports in the nature** and if we don't want the nature to change radically, then we kind of have to take care of it, and in that sense it should be important, we should be taking care of it, we should do something about it. So **in that way it's naturally important for us**." (Halme)*

The ***actual product*** was suggested to be naturally environmentally sustainable when it does not pollute, therefore for example Mr. Bitschnau stated that they have focused a lot in guest services like a sports and recreational park, in addition to mountain biking tours and Nordic walking. Similarly Mr. Halme stressed on the environmentally healthy nature of ski touring. Also integrating environmental sustainability into the actual product as part of the product quality was mentioned in several interviews, as the following citation illustrates:

"... in my opinion quality travel product considers always the environment, so that also in that I cooperate with the environmental experts." (Kumentola)

Features of the ***augmented product***, which were described in the theory as the extra benefits and services that are surrounding the core product and actual product, were also discussed in the case study interviews. For example Mrs. Kumentola mentioned the possibility to reuse and suggested repairing services as a possible new industry. Similarly, augmented product could, for example, be the possibility to compensate the co2 emissions of a flight.

"So we should introduce things like this (co2 compensation), especially to luxury items, heliskiing...well ski-touring we don't need to, that's very environmentally healthy product...and then some other things we did introduce, co2 compensation for the flights that we sell, there was absolutely no interest at first, and the office unfortunately had so much to do, we kind of didn't do what we were going to do, we just didn't basically have time." (Halme)

The previous extract illustrates also the environmentally sustainable nature of service products like ski touring. In addition, the earlier mentioned customers' unwillingness to pay extra and the lack of resources of the company inhibiting sustainability implementation are apparent.

6.2.2 Price directs demand towards environmental sustainability

As some of the interviewees suggested, demand could be directed towards more sustainable practices either by forcing customers to compensate the co2 emissions of their flights, or by encouraging people to use public transportation by offering it for free. The following quote illustrates how the money is directing demand:

"Well, there are probably people who would be willing to pay but I dare to argue that for majority of the people it is, at least at the moment, the money that directs the demand." (Toivonen)

Moreover, it has become evident earlier in this study that majority of customers are not willing to pay extra for environmental sustainability. Similarly, the theoretical statement, that environmental sustainable services should not be more expensive than competing normal services, got support as Mr. Toivonen believed that they would not win anything if they

started to price their services higher because their service is more environmentally sustainable than competing services.

"I don't think that if we would start to price our services higher because we have environmental matters better than in other centers, so we certainly wouldn't win anything in that" (Toivonen)

Several of the respondents expressed that the environmentally sustainable services should not cost more, rather they should come as basic services nowadays. Also Mrs. Kumentola believed that by implementing the environmental sustainability into the overall quality, it will show in the company revenues in long term. Therefore, the need to adapt a long-term perspective gets ever more highlighted.

"They cannot be such that they cost hideously, they should kind of be instilled into that, it is just that if we make quality products, so that also the environment is taken into account in small things and in the end, in the long run, it will show also in the company revenues" (Kumentola)

On the other hand, Mrs. Kumentola suggested also targeting consumers who have the possibility to pay for good price-quality ratio in order to save the natural settings. She also brought up the fact that if the natural settings are destroyed, also the customers and therefore the future revenues will be lost. She definitely has a point there; price should be utilized in order to prevent the kind of mega resorts that have been created, for example in some Alpine destinations.

"...in my opinion, we still don't have the courage to plan, to market in a way that we would invest into the quality ***so that we won't look for major masses in a cheap price****, but we take the operating income particularly so that* ***we elaborate products where the price-quality ratio is in order****, and those we won't sell in promotion. Instead we look for* ***the target groups so that we get enough solvent customers here*** *and especially from abroad. And then, there is no point in that we sell everything for everyone in a hideously low price, so we need to have the courage to be, in a way, selfish,* ***because if we destroy the nature and environment, so after we won't have customers at all anymore****" (Kumentola)*

Furthermore, as established earlier in the theory context, ecologically sound products and services often cost more, in money, time and other resources for both the company and customers. One respondent acknowledged this and presumed cleaner countries to become more expensive in the future. However, he does not take into account the long term cost savings that likely will result from investing, for example, into the water quality preservation.

"In the future, there will be maybe more prices added and I think that the clean countries where you go on holidays or vacation, they'll probably become more expensive in the future. And because they have to invest quite a lot on sustainability, so it will become more expensive. You know, we have very clean water here that costs us a lot of money to preserve that quality of water so these areas will become more expensive." (Bitschnau)

Similarly, it was suggested in the theory to adopt environmental accounting methods to ensure that environmental costs are taken into account in product pricing decisions. The problem is, however, the lack of explicit calculation methods for environmental stress, like noise, pollution and erosion. Furthermore, the fact that there is no real owner of the common goods makes the cost calculation even more difficult. Therefore, the governmental role as a regulator gets once again stressed.

6.2.3 Cooperation improves the environmental sustainability of distribution

As stated in the theoretical part, *place,* or distribution choices include important travel service features such as location, supply chain and transport which also got emphasized in the interviews. In general, the natural settings of the location were valued everywhere, as earlier discussed.

In a ski centre level, the Lappish respondents highlighted the concentrated building and preservation of the other areas. Based on the observations, in the Alps the village centers are normally concentrated; however there are major differences between the constructions of lifts and slopes ranging from couple of slopes and lifts to mega resorts. Mrs. Kumentola sees the saving of Lappish nature as a question of choice; however the choice would have to be made soon as she considers mass tourism as a real threat for the nature. Surely the negative consequences of growing amount of tourism, not only in Lapland but also elsewhere, get highlighted in the following citation:

"It's not a matter of nitpicking or maliciousness, instead it's about facts. About what we want, do we want to save not only Lapland, there are these same kinds of problems everywhere, so we don't yet have the kind of mass tourism than in many other places and we don't have the damages in the same way yet, but if we don't start to act, so it starts to feel scary." (Kumentola)

On the other hand, when the ski center located in or close to a natural park like Molines as well as Pyhä and Ruka, it was seen as an advantage. Also the ski centers' environmental orientation was reasoned by the location close to a national park, therefore the location can be considered to be enhancing the environmental sustainability of the ski resorts.

"Both of them have a national park close to, in Ruka there is Oulanka and in Pyhä, Pyhä-Luosto national park, so it brings strongly the environmental perspective into both of their operations." (Toivonen)

Several of Lappish and Alpine ski centre service providers had experienced demand or pressure towards sustainable practices from both, the customers as well as tour operators. Also, the important fact that customers do not make a difference between what is done by the ski centre and what is done by other service providers on the resort area was conveyed in one interview. Therefore it is obvious that the participant selection and the sustainability development should be done comprehensively including all the ski centre service providers who operate in the area. Both of the Lappish representatives mentioned the importance of sustainability creation at the whole ski resort level. In addition, it is important to provide information to the participants and motivate them towards sustainable actions, as for example Mr. Toivonen explains.

"The ones who operate in the property, that is the ones who rent facilities from us, so from them we require that they recycle and otherwise ***we try to inform about what we do and motivate so that they would do the same things.*** *We get sometimes feedback from the customers that it's not possible to recycle in Ruka, and by that they mean Ruka as whole and not the facilities or areas which are the responsibility of Rukakeskus Ltd., because anyway* ***the customer doesn't think what belongs to Rukakeskus and what doesn't, so it is for our***

interests that all the entrepreneurs would be behind this issue *and would do the same things as us. We really try to get all the entrepreneurs along with these issues." (Toivonen)*

Similarly, some of the tourism offices have realized their central position in the ski centre service provider network. For example, Mr. Bitschnau regarded the official companies being responsible for working as a sustainable development role models; therefore they try to encourage local entrepreneurship by subsidizing the new developments. Furthermore in Verbier, the tourism office has started to coordinate and bring together the important players such as the lift company, local authority and the commune. Mr. Délèze evidently sees the importance of cooperation in planning and improving the ski center services.

"we try to ones again base rule of ***bringing all the people, all the ideas together*** *to see what we can do, what we can improve etc. because* ***we are really the central platform of the resort*** *and as we do not produce really many things effectively, we try to place this rule of platform and bringing the people together, it's necessary. We work more closely with* ***the local authority, the commune and with the lift company*** *it's the three main actors of the tourism here in the area" (Délèze)*

Based on the interviews and observations, one very Lapland specific issue is the presence of snowmobiles and snow mobile routes in the ski centre areas. This issue divided opinions between the respondents. Mrs. Kumentola stated the presence of the snowmobiles as very worrying and brought up the fact how much damage can be done with the snowmobiles. Naturally the presence of snowmobiles in Lapland results from the usefulness of them during winter for moving one place to another. However, there is a growing demand for snowmobiles for leisure purposes all over Finland. The following citation of Mrs. Kumentola illustrates how people unfortunately do not realize how much damage can be done by using them:

"Yet, there hasn't been done irreplaceable damage but the more that the amounts of visitors increase and then also what is worrying me is the mechanization, that is, that ***too many snowmobiles are being used****, crawlers and others. And then it's not looked after, people don't realize how much damage you can do with them, and it's not only visitors but also residents and summer house people and others, so they don't think about the entity, so that is what is worrying me really a lot." (Kumentola)*

The ski center representatives, on the other hand, either stated them to be independent entrepreneurs or argued them to be essential for the ski centre tourism and justified them by the development of the new snow mobile technology. However, according to the Finnish Association for Nature Conservation, even the new technology snow mobile's carbon monoxide emissions are very high. Moreover, the environmental impacts of the snowmobiles are more than just the pollution; they include also the noise and other disturbance for the wild life and humans alike. Therefore, there are severe contradictions between the statements about the importance of the peace and quietness and the presence of snowmobiles in Lapland. Of course it is understandable that the resorts want to answer to the consumer demand especially when they already have the infrastructure build, however also the tradeoffs should be taken into account. The following quotation presents how snowmobiles are seen as essential part of the business and new technology as a solution:

*"Yes**, there are many snow mobile entrepreneurs operating here and our company is cooperating a lot with them**, selling their products among other things. But also in the field of snowmobiles, we are pretty much moving to four-stroke cycle mobiles and they are **much more environmentally friendly** than these two-cycle engine mobiles, so that there is development happening also in there… So that also in that, the most important is probably that the mobiles become more environmentally friendly all the time, **but it is a significant business** here, so that I don't see that the sledging would disappear anywhere from Levi due to environmental issues...there has been 886 kilometers of sledging tracks build in the area of Kittilä, and it is **a big part of what people come here to do**, so that **if we stop that, it is kind of the same if we shoot ourselves in the leg**, so that's not a solution, but in that to develop and favor the kind of mobiles that are environmental friendly. (Töyrylä)*

The representatives of Verbier and Molines stated that the lift company or tourism office is interested in cooperating with different kinds of non-profit associations not only to promote environmental protection but also to get their expertise into decision making. Additionally, Mr. Gacon reckoned associations like Greenpeace to increase their power in ski center decision making in the future, therefore he believed them possibly be important allies when investing in green products. This way of seeing nonprofit association as allies rather than enemy, is very productive as also the environmental charter of NSAA has been made in cooperation between ski resorts, associations and governmental institutions. However, even if

there would be willingness to cooperate in Molines, the resource constraints such as money and human resources apply as also discussed in the theoretical part in the SSCM context:

"We think that if we would have the human resources available, I think it would be really good to cooperate with associations, Greenpeace for example because they're getting more powerful and their influence will grow in the future. And they're also taking part of projects so that they can be really good allies when investing in green products in ski centers." (Gacon)

Tour operator specific intermediaries are accommodation, transport, excursion and food services. The case study tour operator had considered the intermediary selection according to the sustainability aspects; however they were just starting to work on it in the company. Nevertheless, he argued that in the European ski centers where he operates, there are not that many sustainable possibilities available for accommodation. This contradicts with what was stated in the theory in the SSCM context, that it would be likely that costs, facilities and service levels are given priority over sustainability criteria in purchasing decisions by tour operators. In this case study, the availability of sustainable options seems to be the barrier, as the following quotation exhibits:

"...of course that's something that, ***when choosing hotels, accommodation for our clients we should, and will be, taking these things into consideration****, so far we haven't done it. But that's very difficult at the moment in the resorts that we are working simply because there is no,* ***you can't really find information about it often****, I mean yeah now in some resorts there are, I've seen some hotels advertising: "yes, we are green in many ways, very environmental conscious", and yes, we would be happy to choose these hotels, the only thing is that* ***in the resorts that we are working, I haven't really seen any of this happening yet****. But I'm very happy to choose hotels like that, that really pay attention into these issues. That's definitely part of our progress in this." (Halme)*

Furthermore, Mr. Halme has pressured the heliski companies to take the first steps towards sustainability, which provides an example how a tour operator can affect their partners. He has also considered the environmental performance of the bus companies while selecting them. The fact that environmentally sustainable option is not always the cheapest, but more

importantly that the costs are not always given priority in purchasing decisions over sustainability, gets further support from the following statement:

"...and the heliski company in Val Grisenche in Italy which I've been skiing a lot, ***I've been telling them that I won't go skiing there before they make reasonable plan how they will implement some kind of co2 compensation scheme****, I won't be coming back anymore for skiing… Of course, there are issues like,* ***when we ask for offers from bus companies*** *that do the transports from airports to the resorts, we ask how they deal with these issues. And try to take that into consideration when we accept the offers,* ***it's not necessarily the cheapest*** *one but the one that tries to do something in this field. But we haven't gone very far, generally speaking the co2 compensation is definitely the first thing that we are working on." (Halme)*

Integrating transportation systems in Ruka and Pyhä, and favoring local products in Schruns-Tschagguns, were suggested to enhance the effectiveness distribution activities and to reduce traffic. In Pyhä and Ruka, the grocery shipments had been integrated, which is a distinctive part of their environmental program. Clearly also the importance of searching for solutions together with the suppliers gets highlighted in the response of Mr. Toivonen, therefore cooperation plays an important role also in waste reduction and traffic related issues:

"And then of course companies with who we operate, for example Kesko, so ***related to the traffic and travelling issue****, we have* ***integrated the shipments*** *so that for example we get several other food and drink supplier orders with Kesko and Valio shipments. So for example,* ***when in the past 9 cars drove into our yard, so we get only 2 cars****, so those we have tried to integrate and reduce the amount of traffic that it creates. But yes,* ***we try to think these issues together with all of our suppliers****, so that how we can reduce for example the amount of garbage. It is* ***part of our environmental program****, and it is an individual part in there." (Toivonen)*

Most of the respondents saw that the public transportation, especially the train, should be supported, promoted and that efficient connections between railway station and destinations should be created. For instance, Mr. Bitschnau saw it fortunate that they have a train station in the village and the railway goes directly to Germany which allows also the foreign visitors to arrive by train. Unfortunately, the location of Lapland is not as favorable for international train travel. In addition, according to the Levi Travel Ltd., the Finnish train company, VR, is

at the moment lacking night wagons, which restricts considerably the ability to arrive in Lapland from the South of Finland by train. Nevertheless, both of the ski centers were active in improving and lobbying new and better train connections. For example, the Levi Travel Ltd. had started to lobby the train connection from Kittilä until Levi. Similarly, the CEO of Pyhä and Ruka was actively rebelling to keep the train coming until Pyhäjärvi. Obviously it is also the best interest of the resorts to get as many guests as possible, in addition to the environmental sustainability issues. The following quote presents how the ski resorts can use their power in public transportation concerns:

"Then for customers part we cannot do that much in spite of all, other than there are several busses coming to the fell from several places. And then the train to Kemijärvi, the night and car train, so we got it back because they were trying to stop it. So in that Ruka and Pyhä were pretty actively involved so that they would keep the train. The CEO of Ruka and Pyhä was involved in this, so called, train rebellion. " (Toivonen)

However, the common restrictions of train, as time and costs, which apply in the Alps and in Lapland, got highlighted. In both of the Swiss ski centers, even if there is an adequate train connection to the ski centre, the fact that part of the train companies, as well as other transportation companies, are privately own cause problems for sustainable pricing. For instance, the Andermatt tourism office is trying to encourage the lift company to cooperate with the train company in order to include the ski pass into the train ticket, as the case is with the federal train company going to some other Swiss ski resorts. Furthermore, in the response of Mr. Délèze, the willingness to constant improving is evident, and despite the position of the tourism office in the complicated network of different public and private transportation parties, the tourism office has taken a role as a coordinator and started to bring the people together. Also the fact that Mr. Délèze calls them as partners illustrates the genuine eagerness for cooperation:

"And another one which concerns Verbier, but not only, is to ***work on the public transportation*** *system, which is already ok between Martigny and Verbier because we have the train coming to Le Chable and the buses and condolas, but I think we can improve it as well but we are not in a position to decide on that because* ***it involves a private company for the train, the condoles, then it's public transportation companies for the buses, the train.*** *And even the train to Le Chable is not the same train company as the national one arriving in*

Martigny. But we work on that and we just beginning of the week, ***we send an email to all of those partners to have a discussion about how to improve the connections*** *etc. It's on its way, and step by step I think we are going forward." (Délèze)*

Some of the aviation discourses that were discussed in the theory context got also emphasized in the empirical study as in the theoretical part, for example the environmental impacts of air travel were questioned. The moral actor theory applies of course, not only for consumers, but also for employees. The tradeoffs of the different transportation methods, in addition to the optimal blend of them, are so complicated that a special knowledge is needed in order to be able to question contradicting statement. Mr. Töyrylä's remark illustrates how the airline companies feed the misconceptions about the air travel's sustainability over rail travel:

"...so that you can have many opinions about the airplane, that is it energy efficient or not, if you listen to the plane company so it is often more friendly than a train, but then there are probably different kinds of points of view..." (Töyrylä)

In general, the ski centre respondents did not consider the air travel issues as their responsibility. Evidently, it is a difficult issue from the ski center service provider's point of view, especially in Lapland when the airplane is basically the only reasonable option for foreign tourists' arrivals. However, if the calculations about the co2 emission effects on global warming realize, the future of ski center tourism is relatively short. Therefore, ignoring the possible effects of air travel represents short term planning. The quotation of Mr. Toivonen illustrates the ski center viewpoint:

"We don't have any special campaign for that but of course we hope that the customers would use more train than the airplane, for example when arriving from the South Finland. But a ski centre cannot really, how should it be said, it is a bit difficult issue because of course we want that all the customers who ever can, would come, so we kind of cannot take the kind of point of view, that we don't want that you come into our ski centre by plane, so then they come by plane. It is a bit difficult issue but every possible customer needs to be received into the ski centre." (Toivonen)

Nevertheless, the tour operator highlights the importance of the co2 compensation efforts. He has clearly taken seriously the threat of global warming due to flying, which is understandable

taken into account the severe effects of the possible shortage of snow on his business. Mr. Halme is clearly passionate about the flying issue and does not mind the opposed criticism of the co2 compensation, rather he sees it in a positive light and argues the problem to be solved if everyone simply compensated all the co2 they produce:

Some say that it might, that it's hypocritical... but hey, if everyone simply did that, they would compensate all the co2 they produce, we would not have the problem that we have. So, it's very simple. In my view, you can do anything you want, but if you compensate it, fine. So, that's my point of view for the environmental issues here... when I fly somewhere I compensate for the flying, in the myclimate.org, one of the non- profit organizations and apparently one of the best ones." (Halme)

Unfortunately, however, as it was revealed in the theory context, the compensation strategies are not a long term solution due to limited amount of compensation subjects. Therefore in the long term, it is crucial that the authorities develop worldwide regulation strategies for aviation, and not only force but also support the airlines to find out new sustainable technologies.

6.2.4 Promotion should motivate environmentally sustainable behavior

In general, most of the interviewees considered marketing as advertising and stated that they do not have any special marketing campaigns. However, as it was established in the theory, in environmentally sustainable *promotion*, the communication is informative, motivational and the consumer opportunities to make a difference with their choices should be emphasized. Accordingly, in many of the resorts, the customer guidance is concentrated on encouraging recycling and using the ski bus. Additionally, the resorts with good train connection, promote the possibilities to arrive by train. The tour operator, for one, had been considering of adding a banner of some of the co2 compensation companies on their website in order to sensitize the customers about the issue.

Furthermore, the interactive marketing features of the service marketing triangle were revealed for example in the interview with Mr. Toivonen, as he explained how they strive informing customers during their stay in the resort about what Ruka and Pyhä have done for the environment, and therefore motivating the customers by informing how also they can take

the nature into account while holidaying in the resorts. In addition, they have an environmental website including an eco-tip section for customers to enable them to act in a sustainable manner; therefore also the external marketing features came up. The following extract of Mr. Toivonen illustrates how marketing is normally seen simply as advertising, however the environmentally sustainable interactive and external marketing possibilities for ski resorts are obvious:

"In a marketing perspective we have got lots of gains because we have started to do this, but so far at least we are not marketing this further and ***there are no campaigns coming.*** *But then of course on the slopes,* ***in the ski centers, we try to inform about what we are doing and then again encourage them, so that would consider these issues when they are holidaying in our resort****. But that is not directly marketing, but anyway there is the kind of marketing perspective… Well yeah, we're meant to get the kind of* ***fact sheets in the apartments where we describe briefly what we have done for the environment and what we'd hope customers to do.*** *And then we have the kind of environmental web pages where our environmental procedures are described and* ***an eco-tip section for customers about how they can take into account the nature*** *and the environment when they are on holiday in our resorts." (Toivonen)*

Most of the ski centre service providers concentrated on promoting the intact nature which was considered also as a marketing tool. Additionally, couple of the interviewees from the small Alpine resorts stated that even if they do not have the budget for proper promotion campaigns, they base their communication on the intact nature. Especially the fact of locating in a natural park was seen as an advantage in communication. As stated in the theory, the most substantial in the marketing communication is that company's ecological orientation is communicated as truthfully as possible. Therefore the following citation is a bit contradictory, when the preserved nature is utilized as a promotional tool while simultaneously providing motor biking services:

"Yes, we use it, promoting the fresh air, the nature, we have 150 square kilometers in the upper part of the valley which is protected area and we explain that in all of our brochures linked to the hiking or motor biking or the general brochures we have. We really consider our preserved environment as marketing tool in the future." (Délèze)

Criticism of green-washing can be avoided by ensuring the environmental sustainability of the provided services, and thus by having coverage for what is stated in marketing communication, as for example Mr. Töyrylä stated. He emphasized that they do not want to promote the green aspects before they surely have everything in order:

"Let's say that we haven't brought up the environmental issues that much yet. But before you start to market them, you need to have some coverage and maybe soon when we get these specific issues done here, but yet they haven't been seen in marketing, maybe in the future."(Töyrylä)

The conservative cultural environment was also considered as an opportunity for being environmentally proactive. For example Mr. Halme saw that it could be beneficial from a marketing perspective to be in the forefront in implementing environmental sustainability in tour operator services. The following quote highlights this possibility to use the proactive, environmentally oriented strategy as a marketing tool:

"And then of course, simply as marketing tool as well. I think Finns are very conservative in that way with new things. Sweden for example, always when there is a new trend or something happening, Sweden is a way before us implementing things. And this is the same thing in environmental protection…And this is why I think that it would be beneficial for us in marketing way as well if we are in the forefront of this progress in Finland, that's one thing…" (Halme)

Mr. Toivonen's response confirms how the proactive environmental strategy results also marketing benefits. He explains how by ensuring the environmental sustainability of their service, they have gained also promotional benefits. Furthermore, he clarifies how the marketing opportunities are not the reasons for starting the environmental program. Therefore, at least some sort of ethical reasons have evidently been behind the implementation of the program. On the other hand, economical point of view is one reason why they have started the environmental program. It is important for business perspective to note that cost savings due to improved resource efficiency as well as also increased sales, due to increased media attention and positive word of mouth, improve profits. The following quote of Mr. Toivonen exhibits how, even without active marketing, increased media attention and positive word of mouth can be gained when the service is sustainable:

*"**We haven't had any marketing campaigns where we would have brought up the environment in itself.** We have taken the kind of stand point or principle that we do this on our own, we know that we have a lot to improve even though we have done a lot and are kind of pretty much ahead of other centers in Finland, but still…**this is the kind of topic that we don't do it for the sake of marketing possibilities but of course we are practicing commercial sales and economical point of view is one reason why we have started to do this**…the media is interested in this issue and we have been in quite many papers, but it haven't been our active marketing, instead the papers have wanted to write stories about us. **Through that we have gained lots of publicity**, for example in the skiexpo brochure there was an article about our environmental issues." (Toivonen)*

6.2.5 Physical evidence communicate, improve and direct company's environmental sustainability

It was argued that by paying attention to the ecological quality of the *physical evidence*; facility design, equipment as well as for example statements, the company could communicate its environmental orientation to customers that got support from the empirical study. It is apparent in the following citation of Mr. Toivonen, how the environmental program implementation has affected also the environmental sustainability of physical evidence. For example when it comes to facility design, since the environmental program implementation in Pyhä and Ruka, they have considered the environmental aspects in every new building. Similarly they have made guidelines to use only the best energy category domestic appliances, energy saving lights, and in general, for facility construction:

"And in lighting we aim to use energy saving lights and led lamps, and then along with this environmental program everything new that is built here, it is taken pretty much further from the environmental perspective. For example, all the domestic appliances need to be at least A-category. We are now during January working on this kind of separate guideline for methods of construction which depicts all the environmental issues related to properties more precisely". (Toivonen)

In some of the Alpine interviews, the normal green office practices related to printing two sided prints, separating paper and reducing unnecessary cleaning, among other things, came up. Several respondents emphasized especially the esthetical factors, such as infrastructure and other build environment that fits into the natural settings. Mr. Töyrylä, for example, saw it important that the lift company has invested in sustaining the slopes natural, so that they are esthetically pleasant also in summer. This is important, because in some other places, especially in the Alps, the slopes are clearly distinguishable during the summer, and therefore the landscape looks unnatural. As can be noticed from the citation of Mr. Töyrylä, the process of fixing the slopes has demanded lot of resources, probably therefore not many resorts do it:

"…we are probably one of the only ones in Finland, the lift company has used probably couple of millions of Euros for getting peat on those slopes, so that they appear green also during summer so that the grass, hey grows, so that they aren't the kind of gravelly, where rocks and gravel stands out. Not many resorts in Finland have done this but here it has been done already several years, so basically year by year fixed the slopes, so that they look good also during summer." (Töyrylä)

Several respondents highlighted that the newer the equipment is, the more efficient and environmentally sustainable it is. For example Mr. Gacon argues that nowadays ski center consumes less energy than before due to the new machines. This is probably the case in Molines, where the amount of infrastructure, like ski lifts, has not considerably increased. However, in many other places the increase of new lifts with bigger capacity has been notable. Therefore, it is not unambiguous that the new technology would alone result into overall energy savings. Tradeoffs between additional new lifts and the old lifts should be considered. Nevertheless, the following quote illustrates how the new technology leads to energy savings:

"Yes, ski centre consumes a lot, but now you have to know that producers are working a lot to improve their products and especially to give us the possibility to buy less consuming machines etc. For example when talking about snowmaking, it's important to know that the products/ machines that we are using now, they consume twice less energy. If we compare the situation between now and ten years ago, we can say that in general the ski centre consumes 30-40% less energy. (Gacon)

Tour operators can affect the environmental sustainability of physical evidence for example by vehicle choices. Mr. Halme saw traffic as an important factor; therefore he was really enlightened about the current situation on the electric vehicle market. He was determined to acquire an electric minivan as soon as they start to exist. In addition to the shortage of available possibilities, he saw the current price of the electric vehicles too high and explained how the price does not match their utilization needs. So once again, not only the high price but also the lack of available possibilities was restricting sustainability choices:

*"…**the traffic issue is very important for me personally**, we'll see what kind of environmental minivans or mini busses they have at the moment when we buy a new vehicle, **I'm very strongly going to try to find a electric minivan** for example, but **at the moment they don't exist**…And some electric vehicles in Verbier for example, where to take care of the clients and their bags and stuff like that, **but simply all those electrical vehicles are very expensive still and the use of the vehicle is still so smalll**…" (Halme)*

When it comes to reports and statements, Mr. Gacon brought up the realization costs of the ISO14000 standard. He highlighted the easiness to map out things that need to be done in order to preserve the nature. Nevertheless, he saw the financial costs of the new investments as restrictions for the execution of the sustainability project, which has come up also in several other interviews:

"…After I just want to mention that it's easy to get the ISO 14001 standard by making a list of things to do and it was easy because we 're living in a beautiful environment and in a natural park. But it's more complicated to start a real sustainable development project because it costs 1 % of any investment. It's easy to say that we'll do sustainable stuff but it's really important to realize that it's really costly.

Ruka and Pyhä, on the other hand, had strived for a third party logo which they have utilized in their brochures and on their websites. The logo is given only companies which fulfill specific responsibility criteria, therefore it works as a piece of evidence of the resorts sustainability. They have also joined the European Union energy efficiency agreement, which can also be considered as physical evidence. Hence, physical evidence not only works as guidelines but also objectives, like the agreement for energy reduction, that strive environmentally sustainable behavior. These issues are illustrated on the following extract:

*"Well **related to marketing**,…yearly there is the kind of responsible travel day which purpose is to enhance responsible travel and companies that have devoted to responsible tourism can participate, and it includes not only environmentally but also criteria for economically and socially responsible travel. **So companies that fulfill the criteria get this World Responsible Day- logo, which they can utilize in their marketing and we got this logo this year**. So this is one kind of marketing action that we have had. We have used this logo **in some brochures** and so on. In addition we joined in the beginning of January this year, aka 2008, **the energy efficiency agreement** of European Union, which has the **target of reducing the energy usage by 9% by 2016**." (Toivonen)*

6.2.6 People produce the environmental sustainability of ski services

One interviewee brought up the critical role of people in environmental sustainability creation, and therefore confirmed what was argued earlier in theory. Mr. Toivonen highlighted the importance of educating and motivating employees and customers alike. In Ruka and Pyhä, they had invested a lot of resources on the employee education which illustrates the importance that they give on the employee training. Additionally, they have increased communication around the theme; they for example have an environmental section on their intranet. They have clearly realized how considerable amounts of energy and water can be saved that through training and encouraging. Mr. Toivonen emphasized the importance of people also by stating that the new machines are useless, unless the employees know how to use them properly. Similarly, he explained how they pursue to change the existing consumption culture. The same kind of culture, that Mr. Toivonen describes, was observed during the empirical research period in Andermatt. Constantly, the lights were left on round-the-clock. In addition, the apartment was overheated, which led to the need to open the windows and doors. Evidently, remarkably energy savings can be achieved by changing the current behaviors, as also Mr. Toivonen believes. The following citation clarifies the crucial role of people:

*" One that I forgot to say about our eco-deeds, is that **we have put quite a lot of resources on educating our own personnel**…**It could be distilled that training of personnel is one of the most important factors in reducing energy and water usage, because whatever machines, new or old, so they are people who use them.** And if people don't think about it, how they use*

them, then there is not much use of the technological solutions. ***It is people that are the most important factor****, and then customers are another one in the usage of energy and water in particular, and that we cannot really affect otherwise than* ***enlightening, informing and encouraging the customers****. If you have been holidaying in a ski centre, you know that pretty often the lights and TV rumbles round-the-clock and saunas are on even if they are not used. So kind of,* ***if we could change this culture a bit, by that we could reduce the consumption of energy pretty remarkably****." (Toivonen)*

Also traffic can be reduced by affecting the human actions. For example in Verbier, the tourist office employees have been encouraged to use public transportation in order to reduce traffic. They have motivated the employees to use the gondola for commutation by offering the lift pass for free. In addition to encourage the personnel, the normal green office practices are obeyed in the tourism office. Introducing new technologies, and implementing new behaviors through them, is one way how organizational customs can be changed. For instance, in Pyhä and Ruka, an online conference program has been introduced to reduce the travelling of their own personnel.

"The travelling of our own personnel, one way how we've tried to reduce it is that we have implemented this kind of online conference program, so that people don't have to, for example between Pyhä and Ruka, or then when our headquarter is in Helsinki, so if some meeting is between the stuff of Ruka and Helsinki, so they don't need to travel for example to Helsinki, when they have a meeting there, but it can be conducted through online conference program. So we've now implemented that one in the environmental program context." (Toivonen)

In other places, there had not been any specific employee training. However, one of them stated that they would like to train but they are lacking resources. Few of the Alpine interviewees mentioned that they do not have any special training, but that the children are educated already in school to recycle and respect the nature, therefore emphasizing the governmental role in environmental education. Mr. Töyrylä, for one, acknowledged the importance of training and stated that they are about to train, but first their plan is to track the current situation of each firm and after develop measures to improve the performance at the whole ski centre level, as also suggested in the SSCM framework. He also saw changing the attitudes as part of the training objectives:

"Yes, now along with this quality program it is meant to educate and do the attitude shaping, and we are going to educate. We haven't much so far, so that in some trainings we have touched it a bit, but now within this environmental and quality program it is meant to come. But first we have to track the starting levels and do the inspections so that we see where each company is positioned and where are we at the centre level. And then we start to raise the level and train and shape the attitudes and measures that improve." (Töyrylä)

It was argued in the theory that full commitment of corporate management and common rules are needed in order to ensure constant environmental quality. A great example of the management commitment can be seen in the following response which represents the personal passion that the manager has towards environmental values. The environmental values are clearly a strong issue for him, and therefore he has taken up a principle not to heliski with clients who are not ready to compensate their flights. Therefore, he is ready to sacrifice some of his revenues for his principles. At the same time, he works as a role model by his own actions for his employees, customers and other service providers.

"I feel very strong about them (environmental values), it's very strong issue for me right now... and for example, heliskiing, which I do myself, I don't feel good about it, and personally ***I don't heliski anymore.*** *And to the clients I go heliskiing with, I propose that they compensate for all the co2 that they produce when they flying.* ***If they don't do it, then I don't take them as clients****. And I'm actually the first guide here in Verbier area that does that. And they are actually,* ***because what I have introduced, in the local guides offices, they are going to talk about it*** *and might even implement the same, but I think it'll take time because we are in Switzerland, they are conservative and so we'll see, but it's very big issue for me personally." (Halme)*

6.2.7 Service process efficiency minimizes resource use

The importance of service processes in environmental sustainability creation got highlighted in the interviews in a similar vein as in the theory. By creative planning and developing new ways, as for example in Verbier producing electricity with the drinkable water, energy and other resources can be saved. As Mr. Délèze explained, even if the innovations would seem little steps, those little steps enable producing electricity for 2000 people per year, which

equals over half of the permanent population of the village. Thus, any step towards sustainability is important, and it might become substantial in the end:

"And we try to develop new ways, as I said for example producing electricity with the drinkable water or used water as well, and these are small examples but those small examples can produce electricity for 2000 people for one year. So they look like little steps but in the end it's quite important...." (Délèze)

Similarly, planning a resort in a way that reduces need for car was mentioned in the interviews with the Lappish ski centre representatives. Both of the interviewees argued strongly for the importance of initial planning. For example, Mr. Toivonen explained how the village has been planned from environmental viewpoint so that cars would not be needed and no extra accommodation would be build. Likewise, the TuottoOmistus- concept leads to efficient capacity use due to the reducing idle time. Therefore, initial planning seems to be highly effective way to ensure the sustainability of the whole service. The following citation demonstrates, how through clever planning, for instance traffic concerns and unnecessary construction could be avoided:

"Even before this project was started, actually this whole pedestrian village of Ruka and the one that has been planned for Pyhä, and then the TuottoOmistus- accommodation concept, they have been planned greatly from an environmental viewpoint. So the pedestrian village pursue mainly that people would use less car, and they don't even need to use the car here, during their vacation. So, all the accommodations are ski-in-ski-out. And then again, the TuottoOmistus- concept means that everything that we build, even if it belongs to private sellers, yet they are year-round for rent. So that we try to avoid that the kind of holiday apartments would be build, that would be only used during one or two weeks per year, and that there would built as efficient and less as possible."

On the other hand, in most of the Alpine resorts, the traffic was seen as a major challenge. Several ski centre respondents explained how they have planned to reduce the traffic with restrictions and through forcing the use of public transportation by making the private traffic more difficult as well as by creating pedestrian areas. Also, a free ski bus with a ski pass was mentioned several in Alpine and Lappish interviews as a tool for traffic reduction. Additionally, Mr. Gacon mentioned the possibility of acquiring an electric ski bus, although

they had already had it couple of years before and it had turned out to be too expensive. In Verbier, for one's part, they had decided to make the bus free for everyone due to the difficulties to control the possession of ski passes. The free public buses are enabled by the local authority as they are financing them; thus the importance of cooperation with the local authorities gets emphasized once again. Mr. Délèze saw the freeness of the ski busses as the most important encouragement to reduce the car use:

*"...**the best encouragement that we made, was to make the buses free.** At the beginning it was included in the ski pass but then we noticed it was difficult to check if everybody had a ski pass etc. and we came into the conclusion to make them free**...there is always somebody paying in the back**, it's the local authority but it really makes sense and then we are working on a concept where **we will try to force, in a certain way, to use the public transportation by making the private traffic little bit more difficult**. And creating areas where pedestrians have the priority but in which the public transportation might drive through or something like that. It's more in that sense but for the moment the main point is the information and it's difficult to say if it works or not." (Délèze)*

Energy consumption got highlighted as all the respondents mentioned some efforts that the resorts have made towards greener practices. In general, hydropower usage is very common, and several of the Alpine resort interviewees mentioned it to be easy to utilize due to the location on the mountains and the existing dams. Most of the ski centers use green energy with one exception; however Mr. Töyrylä acknowledged that the resort is behind in the progress due to the lack of green energy usage, therefore they had talked about starting using it. Sincerity about the actual sustainability of the processes and acknowledging the deficiencies are crucial for sustainable development. The following citation illustrates how Mr. Töyrylä is open about the green power usage deficiency of the resort:

"And lot is also talked about when to switch to green electricity. So that the electricity that is now used in Levi, would be produced for example with wind power. So that there are those resorts existing which already work like this, so in that we are bit behind, but…" (Töyrylä)

Moreover, Mr. Gacon expressed his concern about the trustworthiness of the actual greenness of the green energy that they buy. This kind of lack of trust in suppliers is a serious concern for developing environmentally sustainable practices. The context, where Mr. Gacon operates,

could explain his lack of trust, as France is a major supporter of nuclear power. Therefore, Mr. Gacon has an ethical dilemma, not only about how he considers the greenness of nuclear power but also how the supplier considers it. Thus, transparency and third party certificates play an important role while communicating about environmental sustainability, as already fortified in physical evidence context. On the other hand, the problems with the trustworthiness of the supplier can be avoided also by producing the energy locally, and examples of locally produced solar and wind powers were mentioned in some of the Alpine ski centre representatives' interviews. An innovative example for producing energy with the drinkable water by cooperating with an association was found from Verbier, as earlier mentioned. However, the following citation presents the concerns of Mr. Gacon:

"Moreover, we have decided to subscribe a green contract with the electricity company. With this contract we pay more for our energy but we are sure, well we're not totally sure but it should be like that, that this energy is green. So this energy comes from wind power, solar or hydro power plants. So we pay for it, but maybe they just use that to get more money out of us. But for us it is important to do that, because we're in a natural park." (Gacon)

Heating was also discussed thoroughly in the interviews, and in general, the respondents gave examples of various different practices how they have strives sustainability on that field. For example geothermal heat pumps, were mentioned in the interviews with the Swiss representatives as well as with Mr. Töyrylä. In Levi for instance, the geothermal heat pumps are used for heating and air-conditioning a new hotel and a congress centre. In addition, changing into energy efficient buildings and improving the energy economies were mentioned both in Lapland and in the Alps. In Lapland, in general, the attention has been paid into making the heating more sustainable and two of the ski centers in Lapland had started to use the heat of a district heating plant. Similarly, in Schruns-Tschagguns, a heating plant working with locally harvested wood was under construction, in addition their public pools are heated with solar power.

Mr. Toivonen explained Ruka to work nearly 90% out renewable energy resources, including both the electricity and heating. Furthermore, in some of the electrically heated ski-in-ski-out apartments in Ruka, the temperature is adjusted lower when they are not in use with a specific control system, which evidently reduces the unnecessary energy consumption. The following citation illustrates the ways that a ski centre representative considers important when

improving overall energy economy. Moreover, it also presents again the importance of acknowledging the deficiencies in order to make changes towards more sustainable energy sources:

"In both of the resorts ***we have switched into using electricity produced from renewable resources****, that is, the use of green electricity. All electricity, what we buy, comes* ***produced from water.*** *And then, in Ruka during these days or after the new year, a new heating plant will be completed, which is functioning from renewable natural resource, namely working with wood chips…So that this* ***central heating plant is working with wood chips*** *and after that Ruka is actually probably about 90% functioning from renewable natural resources, ie. the much spoken carbon footprint is rather small in Ruka.* ***We've still couple of buildings, in which there is an oil burner, but one of them will probably change in the next few years, working from renewable natural resources.*** *…for example, in Ruka there're are still some electrically heated, with this kind of "****at home, away from home-control system****", that is, when accommodation is not in use, it is possible to adjust the temperatures down with this kind of remote-controlled program,* ***so that they are not kept warm when the apartments are not in use.****"(Toivonen)*

Mr. Töyrylä brought up one of the Lapland specific features, as he acknowledged that lots of energy is consumed for lights and heating, probably therefore in Finland, attention has been paid to energy consumption reductions. For example, Mr. Toivonen explained how an outside consultancy company was analyzing the situation of the time regarding energy consumption, and then plan strategies to reduce it. The citation of Mr. Töyrylä, for one's part, exhibits how the conditions in Lapland require artificial lighting and extra heating. Moreover, it illustrates how through improving the efficiency of these, considerable savings can be achieved:

"…So that lot of electricity is consumed for heating and lights over here, so that these two are the kind of big issues where we can achieve big savings." (Töyrylä)

Clearly, the benefits of saving energy include also cost savings and therefore they are also the best interest of companies, unexpectedly however, the cost savings were mentioned only in one interview. When it comes to reducing water and energy consumption for the slope processes, new machines were mentioned in some interviews as also discussed in the physical evidence context. For instance in Verbier, the lift company has developed a new system with

sonar underneath the grooming machine that measures the depth of snow to reduce consumption of water and energy. In addition, their grooming machines work with biodiesel in order to preserve the air quality. In Levi, for one, automated snowmaking system guarantees that the snow is made in optimal circumstances, thus optimizing the snowmaking processes. Additionally, Mr. Töyrylä explained how they capture snow with fences and saw it as an ecological deed. This proves how, even without special technologies, the resource use can be improved through simple practices.

"…in snowmaking for example, the company has moved to ***automated snowmaking****, the canons are on…so that there is no unnecessary idle, so that they start, when the temperatures are good for snowmaking and then they turn off, when the temperature goes such that it is no longer needed or the temperature gets too warm, thus* ***the snow is made in optimal conditions****, and then also the* ***smaller energy costs can be achieved****…And then on the slope-side, you could say one* ***ecological thing*** *to be, so that you kind of* ***storage the snow with snow fences****, so that when it snows, so it is collected and the snow fences stop the blizzards and it is collected next to the snow fences and is used along with the winter, that is,* ***you don't need to do that much snow as the natural snow is utilized more efficiently****." (Töyrylä)*

Surprisingly, Mr. Délèze was the only interviewee who explicitly brought up the possibility of reducing snowfalls. He considered the artificial snowmaking crucial but also anticipated the future value of water resources to increase, thus highlighting the importance of water conservation. Therefore, he stressed on the importance of finding clever, new innovative ways for making it:

"Then the use of the water is also very important, because we know that it's going to be a big story in the future. We are lucky to be at the origin of the water, if I may speak so, because we have the geysers etc. we have to preserve it and.... the snow will be the next issue as well, because if it doesn't fall from the sky, we have to produce it but in a clever way and it's good that the lift company has developed this system of measurement to avoid producing snow just for producing, making it in a clever way I think it's the main issue. (Délèze)

Recycling was also discussed in most interviews, and normally it should be taken care of by the municipality, as already deliberated in the government context. The most effective way to organize recycling seems to be making it compulsory. As Mr. Bitschnau explained, in Austria

you get fines if you get caught of recycling incorrectly, moreover he acknowledged the actual cost of waste. In Andermatt region, for one, you need to pay a tax for each pack of waste that is not recycled. Similarly as in Lapland, the recycling of organic waste was considered problematic in Andermatt. Ms. Mandioni explained how some individuals have made private composts when the village authorities have refused to provide one, not only because of its costs but also due to assumptions of bad smell and its negative effects on tourism. These arguments by the authorities can be considered as excuses, because as earlier noted, the commune or guild is conservative by nature and are not interested in tourism. Mr. Bitschnau, on the other hand, considered that the recycling is running well even though the distances are long. Evidently the tradeoffs need to be considered, thus the size of the village, among other concerns, determines if it is useful to transport the waste long distances or organize it locally. Mr. Bitschnau also highlighted the role of the community in controlling that the waste is recycled correctly. The following citations of Ms. Mandioni and Mr. Bitschnau present the opportunities, costs and problems related to recycling:

"...and then I know a couple of collectors who have made their own compost in the garden, where I can bring my garbage. I have asked the commune why they don't have it, and the argument was, that in the summer time, it smells and it's not good for tourists and..."(Mandioni)

*"...**and all the recycling systems run extremely well, and it's not easy in this rural environment**, in the city it's easier to collect waste and collect recyclables but here the recycling has to be picked up every single house all over the mountains and it's quite a lot... So we sort it out quite well I think everywhere, in all areas, and **waste is very expensive**, so **if you do not sort out reusable materials then you have to pay quite a lot to get rid of all the other waste**. And it has been down into a minimum...they (the community) are also very strict about sorting out your waste, **if you do not sort out well you get fined.** So every waste you try to get rid of is checked again so you cannot, you know, it cannot illegally get recycled wrong way, it's very difficult."(Bitschnau)*

For example in Lapland, even if the municipality has not provided much recycling possibilities, the ski centre providers have made some efforts in order to improve it. In Levi, some recyclable and reusable materials are purposely acquired, as for example the World Cup banderols. Similarly, Mr. Toivonen clarified how they have focused on improving the

recycling possibilities and aimed increasing the amount of materials recycled at the resort and in the apartments, in addition to the possible acquisition of a bio composter. He explained also how they have organized reverse logistics for glass with one of their suppliers. The following citation illustrates the importance that is given to recycling, and how ski resorts can affect it with their own activity:

"Then in recycling, we've actually focused on it the entire autumn, i.e. we've strived to enhance it. In Ruka, there has been okay recycling already until now in its own operations, restaurants, ski and property maintenance, but then with regards to customers, we've tried to get now more recycled materials into the lodgings, and then on the slope and the pedestrian area of, more containers altogether. In Pyhä quite the same work has been done." (Toivonen)

6.3 Environmental principles can be used as benchmarks in ski center service marketing

It is important that ski centers constantly improve their environmental performance. Ski centers can use environmental principles as best practices and improve their environmental sustainability by benchmarking their actions. The empirical findings concerning the sustainable slopes charter principles, which were covered in this chapter, are gathered into the Appendix 5. The concerns and practices related to principles 1-10 have been discussed in the process context, whereas issues related to the principle number 11 have been covered in promotion context. Therefore, the environmental principles will not be further discussed here.

The green service marketing triangle, on the other hand, is a service marketing tool, which covers three different marketing types, through communication between different actors, and all of the marketing types were found in the promotion and people context. Similarly, the green service blueprint is a process mapping tool, because its focus is on processes. Thus, these service marketing tools can be considered as factors of the different service marketing mix components.

6.4 Summary of the case findings

First of all, no fundamental differences were found between the two cases. The environment was unanimously seen as the best offering of ski center service providers. However, more profound differences were found between the ski resorts. In Pyhä and Ruka, the environmental program had ensured that the environmental issues were considered comprehensively in the ski center services. In Levi, on the other hand, the environmental quality creation was in process as part of the overall quality program implementation. In Verbier, especially the importance of cooperation was acknowledged. The governmental role as an enabler by incentives was highlighted in Schruns-Tschagguns. In Andermatt and Molines, the financial resource deficiencies were brought up.

Next, the case study findings are summarized before drawing up conclusions. In Table 4, the key results of the study are presented in a nutshell.

Table 4 The main empirical findings

Factor/ Component	Lapland	Alps
Green marketing	• Environmental program: practical tool for long term planning, objectives & environmental sustainability! • Green marketing drives corporate philosophy • Natural environment: The service offering	• Green marketing drives corporate philosophy • Natural environment: The service offering
Consumers	• Environmental awareness & demand growing trend, actions diminutive • Ability and lifestyle impact service sustainability, moral actors • Non willingness to pay: egoistic segment • Education & motivation prerequisites	• Environmental awareness & demand growing trend, actions diminutive • Ability and lifestyle impact service sustainability, moral actors • Non willingness to pay: egoistic segment • Education & motivation prerequisites
Government	• Crucial role; enabler & motivator (infrastructure, planning, information, role model) and regulator (laws, taxes, needed for air travel & snowmobiles) • Local and qualitative decision making • Cooperation - Barriers: conservativeness and bureaucracy	• Crucial role; enabler & motivator (infrastructure, subsidies, tax reductions, role model) and regulator (laws, taxes, needed for air travel) • Local decision making • Cooperation - Barriers: conservativeness (farming traditions/ possible power of money) and bureaucracy
Service provider	• Intangible, but physical side of the business can be affected by participant selection & cooperation	• Role model & spokesman • Intangible, but physical side of the business can be affected by participant selection & cooperation
Service product	• Surrounding environment: main asset • Core: nature experience • Actual: clean products (ski touring), environmental quality • Augmented: co2 compensation, repair	• Surrounding environment: main asset • Core: nature experience • Actual: clean products (ski touring), environmental quality • Augmented : co2 compensation, repair

Price	• Directs demand: motivating, forcing • Cost savings through more efficient resource use acknowledged • Green services should not cost more • Financial value of saving the nature	• Directs demand: motivating, forcing • Cost of waste acknowledged • Green services should not cost more • Lack of financial resources
Place	• Transport: train lobbied, ski bus, integrated transportation - no clear opinion about air travel • Tour operator sustainability demands • Comprehensive cooperation • Location: surrounding nature valued, concentrated building - Long distances, snowmobiles	• Transport: train lobbied, ski bus, local products - no clear opinion about air travel • Tour operator sustainability demands • Comprehensive cooperation • Location: surrounding nature valued, - Long distances
Promotion	• Informative and motivational communication (interactive & external) • Intact nature promoted • Environmental program: media attention • Avoiding green-washing by having coverage on communication	• Informative and motivational communication • Intact nature promoted
Physical evidence	• Guidelines for construction and purchases • Esthetical factors • New equipment - Tradeoffs: New lifts vs. Few lifts • Energy agreement, 3rd party logo	• Esthetical factors • New equipment - Tradeoffs: New lifts vs. Few lifts - ISO14000 expensive to implement
People	• Critical role: education & motivation • Through encouraging and educating people, traffic and resource use can be reduced (internal, interactive & external marketing) • Management's commitment	• Encouraging
Processes	• Reduce, reuse, recycling & green energy - Problems in recycling - Tradeoffs: river environment, transporting waste long distances • Innovative practices searched • Traffic reduction through planning	• Reduce, reuse, recycling & green energy - Problems in recycling & traffic - Tradeoffs: river environment, transporting waste long distances • Innovative practices searched • Forcing traffic reduction

6.4.1 Green marketing, consumers and government affect ski service sustainability development

It was found in Lapland that through implementing an environmental program the company can adapt the *green marketing* philosophy; hence the environmental program is also a practical tool. The demand towards environmental sustainability and the economical value of the environment have been realized in the companies. Moreover, the surrounding environment was often considered as the main capital, resource or the competitive advantage of the firm and the need for environmentally sustainable practices was acknowledged. Therefore, the natural environment was seen as a crucial component of the firm's marketing surroundings. Also, the special features of Lapland, such as long snow security, cleanliness and quietness got emphasized. Many interviewees explained their feelings towards environmental values by their personal contact to the nature, for example by background or

place of residence. To summarize, green marketing seems to drive corporate philosophy in ski services.

No major differences related to conceptions about *consumers* were found between the two cases. The case study interviews clearly confirm that despite the growing trend of environmental awareness and demand, it cannot be seen in consumer behavior yet. Special knowledge is often needed, especially when operating in a new cultural environment. Even if the consumer would have the personal resources and ability such as awareness, financial resources and external opportunity, consumer's personal characteristics, like values, motives and lifestyles, can be barriers for the propagation of more ecologically oriented consumption styles. In general, consumers were seen as unwilling to pay extra for greener services, even if they would have the financial resources. Therefore, the lifestyle and personal characteristic view for segmentation instead of solely demographics, got support from the case study. Moreover, egoistic people were seen as a potential segment, which is not willing to contribute to environmental quality.

Also people's conceptions of what behaviors are considered ecologically relevant vary as the interviewees felt most of the green pressure coming from the Scandinavians and Brits who are most likely obliged to use the plane to arrive to the destination. Therefore, perceptions of the tourists seem to be dominated by local, visible and immediate environmental problems, such related to recycling and public transportation in the resort whereas transportation to and from the destination, especially air travel was not mentioned to be an issue for the tourists. In conclusion, consumers are moral actors, whose lifestyles and abilities impact on ski services.

The government was unanimously considered to have a key role in environmental sustainability issues as regulator, motivator and enabler. Additionally, the importance of local level decision making was highlighted in both Lapland and the Alps. Because neither consumers nor companies are likely to act proactively if they have to sacrifice their personal resources, one of the governmental responsibilities is to set environmental laws and regulations. The governmental role as enabler and motivator was emphasized in Lapland by the need for accurate information, village planning and infrastructure for basic services, whereas in the Alps subsidies and tax reductions were highlighted, in addition to basic services. Additionally, in both of the cases, government was seen as responsible for giving the right example by their own actions and need cooperation was highlighted.

The role of a government got further emphasized when there were some problems in the infrastructure or in the basic services, such as lacking recycling possibilities. Long distances were seen as barriers for the recycling, and especially in the more qualitative decision making was longed for so that tradeoffs would be accounted. Acquisition of an own composter was seen as a possibility to compensate the lack of basic services. In addition, conservativeness and bureaucracy were found to be substantial barriers for environmental sustainability implementation. Especially in the Alps, the strong traditions on farming long before tourism retain conservativeness, however the power of money was found to improve new thinking.

6.4.2 Green service marketing mix helps implementing environmental sustainability into ski services

According to the interview findings, even if the service provider does not produce anything, it can work as a role model and spread the message how to work with the physical components related to services, such as recycling the materials properly. Additionally, it was acknowledged in the Alps that the service firm can affect the physical side of the business by participant selection and cooperation. The empirical part confirmed that with the help of green service marketing mix companies can implement environmental sustainability into their service offering and practices.

The respondents, in both Lapland and the Alps, associated the environment into the three service *product* features. The ski center service providers considered pure nature experience to be their core product; moreover the tour operator stated healthy nature was to be crucial for the company's existence. Nonpolluting outdoor activities, such as ski touring, form an environmental sustainable actual product. Furthermore, it was mentioned that the environmental sustainability can be implemented into the actual product as part of the product quality. Repair services and co2 compensation for flights were discussed in the interviews, and they can be seen as augmented product.

Price was found to be useful in directing demand towards more sustainable practices in a similar way as promotion, for example by providing a free ski bus, or also by forcing customers to compensate the co2 emissions of their flights. There were some contradictory opinions found about customers' willingness to pay and about the pricing of environmentally sustainable services. On one hand, targeting customers who are willing to pay for the

environmental quality was suggested, but on the other hand, it was stated that the environmentally sustainable services should not cost more than competing services. Also the financial value of saving the environment was stated in one of the Lappish interviews. It came up later on in the empirical analyses that the tour operator and couple of the smaller Alpine ski resorts were lacking financial resources, which was argued to prevent adapting some more environmentally sustainable practices. The cost savings of improving resource efficiency were acknowledged in Lapland, whereas the cost of waste was highlighted in the Alps.

Place, that is distribution choices include many important travel service features such as location, supply chain and transport which got emphasized in the interviews. The natural settings of the location were highly valued both in Lapland and in the Alps. In Lapland the representatives underlined concentrated building. Unlike in the Alps, megaresorts are still uncommon in Lapland; however the negative consequences of growing amount of tourism for Lappish nature were brought up. The respondents had experienced demand towards sustainable practices from both, the customers and the tour operators. Likewise, the case study tour operator had considered the environmental performance of the bus companies and accommodation providers while selecting them as well as pressured the heli-ski companies to take the first steps towards sustainability. Nevertheless, the lack of sustainable accommodation possibilities was restricting the choices in Europe.

Some tourism offices had realized their central position in the ski centre service provider network and taken a coordinator's role. In general, the importance of cooperating with other entrepreneurs, associations and governments was seen very important. In Lapland, the sustainable supply chain management was seen important, because customers do not make a difference between what is done by the ski center and what by other service providers. In spite of this, the presence of snowmobile entrepreneurs divided opinions when one saw them crucial for the business and another as very worrying. Some severe contradictions exist between the statements about the importance of the peace and quietness and the presence of snowmobiles in Lapland; therefore, there is clearly a need for governmental regulation of snowmobiling.

Transportation concerns were seen important in both cases and traffic minimization was taking place, however long distances are often a problem as found earlier. In Ruka and Pyhä, the integrated grocery shipments were a distinct part of their environmental program. In

Schruns-Tschagguns, on the other hand, local products were favored. Many ski resort respondents were actively improving public transportation, especially by lobbying better train connections. However, some of the restrictions of train, as time and costs, got highlighted. Integrating the lift and train pass was mentioned in the Alps, nevertheless the ownership structure of the train was causing problems for its implementation in Switzerland. Some of the aviation discourses got emphasized in Lapland, for example the environmental impacts of air travel were questioned. In general, the ski centre respondents did not mention the air travel impacts. Nevertheless, the tour operator highlighted the importance of compensation efforts. However, as the compensation strategies are not a long term solution, it is crucial that the authorities develop worldwide regulation strategies for aviation.

In general, the customer guidance on *promotion* was concentrated on how to recycle and on encouraging using public transportation. In particular, informative, motivational and consumer opportunities emphasizing communication was found from Pyhä and Ruka, where the consumers are informed and motivated towards environmental sustainable practices also during their holidays as well as through websites. Generally, the intact nature was promoted. Moreover, it was found in Lapland that criticism of green-washing can be avoided by ensuring the environmental sustainability of the provided services and thus having coverage on what is communicated. The tour operator considered adding a banner of some of the co2 compensation companies on their website in order to sensitize the customers about the compensation issue. He also predicted that environmentally proactive strategy would be beneficial in a promotional way as well. This was proven right in Ruka and Pyhä, since even without active marketing activities they had experienced increased media attention and positive word of mouth after starting their environmental program.

In Pyhä and Ruka, guidelines have been made for facility construction and the environmental aspects are taken into account in all new buildings. In several ski centers the esthetical factors were emphasized. Also the normal green office practices were mentioned in some Alpine interviews. Several respondents highlighted that the newer the equipment is, the more efficient and environmentally sustainable it is. Similarly in Pyhä and Ruka, there are guidelines for purchasing the best energy category domestic appliances. The lack of electric vehicle choices and the high prices of the existing ones were seen problematic. When it comes to reports and statements, the ISO14000 standard was discussed in one Alpine interview, nevertheless it was argued to be easy on paper but very costly in practice. On the other hand,

in Pyhä and Ruka, they had managed to acquire a third party logo of *World Responsible Day*, which they had utilized in brochures and on websites. Additionally, they had joined the European Union energy efficiency agreement.

The critical role of *people*, including customers, employees and corporate management, in environmental sustainability creation was confirmed in the empirical study. Mr. Toivonen highlighted the importance of educating and motivating employees and customers alike. In addition, he distilled that training of the personnel as well as enlightening and encouraging customers to change their consumption culture, are one of the most important factors in reducing energy and water usage. Accordingly, they had invested lots of resources on employee training. Additionally an online conference program had been introduced in order to reduce the travelling of their personnel. Likewise in Verbier the personnel had been encouraged to use the gondola for commutation by offering the lift passes for free. In some other Alpine places, environmental education was either seen as a governmental responsibility or the lack of financial resources was invoked. An example of a full commitment of a manager and his personal passion towards environmental values was brought up in one interview. The tour operator was ready to sacrifice some of his revenues for his principles. Consequently, he works as a role model by his actions for his employees, customers and other service providers.

The importance of service *processes* in environmental sustainability creation got strongly established in the interviews in a similar vein as in the theory. Attention had been paid in creative planning, reduction of water and energy consumption as well as traffic, and on recycling materials. Examples about the practices found in this case study are presented in Appendix 5. In Lapland the traffic was minimized through village planning whereas in the Alps traffic was seen as a major problem. Consequently, several Alpine ski centre respondents explained how they had planned to reduce the traffic with free ski bus, restrictions for cars and forcing the use of public transportation. In Lapland, the extra building needs were avoided with the TuottoOmistus-concept.

Reducing energy consumption and green energy usage were stressed in both cases. Hydropower usage was very common, in addition some wind and solar power were used in few Alpine resorts. However, the trustworthiness of the green power got also questioned in one interview. Improving heat economy and creating new ways for heating were also

frequently discussed. Geothermal heat pumps, district heating plant working with renewable natural resources and energy efficient houses were mentioned in several interviews. Additionally, in some lodgings in Ruka the heat is adjusted lower when the apartment is not in use. In Lapland the reduction of energy consumption for lights got emphasized and both of the resorts had changed into using energy saving lights. When it comes to reducing water and energy consumption for the slope processes, new machines were mentioned. However, also some innovative practices were found, like the snow fences in Levi.

Recycling was also discussed in most interviews, and normally it is organized by municipality. The most effective way to organize recycling seems to be making it compulsory and giving fines for incorrect recycling, as is the case in Austria. In Andermatt region, on the other hand, a tax needs to be paid for each pack of waste that is not recycled. Local composts could be a solution for bio waste recycling, which was seen problematic both in the Alps as in Lapland. Even if the municipality has not properly enabled recycling in Lapland, the ski centre service providers have worked on to improve it.

7 CONCLUSIONS, CONTRIBUTIONS AND FUTURE RESEARCH

In this chapter the conclusions and the final research framework are presented. Then, implications for managers are suggested and finally, the limitations of the study are acknowledged and some future research avenues are discussed.

7.1 The modified framework and theoretical contributions

This study strived to answer the following research question: *how to use marketing to promote environmentally sustainable ski center services*. To answer this, three sub research questions were formulated:

- What kind of role green marketing practices, consumers and governments have in the environmental sustainability development?
- How can environmental sustainability be integrated in the service marketing mix?
- How can sustainable tourism guidelines be used in ski centre service marketing in Lapland and in the Alps?

The theoretical framework was developed to guide the empirical research, and following the study results we can now provide answers to the research questions presented above. The final framework (Figure 6) is somewhat modified from the original one according to the case study findings and the theory processing. The main explicit changes to the framework concern the green services marketing triangle, green service blueprint as well as sustainable slopes charter and environmental principles, which now have been implemented into service marketing mix components due to the following reasons. The Chapter 4 was a mix between theory and practice, in which the environmental principles were implemented into service blueprint and services marketing triangle. However, green service blueprint is a process mapping tool, as defined earlier, therefore it has now been incorporated into *process* context. The green services triangle, on the other hand, was defined as a strategic framework that reinforces the importance of people in the ability of firms to keep their environmental promises; hence it has now been implemented into *people*. The environmental principles, for one's part, can be considered as *physical evidence* working as guidelines and best practices not only for the company employees but also for different interest groups.

The modified theoretical framework (see Figure 6) and contributions to previous research will be summarized next. In reference with the original framework, the findings of the empirical research are illustrated with *italic* font whereas the text in brackets did not get much support from the case study.

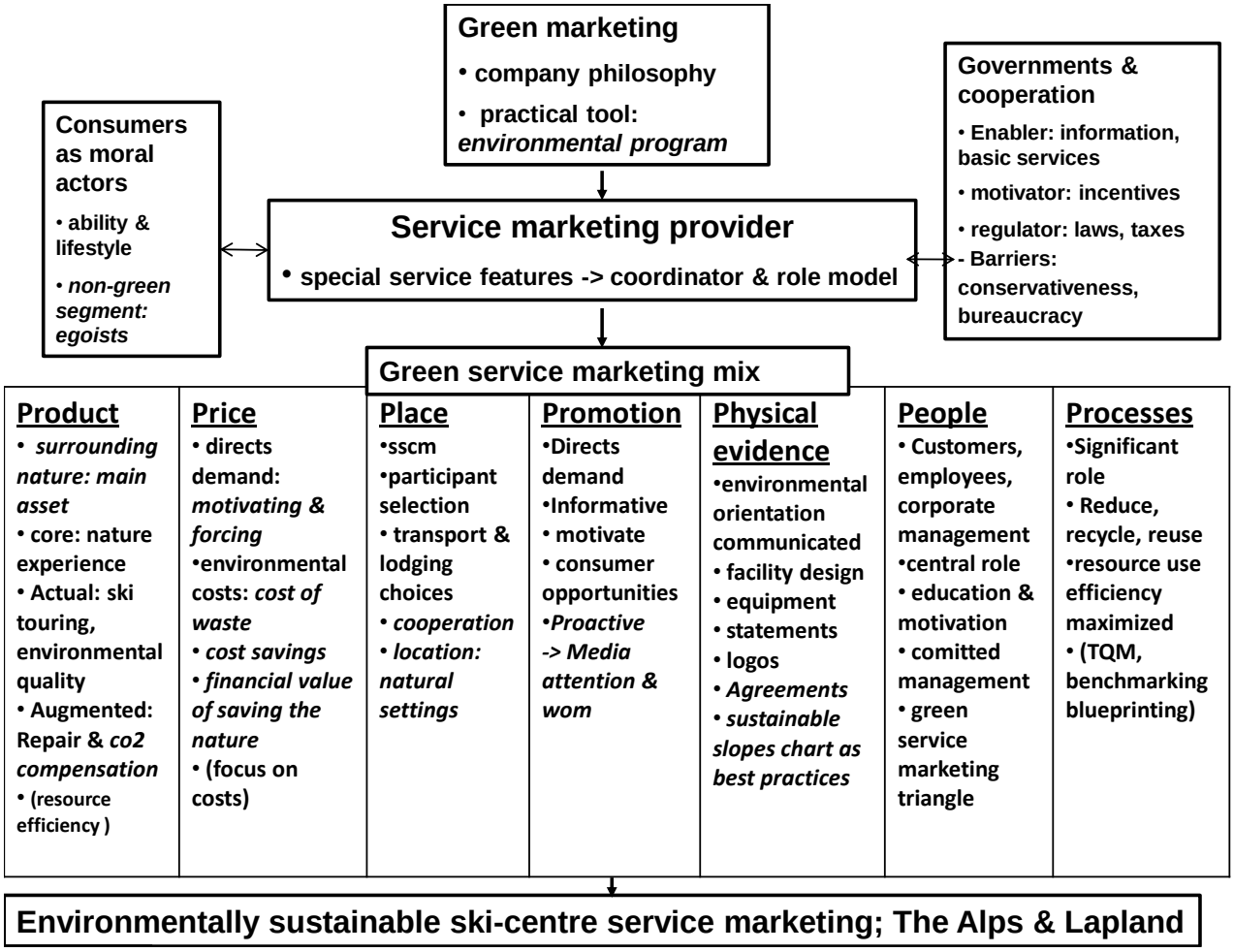

Figure 6 The modified theoretical framework

The research started by introducing the topic and describing the background of the study. A lack of research was identified in the area of green service marketing. Similarly, a practical need for studying how environmentally sustainable services can be promoted in ski center service context was recognized.

7.1.1 The roles of green marketing, consumers and government

Chapter 2 identified the roles of the different background elements and actors affecting the environmental sustainability development, which were fortified and some new aspects found later in the empirical research.

The empirical findings support the previous research around the *green marketing* theme, conducted mostly by Peattie (1992), Polonsky and Rosenberger III (2001), Chitra (2007) García-Rosell and Moisander (2008) as well as (Grundey & Zaharia 2008). Thus, the natural environment was seen as a crucial component of the firm's marketing surroundings and green marketing was found to drive corporate philosophy in ski service marketing. Furthermore, the interview results from Lapland indicate that long-term environmental orientation and the environmental sustainability integration as part of the company philosophy can be achieved through implementing an environmental program. Therefore, the empirical research contributed to the previous research by noting that the environmental program is also a practical tool for ski center management.

The theoretical foundations about green *consumer* behavior of García-Rosell and Moisander (2008), Haanpää (2007), (Cosmescu & Cosmescu 2007) and Moisander (2007), got strong support from the case study. It seems to be fundamental to consider sustainable marketing as a social process involving multiple moral actors. The empirical study proved that intentions to change behavior do not automatically result in actual behavior change. In general, consumers were found to be unwilling to pay extra for environmental quality, even if they would have the financial resources. Nevertheless, personal resources and environmental awareness are prerequisites for green consumer behavior in which companies and governments can effect. Also Becken's (2007, 356) studies were supported as air travel was not mentioned to be an issue for the tourists; rather the green demand was dominated by visible and immediate environmental issues.

The major contributions to the previous research were acknowledging, and thus verifying, that consumer's abilities and lifestyles, including personal resources and motives, impact on service sustainability. Additionally, lifestyles were proven to be better segmentation grounds than demographics, and egoistic segment was found unlikely to act green. However, the suggestion by Kinnear et al. (1974, 23) to practice differentiated marketing, was not supported by the case study, moreover it could even be consider as green washing.

The theoretical discussions (see Kinnear et al. 1974; Bramwell & Alletorp 2001; Batta 2006; Lynes & Dredge 2006; Becken 2007; Chitra 2007; Gössling & Peeters 2007; Weiermair et al. 2008) about governmental roles as enabler, motivator and regulator were unanimously agreed in the case study interviews. Supporting the theoretical discussion, government was found to have a key role in environmental sustainability creation by providing basic services and educating, by offering incentives, and by setting laws and taxes, respectively. The fundamental contributions of the qualitative study was firstly, that the role of the government got highlighted when there was lack of basic services, like recycling or when some regulations were missing, as taxes for air travel and snowmobile regulation. Secondly, it was found to be important that governments work as role models, enable local decision making and cooperation. Moreover, according to the empirical findings, conservative government was seen as a barrier for environmental sustainability, in the Alps and in Lapland.

As a conclusion, the roles of green marketing, consumers and governments got support from the empirical part. *Their roles can be stated to be crucial for environmental sustainability development. First of all, green marketing drives corporate philosophy in ski resorts. Consumers, on the other hand, have an active role impacting on service sustainability with their consumption behavior. Lastly, governmental role is to enable and regulate ski resorts towards environmental sustainability.*

7.1.2 Environmental sustainability integrated in service marketing mix

Chapter 3 presented the environmentally sustainable service marketing mix, and green marketing literature was applied into service marketing literature, therefore already the developed green service marketing mix contributed to the previous research.

The service marketing literature and green marketing literature (e.g. Shostack 1977; Balderjahn 1988; Davis 1991; Peattie 1992; Grove et al. 1996; Polonsky & Rosenberger III 2001; van der Zwan & Bhamra 2003; Zeithaml et al. 2006; Grundey & Zaharia 2008) was found to be relevant for the green service marketing mix also in the empirical study. Moreover, the previous discussion about the special service features and a need for extended marketing mix for services was certified as the physical evidence, processes and people were found to play a crucial role in the case study services. Additionally, because the empirical research concentrated on travel services, *place* got lots of attention.

All of the 7ps of service marketing mix were found to interact with each other, and they proved out to be useful tools when marketing environmentally sustainable ski center service. It was also found during the empirical study that cooperation, due to its important role for environmental sustainability, needs to be added into place context, which also answers to the critic that has been appointed towards the traditional marketing mix (Constantinides 2006) as discussed in the theoretical context. An additional empirical finding concerning service providers was that a service firm can serve as a role model and message spreader as well as coordinator.

In the theory context, service product was seen as three leveled which included the core product, actual product and augmented product, and environmental sustainability was implemented into each of them. Similarly, the case study respondents associated the natural environment into the service product features. In contrast, the resource efficiency maximization, discussed in the theory, is more related to service processes, hence it discussed in the process context. First of all, it was found in the case study that, the surrounding environment is the company's main asset. Moreover, it was found that a nature experience is the ski center service provider's core product. The basis of environmentally sustainable actual product, on the other hand, was found to be clean products, as ski touring, and environmental quality. It was also confirmed that the sustainability of the service products can be enhanced with augmented product features, as co2 compensation and repair services.

In the theory part, the role of price and costs were discussed thoroughly. Firstly, it was argued that the price could be utilized to direct demand towards more sustainable practices. It was suggested to shift a focus from price into costs, and moreover to incorporate environmental costs into cost accounting. The empirical study confirms most of the theoretical price and cost arguments. It was argued that price can be used to direct demand either by forcing, for example with compulsory co2 compensation fee or by motivating, for instance with a free ski bus. Additionally, it was commonly argued that environmentally sustainable services should costs more than normal services, and if they do, the reasons should be explicitly stated. Some of the smaller sized ski center service providers stated that lack of financial was preventing the adaptation of environmentally sustainable practices. Some other interviewees, on the other hand, acknowledged the financial value of the preserved nature, the cost of waste and cost

savings of improving resource efficiency. On the contrary, no consensus was found about incorporating the environmental costs into cost accounting methods and prices.

As stated in the theoretical part, by considering environmental sustainability in the *place* attribute, some important travel service related aspects, like transport and supplier selection are affected. The theory suggested that most of the sustainability impacts take place in the supply chain; therefore greener marketing practices can be achieved by utilizing SSCM framework and participant selection, integrating transportation systems and facilitating public transportation. The same were found in the empirical research, additionally, the empirical contributed several new findings related. First of all, due to the location in natural surroundings, environment was valued. Secondly, since the customers do not make a difference between the different players in the resort, supply chain management and participant selection got strong support from the case study. Similarly, cooperation between different entrepreneurs and associations was found to be fundamental for sustainable practices. Integrated shipments were proven to be useful in order to reduce traffic, and local products were prioritized elsewhere for the same purposes. The service providers had paid a lot of attention to lobbying better public transportation connections.

Additionally, it was proven that tour operators can make a difference by their accommodation and transportation choices as well as forcing co2 compensation schemes. On the other hand, the theoretical statement of Schwartz et al. (2008, 303) that for example costs would be given priority over sustainability criteria in purchasing decisions by tour operators, was not proven. In contrast, the case study tour operator argued the lack of sustainable choices being the purchase restriction. However, the air travel issue was seen as difficult and it divided opinions, supporting that the aviation discourses exist (see Gössling & Peeters 2007).

It was established in the theory, that in environmentally sustainable *promotion,* the communication is informative, motivational and the consumer opportunities to make a difference with their choices should be emphasized. Furthermore, it was stated that promotion can be used to direct demand towards more sustainable practices. These statements got support from the case study. In general, customers were guided to recycle and encouraged to use public transportation. The consumers were informed and motivated towards environmental sustainable practices for example through interactive marketing during their holidays as well as through external marketing by including an eco-tip section on websites. In

addition, even without active advertising actions, proactive environmental strategy was proven to great positive media attention and word of mouth. Criticism of green-washing can be avoided by ensuring the environmental sustainability of the provided services.

It was argued in theory and proven in the case study, that by paying attention to the ecological quality of the *physical evidence*, like facility design, equipment, logos and statements, the company can communicate its environmental orientation to its customers. With facility design, environmental building policies and new equipment companies can reduce resource consumption and ensure esthetical quality. However, tradeoffs between additional new lifts and the old lifts should be considered. Moreover, according to the case study, the service provider can communicate its environmental orientation for its employees and different interest groups for example by third party logos and agreements as well as with environmental principles. In the course of the empirical study, the environmental practices that have been found from the cases of the Alps and Lapland have been gathered into a new sustainable slopes chart (see Appendix 5). These environmental principles work as physical evidence and they can be considered as best practices. As it was contributed in the empirical analysis, physical evidence not only works as guidelines but also objectives, like the agreement for energy reduction, that strive environmentally sustainable behavior.

The theoretical part stated that, because *people* are in a central role in service production, it is important to educate and motivate both employees and customers about environmentally sound practices. Also the full commitment of the management was argued in order to create environmental oriented organization culture and values. The empirical findings especially from Lapland support strongly the theoretical statements, simply because people are the producers of environmentally sustainable services. The green service marketing triangle (see Figure 3), that was developed in Chapter 4, can be utilized to ensure that all of the actors have the prerequisite information, ability and motivation to act green.

The theory argued the importance of re-engineering service procedures in environmental sustainability implementation because services are delivered through processes, which was strongly supported by the empirical research. It was also stated in the theory, that environmental quality can be achieved by implementing it into quality management processes like TQM, benchmarking and service blueprinting and by increasing resource reuse, reduction and recycling. The quality management processes were not explicitly found from the case

study; however the environmental program that has been implemented in Pyhä and Ruka could play the role. On the other hand, several amounts of proactive reduction and recycling practices were found in the empirical research, and these practices are gathered in Appendix 5. Especially as the case study concentrated on ski center service providers, reduction of energy, water and traffic were stressed.

Regarding the above discussion of service marketing mix, it can be concluded that *environmental sustainability can be integrated in the service marketing mix through implementing it comprehensively into each of the components. Moreover, the green service marketing mix can be used as a practical tool when promoting environmentally sustainable services.*

7.1.3 Environmental principles serve as benchmarks for environmentally sustainable services

Chapter 4 was a transition from theory to practice and the environmental principles of sustainable slopes charter were applied to ski centre service design with the help of green service triangle and "green" service blueprint.

However, in the final framework, the environmental principles, green services marketing triangle and service blueprint were implemented into service marketing mix components as discussed in the beginning of this chapter. They are not processed further, instead they are considered as best practices for constant improvement and tools for planning the environmental sustainable services as well as ensuring its implementation.

To answer to the third research sub question, *sustainable tourism guidelines and environmental principles can be used as benchmarks in ski centre service marketing, in Lapland and in the Alps.*

Most importantly, the theoretical framework, which was generated with help of the sub research questions, comprehensively identifies the elements that affect the environmental sustainability of services. Therefore, ***the developed framework can be utilized in order to promote environmentally sustainable ski center service.***

7.2 Managerial implications

This study contributed several practical tools for ski resort management in order to ensure ski center service sustainability. First of all, the developed theoretical framework comprehensively identified the interacting elements affecting the environmental sustainability of service, and it can be used to when promoting environmentally sustainable ski center service. Moreover, the framework is common enough, that it can be utilized in service marketing in general. It is crucial to note, that the foundation of the promoting environmentally sustainable services is the environmentally sustainable service itself. Ski center managers can use the examples found through empirical research from the case study ski centers for benchmarking purposes (see Appendix 5). Similarly the service marketing mix provides a tool for managers to implement environmental sustainability into their service business.

However, even if the service itself is planned in a sustainable manner, customers and other actors affect the service production. Hence, it is important to understand the active role of different actors in the environmental sustainability development. It seems to be important to study consumers' personal motives when striving to understand their behavior instead segmenting according to demographics. In addition, because services are produced through human actions, managers should understand the importance of educating and motivating people, customers and employees alike, to adapt environmentally sustainable practices. The green services marketing triangle, which was created in this study, can be utilized to ensure enabling and informative communication between the different service actors through interactive, external and internal marketing. Similarly, the environmental quality of service processes can be mapped with the green service blueprint, which was developed in this study. Governments have also an active role in affecting service provider's environmental sustainability by enacting laws, providing information and incentives. It was found also, that cooperation with governments, other firms and associations is highly recommendable. To conclude, as Mr. Gacon expressed: *"The environmental issues in the next years will be the main criteria to say if a ski centre is good or bad."* (Gacon)

7.3 Limitations of the study and future research avenues

The possibility of bias has to be recognized and it can be considered as a limitation of this study. In other words, the interviewees might have pursued to give a better view of themselves or their service organization, and therefore given more favorable answers. However, the electronic research helped to minimize the possible bias into some extent. To further decrease the possible bias, an additional quantitative inquiry could have been performed. On the other hand, considering the difficulties to gain participants in this research, it is probable that the ones who agreed to participate, have more favorable approach towards environmental concerns in general. Therefore, in order to increase generalizability, the usefulness of quantitative research remains unclear.

Many of the service providers were in the phase of planning or in the beginning of the environmental practices implementation. Consequently, longitudinal research would have been relevant in order to reveal some possibly emerging problems for the implementations. Thus, the research could be replicated later to check if the intended behaviors have been carried out.

The fact, that the interview with Mr. Toivonen was not possible to carry out face to face in the resorts, disabled observations from Ruka and Pyhä. Therefore only electronic material is used in order to improve credibility of the qualitative material from these resorts.

The study was mostly conducted in English, which was not the native language of any of the research participants, therefore it might have caused some interpretation and translation problems. However, the participant selection from different cultural environments ensured the richness of research data which supports the study aims.

Some *future research avenues,* in addition to the ones suggested earlier in this paragraph includes especially the empirical testing of the contributed research framework and the same interview questions could be repeated in other cultures. The framework could for example be tested in different cultural environments, for example in the USA or Sweden. The same interview questions could be repeated in other cultures. The tour operator of this research perceived especially the English speaking world and Sweden to be ahead of Finland and the Alpine countries in environmental sustainability issues. Therefore, the role of the government would be interesting to study in these different cultures. In addition, the framework could be

tested in other service fields. Financial services, for example, are normally considered as less resource dependant than some other services. However, also they are produced by human action, which might include for example air travel; consequently their environmental sustainability is not self-evident.

It would also to be interesting to study more profoundly the roles of the different players, like government and consumers. Of course also more respondents could be interviewed. Especially it would be interesting to research the issue from consumer's point of view and check if the conceptions of the service providers and previous literature were accurate. In consumer research, longitudinal behavior study would be important to carry out because, as noted in this study, intentions do not always lead into actual behaviors.

Also performing quantitative study about ski centre service provider's environmental orientation would be one possibility. It could be studied how the implementation of an environmental program contributes to resource savings. It was also found in this study, that cost calculation methods for incorporating environmental costs and financial values are missing. Thus, there is a research potential to study, how the environmental costs and contamination could be measured quantitatively. It would be interesting to see the environmental contamination affects of different service process, participant selection and transportation mode choices in a numerical form.

REFERENCES

Balderjahn, Ingo 1988. Personality Variables and Environmental Attitudes as Predictors of Ecologically Responsible Consumption Patterns. *Journal of Business Research*, 17, 51-56 (1988)

Batta, Ravinder N. 2006. Evaluating Ecotourism in Mountain Areas: A Study of Three Himalayan Destinations. *International Review for Environmental Strategies,* 6 (1), 41-61.

Becken, Susanne 2004. How Tourists and Tourism Experts Perceive Climate Change and Carbon-offsetting Schemes. *Journal of Sustainable Tourism,* 12 (4), 332–345.

Becken, Susanne 2007. Tourists' Perception of International Air Travel's Impact on the Global Climate and Potential Climate Change Policies. *Journal of Sustainable Tourism*, 15 (4), 351-368.

Bitschnau, Manuel 2009. CEO, Tourism Office Schruns-Tschagguns. Schruns-Tschagguns, Austria. 23.3.2009

Bramwell, Bill & Alletorp, Lone 2001. Attitudes in the Danish Tourism Industry to the Roles of Business and Government in Sustainable Tourism. *International Journal of Tourism Research*, 3, 91-103.

Bridges, Claudia M. & Wilhelm, Wendy Bryce 2008. Going Beyond Green: The "Why and how" of Integrating Sustainability into the Marketing Curriculum. *Journal of Marketing Education*, 30 (1), 33-46.

Bryman, Alan & Bell, Emma 2003. *Business Research Methods*. Oxford University Press Inc., New York.

Center for a World in Balance 2009. *Our Common Future: Report of the World Commission on Environment and Development, 20 March 1987.* http://www.worldinbalance.net/agreements/1987-brundtland.php, 15.5.2009.

Chan, Ricky Y. K. & Wong, Y. H. & Leung, T. K. P. 2008. Applying Ethical Concepts to the Study of ''Green'' Consumer Behavior: An Analysis of Chinese Consumers Intentions to Bring their Own Shopping Bags. *Journal of Business Ethics*, 79, 469–481.

Chitra, K. 2007. In search of the green consumers: a perceptual study. *Journal of Services Research,* 7 (1), 173-191

CIPRA 2008. Alps and Tourism. http://alpsknowhow.cipra.org/background_topics/alps_and_tourism/alps_and_tourism_chapter_introduction.html. 28.8.2009.

Cosmescu, Ioan & Cosmescu, Denisa, 2007. The ecotourism- A strategic alternative for contemporary tourism. *Annals of the University of Petroşani, Economics, 7,* 65-72

Constantinides, E. 2006. The Marketing Mix Revisited: Towards the 21st Century Marketing. *Journal of Marketing Management*, 22, 407-438.

Davis, Joel J. 1991. A Blueprint for Green Marketing. *The Journal of Business Strategy.* (July/August), 14-17.

Délèze, Pierre-Yves 2009. Deputy Director, Verbier Tourism Office. Verbier, Switzerland. 24.4.2009.

Dolnicar, Sara & Geoffrey I. Crouch & Patrick Long 2008. Environment-Friendly Tourists: What do we really Know about them?. *Journal of Sustainable Tourism,* 16 (3), 197-210.

D'Souza, Clare & Mehdi Taghian & Rajiv Khosla 2007. Examination of Environmental Beliefs and its Impact on the Influence of Price, Quality and Demographic Characteristics with Respect to Green Purchase Intention. *Journal of Targeting, Measurement & Analysis for Marketing,* 15 (1), 69-78.

Eriksson, Päivi & Kovalainen, Anne 2008. *Qualitative Methods in Business Research*. Sage, London.

García-Rosell, José-Carlos & Moisander, Johanna 2008. Ethical Dimensions of Sustainable Marketing: A Consumer Policy Perspective. *European Advances in Consumer Research,* 8, 210-215.

George, Annette A. 2003. Managing Ski Resorts: Perceptions from the Field regarding the Sustainable Slopes Charter. *Managing Leisure,* 8 (01), 41-46.

George, Annette A. 2004. Managing ski resorts: the National Ski Areas Association (NSAA) of the United States' 2001 and 2002 Annual Progress Reports on the Environmental Charter and the reaction from conservation groups. *Managing leisure,* 9 (January), 59-67.

Gilmore, Audrey & Geoff Simmons 2007. Integrating Sustainable Tourism and Marketing Management: Can National Parks Provide the Framework for Strategic Change?. *Strategic Change,* 16, 191-200.

Goodstein, E. S. 2004. *Economics and the environment*. New York: John Wiley.

Grove, Stephen J. & Fisk, Raymond P. & Pickett, Gregory M. & Norman, Kangun 1996. Going Green in the Service Sector, Social responsibility issues, implications and implementation. *European Journal of Marketing,* 30 (5), 56-66.

Grundey, Dainora & Zaharia, Rodica Milena 2008. SUSTAINABLE INCENTIVES IN MARKETING AND STRATEGIC GREENING: THE CASES OF LITHUANIA AND ROMANIA. *Technological and economic development Baltic Journal on Sustainability*, 14 (2), 130–143

Gössling, Stefan & Peeters, Paul & Ceron, Jean-Paul, & Dubois, Ghislain & Pattersson, Trista & Richardson, Robert B. 2005. The eco-efficiency of tourism. *Ecological Economics,* 54 (4), 417–434.

Gössling, Stefan & Broderick, John & Upham, Paul & Ceron, Jean-Paul & Dubois, Ghislain &Peeters, Paul & Strasdas, Wolfgang 2007. Voluntary Carbon Offsetting Schemes for Aviation: Efficiency, Credibility and Sustainable Tourism. *Journal of sustainable tourism*, 15 (3), 223-248.

Gössling, Stefan & Peeters, Paul 2007. 'It does Not Harm the Environment!' An Analysis of Industry Discourses on Tourism, Air Travel and the Environment. *Journal of Sustainable Tourism,* 15 (4), 402-417.

Haanpää, Leena 2007. Consumers' green commitment: indication of a postmodern lifestyle? *International Journal of Consumer Studies,* 31, 478-486.

Halme, Pette 2009. Tour operator/ Mountain guide, Elämysmatkat. Verbier, Switzerland. 24.4.2009.

Holden, Andrew 2000. Winter Tourism and the Environment in Conflict: The Case of Cairngorm, Scotland. *International Journal of Tourism Research,* 2, 247-60.

Jokinen, Mikko 2001. Luontomatkailu Tunturi-Lapissa: näkökulmia tutkimustarpeisiin. In *Luonnon matkailu- ja virkistyskäyttö tutkimuskohteena,* (ed.) J. Järviluoma & J. Saarinen. Metsäntutkimuslaitoksen tiedonantoja 796. Saarijärvi: Gummerus Kirjapaino Oy. 137-151.

Järviluoma, Jari 2001. Luonnon merkitys matkailun vetovoimatekijänä: esimerkkeinä Levin, Pallaksen, Pyhän ja Luoston matkailukeskukset. In *Luonnon matkailu- ja virkistyskäyttö tutkimuskohteena,* (ed.) J. Järviluoma & J. Saarinen. Metsäntutkimuslaitoksen tiedonantoja 796. Saarijärvi: Gummerus Kirjapaino Oy. 51-76.

Kinnear, Thomas C. & Taylor, James R. & Ahmed, Sadrudin A. 1974. Ecologically Concerned Consumers: Who Are They? *Journal of Marketing.* 38 (April), 20-24.

Kotler, Philip & Armstrong, Gary 2004. *Principles of marketing; international edition 10th ed*.. New Jersey: Pearson Education, Inc.

Kumentola, Aila 2008. Project manager, University of Lapland. Phone interview. 22.12.2008.

Lapinliitto (2007). Lapland – Vitality For Life. An Abstract of Lapland Tourism Strategy 2007-2010. http://www.lapinliitto.fi/matkailu/abstract%20of%20Lapland%20Tourism%20Strategy%202007%20-%202010.pdf, 26.8.2009.

Lincoln, Y. S & Guba, E.G. 1985. Naturalistic Inquiry. Thousand Oaks, California: Sage.

Lynes, Jennifer K. & Dredge, Dianne 2006. Going Green: Motivations for Environmental Commitment in the Airline Industry. A Case Study of Scandinavian Airlines. *Journal of sustainable tourism,* 14 (02), 116-138.

Mandioni, Lara 2009. Head of public services, Andermatt Tourism Office. Andermatt, Switzerland. 20.4.2009.

Metsähallitus 2009. Sustainable Nature Tourism in Protected Areas. http://www.metsa.fi/sivustot/metsa/en/NaturalHeritage/ProtectedAreas/SustainableNatureTourism/Sivut/SustainableNatureTourisminProtectedAreas.aspx, 14.5.2009.

Moen, Jon & Peter Fredman 2007. Effects of Climate Change on Alpine Skiing in Sweden. *Journal of Sustainable Tourism,* 15 (7), 418-37.

NSAA 2005. Sustainable Slopes: The Environmental Charter for Ski Areas. http://www.nsaa.org/nsaa/environment/sustainable_slopes/Charter.pdf, 1.2.2009.

Paataja, Ari 2004. Kestävän luontomatkailun ainekset suojelualueilla. In *Luontomatkailupäivät2004- "Keitä me olemme ja minne olemme menossa?" "Kekä mää oon ja mihkä mää ny meinaam mennä?",* (ed.) Eira Railo & Anna-Liisa Toivonen, Kala- ja Riistaraportteja nro 332. Helsinki: Riista- ja kalatalouden tutkimuslaitos. 26-29.

Peaks to Prairies 2002. Greening Your Ski Area, A Pollution Prevention Handbook. http://peakstoprairies.org/p2bande/skigreen/TOC.cfm, 16.1.2009.

Peattie, K. 1992. *Green marketing.* London: Pitman Publishing.

Pforr, Christof 2001. Concepts of Sustainable Development, Sustainable Tourism, and Ecotourism: Definitions, Principles, and Linkages. *Scandinavian Journal of Hospitality and Tourism,* 1 (5), 68-71.

Peeters, Paul & Schouten, Frans 2006. Reducing the Ecological Footprint of Inbound Tourism and Transport to Amsterdam. *Journal of sustainable tourism*, 14 (2), 157- 171.

Polonsky, Michael J. & Rosenberger III, Philip J. 2001. Reevaluating Green Marketing: A Strategic Approach. *Business Horizons*, 44 (5), 21-30.

Schwartz, Karen & Tapper, Richard & Font, Xavier 2008. A Sustainable Supply Chain Management Framework for Tour Operators. *Journal of Sustainable Tourism,* 16 (5), 298-314.

Shostack, G. Lynn 1977. Breaking Free from Product Marketing. *Journal of Marketing,* 41 (April), 73-80.

The free dictionary 2009. Alps. http://www.thefreedictionary.com/Alps, 15.6.2009.

Toivonen, Jusu 2008. Environmental expert, Rukakeskus Oy / Pyhätunturi Oy. Phone interview. 23.12.2008.

Tuppen 2000. The Restructuring of Winter Sports Resorts in the French Alps: Problems, Processes and Policies. *International journal of tourism research*, 2, 327-344.

Töyrylä, Jussi 2008. Managing director, Levi Travel Ltd. Levi, Finland. 28.11.2008.

van der Zwan, Frank & Tracy Bhamra 2003. Services Marketing: Taking Up the Sustainable Development Challenge. *Journal of Services Marketing*, 17 (4), 341-356.

Walker, Rhett H. & Hanson, Dallas J. 1998. Green Marketing and Green Places: A Taxonomy for the Destination Marketer. *Journal of Marketing Management*, 14, 623-639.

Weiermair, Klaus & Peters, Mike & Frehse, Joerg 2008. Success Factors for Public Private Partnership: Cases in Alpine Tourism Development. *Journal of Services Research*, Special issue, (february), 7-21.

Wikipedia 2009. Alps. http://en.wikipedia.org/wiki/Alps, 15.6.2009.

WWF 2005. The Impact of Tourism in the European Alps. http://www.panda.org/about_wwf/where_we_work/europe/what_we_do/alps/area/problems/tourism/index.cfm, 1.2.2009.

WWF 2007. WWF Finlands Position on Logging in Finnish Central Lapland. http://www.wwf.fi/wwf/www/uploads/pdf/forestlapland_wwffinposition_feb2007.pdf, 13.12.2008.

Yin, R. 2002. *Case study research*. Thousand Oaks, CA: Sage

Zeithaml, Valarie A. & Bitner, Mary J. & Gremler, Dwayne, D. 2006. *Services Marketing, Integrating Customer Focus Across the Firm 4th ed.* New York: McGraw-Hill/Irwin, a business unit of The McGraw-Hill Companies, Inc.

Zeithaml, Valarie A. & Parasuraman, A., Berry & Leonard L. 1985. Problems and Strategies in Services Marketing, *Journal of Marketing*, 49, 33-46.

Appendix 1 The implementation process of SSCM framework as deliverable outcomes for monitoring

Supply chain management framework	*Small tour operators*	*Large and medium tour operators*	
	Implementation	*Initial implementation*	*Full implementation*
Step 1. Engage your business	Appointment of a sustainable tourism representative, create goals, promote dialogue on the issues	Appointment of a sustainable tourism representative and management team, create goals, communicate business benefits to employees, directors and shareholders	Training for the sustainable tourism management team, with this cascaded down
Step 2. Create a policy for SSCM	Written SSCM policy document	Written SSCM policy document	Refined SSCM policy document
Step 3. Integrate your SSCM policy into your business	Identification of how SSCM procedures can be integrated into job roles	Review of job/role specifications, role profiles and working procedures	Investment in a sustainability management system
Step 4. Conduct a baseline assessment of suppliers	Evidence of use of assessment system (including informal systems) for suppliers	Use of formal assessment system (checklists, etc.) for some suppliers/in selected pilot destinations	Use of formal assessment system (checklists, etc.) for all suppliers
Step 5. Prepare and implement an action plan	Evidence of actions to implement the company's SSCM policy (including relevant internal management, staff training and customer communications)	Written action plan with clearly identified priorities for implementation of the company's SSCM policy (including relevant internal management, staff training and customer communications)	Refined action plan with clearly identified priorities for implementation of the company's SSCM policy (including relevant internal management, staff training and customer communications)
Step 6. Monitor and report on progress made	Evidence of monitoring of progress (including use of informal systems and feedback from tour leaders, etc.)	Use of formal monitoring system (checklists, etc.) for some suppliers/in selected pilot destinations	Use of formal monitoring and reporting system (checklists, etc.) for all suppliers, combined with some independent review

Source: Schwartz et al. 2008, 305

Appendix 2 Summary of environmental impacts generated by the airlines

Environmental issue	*Summary of impact*	*Factors affecting management*
Air emissions Air Transport accounts for 3% of global CO_2 emissions and 12% of transportation CO_2 emissions	• Carbon dioxide CO_2 • Carbon monoxide • Hydrocarbons (HC) • Oxides of nitrogen (NO_x) • Oxides of sulphur (SO_x) • Condensation trails (contrails)	• Airline's choice of aircraft • International standards developed by ICAO • Individual countries can impose emissions-related charges and taxes • Emissions of international flights do not fall under the present Kyoto Protocol
Noise emissions Exacerbated by increasing residential development near airports and under flight paths	• Most prominent during landing/take off cycle (LTO) • Affects local residents and wildlife	• Airline's choice of aircraft • Standards developed by ICAO (starting in the 1960s) • Landing charges for noise emissions at some airports
Congestion Up to 10% of aircraft fuel use could be reduced through more efficient air traffic management	• Increased fuel use (and thus emissions) caused by circling busy airports and longer taxiing on the ground	• Regional/National governments and their NGOs develop more effective air traffic management systems • Partly caused by national air space rules that sometimes prevent aircraft from flying the most direct route
Waste Solid and hazardous wastes	• Solid waste from inflight service and aircraft grooming • Waste generated from airline administration offices • Hazardous waste from aircraft maintenance (e.g. petroleum products, etc.) and de-icing of aircraft (glycol)	• Local rules developed by each municipality or airport authority for waste disposal/treatment of tarmac run-off

Source: Lynes and Dredge 2006, 125.

Appendix 3 NSAA's sustainable slopes charter and environmental principles

1. PLANNING, DESIGN AND CONSTRUCTION

Principles

- Engage local communities, environmental groups, government agencies and other stakeholders in up front and continuing dialogue on development plans and their implementation
- Assess environmental concerns and potential restoration opportunities at local and regional levels
- Plan, site and design trails, on-mountain facilities and base area developments in a manner that respects the natural setting and avoids, to the extent practical, outstanding natural resources
- Emphasize nature in the built environment of the ski area
- Make water efficiency, energy efficiency and clean energy use and materials efficiency priorities in the design of new facilities and upgrades to existing facilities
- Use high-density development or clustering to reduce sprawl, provide a sense of place, reduce the need for cars and enhance the pedestrian environment
- Meet or exceed requirements to minimize impacts associated with ski area construction

2. OPERATIONS

WATER RESOURCES

WATER USE FOR SNOWMAKING

- Optimize efficiency and effectiveness of water use in snowmaking operations
- Conduct snowmaking operations in a manner that protects minimum stream flows and is sensitive to fish and wildlife resources

WATER USE IN FACILITIES
Principle

- Conserve water and optimize efficiency of water use in ski area facilities

WATER USE FOR LANDSCAPING AND SUMMER ACTIVITIES
Principle

- Maximize efficiency in water use for landscaping and summer activities

WATER QUALITY MANAGEMENT
Principle

- Strive to exceed water quality-related requirements governing ski area operations

WASTEWATER MANAGEMENT
Principle

- Manage wastewater in a responsible manner

3. ENERGY CONSERVATION AND CLEAN ENERGY

ENERGY USE FOR FACILITIES
Principles

- Reduce overall energy use in ski area facilities
- Use cleaner or renewable energy in ski area facilities
- Strive to exceed energy standards in new or retrofit projects

ENERGY USE FOR SNOWMAKING
Principles

- Reduce energy use in snowmaking operations
- Use cleaner energy in snowmaking operations

ENERGY USE FOR LIFTS
Principles

- Reduce energy use in lift operations
- Use cleaner energy in lift operations

ENERGY USE FOR VEHICLE FLEETS
Principles

- Reduce fuel use in ski area vehicles
- Use cleaner fuel

4. WASTE MANAGEMENT

WASTE REDUCTION
Principle

- Reduce waste produced at all ski area facilities

PRODUCT REUSE
Principle

- Reuse products and materials

RECYCLING
Principle

- Increase the amount of materials recycled at ski areas

POTENTIALLY HAZARDOUS WASTES
Principle

- Minimize the use of potentially hazardous materials, the generation of potentially hazardous wastes and the risk of them entering the environment

5. FISH AND WILDLIFE

Principle

- Minimize impacts to fish and wildlife and their habitat and maintain or improve habitat where possible

6. FOREST AND VEGETATIVE MANAGEMENT

Principle

- Manage effects on forests and vegetation to allow for healthy forests and other mountain environments

7. WETLANDS & RIPARIAN AREAS

Principle

- Avoid or minimize impacts to wetlands and riparian areas, and offset unavoidable impacts with restoration, creation or other mitigation techniques

8. AIR QUALITY

Principles

- Minimize negative impacts to air quality
- Reduce operations-related air pollution and greenhouse gas emissions as feasible

9. VISUAL QUALITY

Principles

- Create built environments that complement the natural surroundings
- Explore partnerships with land conservation organizations and other stakeholders that can help protect open lands and local viewsheds

10. TRANSPORTATION

Principle

- Ease congestion and transportation concerns

11. EDUCATION AND OUTREACH

Principles

- Use the natural surroundings as a forum for promoting environmental education and increasing environmental sensitivity and awareness
- Develop outreach that enhances the relationship between the ski area and stakeholders to ultimately benefit the environment

Source: NSAA 2005 (adapted)

Appendix 4 Interview outline

Profile

- What do you do for living?
- What are your study and professional history like and how did you end up into this position?

Attitudes

- How do you feel personally about environmental values?
- How can they be seen in your work?/ How can you implement them into your work?

Environmental strategy

- How are the environmental issues taken into account in operation's planning?

Practices

- Could you give some examples about your environmentally sustainable practices?
- Could there be something to improve?

Special features

- Are there some special features to be considered related to environmental issues in_____? (some advantages/disadvantages)

Marketing

- Do you use some environmental arguments in marketing/to promote the ski centre?
- Is there something special while communicating international consumers?

People

- Are the employees trained about environmental practices?
- How do you think customers feel about environmental issues?
- Are customers guided about environmental sustainable practices?

Price

- How do you feel about customers' willingness to pay extra for greener services?

Physical evidence:

- How is environmental sustainability taken into account in physical evidence?

Processes

- How is the energy and water use optimized? (green energy use? lifts, snowmaking?)

Traffic:

- How is the traffic tried to minimized?
- How are people encouraged to use public transportation? (skibus, trains, flights?)

Cooperation:

- What kind of cooperation is there with other entrepreneurs? (Shared purchases, green practices?)
- What is the role of a county/ village/ government about environmental issues?

Something else?

Appendix 5 The Sustainable Slopes Environmental Charter; The Alps & Lapland

Key issues & principles	Example implementations found in empirical research
1. Planning, design & construction - Plan, site and design trails, on-mountain facilities and base area developments in a manner that respects the natural setting and avoids, to the extent practical, outstanding natural resources	• Green building principles (Pyhä & Ruka) • Home in home out-system in some holiday homes (Ruka) • Ski-in-ski-out apartments (Pyhä & Ruka, Levi, some also in Alpine resorts) • TuottoOmistus-concept to enhance capacity use and to reduce building (Pyhä & Ruka) • On-mountain facilities and base area developments build in a manner that respects the natural environment (Molines; due to location in a natural park)
2. Operations; water resources - Optimize efficiency and effectiveness of water use in snowmaking operations	• Modern snowmaking equipment (Ruka & Pyhä, Levi, Molines) • Educating employees (Pyhä & Ruka) • Water usage restricted according to the resources available (Andermatt) • Snow fences to capture natural snow (Levi) • Sonar underneath the grooming machine measuring snow depth (Verbier)
3. Energy conservation and clean energy - Use cleaner or renewable energy in ski area facilities - Reduce energy use in lift operation	• Green electricity (Molines and Pyhä & Ruka; buying, Andermatt; hydro 99% & wind 1 %, Schruns-Tschagguns and Verbier; hydro • Ruka 90% working from green energy; including both electricity and heating • Solar power (Disentis; solar panels on slopes, Austria; solar panels subsidized • Public pools heated with solar power (Schruns-Tschagguns) • Producing energy with drinking water coming from the mountains (Verbier) • District heating plant (Ruka, Levi, Schruns-Tschagguns; public buildings heated with locally harvested wood) • Geothermal houses/testing (Verbier, Andermatt, Levi) • Modern equipment with high efficiency motors (Pyhä & Ruka and Levi; lights, snowmaking and lifts, Molines; snowmaking) • Educating employees: (Pyhä & Ruka) • Buying policies for the best energy category appliances (Ruka &Pyhä) • Snow fences to capture natural snow (Levi) • Sonar underneath the grooming machine measuring snow depth (Verbier) • Home in home out-function in holiday homes (Ruka)
4. Waste management - Reduce waste produced at facilities, Reuse products and materials and Purchase recycled products - Increase the amount of materials recycled at ski areas	• Recycling (Everywhere; some materials) • Illegal not to recycle, fines -> waste expensive (Austria) • recycling and reusing world cup banderols (Levi) • Working on to increase the amount of materials recycled (Pyhä & Ruka) • Tax for non recycled waste (Andermatt)
5. Fish and wildlife - Minimize impacts to fish and wildlife and their habitat and maintain or improve habitat where possible	• Access limited to some areas inside the ski area (Andermatt, Schruns-Tschagguns) • Building restrictions due to the natural park (Molines) - Fish was not mentioned anywhere
6. Forest and vegetation management - Reduce or eliminate snow cat and snowmobile access to sensitive areas with limited snow coverage	• Re-cultivating the slopes in spring (Schruns-Tschagguns) • Growing peat on the slopes (Levi) - Motor sledges in Lapland and motor bikes in Verbier

7. Wetland & riparian areas - Avoid or minimize impacts to wetlands and riparian areas, and offset unavoidable impacts with restoration, creation or other mitigation techniques	• Engage in restoration, remediation and protection projects (Molines; compulsory due to natural park)
8. Air quality - Reduce operations-related air pollution and greenhouse gas emissions as feasible	• Biodiesel in grooming machines (Verbier)
9. Visual quality - Create built environments that complement the natural surroundings - Design lifts and buildings to blend into the natural backdrop	• Lifts and buildings blend into the natural backdrop: Molines, Kappl (Levi, *Andermatt*, Verbier) • Peat on slopes so that grass grows during summer: Levi • Using snow in visual design: Levi • green office practices: Andermatt, Verbier - In Vorarlberg lots of lifts all over the mountains
10. Transportation - Ease congestion and transportation concerns - Provide and promote ski area guest transportation through shuttles or buses	• Train promoted: Schruns-Tschagguns, Andermatt • Lobbying the train connections (Verbier, Pyhä & Ruka, Levi) • Ski bus (Ruka, Levi, Verbier; free for everyone, Schruns-Tschagguns, Molines) • Electronic vehicles under consideration (Halme) • Integrated shipments (Pyhä & Ruka) • Pedestrian village (Ruka, Pyhä; under construction) • Online meetings for reducing travelling (Pyhä & Ruka) • Encouraging employees to use gondola for commutation (Verbier) • Parts of the village prohibited from cars (Schruns-Tschagguns and Pyhä & Ruka, Andermatt & Verbier; under consideration) • Ski-in-ski-out apartments (Pyhä & Ruka, Levi, commonly some Alpine villages) • Buying local products (Schruns-Tschagguns) • Building more hotels etc. to reduce one- day tourism (Schruns-Tschagguns) • Congress centre reachable by gondola (Levi)
11. Education and outreach - Use the natural surroundings as a forum for promoting environmental education and increasing environmental sensitivity and awareness - Train employees and inform guests of all ages about the surrounding environment	• recycling ads in lifts (Andermatt) • Garbage collection points on resort map (Verbier) • Fact sheets in accommodation for customer informing and environmental section on website *for promoting environmental education*: Pyhä & Ruka • Information on Ski Club Great Britain green resort guide (Pyhä & Ruka, Levi, Verbier, Schruns- Montafon) • Employee training: Pyhä & Ruka , *Levi in progress*