

Segmenting Protected Area Visitors Based on Their Motivations



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Cover picture: From left to right: Nature-oriented relaxation seeker in the Koli National Park, exercising nature explorer in the Linnansaari National Park, social self-developers in the Oulanka National Park and nostalgia appreciative seekers of mental well-being on Otsamo fell, Inari.
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ABSTRACT	<p>National parks and other protected areas are popular destinations for people who want to take part in the activities of nature-based leisure, travel and ecotourism. It is essential to understand the nature of park visitors in order to be able to: minimize the impact of increasing visitation to protected areas on park resources; develop effective education programs and public relations; have effective risk management in the protected areas; and create an efficient marketing strategy for the areas. The general aim is to provide a good quality travel experience for visitors in a way that does not harm the natural resources that attract the visitors to the areas in first place.</p> <p>The main aim of the study is to segment Finnish protected area visitors based on leisure motivation factors so that the services and marketing communications of the protected areas can be better targeted to diverse customer groups. Hence, the main research question is: What kinds of motivation-based visitor segments are there in Finnish protected and recreational areas?</p> <p>The data were collected in Finnish national parks and protected areas administrated by Metsähallitus using standardized methods and a standard questionnaire. The target group was national and international visitors to the state-owned Finnish protected and recreational areas. In protected areas, the questionnaire was given to respondents who filled it out themselves. In total, 34,868 responses were collected during the years 2000–2010. This data include material from 91 different visitor surveys and from 74 different nature areas. Customer segments were formed by using cluster and discriminant analyses.</p> <p>Four motivation-based segments that differed significantly from each other were identified: <i>Social self-developers</i>; <i>Exercising nature explorers</i>; <i>Nostalgia appreciative seekers of mental well-being</i>; and <i>Nature-oriented relaxation seekers</i>. The motivation factors that had the most discriminating power between all segments were pleasant old memories, experiencing excitement and meeting new people.</p> <p>Statistically significant differences were identified between the segments concerning diverse areas. Members of the segment <i>Nostalgia appreciative seekers of mental well-being</i> visited the most national parks compared to other segments, while <i>Nature-oriented relaxation seekers</i> and <i>Exercising nature explorers</i> are the biggest groups who visit nature reserves. <i>Social self-developers</i> visited the most hiking and other areas such as wilderness areas and cultural places. There were also significant alterations in shares of segments during the period 2000–2010. Discussions on the implications of the results for practice, future research and challenges faced conclude the study.</p>		
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TIIVISTELMÄ	<p>Kansallispuistot ja muut suojelu- ja virkistysalueet ovat suosittuja luontomatkoilukohteita. Kävijöiden ja käytön luonteen ymmärtäminen on tärkeää, jotta kasvavien kävijävirtojen kielteisiä vaikutuksia voidaan minimoida ja niiden tuomia riskejä hallita. Lisäksi kävijöiden tunteminen helpottaa oikeiden viestintäkanavien löytämistä ja tehokkaiden markkinointistrategioiden luomista. Tavoitteena on tarjota kävijöille laadukas elämys vaarantamatta luontoa, alueen olennaista vetovoimatekijää.</p> <p>Tutkimuksen päätavoite on segmentoida valtion suojelu- ja virkistysalueiden kävijät motiivien perusteella, niin että alueiden palvelut ja markkinointiviestintä voidaan kohdentaa paremmin erilaisille asiakasryhmille. Tavoitteena on tuoda esille, millaisia kävijöiden motiiveihin perustuvia kävijäsegmenttejä on valtion hallinnoimilla suojelu- ja virkistysalueilla.</p> <p>Aineisto on kerätty Suomen kansallispuistoista ja muilta Metsähallituksen luontopalvelujen hallinnoimilta suojelu- ja virkistysalueilta käyttäen vakioitua kyselylomaketta. Kohderyhmänä ovat valtion omistamien suojelu- ja virkistysalueiden kävijät, mukaan lukien ulkomaiset kävijät. Aineisto on kerätty maastossa käyttäen ohjattua kyselyä, jossa aineiston kerääjä on paikalla, mutta vastaajat täyttävät lomakkeen pääsääntöisesti itsenäisesti. Aineisto koostuu yhteensä 34 868 vastauksesta, jotka on kerätty vuosina 2000–2010. Aineisto koostuu 91 kävijätutkimuksesta 74 eri alueelta. Kävijäsegmentit muodostettiin käyttäen klusteri- ja diskriminanttianalyysejä.</p> <p>Aineistosta tunnistettiin yhteensä neljä motiivipohjaista segmenttiä, jotka erosivat merkittävästi toisistaan: <i>sosiaaliset itsensäkehittäjät</i>, <i>kuntoilevat luontoseikkailijat</i>, <i>henkistä hyvinvointia hakevat nostalgikot</i> ja <i>luontosuuntautuneet rentoutujat</i>. Parhaiten erottelevia motiiveja olivat aiemmat muistot, jännityksen kokeminen ja tutustuminen uusiin ihmisiin.</p> <p>Segmenttien välillä oli tilastollisesti merkitseviä eroja aluetyypeittäin. <i>Henkistä hyvinvointia hakevat nostalgikot</i> vierailivat muita segmenttejä enemmän kansallispuistoissa, kun taas <i>luontosuuntautuneet rentoutujat</i> ja <i>kuntoilevat luontoseikkailijat</i> ovat suurimpia ryhmiä muilla luonnonsuojelualueilla. <i>Sosiaaliset itsensäkehittäjät</i> vierailivat muita segmenttejä enemmän valtion retkeilyalueilla ja muilla alueilla (esim. erämaa-alueet, kulttuurikohteet). Segmenttien osuudet olivat myös muuttuneet merkittävästi vuodesta 2000 vuoteen 2010. Lopuksi pohditaan tutkimuksen merkitystä käytännölle sekä jatkotutkimustarpeita ja -haasteita.</p>		
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SAMMANDRAG	<p>Nationalparkerna och de övriga skyddsområdena är populära naturturism- och utflyktsmål. Det är viktigt att man har en klar bild av besökarna och besökens natur, för att man ska kunna dels minimera de negativa verkningarna av de allt större besökarmängderna, dels hantera de risker dessa medför. Därtill är det bra att ha kännedom om besökarna för att man ska hitta de rätta kommunikationskanalerna och kunna skapa effektiva marknadsföringsstrategier. Målet är att erbjuda besökarna högklassiga upplevelser utan att äventyra naturen, dvs. områdets huvudsakliga attraktionsfaktor.</p> <p>Huvudsakliga målet för undersökningen var att indela besökarna på statens skydds- och rekreationsområden i segment utgående från deras motiv, så att man bättre kunde inrikta tjänsterna och marknadskommunikationen på olika slags kundgrupper. Syftet var att klarlägga hurdana besökarsegment de skydds- och rekreationsområden som förvaltas av staten uppvisar. Indelningen i segment gjordes utifrån besökarnas motiv.</p> <p>Materialet insamlades med hjälp av standardiserade frågeformulär i finländska nationalparker och andra skydds- och rekreationsområden som förvaltas av Forststyrelsen. Målgruppen var inhemska och utländska besökare på statens skydds- och rekreationsområden. Materialet insamlades huvudsakligen i terrängen genom handledd enkätundersökning, så att den person som samlade in materialet var på plats men besökarna i regel själva fyllde i formuläret. Materialet bestod av sammanlagt 34 868 svar, som insamlats åren 2000–2010. Materialet kom från 91 besökarundersökningar på 74 olika områden. Besökarsegmenten togs fram med kluster- och diskriminantanalyser.</p> <p>I materialet kunde man urskilja utgående från motiven fyra segment, som skilde sig signifikant från varandra, nämligen <i>sociala personer intresserade av självutveckling</i>, <i>motionerande naturäventyrare</i>, <i>nostalgiker som söker andlig välmåga</i> och <i>naturentusiaster som söker avkoppling</i>. De klarast åtskiljande faktorerna bland motiven var att uppleva gamla minnen, att uppleva spänning och att bekanta sig med nya människor.</p> <p>Det förekom statistiskt signifikanta skillnader mellan olika typer av områden. <i>Nostalgiker som söker andlig välmåga</i> besökte i högre grad än de andra segmenten nationalparkerna, medan <i>naturentusiaster som söker avkoppling</i> och <i>motionerande naturäventyrare</i> utgjorde de största grupperna på de övriga skyddsområdena. <i>Sociala personer intresserade av självutveckling</i> besökte för sin del flitigare än de andra segmenten statens strövområden och andra områden (t.ex. ödemarksområden, kulturobjekt). Fördelningen av segmenten mellan olika områden hade också ändrats signifikant från år 2000 till år 2010. I slutet av rapporten begrundas undersökningens betydelse i praktiken samt behovet av och nya utmaningar i ytterligare undersökningar.</p>		
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1 Introduction

1.1 Background and aim of the research

Many studies on tourism show that it is the fastest growing industry (e.g. Bansal & Eiselt 2004); moreover, it has been stated that nature-based tourism is growing even faster than the tourism industry in general (Hall & Boyd 2005; Mehmetoglu 2005; Weaver 2002). According to Cohen (2008), the demand for nature experiences is apparent globally. The image of Scandinavia or the Nordic countries as a tourism destination is based mainly on pure nature and nature activities. Nature and the environment and the meanings attached to them are the focus when marketing the area. Nature experiences are seen to be a primary travel motive among foreign visitors who visit the Nordic region (Gössling & Hultman 2006). For instance, the Finnish Tourist Board (2009) has estimated that one third of all foreign tourists take part in nature activities.

National parks and protected areas are popular destinations for people who want to

take part in nature-based leisure, travel and ecotourism activities (Newsome et al. 2002). It is essential to understand the nature of park visitors to be able to minimize the impact of increasing visitation of protected areas on park resources; to be able to develop effective education programs and public relations; to have effective risk management in the protected areas; and to create an efficient marketing strategy for the areas (Galloway 2002). The general aim is to provide a good quality travel experience for the visitors in the destinations in a way that does not harm the natural resources that attract the visitors to the areas in first place (Backman et al. 1999; Mehmetoglu 2007, p. 200).

It is important to know about the changes in consumer behavior, such as the needs and motivations of visitors, when promoting and marketing a place or destination. In several tourism studies, motivations are recognized as a starting point in order to understand tourist behaviors (Crompton 1979; Hudson 1999). Motivations have also been seen as a tool for



National parks and other protected areas are popular tourism destinations. Leivonmäki National Park. Photo: Mikael Hintze / Metsähallitus.

market segmentation in tourism. According to Backman et al. (1995), motivations are associated with individual basic needs for participating in different activities, for example. Hence, tourist motivations are important in explaining why tourists travel. It is also noted by Bowen and Clarke (2009) that motivations play a critical role when the aim is to understand the vacation decision-making process. They continue that motivations also play a central role when the satisfaction of an experience is assessed, tourism attractions are designed or planned, and when tourism experiences are marketed. In addition to tourism, studying motivations is also useful in the context of leisure and recreational services.

Detailed information on visitors (customers) and customer segments helps to develop well-targeted products and services that meet the customers' needs – in this case the needs and interests of national park and other protected area visitors. In-depth customer information helps entrepreneurs and other service providers target their marketing activities to customers who are financially profitable to the supplier and/or whose needs the service providers can meet by using their own resources or those of its cooperation network. In order to develop customer oriented products and services, service providers need to recognize the customers whose needs they can fulfill. Customer segmentation helps to recognize suitable customer groups as it divides customers (here visitors/tourists) into homogenous groups which differ from each other based on some given factor. In this study, national park and protected area visitors are segmented based on their recreational/travel motivations.

Metsähallitus is a state enterprise that administers over 12 million hectares of state-owned land and water areas in Finland (Metsähallitus 2009a). One of the public administration duties of Metsähallitus is to provide services related to recreation and nature tourism (Metsähallitus 2009b). The Natural Heritage Service of Metsähallitus is managing all Finnish national parks, national hiking areas, as well as most of the other state-owned protected areas. The empirical data for this study have been collected in protected areas managed by Metsähallitus, Natural Heritage Services during the years 2000–2010. The data were collected by a visitor survey

questionnaire developed by Metsähallitus and the Finnish Forest Research Institute. This segmentation study was carried out in close cooperation between the University of Eastern Finland's Centre for Tourism Studies and Metsähallitus, Natural Heritage Services. Researcher Henna Konu has written the theoretical part of this study as well as conducted all the data analyses and reporting. Liisa Kajala's role has been that of providing and explaining the raw data.

The main aim of the study is to segment and profile protected area visitors based on leisure motivation factors, so that services and marketing communications of the protected areas can be targeted better to diverse customer groups. Hence, the main research question is: *What kind of motivation based visitor segments are there in Finnish protected and recreational areas?*

In addition, the profiles of the segments and possible differences between the segments are examined. First, the demographic profile, travelling habits, needs and interests in different activities, areas visited as well as satisfaction are determined; second, potential differences between the segments are distinguished. The target group is domestic and international visitors to the state-owned Finnish protected and recreational areas.

The research is divided into theoretical and empirical parts. In the theoretical part, customer segmentation, psychographic segmentation and tourist segmentation are first discussed, after which nature-based tourism and leisure motivations are presented. In the empirical part, the research methods and data are introduced, after which national park and protected area visitors are segmented and the profiles of each segment described. Discussions on the implications of the results for practice, future research and challenges faced conclude the study.

1.2 Central concepts and framework of the research

Tourist behavior is closely connected to tourism marketing activities as it affects the wellbeing of tourism companies and can create different socio-cultural and environmental impacts (Pearce 2005). Tourist behavior is often identified as consumer behavior but with some additional elements, one of which is the extended phases

that follow tourist activities (Pearce 2005). Tourists will have different experiences and consume various services during their holidays. According to Fridgen (1984), diverse experiences can be categorized in a way that matches with the physical stages of travel. These categories are travel decision making and anticipation; travel to a tourism destination or attraction; the on-site or at destination experience; return travel; recollection of the experience; and influence on future decision making (see also Clawson & Knetsch 1966).

The similarities in consumer behavior in leisure and tourism contexts can also be easily identified. Leisure organizations are usually service providers who also produce products and services. These products and services, as well as infrastructure used in leisure activities, are also used by tourists in many places (e.g. hiking trails, events). Like a tourism product, a leisure product is in many cases intangible. Horner and Swarbrooke (2005) have listed characteristics of a leisure experience (Table 1). Many of the characteristics are also applicable to tourism.

Horner and Swarbrooke (2005) have developed a model of consumer behavior in the leisure sector. The model suggests that motivators and determinants have an influence on all aspects of the purchase decision-making process. Thus, the motivations can affect places/areas visited and activities participated. This is also supported in the tourism context by Pearce (2005) who suggests that tourists' internal input comprising a social psychological set of factors (personal characteristics and motives) affect the desired activities that tourists want to do in a destination. It

can thus be concluded that motivations play a central role in leisure and tourism behavior.

The focus of this paper is to make a study of those people who visit Finnish protected areas – there was no segregation between tourists or local visitors. In the setting, both tourists and local visitors use the same services and infrastructure in the areas. It was important, therefore, to use attributes and a scale that fit both tourists and other recreational visitors. Motivation factors were chosen as the starting point to profile the visitors, since motivations are seen as the starting point of tourism and leisure activities, and they also affect activities taken during leisure time or holidays (see e.g. Pearce 2005).

In this study, the central concepts used are defined as follows. *Visitor* is a person who visits an (natural) area or destination and whose primary purpose is recreation (e.g. hiking, biking or mushroom picking). The visitor can come from areas nearby the destination, further away in the same country, or from abroad. In some contexts, a visitor can also be called a user, guest, customer or tourist (adapted from Kajala et al. 2007, p. 34; see also Hornback & Eagles 1999; Erkkonen & Sievänen 2001; Lindhagen & Ahlström 2005; Naturvårdsverket 2005).

Motivation is described as a state of need that makes individuals take particular actions or activities to satisfy their needs (Moutinho 1987; Schiffman & Kanuk 1978; Park & Yoon 2009, p. 2). In consumer behavior research and studies, motivation is seen as a dynamic process in customer/buyer behavior as it bridges the gap between the customer's felt need and the decision to act or make a purchase (Middleton & Clarke

Table 1. Characteristics of a leisure experience (adapted from Horner & Swarbrooke 2005, p. 35).

The leisure consumer
Leisure products and services are often inherently linked to lifestyle
Leisure products and services are often available through complex distribution networks
The price of leisure offering does not always reflect the cost because of subsidies and because some elements (such as beaches) on holiday are free
External influences have a fundamental effect on the leisure consumer
The leisure customers are not always the consumer
The leisure consumer has high expectations of leisure offering
Leisure purchases often involve a mix of other components
Leisure purchases often involve services
Leisure purchases are often infrequent and high spend

2001). Tourist motivations are characteristics of people influencing their choice, such as destination or activity choice (e.g. Park & Yoon 2009).

Customer segmentation is used when it is required to divide customer markets into homogenous customer groups based on some exact criterion or criteria (Cahill 2006, p. 3; Pelsmacker et al. 2001, p. 95). The customer/market segment is a homogenous group of customers formed based on some particular factors or criteria. Customers in a segment share a similar level of interest or set of needs, for example (McDonald & Dunbar 2004, p. 242).

Natural area tourism is tourism that happens in natural settings (Newsome et al. 2002). Newsome et al. (2002) state that tourism in natural areas includes adventure tourism, nature-based tourism, wildlife tourism and ecotourism. Some other researchers use **nature-based tourism** as an umbrella concept. For instance, Hall and Boyd (2005, p. 3) define nature-based tourism as follows: “Nature-based tourism includes tourism in natural settings (e.g. adventure tourism), tourism that focuses on specific elements of the natural environment (e.g. safari and wildlife tourism, nature tourism, marine tourism), and tourism that is developed in order to conserve or protect natural areas (e.g. ecotourism, national parks)”.

Black and Crabtree (2007, p. 4) define nature tourism to be “...any form of tourism that relies primarily on natural environments for its attractions and/or settings”. Ecotourism is generally seen as a subset of nature tourism (Weaver 2001). Recently, ecotourism has been conceptualized as being environmentally and socially benign while contributing to both local economies and the conservation of protected areas. At the same time, travelers are educated about local nature and culture (Gössling & Hultman 2006; see also Fennel 2003). Black and Crabtree (2007, p. 6) agree with this definition; they define ecotourism as follows after examining several ecotourism definitions: “Ecotourism:

- Has a natural area focus.
- Is environmentally sustainable.
- Has some component of interpretation or education.
- Provides returns to the environment.
- Provides returns to local communities.
- Is culturally sensitive”.

In this study, the broader concept of nature-based tourism is used. The natural area tourism and nature-based tourism are seen as synonyms and as an umbrella concept; different and more specified tourism forms using natural resources are seen as sub-concepts (Figure 1).

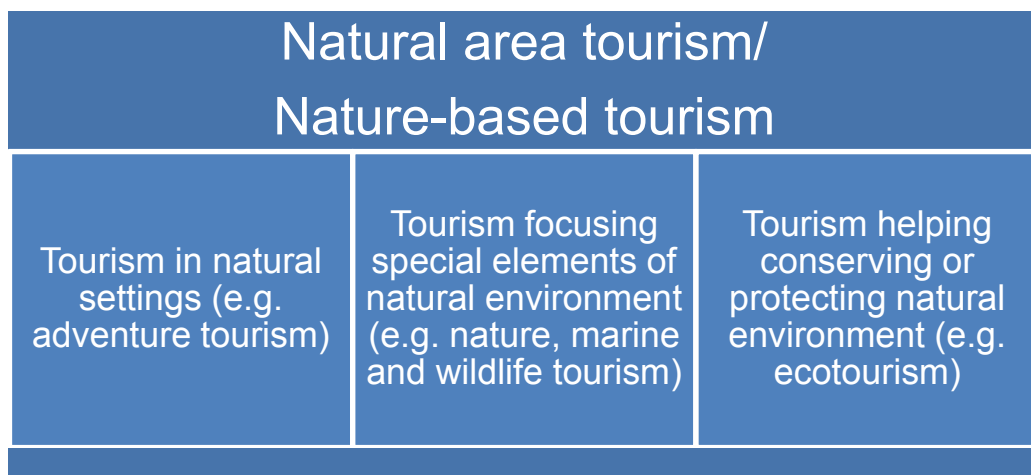


Figure 1. Concepts related to natural area/nature-based tourism (adapted from Newsome et al. 2002 and Hall & Boyd 2005).

2 Segmentation based on motivations

2.1 Market segmentation

2.1.1 Basics of market segmentation

In market segmentation, the aim is to divide consumers into homogeneous groups. For instance, Wedel and Kamakura (2002, p. 181) define market segmentation as follows: “In market segmentation, one distinguishes homogenous groups of customers who can be targeted in the same manner because they have similar needs and preferences”. Segmentation has become an important instrument that is used to plan appropriate marketing strategies (Park & Yoon 2009). Different variables or criteria can be used to segment a market (see e.g. Cahill 2006, p. 3; Middleton & Clarke 2001; Pelsmacker et al. 2001, p. 9; Wedel & Kamakura 2002). The purpose of segmentation is to recognize the most profitable customers from a group of potential customers, and offer them the products and services they want (Kotler 1997, p. 250; Park & Yoon 2009). This is based on an idea that the market is composed of subgroups of people that have different and specific needs and motivations (Berry et al. 1991; Dolnicar 2002; Park & Yoon 2009).

Alternatives to market segmentation are one-to-one marketing on one hand and mass marketing on the other (Wedel & Kamakura 2002, p. 181). Wedel and Kamakura (2002, p. 181) state that one-to-one marketing can lead to greater profitability; however, it does not preclude segmentation. Businesses can first develop different marketing mixes that are targeted to diverse market segments and then personalize some of their components to members of the chosen segment. The available technology and new marketing channels facilitate the customization of the marketing mix. Even though many businesses have applied one-to-one marketing, market segmentation has still applied as a general strategy to approach markets. Wedel and Kamakura (2002, p. 181) also highlight that companies have used mass marketing successfully on a global scale using standardized components of marketing mix, but with some customized components such as distribution channels or communications. They continue that between

these two extremes there is the identification and targeting of segments.

Segmentation aims to facilitate more cost-effective marketing by formulating, promoting and delivering specifically designed products and services that meet the needs of target groups identified (Park & Yoon 2009, p. 2). According to Tsiotsou (2006, p. 16), companies benefit from market segmentation in four diverse ways. First, segmentation provides a basis for target marketing; second, it helps to develop more effective marketing mixes so that the needs of specific customer segments can be satisfied; third, segmentation helps product differentiation; and fourth, it makes easier to identify market opportunities and threats. When companies are evaluating the segments, they have to consider their resources and goals and also how appealing they feel a certain segment to be. Attractiveness can be measured by evaluating the potential growth, size, profitability and risk level of the segment (Cahill 1997, p. 13). Morrison (1996; Moscardo et al. 2001, p. 31) has listed eight criteria for efficient market segmentation:

1. “People within a segment should be similar to each other and segments should be as different from each other as possible (homogeneity).
2. Segments should be identified with reasonable degree of accuracy (measurable).
3. Segments should be large enough in size to warrant separate attention (substantial).
4. An organization needs to be able to easily reach or access the identified segments (accessible).
5. Segments must require different marketing approaches. This suggests that the segments must differ on those characteristics which will be most relevant to the organization’s services or products (defensible).
6. Segments must be suited to the products or services offered by the organization (competitive).
7. Identified segments need to be compatible with existing markets (compatible).
8. There must be some stability in the segments. The identified segments need to remain relevant over an extended period of time (durable)”.

There are several factors that can be used as a base of customer segmentation. Most often, segmentation is based on socio-demographic, geographic, behavioral, and psychographic criteria (Figure 2). Socio-demographic and geographic criteria are most commonly used for segmentation (see e.g. Dolnicar et al. 1999; Hudson 2000; Juaneda & Sastre 1999; Yan et al. 2007). This is because demographic and geographic information is quite easy to obtain from official statistics. Geo-demographic segmentation became more popular after the introduction of geographical information systems (GIS), which allow the management of a great mass of information of households in specific geographical areas, for instance (see e.g. Musyoka et al. 2007).

In psychographic segmentation, markets are segmented based on differences in consumer lifestyles or personality criteria. Zografos and Allcroft (2007) describe psychographic segmentation as a method that measures consumers' interests, beliefs and opinions. These are measured by using psychological characteristics such as personality features, religious beliefs, opinions, and spare time activities. Behavioral segmentation is based, for instance, on benefits, frequency of use and loyalty (Tsiotsou 2006, p. 16). Behavioral attribute segmentation is usually product specific, as the aim is to categorize consumers focusing on their purchasing behavior within a relevant product category or the benefits consumers anticipate to have from a product or service category (Gunter & Furnham 1992, p. 4; Vyncke 2002, p. 446). Benefit segmentation is seen as a part of behavioral segmentation (see

e.g. Minhas & Jacobs 1996). It is also considered an appropriate approach, for example, when destination segments are defined because it can be used to identify tourists' satisfaction (Ahmed et al. 1998). The strategic goals of segmentation affect the decision on what methods or bases are used in market segmentation (Wedel & Kamakura 2002). Diverse segments can be identified from the market based on what attributes are used in segmentation processes. The segmentation approach must be selected to suit to the purpose of the company or developer to meet their goals. These goals can be product or service development or developing appropriate marketing communications.

There are two segmentation approaches: a priori and a posteriori (post hoc) (e.g. Chen 2003; Dolnicar 2002; Dolnicar & Leisch 2003; Formica & Uysal 2002; Moscardo et al. 2001; Tsiotsou 2006). A priori segmentation is used when the variable used as a criterion is known beforehand. These attributes can include gender, age or other pre-defined variables. This kind of a priori segmentation is also referred to as the typological approach (Dolnicar 2002). A posteriori segmentation is data-driven and is applied when there is no knowledge about distinct groups in advance (e.g. Dolnicar & Leisch 2003; Formica & Uysal 2002; Moscardo et al. 2001; Tsiotsou 2006). In other words, the a posteriori segmentation is based on a set of different variables. A starting point for data-driven segmentation is, in many cases, an empirical data set (Dolnicar 2002). This can be, for example, a customer survey made in a particular travel destination or in some business. In this study, a posteriori

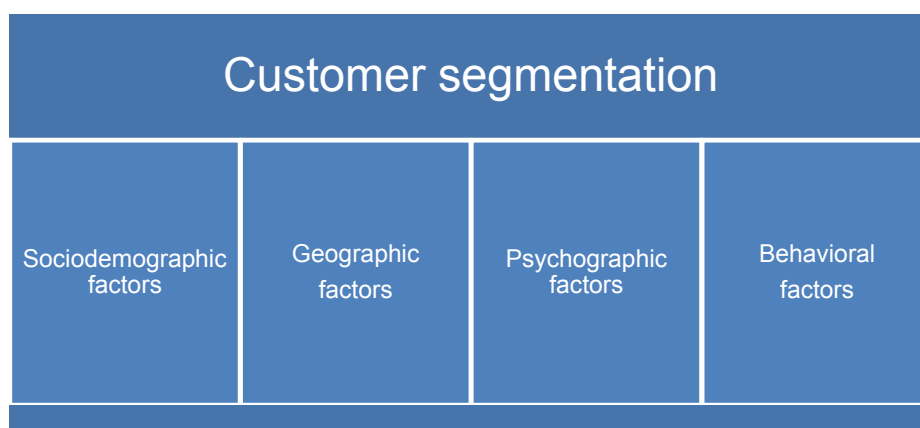


Figure 2. Different factors used in customer segmentation.

segmentation is applied as the researchers did not have any prior knowledge of possible motivation based on visitor segments of the Finnish protected areas.

2.1.2 Segmentation approaches in tourism

It has been stated that in tourism studies there is a long history of a priori segmentation where tourist groups are identified from the population by using prior knowledge (Dolnicar 2004). According to Dolnicar (2004), this kind of grouping is also called commonsense segmentation. Dolnicar (2004) studied different methods used in segmentation in the *Journal of Travel Research* for over 15 years. She (2004, p. 244) identified four different segmentation approaches from studies published during that time period: 1) pure commonsense segmentation; 2) pure data-driven segmentation; 3) combinations of both (most often one commonsense segment is used and then split into data-driven sub-groups); and 4) a sequence of two commonsense segmentations.

Many of the tourism segmentation studies are pure a priori segmentations using pre-defined groups as a base of segmentation. For instance, Kozak and Kozak (2008) have used information sources, Tsiotsou (2006) visit frequency, while Li et al. (2008) compared groups of first-time and repeat visitors. According to Dolnicar (2004), there are only few pure data-driven segmentation studies in tourism. This is because many studies concentrate on segmenting some particular subgroup of tourists (e.g. nature tourists, cultural tourists or wellbeing tourists). This means that a commonsense segmentation is made first and then the data is further analyzed by using data-driven segmentation. Dolnicar (2004) has presented a systematic of conceptual approaches for segmentation (Figure 3).

This study focuses on segmenting a particular subgroup of tourists, namely visitors of Finnish protected areas. First, the commonsense segmentation is made and then the data are analyzed by using data-driven segmentation using travel/leisure motivations as a segmentation base.

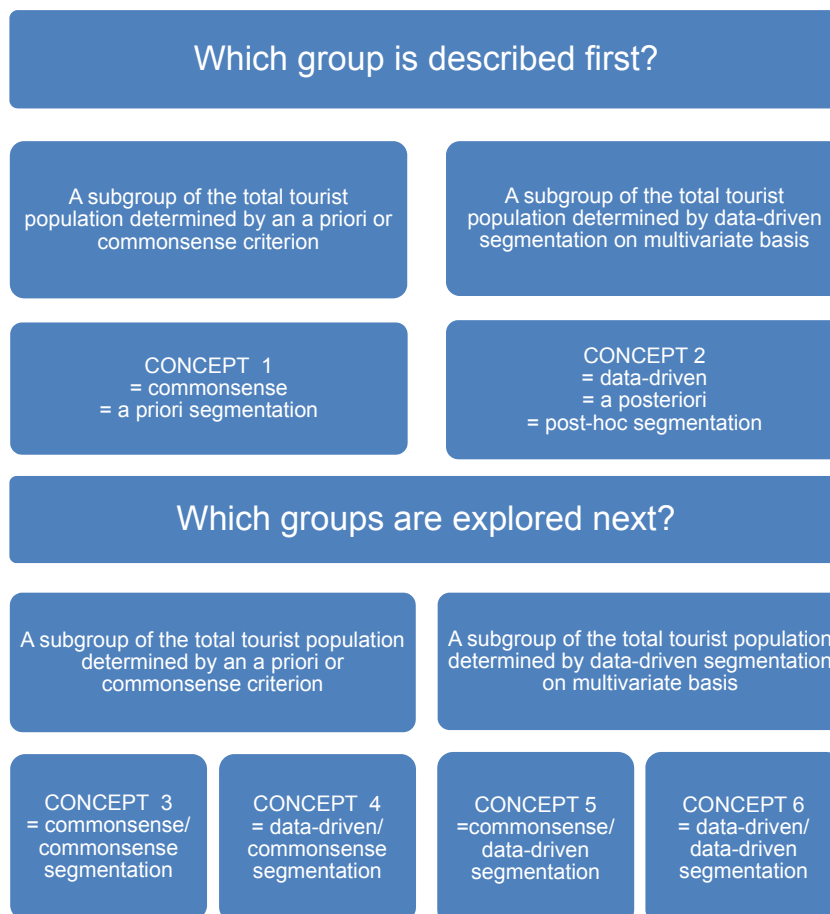


Figure 3. A systematic of segmentation approaches (Dolnicar 2004, p. 245).

2.1.3 Psychographic segmentation

Psychographic segmentation is based on the idea that lifestyle, attitudes, personality and opinions of people determine their consumer behavior (Horner & Swarbrooke 2005). Horner & Swarbrooke (2005, p. 41) argue that psychographic segmentation approach suits well to the leisure market. They give an example by saying that people who are environmentally aware (e.g. interested in environmental issues) can be targeted with natural outdoor leisure experiences.

According Decrop (2000, pp. 106–107), lifestyle “refers to unique pattern of thinking and behaving (including daily routine, activities, interests, opinions, values, needs and perceptions) that characterize differences among consumers”. He continues that in the tourism context, lifestyles are reflections of self-image and help to get insight about tourists’ spending, time and feeling patterns. To emphasize, lifestyle segmentation is customer segmentation that uses different lifestyle factors in order to group customers into homogenous segments (Morrit 2007, p. 25; Scott & Parfitt 2004, pp. 125–126). According to Plummer (1974, p. 33), lifestyle is used in lifestyle segmentation research to measure people’s activities in terms of:

1. “... how they spend their time;
2. their interests, what they place importance on in their immediate surroundings;
3. their opinions in terms of their view of themselves and the world around them;
4. and some basic characteristics such as their stage in life cycle, income, education, and where they live”.

There are several lifestyle segmentation methods in segmentation research. These methods include AIO (Wells & Tigert 1971); the Rokeach Value Survey VALS and VALS2 by Rokeach (1973); and the List of Values (LOV) introduced by Kahle (1986). The most commonly used method is AIO, which includes variables of attitudes/activities, interests and opinions (e.g. González & Bello 2002, p. 56; Lawson & Todd 2003, p. 73; Plummer 1974; Vyncke 2002, p. 448). It has been stated that the theory of personal values spring from the motivational literature, where motives and behavior drivers have been studied using Maslow’s theory

of motivation, for instance (Hede et al. 2004, p. 37). Hence, the psychographic segmentation is closely connected to motivations.

In AIO, activities include hobbies, work, social events, vacation and sports. Interests are certain objects or topics like family, home, recreation, food and community. Opinions are descriptive beliefs of particular topics such as social issues, education, future and culture (Plummer 1974; see also Vyncke 2002, p. 448). Many of the studies using AIO concentrate in some sectoral context such as social marketing, and product and brand analysis (see e.g. González & Bello 2002; Vyncke 2002). González and Bello (2002, p. 57) brought up two AIO methodologies that include the tourism point of view. The use of these two methodologies depends on the degree of the information: is it more general or more specific? González and Bello (2002, p. 57) define the general AIO as follows: “Segmentation of the population in accordance with general lifestyles. This permits the definition of broad categories of consumer in response to the lifestyle criterion chosen, yielding information on their way of life and outlook. From this an overall definition of their structure of necessities and consumption can be obtained”. They continue defining specific AIO as: “Market segmentation according to features of lifestyle specific to the product or service concerned. The segmentation study is based on questions linked to a given type of consumption. A more appropriate name might be *consumption style*”. Thus, the specific AIO can be connected to tourism products and services such as nature-based tourism services.

Many quantitative tourism studies include questions of psychographic attributes. Psychographic segmentation gives a more comprehensive picture of consumers (here tourists or visitors), which helps to predict better customer behavior than just using geo-demographic information (González & Bello 2002; Johns & Gyimóthy 2002; Matzler et al. 2004). Consequently, by combining psychographic segmentation with geo-demographic attributes it is possible to gain a fairly detailed view of the travel motives of tourists, issues that affect destination choices and characteristics of the different segments.

Psychographic segmentation is also used to research 'new' tourist products and services (Johns & Gyimóthy 2002, p. 317). Thus, it is also well suited as a base for customer oriented product and service development. As stated above, demographic and socioeconomic factors are widely used as a base of segmentation (Johns & Gyimóthy 2002, p. 316), but age, gender and income rarely have direct correlation to purchasing behavior (e.g. in tourism). Therefore, in this research, demographic and geographic factors are used to define segments – not as a segmentation base.

2.2 Research findings in tourist segmentation

The tourism sector has understood the importance of paying attention to the heterogeneity of tourists. Tourists come from various areas, travel diverse ways and have different life situations (Konu et al. 2011). For instance, they choose destinations, activities, transport and accommodation based on their lifestyles, motives and personalities (González & Bello 2002, p. 54). This is one of the reasons why segmentation has been used to identify diverse tourist groups.

Moreover, it can be argued that in general, travel motivations have a direct relationship with benefits sought (Frochot & Morrison 2000). Tourists have been segmented by using several segmentation bases such as environmental attitudes, sustainable practices, motivation and environmental behavior at home (Baloglu & Uysal 1996; Dolnicar & Leisch 2008; Galloway 2002; Konu & Honkanen 2010; Marques et al. 2010; Park & Yoon 2009; Zografos & Allcroft 2007). Table 2 demonstrates a few examples of tourism segmentation studies which are based on psychographic and/or behavioral segmentation, or are connected to nature or sustainable tourism (or both).

Segmentation studies that use motivations, benefit statements or destination choice attributes as a base of segmentation can be found from the tourism literature (e.g. Dolnicar & Leisch 2003; Jang et al. 2002; Park & Yoon 2009; Thyne et al. 2004). Jang et al. (2002) identified three clusters among Japanese pleasure travelers based on benefits sought items: Novelty/nature seekers; Escape/relaxation seekers; and Family/outdoor activities seekers. They also described the socio-demographic profile and trip characteristics of the segments. Park and Yoon

Table 2. Examples of segmentation studies in tourism.

Country/City/Region	Segmentation variables	Statistical analysis	Tourism market	Number of segments	Authors
Scotland	Lifestyle	Cluster analysis	Backpacker market in Scotland	5	Thyne et al. (2004)
Australia	Lifestyle	Principal Component & Cluster analyses	Rainforest visitors	4	Moscardo (2004)
Australia	Service expectation and performance	Factor & Cluster analyses	(National) Parks visitors	7	Zanon (2005)
Slovenia, Spain and the UK	Environmental attitudes	Cluster analysis	Visitors of protected areas	3	Konu & Honkanen (2010)
Scotland	Environmental attitudes	Factor & Cluster analyses	Potential ecotourists	4	Zografos & Allcroft (2007)
Japan	Benefits sought	Principal Component & Cluster analyses	Japanese pleasure travelers	3	Jang et al. (2002)
Korea	Motivation	Principal Component & Cluster analyses	Rural tourists	4	Park & Yoon (2009)
Ontario, Canada	Psychographic attributes	Principal Component & Cluster analyses	Park users	3	Galloway (2002)
Portugal	Motivation	Principal Component & Cluster analyses	Visitors of protected areas	5	Marques et al. (2010)
Belize	Motivation	Factor & Cluster analyses	Visitors in Belize	4	Palacio & McCool (1997)
Australia	Social values	Principal Component & Cluster analyses	Potential ecotourists	4	Blamey & Braithwaite (1997)

(2009) used 24 motivation factors to segment rural tourists in the Korean countryside. They found four different tourist segments: Passive tourists; Want-it-all; Family togetherness; and Learning and excitement. They also highlighted that the primary motivation for rural tourism was learning; other important motivations' dimensions were excitement and family togetherness. Baloglu and Uysal (1996) have used both push and pull motivations as a base of segmentation. They grouped people from West Germany into four segments: Sports/activity seekers; Urban-life seekers; Novelty seekers; and Beach/resort seekers. Their findings imply that there is a significant relationship between motives and destination attributes.

Moscardo (2004) has segmented nature tourists who visit tropical areas based on their motives to visit rainforests. She identified four segments: Escape to Nature; Scenic Nature Tourers; Just passing through; and Wilderness Adventurers. Galloway (2002) studied whether a psychological push factor (sensation seeking) could be useful as a base for park market segmentation. He used 15 psychological attributes as a base of his analysis. These attributes were enjoy nature; reduce tensions; escape noise/crowds; outdoor learning; sharing similar values; independence; family kinship; introspection/spiritual; considerate people; achievement/stimulation; physical rest; physical fitness; teach/lead others; risk taking; and meet new people. Many of these attributes can be identified as push motivation attributes. By using these attributes, Galloway (2002) identified three segments among park users: Active enjoyment of nature; Escape stress; and Sensation seekers. He established that there are significant differences between the segments concerning, for example, socio-demographic factors and activities, and placed importance and satisfaction on facilities and services in the parks. He also concludes that segmenting park visitors by using sensation seeking as the psychological push factor enables the differences to be identified between segments with regard to park-related behaviors and attitudes.

Marques et al. (2010) have segmented visitors of Portuguese protected areas based on

motivation factors. They used 23 motivation statements that were grouped into seven dimensions: participation in traditional events; enjoyment of nature; sports; social influence; personal fulfillment; proximity and convenience; and participation in planned events. Marques et al. identified five segments among the protected area visitors: Self-centered Visitors; Occasional Visitors; Urban Visitors; Excursionists; and Sociable Naturalists. Segments of Self-centered Visitors, Urban Visitors and Sociable Naturalists were clearly committed to natural environment while Occasional Visitors and Sociable Naturalists focused on events and activities. Surprisingly, the motivations of Excursionists were not related to any motivations connected to nature-based tourism. Palacio and McCool (1997) have grouped visitors to Belize based on benefits sought. To do this they used 18 motivation factors that were derived from Driver (1977). The factors used were 1) for the solitude; 2) my mind could move at a slower pace; 3) get away from other people; 4) experience the tranquility; 5) be in a natural setting; 6) observe the scenic beauty; 7) enjoy the noise and smell of nature; 8) understand the natural world better; 9) learn more about nature; 10) the adventure; 11) help keep me shape; 12) improve my physical health; 13) develop my skills and abilities; 14) I could do something creative such as photography; 15) I thought it would be a challenge; 16) I could do things with my companion; 17) I could be with friends; and 18) to be with others who enjoy the same (Palacio & McCool 1997, p. 238). Derived from the answers to these attributes Palacio and McCool found four segments: Nature Escapist; Ecotourist; Comfortable Naturalist; and Passive Players.

Zanon (2005) has segmented park visitors in Australia. He used service expectation and performance variables as a base of the segmentation. He found seven segments: Nature Admirers; Urban Socials; Trail Users; Passive and Other Users; Activity Centrics; Access Made Easy; and Country Vacationers. In his extensive report, the segment profiles, including behaviors, experiences, market preferences, service preferences and demographics, are described in

depth. Konu and Honkanen (2010) used the New Environmental Paradigm (NEP scale) to identify segments among protected area visitors. The NEP scale includes 15 statements about five areas that are under discussions concerning the environment. These are limits to growth; antianthropocentrism; the fragility of nature's balance; rejection of human exemptionalism and the possibility of an ecocrisis (Dunlap et al. 2000). They found three segments: anthropocentrics, ambivalents and ecocentrics. Differences between the segments were identified concerning, for example, their opinion about the importance of ecolabels and certification for products, services and for businesses. Zografos and Allcroft (2007) also used attributes from the NEP scale as a base for segmentation in their study. They identified four segments: Disapprovers; Concerners; Approvers; and Scepticals. The segments differed from each other by some socio-demographic variables, trip characteristics as well as on the importance they addressed biodiversity as the primary aspect of ecotourism. In addition to environmental attitudes, potential ecotourists have also been segmented by using social values (Blamey & Braithwaite 1997). In their study, Blamey and Braithwaite found four segments among potential ecotourists: Greens; Relatives; Dualists; and Libertarians. They also examined diverse attitudinal statements about nature and environment across all clusters.

It can be concluded that tourists, nature tourists, ecotourists and natural area visitors have been segmented by using different psychological and behavioral variables and attributes. Using motivations as a base of segmentation has proven to be an effective way to group target markets. It has been argued that in the fragmented post-modern markets, demographic factors cannot reliably be used to explain the differences between different market segments (Firat et al. 1995; Firat & Shultz 1997). On the other hand, psychographic factors such as motivations and attitudes have become more important factors when segments' differences between each other are explained (see e.g. Cova & Cova 2002). This is why motivation attributes are used as a base of segmentation also in this study.

2.3 Motivations of recreation and tourism

2.3.1 Needs and motivation

According to Moutinho (1987, p. 16; Hall & Page 2002), motivation is "a state of need, a condition that exerts a push on the individual towards certain types of action that are seen as likely to bring satisfaction". In consumer behavior, motivations are seen to represent individual internal forces that are leading to action (Schiffman & Kanuk 1978; Park & Yoon 2009, p. 2). In consumer behavior research and studies, motivation is seen as a dynamic process in customer/buyer behavior as it bridges the gap between the customer's felt need and the decision to act or make a purchase (Middleton & Clarke 2001). The motivation is seen to derive from the individual needs of a person. The motivation process starts with a need, continues by action to satisfy the need and ends to the fulfillment of the need (Wright 2006).

Maslow (1943; 1987) has grouped the different needs of an individual into a hierarchy (Figure 4). At the bottom of the pyramid are physiological basic needs such as the need to eat, sleep and breathe, i.e. things that are essential for living. On the second level are safety needs such as security and protection. Above the first two levels come psychological needs such as social needs including needs for affection, love

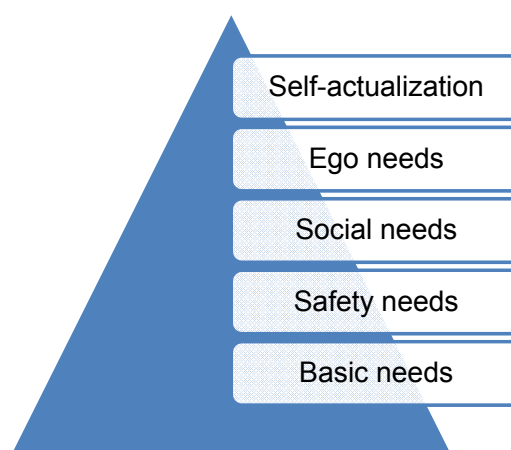


Figure 4. Maslow's hierarchy of needs (adapted from Maslow 1987; Holloway et al. 2009, p. 61).

and friendship. On fourth level come ego needs containing, for instance, self-respect and status. At the top of the pyramid are the needs of self-actualization including self-fulfillment. Maslow suggests that the fundamental needs must be satisfied before individuals seek to satisfy the needs on higher levels.

Maslow's model has also been criticized because in reality needs are not in a hierarchical order and some needs may occur simultaneously (Hall & Page 2002, p. 34). Holloway et al. (2009) further maintain that it is challenging to explore needs as many people can actually be quite unaware of their needs or how they could satisfy them. They also argue that some people might be reluctant to reveal their real needs.

Backman et al. (1995) highlight that motivations are interconnected with an individual's basic needs for developing preferences, participating in diverse activities, and expecting satisfaction. The motivations of nature activities, participating in a nature holiday or purchasing nature activity products and services are also connected to a customer's needs and interests.

According Bowen and Clarke (2009, p. 89), motivations can be classified into different categories such as positive motivations and negative motivations; internal motivations and external motivations; cognitive motivations; and affective motivations. Bowen and Clarke (2009, p. 89) describe positive motivations as a need to seek positive situations and negative motivations as a need to escape from negative situations. Internal motivations come from drive within while external motivations derive from the drive of external stimuli like active marketing campaigns – also referred to as pull and push motivations (e.g. Crompton 1979). Cognitive motivations are linked to a need for meaning, while affective motivations are linked to feelings of satisfaction and the achievement of emotional goals.

2.3.2 Leisure and tourism motivations

Leisure and tourism motivations are seen to have common motivation factors (Moore et al. 1995). For example, Leiper (1990; Hall & Page 2002, p. 30) argues that leisure has a similar value category as tourism. Similarities are recognized in motivating factors and needs. The same factors can motivate tourist and recreational activities,

and needs such as being with friends or relaxation can be fulfilled in recreational or tourism settings (Hall & Page 2002, p. 30). It has been stated that motivation to travel refers to different needs that make a person participate in tourism activities (Park & Yoon 2009). Park and Yoon (2009, p. 2) refer to Crompton (1979) and Kim et al. (2000) when they state that “motivational factors are defined as the psychological needs that play a significant role in causing a person to feel psychological disequilibrium that may be corrected through a travel experience.”

Beard and Ragheb (1983; Ryan 2002, pp. 35–36) have classified motivation into four categories. First is an intellectual component which is used to examine an individual's interest in participating in leisure activities that include intellectual aspects (e.g. learning and discovering). The second component is social and is used to assess the importance and influence of social reasons to participate leisure activities. The third is called competence-mastery, which focuses on interests to participate in activities that involve things such as achievement and competition. The fourth and final category is stimulus-avoidance which assesses the need and drive to get away and escape. These motivations have been used as a basis of several motivation scales, the most well known being the Leisure Motivation Scale (Ryan 2002).

Dann (1977, 1981) has conceptualized tourist motivation into seven categories. These principal elements include 1) travel as a response to what is lacking yet desired; 2) destination pull in response to motivational push; 3) motivation as fancy; 4) motivation as classified purpose; 5) motivation typologies; 6) motivation and tourist experiences; and 7) motivation as definition and meaning (see also Hall & Page 2002; Hudson 2000). These were later simplified by McIntosh and Goeldner (1990; Hall & Page 2002, p. 63) under four themes: physical motivators; cultural motivators; interpersonal motivators; and status and prestige motivators. Iso-Ahola (1982) has identified two motivations involved in tourism activity: the desire to escape everyday environments and seeking intrinsic rewards. He also highlights that each motive also has a personal and interpersonal component. This leads to the emergence of four motivation dimensions: personal escape; personal seeking; interpersonal

escape; and finally interpersonal seeking (see also Bowen & Clarke 2009).

There have been several studies on leisure motivations. Crandall (1980) sums up 17 motivation factors that emerge from previous motivation studies in the field. These factors are: 1) enjoying nature, escaping from civilization; 2) escape from routine and responsibility; 3) physical exercise; 4) creativity; 5) relaxation; 6) social contact; 7) meeting new people; 8) heterosexual contact; 9) family contact; 10) recognition, status; 11) social power; 12) altruism; 13) stimulus seeking; 14) self-actualization (feedback, self-improvement, ability utilization); 15) achievement, challenge, competition; 16) killing time, avoiding boredom; and 17) intellectual aestheticism.

Motivation has also been a major topic in tourism research for a long time (Crompton 1979; Dann 1981; Mak et al. 2009; Nowacki 2009; Park & Yoon 2009; Pearce 2005). Tourist motivations have also been explained by using Maslow's (1943) needs hierarchy; for example by Mill and Morrison (1985) who identify travel as a need or want satisfier. Several researchers have been influenced by Maslow's needs hierarchy; for example, Pearce's model of the travel career ladder (TCL) is based partly on Maslow's theory (Pearce 2005). TCL consists of five different levels of tourist motivations: relaxation needs; safety/security needs; relationship needs; self-esteem and development needs; and self-actualization/fulfillment needs (Pearce 2005, pp. 52–53). Pearce also developed the TCL to a travel career pattern approach. The need for this came from critique from diverse scholars (see e.g. Ryan 1998; 2002). According to Pearce (2005, pp. 54–55), the travel career pattern approach de-emphasizes the hierarchical elements that were in the TCL theory. He continues that the travel career pattern (TCP) is conceptually modified from the travel career ladder approach and it has "more emphasis on the change of motivation patterns reflecting career levels than on the hierarchical levels" (Pearce 2005, p. 55). Pearce (2005; see also Pearce & Lee 2005) has also highlighted the relationship between past experience and tourist motivation when he developed the TCP. He claims that the most important travel motives (e.g. escape/relax and novelty) have an effect on all travelers, as well as less important

motives (e.g. social status and isolation). He also argues that when an individual's travel career level develops (tourists gain more experience, pass certain stages in their life-cycle and grow older), the moderately important travel motives will change to externally-oriented needs from internally-oriented needs.

The push and pull model by Crompton (1979) is one of the most popular typologies of tourist motivation. The model emphasizes that tourist's choice of a travel destinations is affected by two forces – push and pull factors. Push factors are underlying individual motivations that push a person from home while pull factors are attributes and features of a destination, a product or a service that pull a person towards a destination. In other words, individuals travel because they are pushed by their internal motives and pulled by external forces of a travel destination (Lam & Hsu 2006).

Most push factors derive from an individual's intrinsic or intangible desires; for instance from health and fitness; the desire to escape; dream fulfillment; rest and relaxation; novelty seeking; adventure seeking; prestige; and socialization (Chon 1989; Lam & Hsu 2006; Uysal & Jurowski 1993). Pearce and Lee (2005) identify 14 factors of general tourist motivation: novelty; escape/relax; nature; self-development (host-site involvement); stimulation; relationship (strengthen); autonomy; self-development (personal development); relationship (security); self-actualization; isolation; nostalgia; romance; and recognition. The push motivations are noted to be useful in explaining the desire for travel as they are recognized as the basis for understanding tourists' behavior (Crompton 1979; Kim et al. 2008). Pull factors are more tangible and they are usually related to the attractiveness of a destination (e.g. Baloglu & Uysal 1996; Bowen & Clarke 2009). Pull factors can be diverse destination attributes (e.g. natural sights such as national parks, high quality accommodation, amusement parks, wellness facilities) and activities (e.g. outdoor activities, events, courses, excursions) that tourists are interested in.

It can be concluded that there are similarities in motivation items, factors and attributes identified in leisure and tourism studies. This is evident especially when general travel motives (e.g. Pearce 2005) are compared to leisure

motives (e.g. Crandall 1980). Hence, it can be assumed that similar motivation items can be used when visitors (including tourists) of protected areas are studied.

2.3.3 Motivations in nature-based tourism

In the early 1990s, a new group of tourism consumers was identified when Poon (1993) suggested that tourists are more independent, experienced and environmentally aware than before (Newsome et al. 2002). Nature-based tourists are generally seen to be more interested in nature, staying longer at a destination and traveling more frequently and longer distances (Mehmetoglu 2007). They are also seen to be well educated, having high individual and household income, and thus willing to spend more (Lang & O’Leary 1997). Differences can be identified when motivations of tourists (in general) and ecotourists are compared. Eagles and McCool (2002) have compared two motivation studies carried out in Canada. One study focused on examining the travel motivations of an average Canadian traveler (Burak Jacobson 1985), while other focused on travel motivations of Canadian ecotourists (Eagles 1992). The comparison showed that social orientations are more important for the average Canadian traveler, whereas Canadian ecotourists were motivated by attraction-oriented motivations.

There have also been studies on how tourists experience the environment. Experiencing is closely connected to factors such as needs, motivations, expectations and feeling of satisfaction. Newsome et al. (2002) present a taxonomy of

environmental experiences developed by Holden (2000), which includes a behavioral dimension (Table 3). In this case, tourists’ motivations can be closely linked to issues stated in the Interpretation column of the table.

Dorwart et al. (2010) have developed a model of nature-based recreation experience in a trail environment (Figure 5). The model shows that visitors’ personal factors, such as individual characteristics, motivations, norms and expectations, have an influence on what they pay attention to and what kind of perceptions they have during their visit in a natural environment (in this case a trail environment). It can be assumed that a similar model can also be applied on a wider scale in nature tourism, and recreation destinations and attractions.

Motivations have been studied in a nature-based tourism context by using, for example, different motivational attributes or statements. Mehmetoglu (2007) studied motivations of nature-based tourists by using 20 motivation statements in his study of nature-based tourists’ expenditures and activities. The motivation statements used were: to be close to nature; to experience nature; to visit natural attractions; to engage in nature-based activities; to engage in non-challenging physical activities; to engage in challenging physical activities; to do/experience something new; to visit new places; to learn about new things/places/cultures; to gain in experience/knowledge; to mentally relax; to have time for yourself; to get away from everyday life; to experience something adventurous; to have fun; to be with friends and relatives; to have social contact; to have experiences to talk

Table 3. The tourist experience (Newsome et al. 2002, p. 10; derived from Holden 2000; developed from Ittleson et al. 1976 and Iso-Ahola 1980).

Mode of experience	Interpretation	Behavior and environmental attitudes
Environment as a ‘setting for action’	The environment is primarily interpreted in a functional way as a place for hedonism, relaxation and recuperation	Conscious or subconscious disregard for the environment and a lack of interest in learning more about its natural or cultural history
Environment as a social system	The environment is seen primarily as a place to interact with family and friends	Physical setting becomes irrelevant as the focus of the experience centers on social relationships
Environment as emotional territory	Strong emotional feelings associated with, or invoked by, the environment which provide a sense of well-being	Sense of well-being and wonder at being in a different environment
Environment as self	Merging of the physical and cultural environment with self	Strong attachment to landscape and cultures that are perceived as being ‘better’ than the home society

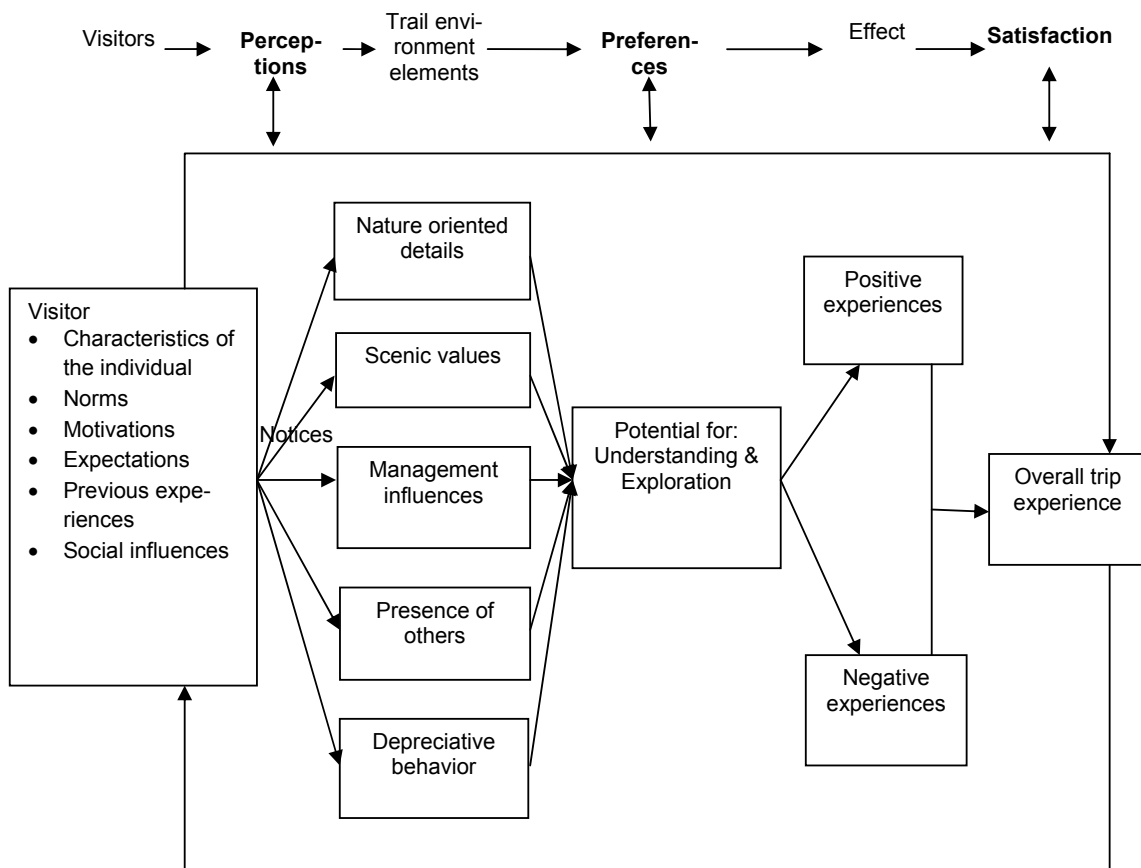


Figure 5. Nature-based recreation experiences model (adapted from Dorwart et al. 2010, p. 49).

about; to improve your self-confidence; and to obtain a feeling of achievement. Based on these statements, he identified six motivation factors among nature-based tourists: nature; physical activities; novelty/learning; mundane everyday; social contact; and ego/status.

The results of Mehmetoglu (2007) have been supported by Meng and Uysal (2008) who studied the motivations of potential nature-based tourists. They identified three motivation dimensions from 12 push factors: activities and fun, family and friends, and relaxation experience. Meng and Uysal (2008) discovered that these motivation factors were consistent with many other nature tourist studies (e.g. Mehmetoglu 2007) by indicating that visitors interested in nature settings desire versatile physical activities, a relaxing lifestyle and having fun. However, the results of Meng and Uysal differed partly from other nature-based tourism studies because they identified family and friends as a strong motivation factor. They recognize that the reason for this is that in their study, the motivation items were mainly developed in relation to the nature-

based destination studied which mainly targeted family and romantic vacationers.

2.4 Segmentation by motivation

As motivation is seen as the starting point of a behavior, it was chosen to be the base of segmentation in this study. In the leisure context, motivations help determine “why people engage in leisure behavior in the manner they do, and assists in understanding the consequences of leisure engagements” (Manfredo et al. 1996, p. 188). The information about motivations in leisure, tourism and recreation can help regional developers, businesses and other practitioners to develop services, products and infrastructure that meet customers’ needs, and at the same time help to minimize the likelihood of conflicts in the area (e.g. in relation to different stakeholders and user groups).

Several tourism scholars have studied profiles of nature-based tourists – they have been studied as one target group as well as being segmented into different subgroups. To give some examples

of the attributes studied among nature-based tourists, Methmetoglu (2007) studied the relationship between nature-based tourists' trip expenditures and activities; Meng and Uysal (2008) examined the effects of gender differences on perceptions of destination attributes, motivations and travel values; Palacio and McCool (1997) studied the benefits sought; and Zografos and Allcroft (2007) mapped the environmental values of potential ecotourists. Only few of the studies focusing on nature-based tourists have used motivations as a segmentation base, even though motivations are examined in the studies. Motivations have been researched by using different motivation statement batteries, which are used in segmentation studies as segmentation bases (as mentioned in Chapter 2.2). The statement batteries include, in many cases, push factors and/or pull factors. Pull factors used are usually context and study specific and there are no unified statements that are used in general. Studies using push factors base their motivation statements on previous studies and motivation theory. Many have used the motivation battery defined by Pearce (2005), for example, by adapting the statements from diverse motivation studies. Motivation statements developed by Driver (1977) are also commonly used in motivation studies, especially in the context of nature-based tourism.

Studies have attempted to explain an individuals' participation in activities and their susceptibility to engage in these activities in some particular settings by their recreation or tourism experience preferences (Payne et al. 2004). The Recreation Experience Preference (REP) scales, early conceptualized by Driver and Tocher (1970), have been used as an instrument in the development of perspectives on recreation experience (Manfredo et al. 1996; Steward 1992). The starting point for developing the scales was in leisure motivation research and the line was known as the 'experiential approach'. The approach suggested that recreation should not be seen just as activity (e.g. skiing or hiking); rather, it should be conceptualized as psychophysiological experience occurring during free time – a result of free choice – and that can be identified as self-rewarding (Manfredo et al. 1996, p. 189). The REP scales have been developed within the context of motivation theory

and it was claimed that "recreation activities are behavioral pursuits that are instrumental to attaining certain psychological and physical goals" (Manfredo et al. 1996, p. 189). According to Raadik et al. (2010), the idea behind REP scale distinguishes two outcomes of recreational features: an individuals' expectation to experience particular psychological benefits when they take part into certain recreational activities and the placement value on these psychological benefits.

The REP scale's set of measurements include more than 40 diverse sub-factors. The main dimensions of the scale are achievement; autonomy/leadership; risk taking; equipment; family togetherness; similar people; new people; learning; enjoy nature; introspection; creativity; nostalgia; physical fitness; physical rest; escape personal-social pressures; escape physical pressure; social security; escape family; teaching-leading others; risk reduction; and temperature. All these main dimensions are divided into several statements (see e.g. Driver 1977, 1983). Erkkonen and Sievänen (2001, p. 56; Kajala et al. 2007, p. 135) have condensed these dimensions and sub-factors into four key dimensions that are "experiences of nature (admiration of scenery, observation of animals); social experiences (quality time shared with one's family, the chance to be alone); personal learning and development objectives (learning new skills, testing one's limits); and physical needs (exercise and fresh air)." (see also Driver et al. 1991; Moore & Driver 2005).

The REP scales were developed in two phases. In the first phase, the focus was on developing and identifying scales that can be used to measure the concepts of interest while the second phase focused on establishing scale reliability and testing the validity of the scales (Manfredo et al. 1996). Items to the scales were developed by using open-ended qualitative discussions with recreationists on motives, and adapting them from existing scales used in recreation studies (Manfredo et al. 1996; Raadik et al. 2010).

Manfredo et al. (1996) have recognized six types of studies that use REP scales. The first concentrates on comparing and describing the experience preferences of individuals taking part in specific recreation activities. The second focuses on formulating experience segments or types of recreationists. The third attempts to

establish relationships among activity preferences and experience settings. The fourth examines the relationship between experience preference and non leisure conditions. The fifth focuses on studying relationships between basic individual characteristics and experience preferences. Finally, the sixth concentrates on the methodological point of views by analyzing the development and testing of the REP scales.

During the last several years, the REP scale has been used to measure motivations of visitors and tourists in nature recreation and tourism contexts. For instance, Payne et al. (2004) studied experience preferences among people who used forests for recreation and tourism purposes. They used a modified Recreation Experience Preference scale with 20 attributes: experiencing risks; independence; developing skills; using equipment; self-confidence; adventure; tranquility; solitude; being in nature; getting away; being with others; meeting new people; bringing the family closer together; being with friends; sharing learning; spirituality; self-confidence; First Nations (i.e. aboriginal) culture; experiencing new and different things; and learning about nature. They found five experience preference dimensions among the respondents: risk-adventure; solitude-getaway; friends-family; spirituality; and learning. In their study, Raadik et al. (2010) used 35 motivation attributes to measure recreation experience preferences of national park visitors. These items were adapted from Driver's (1983) original list and were used earlier by Newman and Dawson (1998). Raadik et al. (2010) identified four primary reasons for visiting the Fulufjället National Park: self discovery (including get in touch with true self; opportunity for self discovery; develop a sense of self confidence; develop self sufficiency; reflect on life; chance to think/solve problems; and feel connected to a place that is important); experience places (including seeing different dramatic landscapes; see spectacular views; experience places I read about; and to have a story to tell); seek solitude (containing items experience the scenic quality of nature; tranquility/peacefulness; and develop oneness with nature); and challenge oneself (such as having an adventure; a sense of discovery; recreate a primitive environment; and physical

challenges). These domains are similar to those found by Newman and Dawson (1998).

Raadik et al. (2010) maintain that REP scales are an effective measurement tool that gives useful information for managers of the area. They can, for instance, evaluate social conditions in the area, which might eventually help to protect its resources and give better value for recreationists when perceived benefits are increased. Manfredo et al. (1996) highlight that REP scales can be applied when the goal is to determine the desired psychological outcomes from or motivations for leisure. They also argue that REP scales can help managers (or regional developers and businesses) understand the motivation for leisure, and to understand and meet the needs and desires of visitors.

In this study, the focus is to segment visitors of Finnish protected areas into motivation-based segments. The motivation attributes of the REP scales were deemed an appropriate instrument to this aim as the questions have been successfully applied in nature-based recreation and tourism contexts (see e.g. Payne et al. 2004; Raadik et al. 2010). Different studies using the REP scales also use a different number of statements derived from the scale. The statements used in this study are presented in Chapter 3.2.

3 Data and methods

3.1 Methodological framework of the study

The general methodological framework and research process of the study are presented in Figure 6. In order to gather the required information about the visitor segments, the study employed several research approaches. For this reason, the results of the study are also presented in different phases. The demographic and travel related profile of the whole sample is first presented, followed by the results of the segmentation analysis given in two parts. First, the customer segments are formed based on

the factors connected to motivation by using a K-Means Cluster analysis and a Discriminant analysis. Second, the profiles of the formed segments are described and the possible differences between the segments highlighted (using e.g. the Chi-Square test).

3.2 Data collection method and the standard questionnaire

Since 2000, Metsähallitus has been using a standardized method to gather visitor survey data from those state-owned protected and recreational areas where recreation and tourism

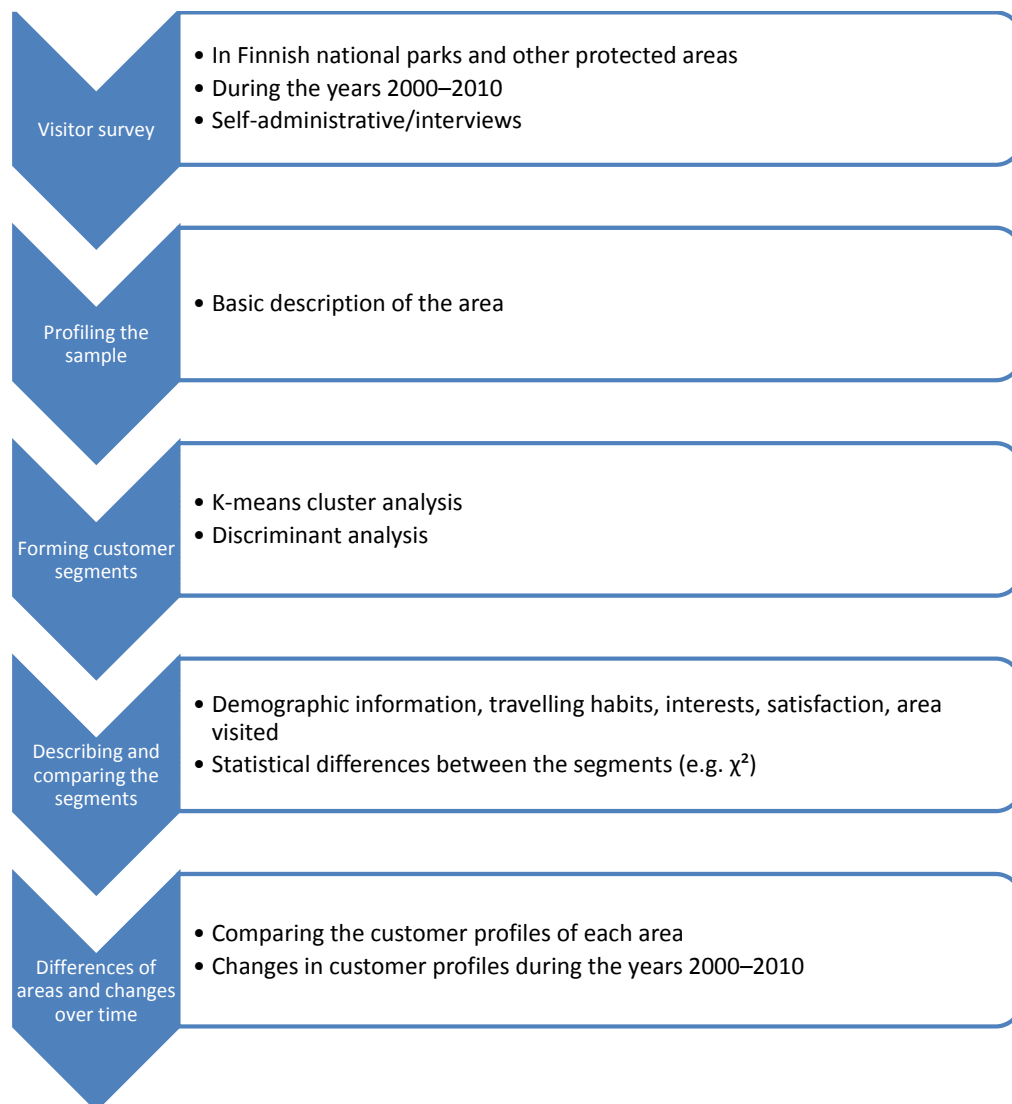


Figure 6. Methodological framework of the study.

plays a significant role. These areas include all the Finnish national parks and national hiking areas as well as many other protected areas. The data are primarily gathered for management and monitoring purposes and reports are produced by Metsähallitus at on-site, regional and national levels. However, the large data that has been gathered in a uniform manner across the country for eleven years and saved in one database provides opportunities for many kinds of further analysis such as the current study.

The standardized methodology was originally developed in a research project during 1998–2000 by Metsähallitus, METLA (the Finnish Forest Research Institute) and the University of Helsinki (Erkkonen 2001; Erkkonen & Sievänen 2001; Kajala 2006). The project produced a visitor monitoring manual (Erkkonen & Sievänen 2001) which presented a standardized visitor survey method with common questions, data collection, entry and reporting.

The data is collected by on-site guided interviews using a structured questionnaire. On the randomized sampling days and sites within each area, visitors of 15 years of age or older are asked to fill out the questionnaire. The field work is always implemented under the supervision of Metsähallitus personnel responsible for visitor surveys. For on-site data collection as well as data entry, temporary employees such as university students are often hired. All visitor survey data is saved in Metsähallitus's database system for visitor information (ASTA). Visitor surveys are recommended to be conducted every five years. Thus, in some of the areas such as the Oulanka National Park, the survey has been implemented already three times. During its development, the standardized questionnaire was thoroughly tested in several areas; moreover, the phrasing and response options for the questions were also defined.

The methodology, mainly the questionnaire, was further developed in the mid 2000s in a Metsähallitus development project to create a database for managing customer information. The project was implemented at the same time with a Nordic-Baltic visitor monitoring development project. In this way, the questionnaire was also refined by feedback from international experts on nature tourism research and protected area management. At this point, the question-

naire was not re-tested as the changes were few and the used phrasings or response options were already tested in other countries in the Nordic-Baltic region. The Nordic and Baltic development project also co-published visitor monitoring guidelines applicable to all the Nordic and Baltic countries (Kajala et al. 2007). The latest modifications to the questionnaire were made in 2009 when the question about expenditure was refined to increase its reliability (Huhtala et al. 2010). Thus, the questionnaire has been designed and modified by several people working with nature tourism, national parks, and protected areas research and management mostly in Finland but also in the other Nordic and Baltic countries.

The questionnaire includes permanent questions common to all visitor studies. It can also include additional questions that are interesting for a particular protected area and its managers (see Appendix 1). The permanent questions are related to the current trip to the area; the travel company; motivations to travel/visit the area; activities of interest; satisfaction with the services; spending in the area; and demographic information. The additional questions can be connected to issues such as information source; intentions to recommend and revisit the area; the use of public transportation; interests in a particular area; and interest in learning about cultural heritage. When refining the questionnaire in the mid 2000s, the motivation factors of the survey were kept almost identical to previous surveys since they had proven to be suitable for the study. The sources of the motivation statements are presented in Table 4.

3.3 Collected data

The data were collected in Finnish national parks and protected areas administrated by Metsähallitus using the questionnaire discussed above. In protected areas, an interviewer presented the questionnaire to individuals and asked them to fill in the questionnaire themselves. The interviewers were available the whole time to answer any questions that might arise (e.g. giving guidelines if needed). In total, 34,868 responses were collected during the years 2000–2010. This data include material from 91 different visitor surveys and from 74 different nature areas (Figure 7 and

Table 4. Developing motivation statements for the questionnaire.

Statement	REP dimension
Nature experiences	Enjoy nature (Driver 1977, 1983)
Scenery	Enjoy nature (Driver 1977, 1983)
Being on my own	Autonomy/leadership, Escape physical pressure, Reduce tension (Driver 1977, 1983)
Mental well-being	Escape personal-social pressures (Driver 1977, 1983)
Getting away from noise and pollution	Escape physical pressure (Driver 1977, 1983)
Relaxation	Physical rest, Escape personal-social pressures (Driver 1977, 1983)
Meeting new people	New people (Driver 1977, 1983)
Being together with own group	Family togetherness, Similar people (Driver 1977, 1983)
Pleasant old memories	Nostalgia (Driver 1977, 1983)
Getting to know the area	Learning (Driver 1977, 1983)
Learning about nature	Learning (Driver 1977, 1983)
Improving my own skills	Achievement/stimulation (Driver 1977, 1983)
Keeping fit	Physical fitness (Driver 1977, 1983)
Experiencing excitement	Achievement/stimulation (Driver 1977, 1983)

Appendix 2). Invalid answers were eliminated leaving 34,828 usable responses.

The data was partly analyzed by using park classification developed by Metsähallitus based on the literature review (Huhtala et al. 2010). The classification was made by calculating the population density for the hinterland of each protected and recreational area. Finally, the areas were divided into three groups: capital areas, other built-up areas and rural areas. One additional grouping was made which includes all the areas located in tourism centres.

3.4 Data analyzing methods and data analysis

The empirical part of segmentation studies usually comprise two stages: segment revelation and segment diagnoses (Chen 2003). Segment revelation includes the deployment of segmentation methods and algorithms, the selection of segmentation bases and the formation of segments. The segment diagnoses contain descriptive analyses of segment characteristics and comparative analyses of segment characteristics. This procedure is followed in this study.

Segmentation studies normally employ statistical methods, especially multi-variate analysis (e.g. Factor/Principal component and cluster analysis), to create market segments (e.g. Arimond et al. 2003; Dolnicar 2002; Füller & Matzler 2008). Clustering has been a popular

way to identify customer segments from survey data (Dolnicar 2002). The aim of the cluster analysis is to group respondents into logical segments based on their responses. Dolnicar (2002, p. 4) describes the essence of cluster analysis in the following way: “The basic idea of cluster analysis is to divide a number of cases (usually respondents) into subgroups according to a pre-specified criterion (e.g. minimal variance within each resulting cluster) which is assumed to reflect the similarity of individuals within the subgroups and the dissimilarity between them”.

Dolnicar (2002) has made a review of data-driven segmentation studies in tourism. She argues that many of the studies do not describe the used method properly and in many cases the validity and reliability in segmentation studies are not clearly defined and presented. She also gives recommendations for the segmentation process that deals with data processing, algorithms applied, technical issues, and reliability and validity. She states that pre-processing data (e.g. factor analysis and standardization) should be avoided as it might lead to a distortion of results. She also presents suggestions on what kinds of procedures can be used when a number of segments are defined. In relation to reliability and validity, she recommends that the grouping process is repeated several times and external validation is made by using methods such as discriminant analysis. Dolnicar (2002, p. 18) summarizes that the quality of segmentation

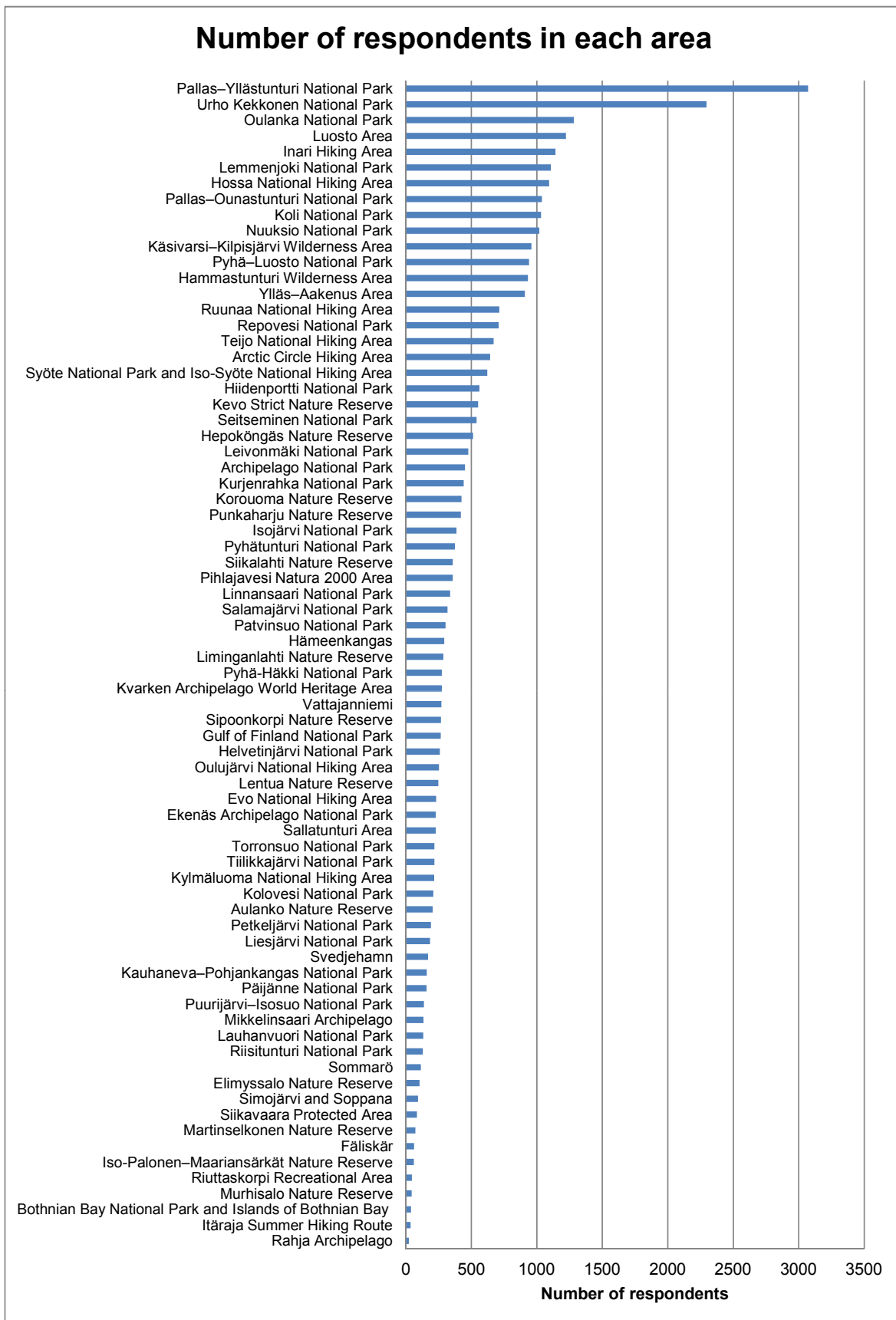


Figure 7. Areas where the research was carried out and the number of responses for each area.

studies would increase if the following points were considered:

1. the data format and the number of variables included should be chosen carefully (with regard to the sample size available);
2. data should not be automatically pre-processed;
3. the algorithm applied should be carefully chosen considering data size and the properties of different algorithms;
4. the measure of association used should reflect the data format available;
5. the whole process should be repeated several times in order to explore data structure and helping the evaluation of choice of the final cluster solution and stability of the solution chosen; and
6. the external validity of the results should be tested.

In this study, a K-Means cluster analysis was used to group respondents based on their responses on the motivation attributes. A cluster analysis seeks to identify homogeneous subgroups of cases in a population. It tries to find a set of groups which both minimize within-group variation and maximize between-group variation (Garson 2010). In a K-Means cluster analysis, cluster centers are defined. All observations are connected to the closest cluster centre and new more accurate value is calculated for the centre based on new observations. A K-Means cluster analysis is more suitable than a hierarchical cluster analysis when a large amount of data is analyzed (Metsämuuronen 2003, p. 725). For this reason, a K-Means cluster analysis is used in this study. The method is very well suited to forming customer segments since usually there is no advance information on the number of the segments. REP-scaled attributes were used as a basis to classify respondents who have similar motivations in groups. The K-Means Cluster Analysis was performed in SPSS (Version 17.0).

The 14 motivation factors were measured with a Likert-scale (5 = Very important...1 = Not important at all). These motivation attributes are driven from the Recreation Experience Preference scales (see Table 4 above). The tourist profiles were formed based on how tourists responded to these attributes. In this research, the attitude variables are seen as interval scaled components and the scale of opinions are seen uniformly pitched. This allows the analyzing of opinions as numbers; it also makes it possible to use statistical tests which use mean values (e.g. Dolnicar 2002).

The data are analyzed in three steps. First, a K-Means cluster analysis was carried out from 14 motivation factors. To avoid unwanted homogeneity within a case, “a magnitude was calculated indicating the individual relative magnitude per item in relation to the overall mean of all items of travel motivation per case.” (Boksberger & Laesser 2009, p. 314; see also Pesonen & Honkanen 2011). Following the recommendations of Dolnicar (2002), the data was not pre-processed. For example, the scales of all items were identical and thus the standardization was not necessary. Second, several discriminant analyses were carried out in order to test the cluster analyses’ discriminating characteristics. The final and optimal amount of clusters was determined based on graphical results (dendrogram) and the best discriminating result between the groups. Third, the differences between the segments were identified and the segments were compared by using Chi-square (χ^2) and ANOVA/Kruskall-Wallis tests when suitable.

4 Results

4.1 Profile of national park and protected area visitors

The profile of the whole sample was examined before segment formation. The total number of usable answers was 34,828. A little more than 50% of the respondents were male (Figure 8). The biggest age group was 45–54 years old; 28% of the respondents belonged into this age group (Figure 9). More than half of the respondents are over 44 years old.

Some 90% of the respondents were Finnish and the rest from abroad. The biggest foreign nationality groups were German (n = 713), Swedish (n = 186), and Dutch (n = 175).

Over 30% of the respondents had a college-level degree while 25% had master’s or higher university degree (Figure 10). The number of respondents who had no vocational training or professional qualification was rather high, which is partly explained by students belonging to this group.

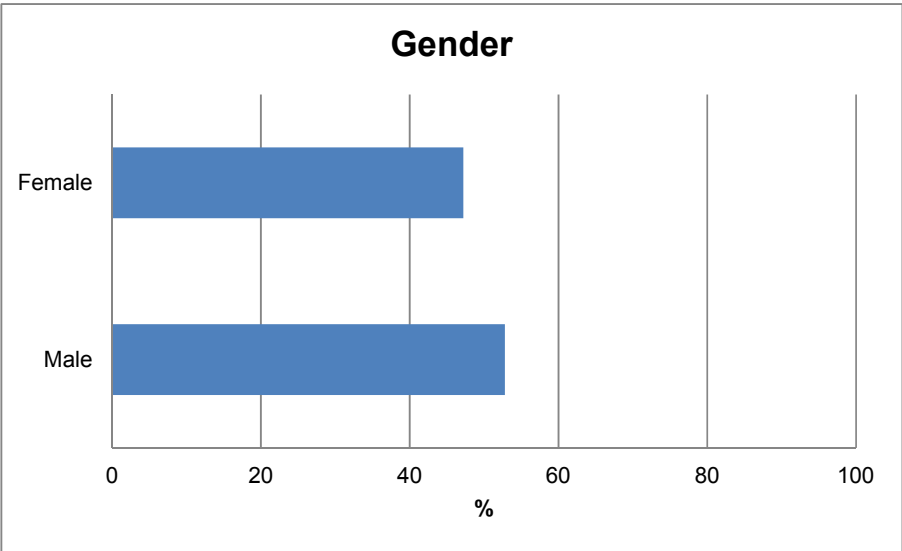


Figure 8. Gender of the respondents (n = 34,130).

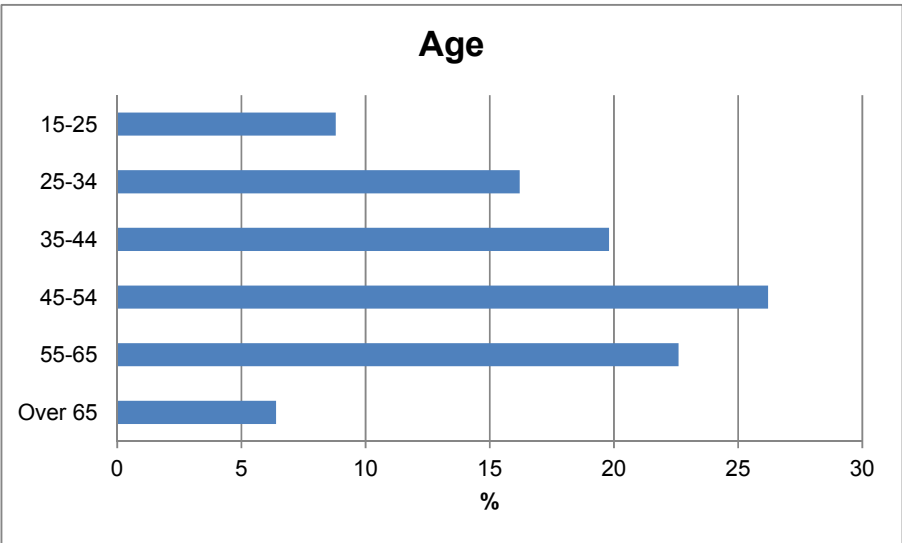


Figure 9. Age of the respondents (n = 33,791).

Figure 11 shows that the respondents mainly travelled with members of their own family (55%) followed by travelling with friends. The category 'others' includes travelling as or with business guests, senior citizens, clients of an enterprise offering organized activities or kindergarten children.

The respondents mainly obtained information about the protected area they visited from relatives, friends or acquaintances (Figure 12). In many cases, the area was already familiar to the respondents. Metsähallitus's Internet pages – www.luontoon.fi since 2004 (www.outdoors.fi

in English) and www.metsa.fi – were also a common source of information. Other information (see Figure 12) includes sources such as books, maps and outdoor signs.

A little over 30% of the respondents were first-time visitors to the area where they answered the survey; the rest had visited the area at least once before. The respondents were asked in some areas about their intention to recommend or revisit the area. Figure 13 shows that most respondents were very likely going to recommend or revisit the area.

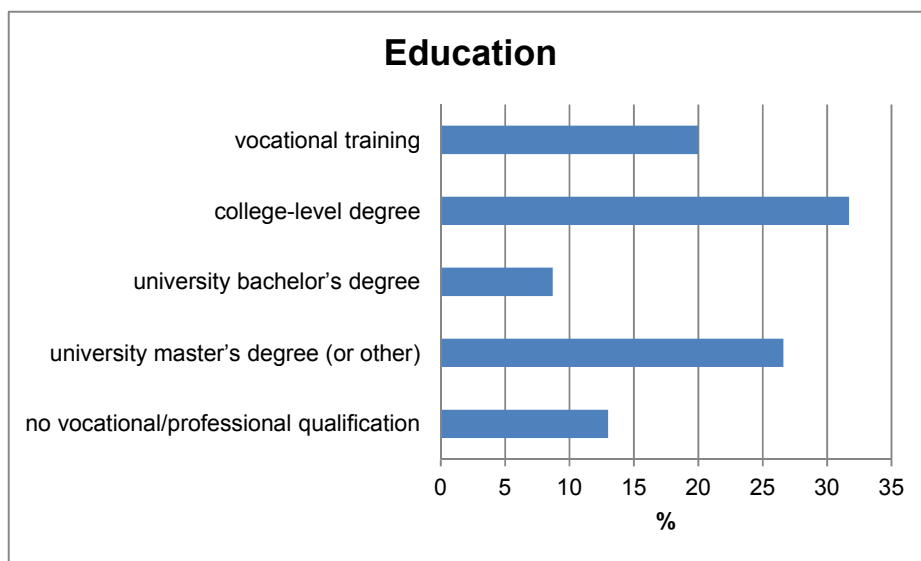


Figure 10. Respondents' education (n = 33,455).

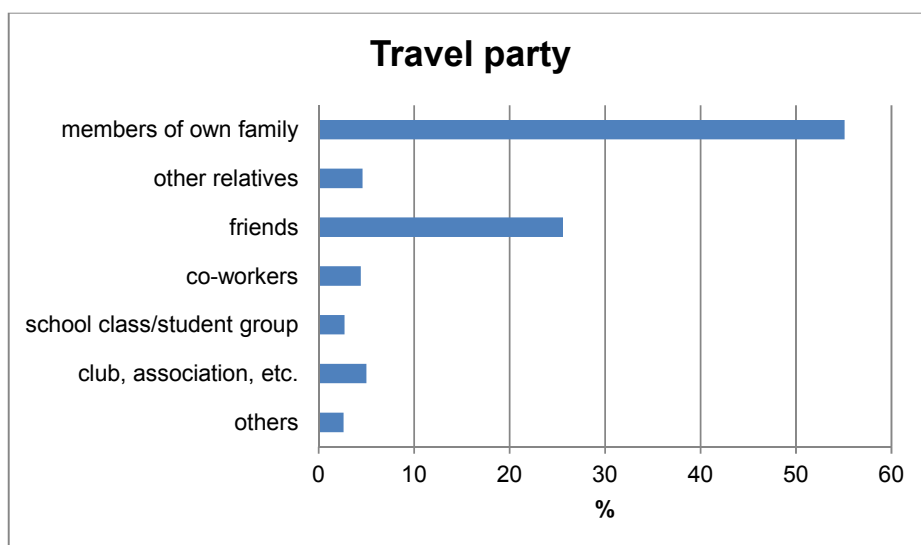


Figure 11. Respondents' travel companion(s) (n = 31,311).

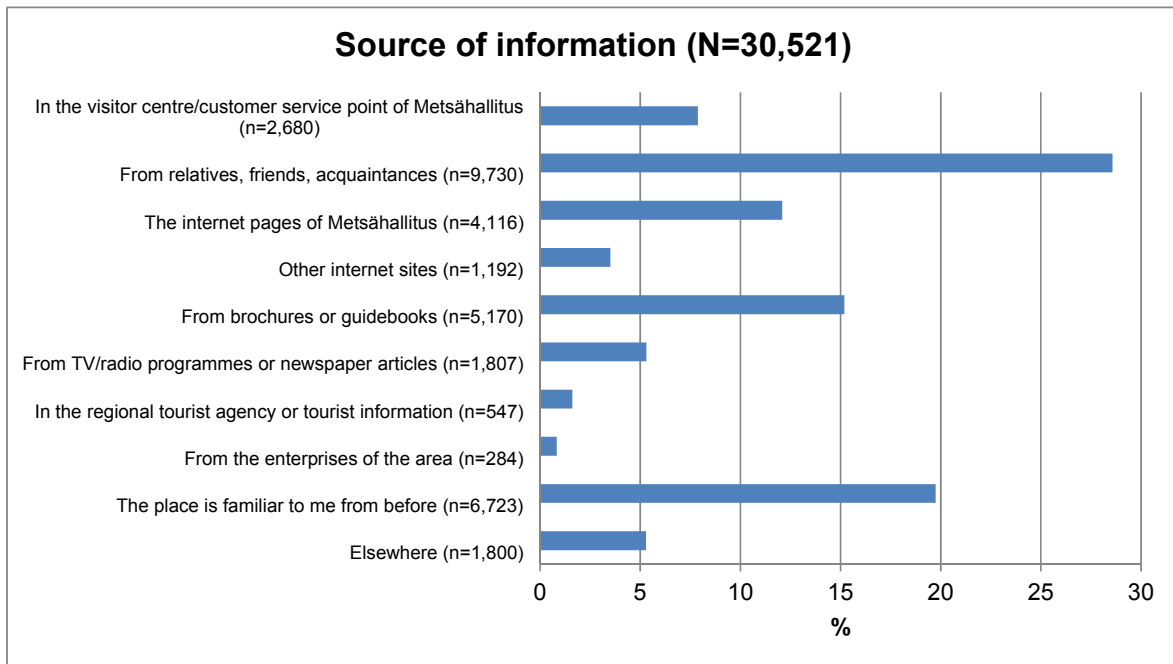


Figure 12. Source of information about the protected area (n = 34,049, total number of mentions). One respondent could choose more than one source of information (the question was not compulsory in all surveys).

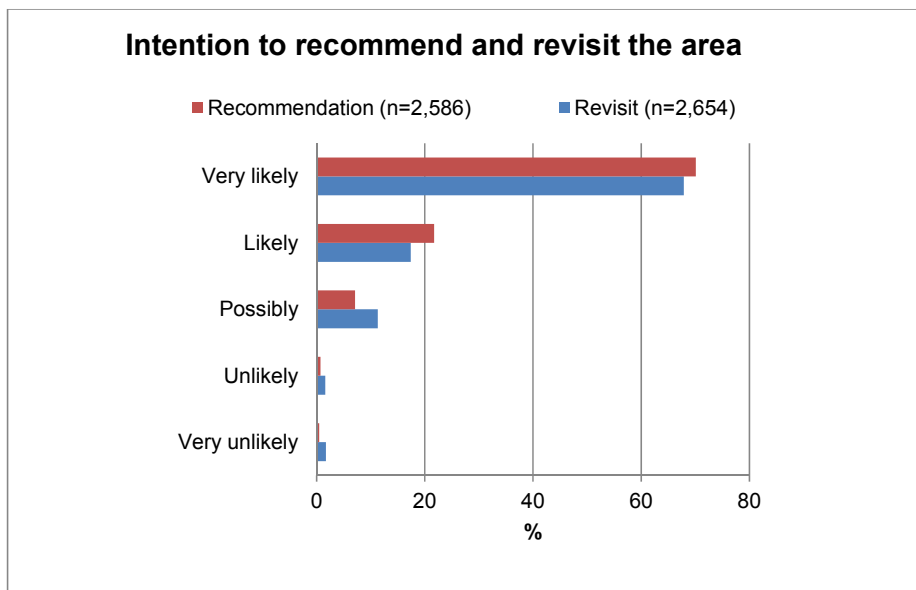


Figure 13. Intention to recommend and revisit the area.

4.2 Segmenting national park and protected area visitors by using a K-means cluster analysis

In total, 28,496 valid responses were used in the segmentation process (responses with missing values were excluded). A K-means cluster analysis was used to cluster respondents by travel motivations. Different cluster solutions were used to find the correct number of segments. Trials with two to seven clusters were carried out. The final cluster solution of four clusters was proven to be the most suitable based on the results of the cluster formation and preliminary discriminant analyses (Table 5).

A four-cluster solution was chosen (even though two and three cluster solutions also had a very high percent of correctly classified cases based on the discriminant analyses) since the aim was to find several different segments among the large number of respondents. By choosing more than two or three segments, it is possible to find more suitable segments for particular protected areas and for product and service categories. Future customers (or tourists/visitors) will be divided into smaller groups than previously and the segments will be more fragmented (Firat &

Shultz II 1997, 186). Hence, the four-cluster solution is better for the challenges of the future.

The biggest motivation-based segment is A (n=8,990; 31.5%; first column in Table 5). The members of this segment were the most willing to *meet new people* compared to the other segments. They were also motivated by *pleasant old memories*, *improving their skills* and *experiencing excitement*. However, no motivation had a clear dominant role for this segment. The members of the segment were also somewhat interested in nature experiences, scenery and relaxation. Based on these factors, the segment is named ***Social self-developers***.

Compared to other segments, members of segment B (n = 5,454; 19.1%; second column in Table 5) are predominantly motivated by *keeping fit*, *learning about nature*, *improving their skills* and *experiencing excitement*. Motivations such as *meeting new people* and *pleasant old memories* were less important for them. Hence, the segment was named ***Exercising nature explorers***.

The people who belong to segment C (n = 7,994; 28.1%; third column in Table 5) are predominantly motivated by *mental well-being*, *pleasant old memories* and *being on their own* compared to other segments. They are

Table 5. Cluster analysis results (n = 28,496). Bold = values higher than median per cluster; light green = the highest value across clusters.

Travel motivation	Clusters			
	A n=8,990	B n=5,454	C n=7,994	D n=6,058
Nature experiences	0.615	0.868	1.034	1.258
Scenery	0.636	0.832	0.985	1.247
Being on my own	-1.012	-0.962	0.085	-0.764
Mental well-being	0.235	0.312	0.774	0.766
Getting away from noise and pollution	0.287	0.452	0.851	0.900
Relaxation	0.517	0.554	0.916	1.092
Meeting new people	-0.681	-1.681	-2.049	-1.576
Being together with own group	0.475	-0.419	-0.071	0.923
Pleasant old memories	0.188	-1.179	0.219	-1.894
Getting to know the area	-0.032	0.409	-0.105	0.467
Learning about the nature	-0.188	0.373	-0.189	-0.126
Improving my own skills	-0.376	0.244	-0.751	-0.905
Keeping fit	-0.030	0.345	0.002	-0.119
Experiencing excitement	-0.636	-0.147	-1.701	-1.270

also motivated by nature experiences, scenery, relaxation, and getting away from noise and pollution. *Meeting new people* and *experiencing excitement* were less important for them. Hence, the segment was named ***Nostalgia appreciative seekers of mental well-being***.

Nature experiences, scenery, relaxation, being together with own group and *getting away from noise and pollution* motivate most members of segment D (n = 6,058; 21.3%; fourth column in Table 5). They are also interested in getting to know the area, but not in meeting new people or improving their skills. The segment is named ***Nature-oriented relaxation seekers***.

Results of the discriminant analysis show that the travel motivations *pleasant old memories*, *experiencing excitement* and *meeting new people* have most discrimination power between all clusters (in descending order). Altogether three discriminant functions were created. First function explains 49.4% of the variation (eigenvalue 1.588), second function 35.9% (eigenvalue 1.153) and third function 14.7 % (eigenvalue 0.472). The classification matrix shows that 93.3% of all cases are correctly classified.

4.3 Segment profiles and differences between segments

4.3.1 Geo-demographical characteristics and travel habits

The segment ***Social self-developers*** has 58.7% men and 41.3% women. Over half (50.7%) are 45–65 year olds. People in this group mainly have a college-level degree (31.4%). Members of the segment were the least educated compared to other segments, i.e. the number of respondents without a vocational/professional qualification was the highest. ***Exercising nature explorers*** has slightly more men (52%) than women. The biggest age groups are 45–54 (25.5%) followed by 35–44 year olds (20.3%). The people in this group have mainly college-level (32.4%) or master's degrees (26.1%).

Respondents belonging to ***Nostalgia appreciative seekers of mental well-being*** are equally distributed between men (50.8%) and women (49.2%). The biggest age groups are 45–54 and 55–65 year olds. Hence, this segment does not differ from the total sample considering the age. Members of the segment mainly have college-

level (33.3%) or master's degrees (29.7%). More women (53.5%) than men (46.5%) belong to the segment ***Nature-oriented relaxation seekers***. The segment has the most under 35 year olds compared to other segments (33.4%); however, the median age is 42 years. They mainly have master's (31.3%) or college-level degrees (29.8%). Compared to other segments, it also has the most respondents with a bachelor's degree. The χ^2 tests showed statistically significant differences ($p < 0.001$) between the segments concerning all measured demographical factors: gender, education and age.

Statistically significant differences between the segments were identified (χ^2 test $p < 0.001$) when the country of residence were examined. The segment ***Exercising nature explorers*** had most foreigners (11.3%) compared to other segments (Figure 14) while ***Nostalgia appreciative seekers of mental well-being*** had the biggest proportion of Finnish visitors (94.1%).

Table 6 presents the travelling companions of each segment. It shows that members of one's own family are the most common travel companions followed by friends. The χ^2 test showed statistically significant differences between the segments in relation to the travelling company ($p < 0.001$). ***Nostalgia appreciative seekers of mental well-being*** travelled mainly with their own family members (over 65%), while fewer than 50% of ***Social self-developers*** travelled with their family. The segments differed from each other also by size of their travel party (Table 6).

The segments obtained information about the area they visited from different information sources. The χ^2 tests also showed statistically significant differences between segments in relation to the source of information. The differences were found in the use of the following sources: visitor centre or Metsähallitus customer service point ($p < 0.05$); relatives, friends or acquaintances ($p < 0.001$); Metsähallitus Internet pages (www.luontoon.fi, i.e. in English www.outdoors.fi; www.metsa.fi) ($p < 0.001$); other Internet sites ($p < 0.001$); brochures or guidebooks (hiking guidebook etc.) ($p < 0.001$); TV/radio programmes or newspaper articles ($p < 0.001$); in the regional tourist agency or tourist information ($p < 0.01$); and it being a familiar place ($p < 0.001$).

Compared to other segments, *Social self-developers* used the Metsähallitus visitor centre or customer service point as source of information more than respondents belonging to other segments. *Exercising nature explorers* used the Metsähallitus Internet pages most (www.luontoon.fi, i.e. in English www.outdoors.fi; www.metsa.fi) as their information source. They also used brochures or guidebooks and TV/

radio programmes more than other segments. Compared to other segments, *Nostalgia appreciative seekers of mental well-being* mostly used their previous experiences since the place/area was familiar for many of them. *Nature-oriented relaxation seekers* got their information more often than other segments from relatives, friends or acquaintances, other Internet sites and from the regional tourist agency or tourist information.

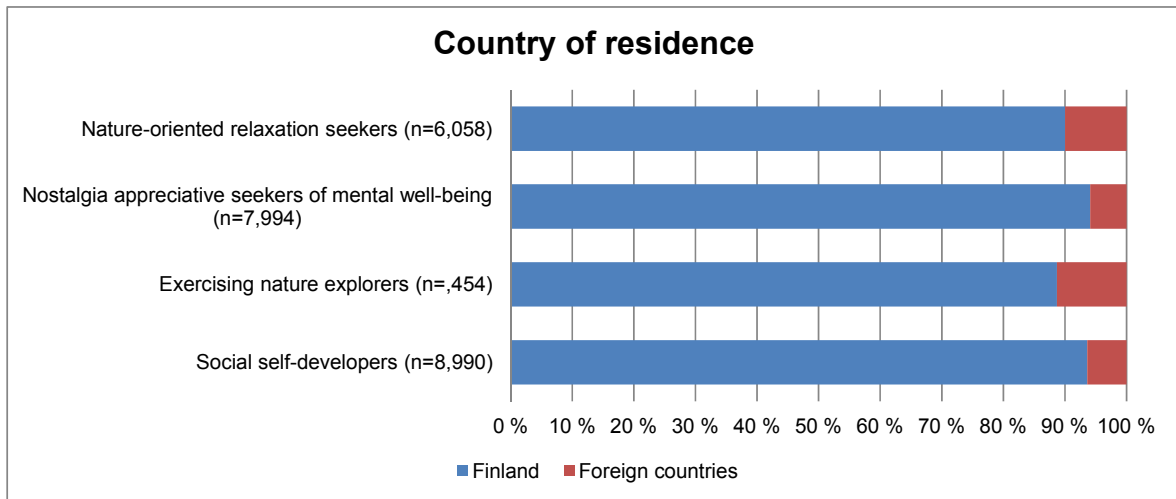


Figure 14. Country of residence.

Table 6. Travel companions by segment.

	Social self-developers	Exercising nature explorers	Nostalgia appreciative seekers of mental well-being	Nature-oriented relaxation seekers	χ^2	p
Travel company					927.9	< 0.001
Members of own family	49.8%	51.8%	66.4%	54.3%		
Other relatives	5.1%	3.6%	4.4%	5.2%		
Friends	26.5%	25.9%	22.5%	27.3%		
Co-workers	5.2%	4.8%	2.5%	4.8%		
School class	0.8%	1.1%	0.1%	0.7%		
Kindergarten children	0.1%	0.1%	0.1%	0.1%		
Student group	2.2%	4.5%	0.5%	1.7%		
Senior citizens	0.5%	0.3%	0.2%	0.4%		
Clients of an enterprise offering organised programmes of activities	0.3%	0.6%	0.2%	0.2%		
Club, association, etc.	7.1%	5.5%	2.5%	4.0%		
Others	2.3%	1.9%	0.8%	1.4%		
Size of travel party					632.0	< 0.001
2 or under	37.1%	43.8%	54.5%	42.6%		
3 to 4	31.4%	28.7%	28.6%	31.1%		
5 or over	31.5%	27.5%	16.9%	26.3%		

Over 65% of all respondents were repeat visitors in the area they were visiting. Statistically significant differences were also identified between the segments (χ^2 test $p < 0.001$). Over 80% of *Nostalgia appreciative seekers of mental well-being* were repeat visitors, while over 55% of *Nature-oriented relaxation seekers* were visiting the area for the first time.

4.3.2 Interests in diverse activities

All respondents were asked what they did or what they intended to do during their current visit in the area. It was a multiple-choice question so the respondents could check as many activities as they participated in. The survey had 20 standard activities that were asked in each area in the same way. In addition, each area could add a maximum ten area-specific activities as response alternatives to the question.

The respondents took part in diverse activities during their visits to the areas. The χ^2 tests showed statistically significant differences between the segments concerning all the activities presented in Tables 7 and 8. Table 7 gives the statistical differences between the segments

with regard to 19 standard activities. It should be noted, however, that even though there are statistically significant differences between the segments the differences as such are not necessarily very big.

Table 8 presents the differences in other activities – some are very area specific and thus the sample size is very small. Significant statistical differences were, however, identified between the segments in several activities.

A larger proportion of *Social self-developers* participated in fishing and Nordic walking compared to the other segments. Some other activities that the respondents were most actively participating in were boating, gold mining, rowing and snowmobiling. Some of the activities, including different kind of exercising (e.g. hiking and orienteering), were the most popular among *Exercising nature explorers*. The majority of this segment was also most interested in bird watching, nature photography, observing nature and studying plants compared to other segments. In addition, they were also the most interested in canoeing, hiking (staying overnight in the wilds), staying overnight in a hut or a cottage and getting to know nature trails.

Table 7. Differences between segments in participating (general) activities in national parks and protected areas. % = what percent of the segment participated in the particular activity during their visit to the protected area; n = the number of respondents who said that they are participating the mentioned activity.

Activity	Social self-developers	Exercising nature explorers	Nostalgia appreciative seekers of mental well-being	Nature-oriented relaxation seekers	χ^2	p
Biking (n=714)	2.6%	2.1%	2.9%	2.1%	12.7	p < 0.01
Bird watching (n=2,445)	7.1%	11.6%	9.1%	7.4%	98.1	p < 0.001
Education related visit (n=1,049)	4.0%	6.1%	2.1%	3.0%	161.7	p < 0.001
Fishing (n=2,957)	12.2%	10.1%	10.7%	7.5%	85.1	p < 0.001
Hiking (n=11,213)	35.8%	46.5%	37.7%	40.4%	174.5	p < 0.001
Hiking (overnight camping in the great outdoors) (n=3,248)	10.4%	15.2%	10.2%	11.0%	99.6	p < 0.001
Nature photographing (n=5,920)	17.5%	25.6%	18.9%	23.5%	175.6	p < 0.001
Nordic walking (n=2,003)	7.6%	7.0%	7.4%	5.7%	21.2	p < 0.001
Observing nature (n=14,580)	45.4%	57.3%	51.6%	53.6%	216.1	p < 0.001
Orienteering (n=1,019)	3.2%	5.6%	3.5%	2.3%	95.2	p < 0.001
Picking berries (n=2,326)	7.9%	8.3%	9.1%	7.2%	17.2	p < 0.01
Picking mushrooms (n=1,233)	3.8%	4.0%	5.6%	3.8%	41.0	p < 0.001
Picnicking (n=9,605)	32.3%	31.8%	34.2%	36.9%	45.6	p < 0.001
School camp (n=157)	0.7%	0.6%	0.4%	0.4%	13.7	p < 0.01
Scouting (n=330)	1.6%	1.6%	0.6%	0.8%	50.6	p < 0.001
Studying plants (n=1,568)	4.5%	7.5%	5.5%	5.1%	60.7	p < 0.001
Walking (n=16,808)	55.3%	59.3%	56.0%	68.0%	283.7	p < 0.001
Walking with a dog (n=1,534)	4.3%	5.0%	6.4%	6.0%	41.2	p < 0.001
Visiting nature centre (n=3,822)	13.3%	13.9%	12.4%	14.6%	15.9	p < 0.01

Table 8. Differences between segments in participating in additional activities asked. % = what percent of the segment participated in the particular activity during their visit to the protected area; n = the number of respondents who said that they are participating the mentioned activity.

Activity	Social self-developers	Exercising nature explorers	Nostalgia appreciative seekers of mental well-being	Nature-oriented relaxation seekers	χ^2	p
Boating (n=831)	4.3%	2.4%	2.9%	1.4%	114.9	p < 0.001
Boating (a motor boat) (n=408)	1.7%	0.6%	1.5%	1.7%	32.0	p < 0.001
Canoeing (n=873)	2.5%	4.3%	2.5%	3.6%	52.6	p < 0.001
Cross-country skiing (n=4,565)	18.5%	12.3%	21.2%	8.9%	489.7	p < 0.001
Downhill skiing (n=927)	4.0%	2.6%	4.0%	1.8%	79.8	p < 0.001
Enjoying nature (n=2,072)	6.2%	5.6%	7.4%	10.2%	114.5	p < 0.001
Getting to know a World Heritage Site (n=77)	0.2%	0.3%	0.1%	0.6%	31.6	p < 0.001
Getting to know amethyst mine (n=158)	0.5%	0.6%	0.4%	0.7%	8.0	p < 0.05
Getting to know cultural heritage (n=1,820)	5.7%	7.0%	5.4%	8.1%	51.6	p < 0.001
Getting to know guiding stands (n=131)	0.3%	0.5%	0.4%	0.7%	10.1	p < 0.05
Getting to know history (n=360)	1.2%	1.3%	0.9%	1.8%	23.1	p < 0.001
Getting to know nature trails (n=3,491)	10.8%	15.3%	11.0%	13.3%	81.9	p < 0.001
Gold mining (n=373)	2.1%	1.2%	1.3%	0.2%	102.4	p < 0.001
Guided tour (n=260)	0.8%	1.4%	0.4%	1.3%	48.0	p < 0.001
Hiking (staying overnight in nature) (n=2,514)	7.8%	12.7%	8.9%	6.8%	142.3	p < 0.001
Hunting (n=109)	0.5%	0.4%	0.4%	0.2%	8.3	p < 0.05
Nature painting/graphing (n=353)	1.2%	1.6%	1.3%	0.9%	10.5	p < 0.05
Observing Saimaa seal (n=96)	0.4%	0.1%	0.4%	0.4%	9.4	p < 0.05
Overnighting in a hut/cottage (n=1,199)	3.6%	6.0%	4.9%	2.5%	107.8	p < 0.001
Rafting (n=270)	1.2%	1.4%	0.4%	1.0%	43.4	p < 0.001
Rock climbing (n=84)	0.4%	0.6%	0.1%	0.1%	30.9	p < 0.001
Rowing (n=411)	1.9%	1.5%	1.1%	1.2%	24.8	p < 0.001
Sailing (n=242)	0.9%	0.3%	1.0%	1.1%	21.4	p < 0.001
Sightseeing (natural sights) (n=676)	1.9%	2.1%	2.5%	3.1%	23.5	p < 0.001
Snowmobiling (n=285)	1.5%	1.0%	0.8%	0.7%	25.9	p < 0.001
Snowshoeing (n=268)	1.0%	1.0%	1.0%	0.6%	9.9	p < 0.05
Staying in a cottage (n=273)	1.0%	0.6%	0.8%	1.3%	14.9	p < 0.01
Sun bathing (n=541)	2.0%	0.7%	2.6%	2.0%	62.7	p < 0.001
Swimming (n=2,362)	7.9%	6.6%	9.1%	9.2%	35.9	p < 0.001
Taking part to organized event (n=60)	0.4%	0.1%	0.1%	0.2%	13.8	p < 0.01
Viewing the scenery (n=2,297)	7.4%	6.7%	7.5%	11.0%	94.5	p < 0.001
Visiting a museum (n=75)	0.2%	0.2%	0.2%	0.2%	8.2	p < 0.05
Work/research (n=90)	0.3%	0.6%	0.1%	0.2%	27.9	p < 0.001

Nostalgia appreciative seekers of mental well-being were most interested in activities such as picking berries and mushrooms, and walking with a dog. Compared to the proportion of members of other segments doing diverse activities, the *Nostalgia appreciative seekers of mental well-being* were most interested in cross-country skiing and sun bathing. *Nature-oriented relaxation seekers* went picnicking and walking more actively than respondents belonging to other

segments. They were also the most interested in visiting nature centers. Other activities included enjoying nature, getting to know cultural heritage and history, swimming and viewing the scenery.

The respondents were also asked to indicate the single most important activity during their visit. It is clear that respondents mostly value similar activities – hiking, walking, cross-country skiing, picnicking, and observing and enjoying

Table 9. The ten most important activities of each segment in order of popularity.

	Social self-developers (n=4,069)	Exercising nature explorers (n=2,217)	Nostalgia appreciative seekers of mental well-being (n=3,894)	Nature-oriented relaxation seekers (n=3,486)
1.	hiking (n=569)	hiking (n=438)	cross-country skiing (n=656)	hiking (n=601)
2.	cross-country skiing (n=445)	observing nature (n=293)	hiking (n=546)	observing nature (n=517)
3.	observing nature (n=427)	walking (n=255)	observing nature (n=463)	walking (n=457)
4.	walking (n=417)	cross-country skiing (n=188)	walking (n=400)	picnicking (n=254)
5.	picnicking (n=258)	hiking (overnight camping in the great outdoors) (n=138)	enjoying nature (n=235)	enjoying nature (n=243)
6.	fishing (n=189)	enjoying nature (n=78)	picnicking (n=216)	cross-country skiing (n=205)
7.	enjoying nature (n=169)	picnicking (n=78)	hiking (overnight camping in the great outdoors) (n=132)	viewing the scenery (n=168)
8.	viewing the scenery (n=121)	fishing (n=76)	fishing (n=129)	hiking (overnight camping in the great outdoors) (n=114)
9.	hiking (overnight camping in the great outdoors) (n=116)	nature photographing (n=61)	viewing the scenery (n=111)	canoeing (n=70)
10.	picking berries (n=79)	canoeing (n=48)	picking berries (n=94)	nature photographing (n=66)

nature. These activities were in the top five for all the segments but with slightly different rankings. *Nostalgia appreciative seekers of mental wellbeing* differed from the other segments by having cross-country skiing as the most important activity – the others had hiking. Table 9 lists the top ten activities of the segments in order of popularity. It can be seen from the table that the bottom five activities differ more. Popular activities among the all respondents are fishing, viewing the scenery and hiking including overnight camping in the great outdoors. *Exercising nature explorers* and *Nature-oriented relaxation seekers* also had nature photography and canoeing in their top ten lists while *Social self-developers* and *Nostalgia appreciative seekers of mental well-being* had picking berries.

4.3.3 Visiting different protected areas

Most respondents visited national parks (Figure 15). The other areas visited were nature reserves, hiking areas and others (e.g. wilderness areas, cultural places, hiking routes).

There were statistically significant differences among the segments in relation to the areas they visited (χ^2 test: $p < 0.001$). *Nostalgia appreciative seekers of mental well-being* visited the most national parks compared to other segments. When visitors of the nature reserves are examined, it can be seen that the *Nature-oriented relaxation seekers* and *Exercising nature explorers* are the biggest groups visiting these areas. *Social*

self-developers visited the most hiking and other areas.

There were also statistically significant differences between the segments when individual areas were examined (χ^2 test: national parks $p < 0.001$; nature reserves $p < 0.001$; hiking areas $p < 0.001$; and other areas/places $p < 0.001$). It can be noted that in some areas, particular motivation segments are more dominant. Table 10 presents the distribution of segment members in different national parks. *Social self-developers* is the biggest group in twelve areas, being most dominant in the Bothnian Bay National Park and the Islands of Bothnian Bay, the Päijänne National Park and the Lemmenjoki National Park. Moreover, it can be noted that this segment is the biggest in six out of ten areas located near a holiday resort. *Exercising nature explorers* is the biggest group in only two national parks, the Puurijärvi–Isosuo National Park and the Kolovesi National Park. In addition, the group is the biggest together with *Nostalgia appreciative seekers of mental well-being* in the Riisitunturi National Park. *Nostalgia appreciative seekers of mental well-being* is the dominant group in ten national parks, being the most dominant in the Torronsuo and Kauhaneva–Pohjankangas National Parks, in the Syöte National Park and in the Iso-Syöte National Hiking Area. The group was the biggest together with *Nature-oriented relaxation seekers* in the Petkeljärvi National Park. *Nature-oriented relaxation seekers* is the largest group in nine parks. They are the most dominant in the

Table 10. Distribution of segment members in national parks. National parks are classified into four categories based on the population density and location in relation to tourism centers. Light green = the biggest group in the area across clusters.

National park ^a	Social self-developers	Exercising nature explorers	Nostalgia appreciative seekers of mental well-being	Nature-oriented relaxation seekers
National parks located in the capital region (>500 people/km²)				
Nuuskio National Park (n=869)	22.8%	17.5%	32.3%	27.4%
National parks located in densely populated areas (6-500 people/km²)				
Archipelago National Park (n=414)	26.3%	14.0%	36.0%	23.7%
Bothnian Bay National Park and Islands of Bothnian Bay (n=38)	63.2%	2.6%	18.4%	15.8%
Ekenäs Archipelago National Park (n=173)	27.2%	9.8%	23.7%	39.3%
Gulf of Finland National Park (n=207)	30.0%	15.9%	20.8%	33.3%
Helvetinjärvi National Park (n=224)	21.4%	22.3%	17.0%	39.3%
Kauhaneva-Pohjankangas National Park (n=160)	30.6%	15.0%	38.1%	16.3%
Kolovesi National Park (n=186)	16.1%	31.2%	27.4%	25.3%
Kurjenrahka National Park (n=389)	22.9%	16.2%	32.4%	28.5%
Lauhanvuori National Park (n=128)	32.8%	15.6%	25.8%	25.8%
Leivonmäki National Park (n=395)	18.2%	20.5%	27.1%	34.2%
Liesjärvi National Park (n=157)	26.8%	17.2%	30.6%	25.5%
Linnansaari National Park (n=277)	33.2%	13.4%	22.0%	31.4%
Puurijärvi-Isosuo National Park (n=136)	27.9%	44.9%	23.5%	3.7%
Pyhä-Häkki National Park (n=217)	16.6%	24.4%	24.9%	34.1%
Päijänne National Park (n=107)	53.3%	3.7%	24.3%	18.7%
Repovesi National Park (n=596)	30.2%	24.7%	21.5%	23.7%
Seitseminen National Park (n=447)	27.7%	16.6%	25.7%	30.0%
Torransuo National Park (n=181)	23.2%	17.1%	42.5%	17.1%
National parks located in rural areas (<5 people/km²)				
Hiidenportti National Park (n=502)	24.9%	23.3%	16.3%	35.5%
Lemmenjoki National Park (n=885)	46.3%	19.2%	32.0%	2.5%
Patvinsuo National Park (n=228)	25.9%	16.7%	28.5%	28.9%
Petkeljärvi National Park (n=161)	21.1%	18.0%	30.4%	30.4%
Tiilikajärvi National Park (n=170)	32.4%	14.7%	32.4%	20.6%
National parks located near tourist centres (shared customers)				
Koli National Park (n=796)	31.2%	13.8%	19.1%	35.9%
Luosto Area (n=1,091) ^b	39.8%	15.9%	28.0%	16.4%
Oulanka National Park (n=1,170)	29.2%	27.6%	19.4%	23.8%
Pallas-Ounastunturi National Park (n=859) ^c	31.2%	23.3%	33.1%	12.5%
Pallas-Yllästunturi National Park (n=2,412)	33.0%	15.4%	35.2%	16.4%
Pyhä-Luosto National Park (n=691)	35.0%	15.2%	25.0%	24.7%
Pyhätunturi National Park (n=332) ^d	31.0%	23.8%	27.7%	17.5%
Riisitunturi National Park (n=106)	27.4%	30.2%	30.2%	12.3%
Syöte National Park and Iso-Syöte National Hiking Area (n=576)	31.6%	15.1%	36.6%	16.7%
Urho Kekkonen National Park (n=1,970)	34.4%	20.7%	30.5%	14.4%
Ylläs-Aakenus Area (n=803) ^e	37.2%	17.3%	34.2%	11.2%

a) The data of Isojärvi and Salamajärvi National Parks did not allow for area specific segmentation and therefore these two parks are not shown in this table.

b) The Luosto Area has never been a national park itself, but became part of the Pyhä-Luosto National Park in 2005.

c) The Pallas-Ounastunturi National Park became part of a new Pallas-Yllästunturi National Park in 2005.

d) The Pyhätunturi National Park became part of a new Pyhä-Luosto National Park in 2005.

e) The Ylläs-Aakenus Area has never been a national park itself, but became part of a new Pallas-Yllästunturi National Park in 2005.

Helvetinjärvi National Park, the Ekenäs Archipelago National Park and the Koli National Park.

Social self-developers is the biggest segment in almost all the hiking areas (Table 11), excluding the Arctic Circle Hiking Area and the Hossa National Hiking Area. *Nature-oriented relaxation seekers* was the biggest group in the Arctic Circle Hiking Area (however, the share was very close to the share of *Social self-developers*) and *Nostalgia appreciative seekers of mental well-being* in the Hossa National Hiking Area.

Table 12 presents the distribution of segments in nature reserves. *Social self-developers* is the biggest group in two nature reserves: Lentua and Liminganlahti. *Exercising nature explorers* is

the biggest group in three nature reserves – the Kevo Strict Nature Reserve, the Siikalahti Nature Reserve and the Korouoma Nature Reserve. The Sipoonkorpi, Aulanko, Elimyssalo, Martinselkonen and Murhisalo nature reserves, as well as the Siikavaara Protected Area are dominated by *Nostalgia appreciative seekers of mental well-being*. *Nature-oriented relaxation seekers* are the dominant segment in three nature reserves.

Social self-developers dominated the biggest proportion of other areas compared to other segments (Table 13). They are the biggest group in the Fäliskär, Hämeenkangas and Käsivarsi-Kilpisjärvi Wilderness areas; Mikkeliinsaari Archipelago; the Pihlajavesi Natura 2000 Area;

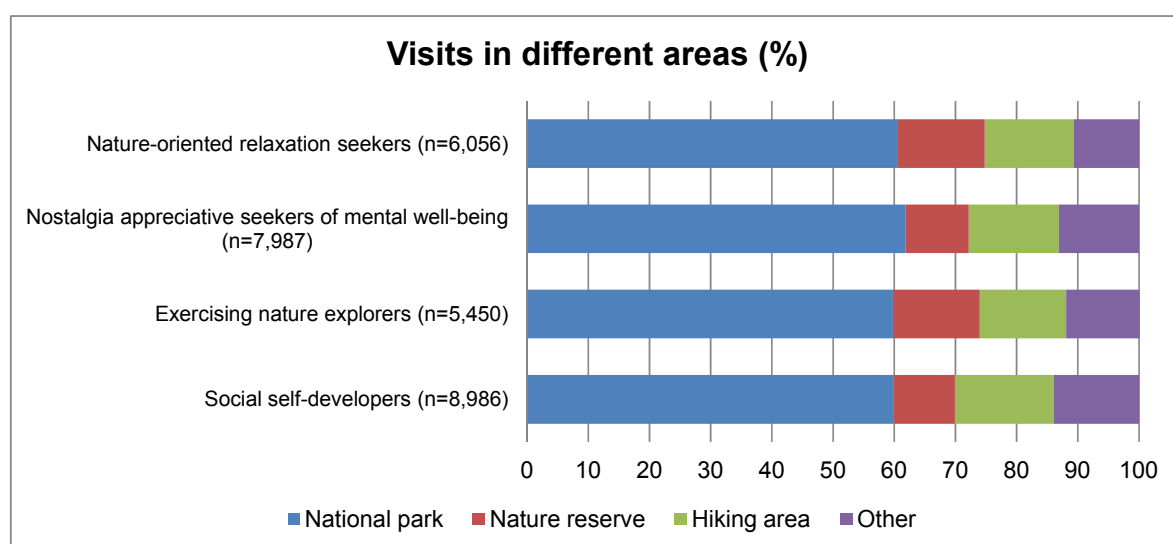


Figure 15. Distribution of segment members based on the area they visited.

Table 11. Distribution of segment members in hiking areas. Light green = the biggest group in the area across clusters.

Hiking area	Social self-developers	Exercising nature explorers	Nostalgia appreciative seekers of mental well-being	Nature-oriented relaxation seekers
Hiking areas located in densely populated areas (6-500 people/km²)				
Evo National Hiking Area (n=215)	38.6%	14.9%	19.1%	27.4%
Arctic Circle Hiking Area (n=546)	28.6%	19.0%	23.4%	28.9%
Teijo National Hiking Area (n=549)	37.0%	12.0%	29.0%	22.0%
Hiking areas located in rural areas (<5 people/km²)				
Hossa National Hiking Area (n=990)	32.4%	17.5%	33.7%	16.4%
Inari Hiking Area (n=971)	32.5%	20.7%	28.3%	18.4%
Kylmäluoma National Hiking Area (n=191)	45.0%	15.7%	27.2%	12.0%
Oulujärvi National Hiking Area (n=246)	40.2%	13.0%	35.0%	11.8%
Ruunaa National Hiking Area (n=567)	34.2%	22.6%	17.5%	25.7%

N.B. As the Iso-Syöte National Hiking Area study was carried out jointly with the Syöte National Park, its results are in the national parks' table.

the Sallatunturi Area; and the Simojärvi and Soppana areas. *Exercising nature explorers* are only dominant in the Hammastunturi Wilderness

Area. *Nature oriented relaxation seekers* were the biggest group in three and *Nostalgia appreciative seekers of mental well-being* in two locations.

Table 12. Distribution of segment members in nature reserves. Light green = the biggest group in the area across clusters.

Nature Reserve	Social self-developers	Exercising nature explorers	Nostalgia appreciative seekers of mental well-being	Nature-oriented relaxation seekers
Nature reserves located in the capital region (>500 people/km²)				
Sipoonkorpi Nature Reserve (n=214)	19.2%	16.4%	45.8%	18.7%
Nature reserves located in densely populated areas (6-500 people/km²)				
Aulanko Nature Reserve (n=180)	30.0%	10.0%	35.6%	24.4%
Liminganlahti Nature Reserve (n=225)	32.9%	21.8%	16.4%	28.9%
Punkaharju Nature Reserve (n=322)	28.6%	11.5%	28.3%	31.7%
Siikalahti Nature Reserve (n=307)	31.6%	35.5%	18.9%	14.0%
Nature reserves located in rural areas (<5 people/km²)				
Elimyssalo Nature Reserve (n=92)	22.8%	23.9%	33.7%	19.6%
Iso-Palonen–Maariansärkät Nature Reserve (n=53)	24.5%	15.1%	26.4%	34.0%
Hepoköngäs Nature Reserve (n=485)	28.0%	16.3%	23.3%	32.4%
Kevo Strict Nature Reserve (n=470)	16.0%	42.6%	18.1%	23.9%
Korouoma Nature Reserve (n=394)	26.1%	33.8%	16.2%	23.9%
Lentua Nature Reserve (n=211)	34.1%	12.3%	31.3%	22.3%
Martinselkonen Nature Reserve (n=57)	21.1%	17.5%	35.1%	26.3%
Murhisalo Nature Reserve (n=38)	28.9%	23.7%	34.2%	13.2%
Siikavaara Protected Area (n=66)	31.8%	13.6%	33.3%	21.2%

Table 13. Distribution of segment members in other areas. Light green = the biggest group in the area across clusters.

Other	Social self-developers	Exercising nature explorers	Nostalgia appreciative seekers of mental well-being	Nature-oriented relaxation seekers
Other areas/hiking routes/places located in densely populated areas (6-500 people/km²)				
Fäliskär (n=48)	39.6%	18.8%	10.4%	31.3%
Hämeen kangas (n=223)	42.2%	17.0%	28.3%	12.6%
Kvarken Archipelago World Heritage Area (n=243)	30.9%	11.5%	21.0%	36.6%
Mikkelinsaari Archipelago (n=107)	48.6%	9.3%	11.2%	30.8%
Pihlajavesi Natura 2000 Area (n=198)	36.4%	8.6%	30.3%	24.7%
Sommarö (n=94)	20.2%	5.3%	19.1%	55.3%
Svedjehamn (n=121)	35.5%	15.7%	9.9%	38.8%
Vattajanniemi (n=223)	28.3%	3.6%	55.2%	13.0%
Other areas/hiking routes/places located in rural areas (<5 people/km²)				
Itäraja Summer Hiking Route (n=34)	23.5%	17.6%	47.1%	11.8%
Hammastunturi Wilderness Area (n=776)	20.5%	29.4%	21.9%	15.3%
Käsivarsi-Kilpisjärvi Wilderness Area (n=679)	30.5%	23.4%	21.4%	24.7%
Sallatunturi Area (n=202)	33.7%	22.3%	32.7%	11.4%
Simojärvi and Soppana Area (n=76)	60.5%	5.3%	22.4%	11.8%

4.3.4 Satisfaction of services in the protected areas and intentions to recommend and revisit the area

The respondents were, in general, rather satisfied with the services and infrastructure of the protected areas. The five services or 'things' that satisfied the respondents most were variability of landscapes, general cleanliness, firewood in cabins and at maintained campfire places, parking places, and campfire sites and lean-tos (Table 14). The satisfaction was measured by using a scale where 1 = Very poor and 5 = Very good.

The Kruskal-Wallis tests showed that there are statistically significant differences between the segments concerning the assessment of quality of services and infrastructure. The test showed significant differences related to parking places ($p < 0.001$); road network ($p < 0.05$); trail and/or skiing track network ($p < 0.001$); signposts on the routes ($p < 0.05$); campfire sites and lean-tos ($p < 0.001$); firewood in cabins and at maintained campfire places ($p < 0.001$); public latrines ($p < 0.001$); realization and guidance of the waste disposal ($p < 0.01$); safety of the routes and structures ($p < 0.001$); general safety ($p < 0.001$); general cleanliness ($p < 0.001$); and the variability of landscapes ($p < 0.001$). Figure 16 illustrates how the respondents belonging to

each segment rated their satisfaction concerning different services and infrastructure (mean values).

The respondents were also asked to state if the amount/quantity of the services and infrastructure is adequate for them on a scale of 1 (Too few), 2 (Suitable) and 3 (Too much). The χ^2 tests showed statistically significant differences between the segments concerning the quantity of some services or infrastructure. The differences were related to parking places ($p < 0.01$); signposts on the routes ($p < 0.05$); trail and/or skiing track network ($p < 0.01$); signposts at the trails and/or skiing tracks ($p < 0.05$); campfire sites and lean-tos ($p < 0.05$); firewood in cabins and at maintained campfire places ($p < 0.05$); public latrines ($p < 0.001$); and paying attention to special needs (accessibility of routes, safety, signposts/information boards etc.) ($p < 0.05$). There were no statistically significant differences concerning the realization and guidance of waste disposal and services provided by enterprises such as cafes and organized activities. On many occasions, respondents belonging to the *Nostalgia appreciative seekers of mental well-being* segment were the most critical concerning the amount of services and infrastructure; for instance, they wanted more campfire sites and lean-tos with firewood.

Table 14. Satisfaction of the services and infrastructure in protected areas (all respondents). Mean: 1 = very poor... ..5 = very good.

Service or infrastructure	Mean	Standard deviation
Variability of landscapes (n=32,198)	4.46	0.73
General cleanliness (n=32,853)	4.26	0.75
Firewood in cabins and at maintained campfire places (n=23,498)	4.21	0.91
Parking places (n=27,618)	4.17	0.87
Campfire sites and lean-tos (n=25,523)	4.16	0.85
Trail and/or skiing track network (n=28,367)	4.15	0.82
General safety (n=31,023)	4.12	0.78
Signposts at the trails and/or skiing tracks (n=27,521)	4.01	0.93
Signposts on the routes (n=30,951)	3.97	0.93
Safety of the routes and structures (n=15,467)	3.90	0.81
Public latrines (n=24,469)	3.82	1.02
Realization and guidance of the waste disposal (n=23,639)	3.80	1.01
Road network (n=29,422)	3.77	0.96
Paying attention to special needs (accessibility of routes, safety, signposts/information boards etc.) (n=12,179)	3.66	0.90
Services provided by enterprises (for example cafes and organised activities) (n=8,411)	3.62	1.01

Quality of services in protected areas

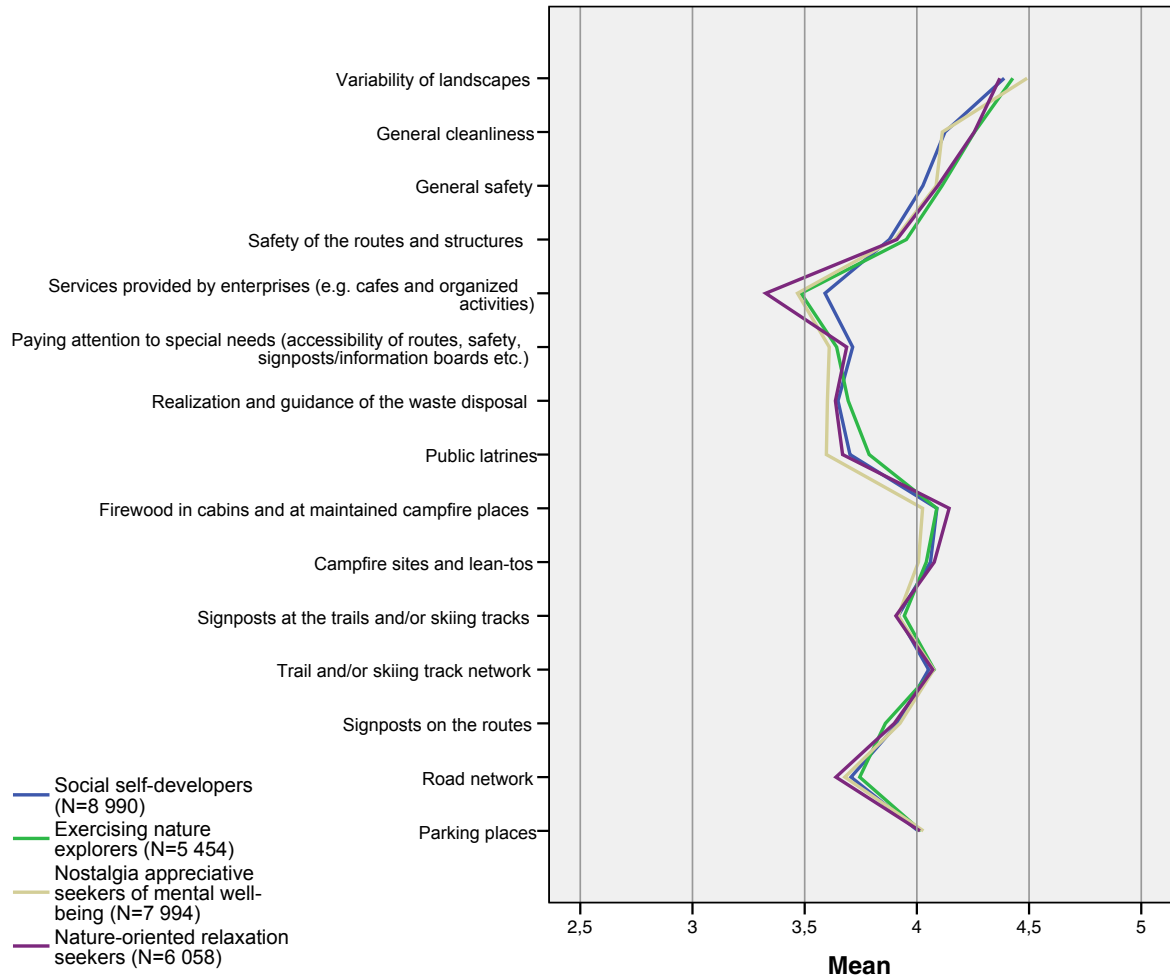


Figure 16. Respondents' evaluation of the quality of services in protected areas (1 = very poor... 5 = very good) by segment.

The respondents were also asked to state their satisfaction concerning the quantity of services and available infrastructure in general. Satisfaction was measured by using a scale from 1 (Very unsatisfied) to 5 (Very satisfied). In general, all respondents were rather satisfied, the mean being little over 4. However, the Kruskal-Wallis test showed that there were statistically significant differences between the segments in overall satisfaction ($p < 0.001$). Members of *Exercising nature explorers* and *Nostalgia appreciative seekers of mental wellbeing* were the most satisfied compared to other segments.

The respondents' expectations related to natural environment, opportunities for outdoor activities, and routes and facilities were fulfilled rather well, the mean being more than 4 across all segments (measured on a scale of 1 (Very poor) to 5 (Very well)). However, statistically significant differences were also found related to

all three items (Kruskal-Wallis tests: $p < 0.001$ in natural environment and opportunities for outdoor activities, and in routes and facilities). Compared to other segments, members of *Nostalgia appreciative seekers of mental well-being* expectations were fulfilled the best concerning natural environment and opportunities for outdoor activities. *Nostalgia appreciative seekers of mental well-being* together with *Exercising nature explorers* were the most satisfied (i.e. their expectations were met) with routes and facilities in the areas they visited.

Statistically significant differences were found between the segments in their intention to revisit (Kruskal-Wallis: $p < 0.001$) and recommend the area to others (Kruskal-Wallis: $p < 0.001$). Intentions were measured by using a five-point Likert scale: 1 = Very unlikely to 5 = Very likely. *Nostalgia appreciative seekers of mental well-being* were most likely going to revisit and recommend the area compared to other segments.

4.3.5 Spending

The respondents were asked to estimate their spending in the protected area and its surroundings. They were also asked if the estimation of spending is their personal expenses or expenses of their travel party. Statistically significant differences were identified between members of diverse segments in their overall spending both when individual spending ($p < 0.001$) and spending of travel party ($p < 0.01$) were studied. Table 15 shows that only respondents belonging to *Nostalgia appreciative seekers of mental well-being* and *Social self-developers* estimated that the spending of their travel party was smaller than when estimating their individual spending. *Social self-developers* estimate their individual costs and *Exercising nature explorers* the costs of their travel party highest compared to the other segments.

4.3.6 Changes in visitor segments over the years

The number of respondents belonging into diverse segments has altered year by year. The χ^2 test also showed statistically significant differences ($p < 0.001$) in the number of respondents belonging to the four segments during the years 2000–2010. Figure 17 shows the yearly development in respondent numbers by each segment while Figure 18 presents the share of each segment on an annual basis. The differences are partly due to the fact that the data are collected in diverse areas in different years and, as Chapter 4.3.4 has shown, there were statistically significant differences in segments in diverse areas.

When the periods 2000–2005 and 2006–2010 are compared, it can be seen that the share

of *Exercising nature explorers* has diminished in the latter period and the total share of *Nostalgia appreciative seekers of mental well-being* and *Nature-oriented relaxation seekers* has increased.

The areas in which the data were collected more than once were then examined in more detail to determine the division of respondents in each segment in individual areas over time. Data were collected more than once in 13 areas: the Inari Hiking Area; the Hossa National Hiking Area; the Nuuksio National Park; the Oulanka National Park; the Archipelago National Park; the Syöte National Park and Iso-Syöte National Hiking Area; the Teijo National Hiking Area; the Urho Kekkonen National Park; the Leivonmäki National Park; the Ruunaa National Hiking Area; the Arctic Circle Hiking Area; the Repovesi National Park; and the Kurjenrahka National Park. Statistically significant differences were found regarding the distributions of the segments in different years in many of the areas. The areas where no statistically significant differences were found were the Inari Hiking Area, the Syöte National Park and Iso-Syöte National Hiking Area, the Leivonmäki National Park and the Kurjenrahka National Park. Figures 19–27 present the share of segments for those years when the data were collected in the areas that had statistically significant differences between the segment distributions.

From these results of individual areas, it can be seen that the share of *Nature-oriented relaxation seekers* has increased, in particular, during the last years. The differences in the shares of segments might also be partly due to the changes in visitors' motivations over the years.

Table 15. Spending in protected areas and their surroundings.

	Personal spending EUR mean	Spending of the travel party EUR mean
Social self-developers	362	252
Exercising nature explorers	298	468
Nostalgia appreciative seekers of mental well-being	349	281
Nature-oriented relaxation seekers	260	271

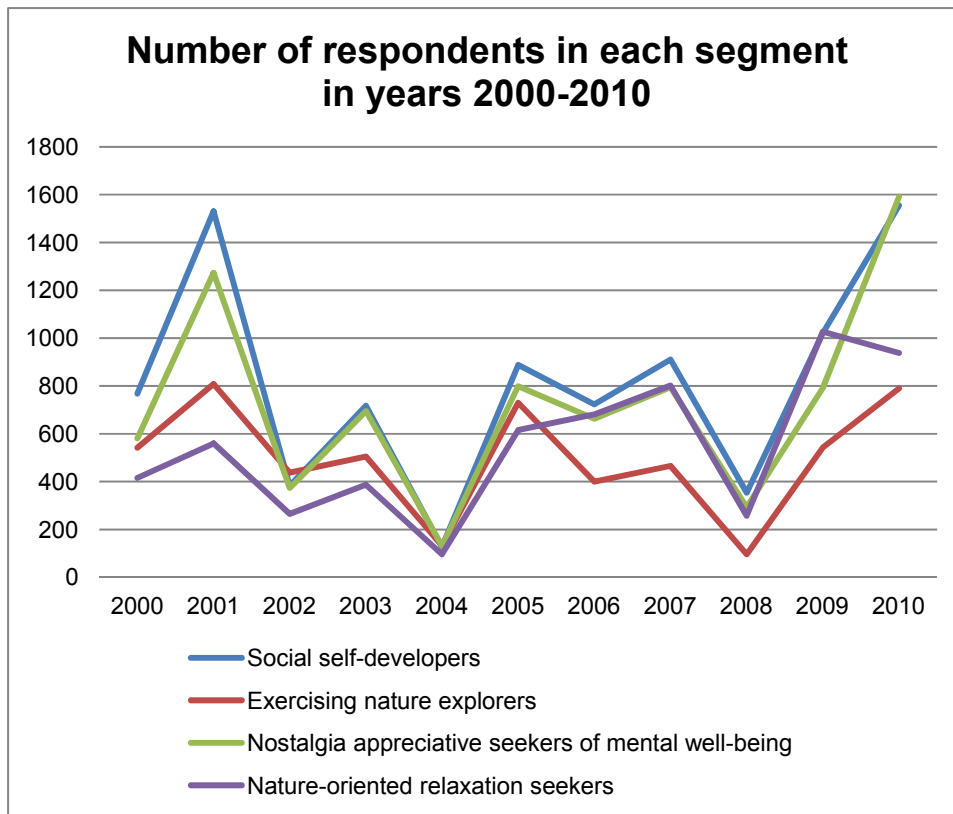


Figure 17. Developments in the number of respondents in each segment during 2000–2010.

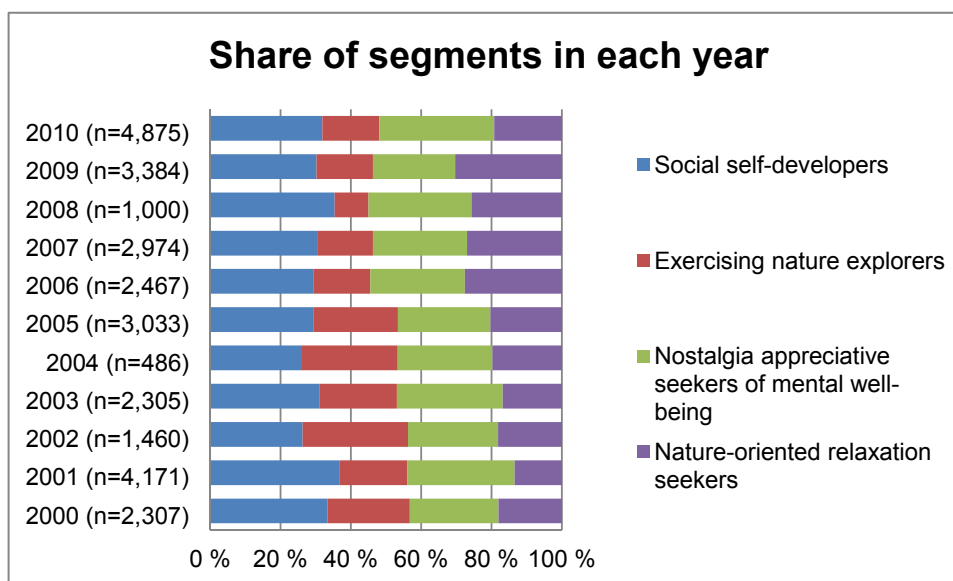


Figure 18. Share of segments in each year.

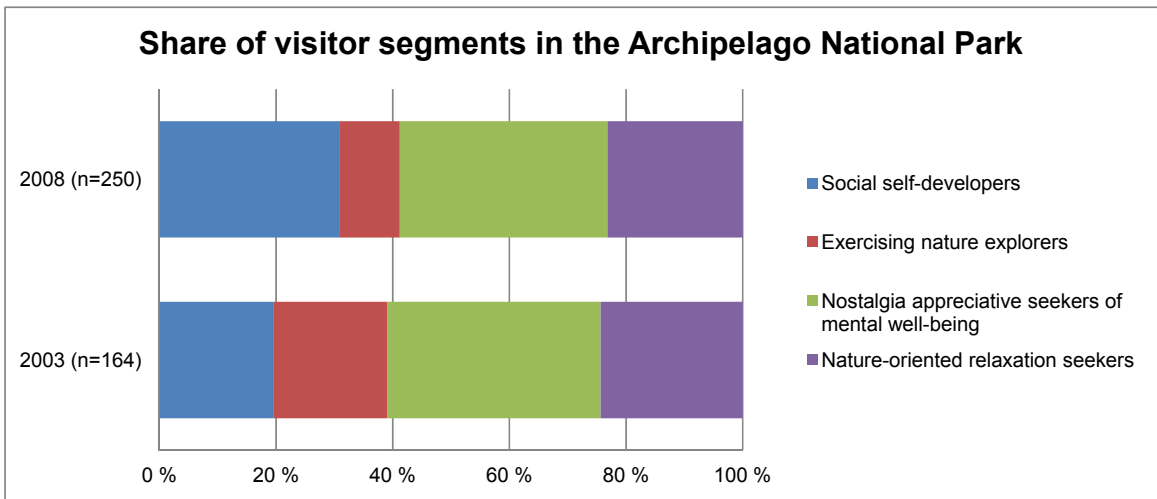


Figure 19. Share of visitor segments in the Archipelago National Park in 2003 and 2008 (χ^2 test: $p < 0.05$).

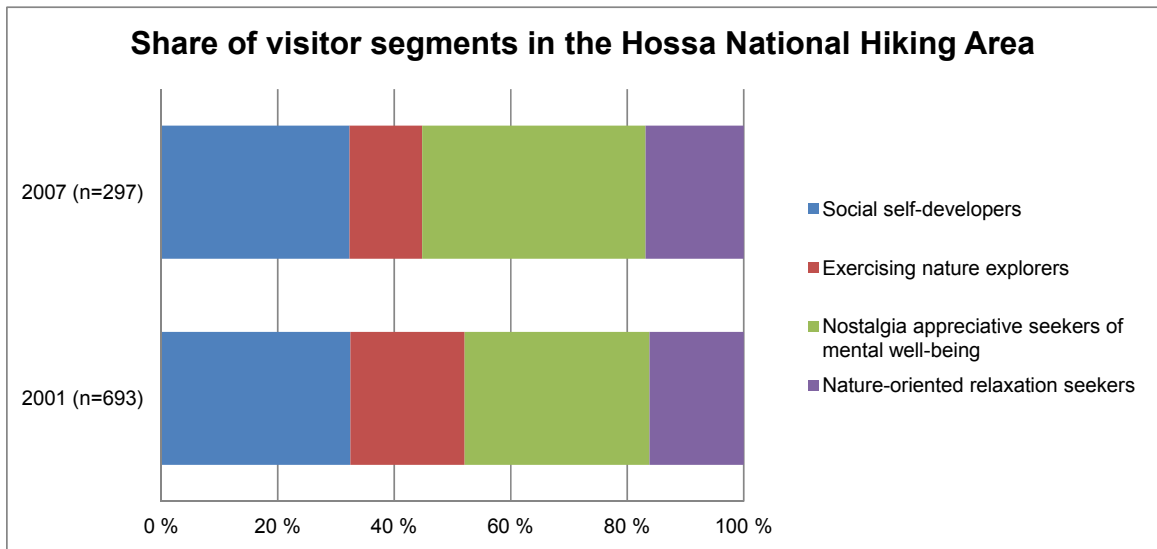


Figure 20. Share of visitor segments in the Hossa National Hiking Area in 2001 and 2007 (χ^2 test: $p < 0.05$).

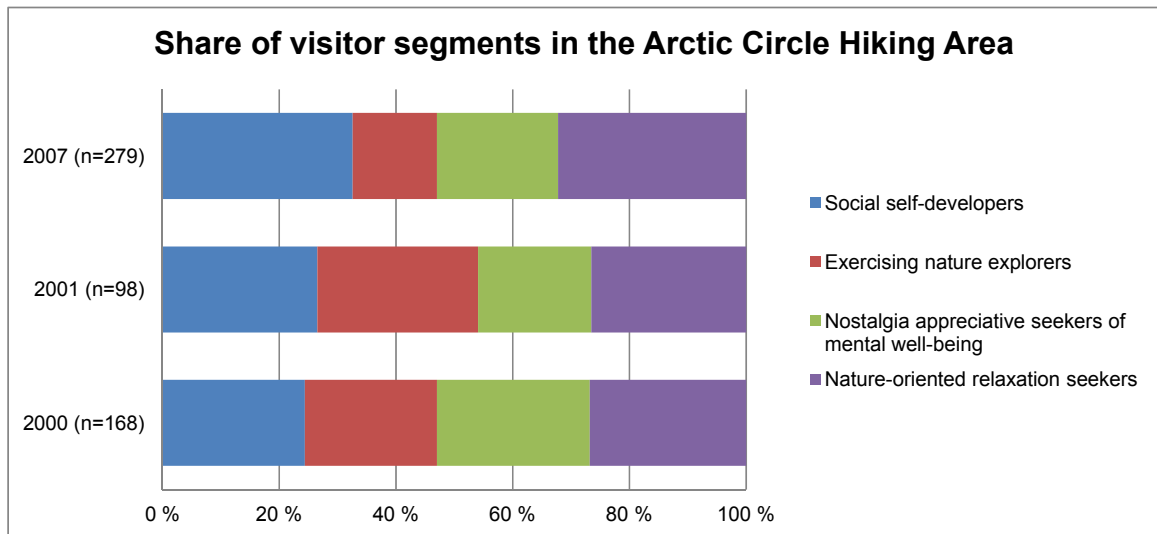


Figure 21. Share of visitor segments in the Arctic Circle Hiking Area in 2000, 2001 and 2007 (χ^2 test: $p < 0.05$).

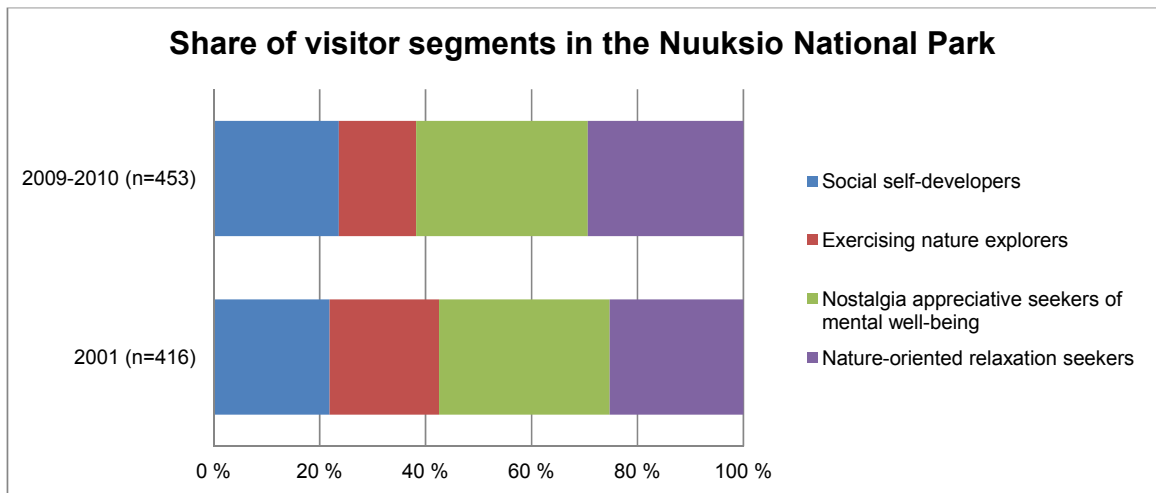


Figure 22. Share of visitor segments in the Nuuksio National Park in 2001 and 2009-2010 (χ^2 test: $p < 0.05$).

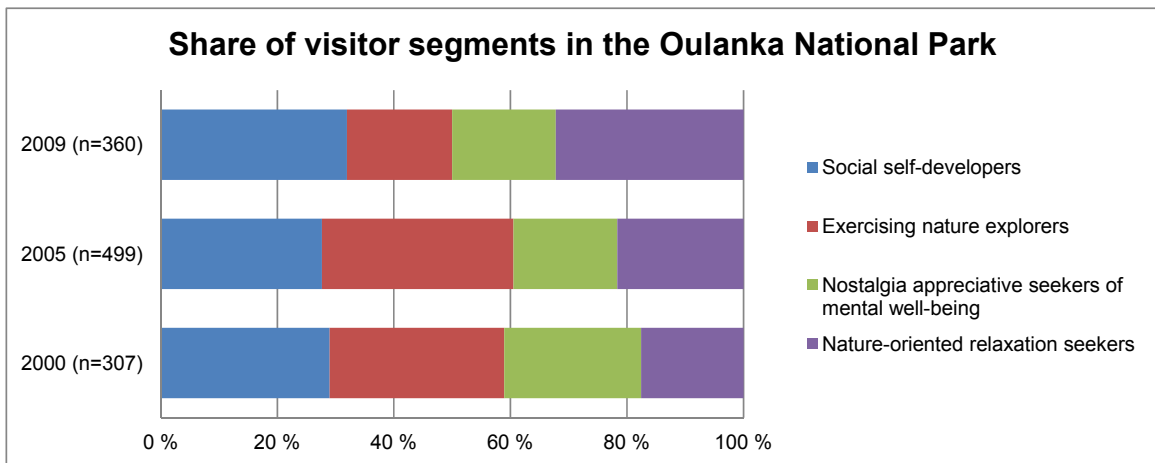


Figure 23. Share of visitor segments in the Oulanka National Park in 2000, 2005 and 2009 (χ^2 test: $p < 0.001$).

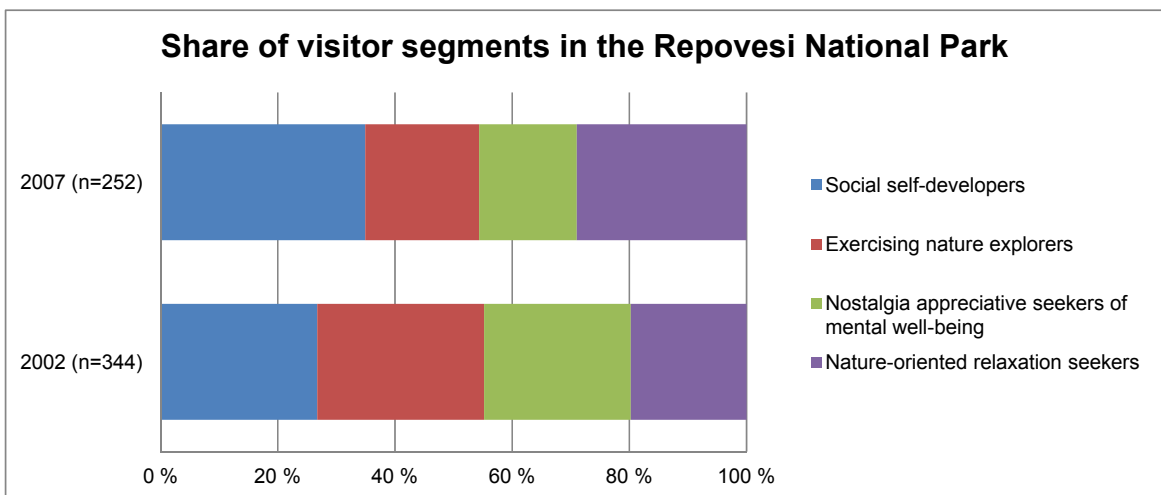


Figure 24. Share of visitor segments in the Repovesi National Park in 2002 and 2007 (χ^2 test: $p < 0.001$).

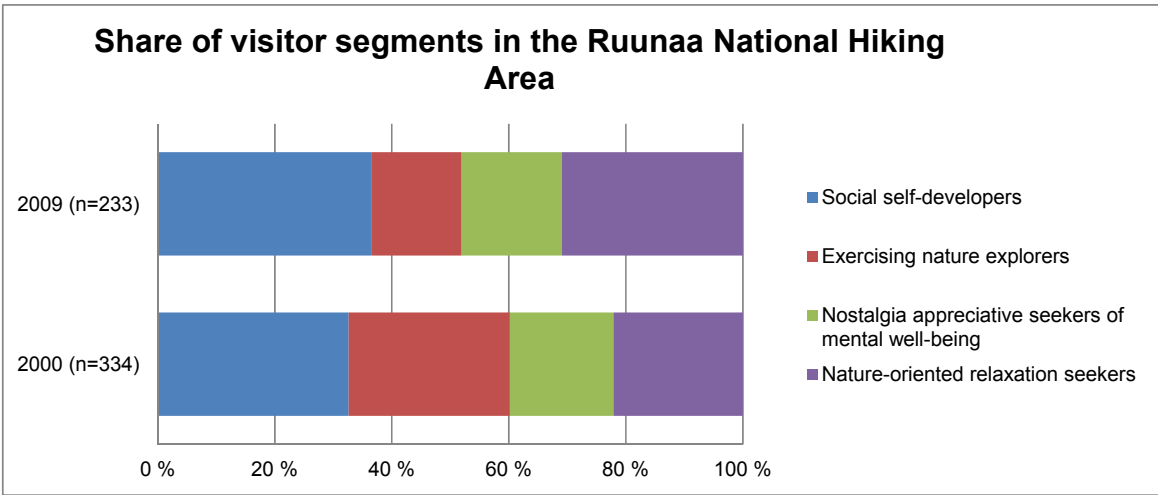


Figure 25. Share of visitor segments in the Ruunaa National Hiking Area in 2000 and 2009 (χ^2 test: $p < 0.01$).

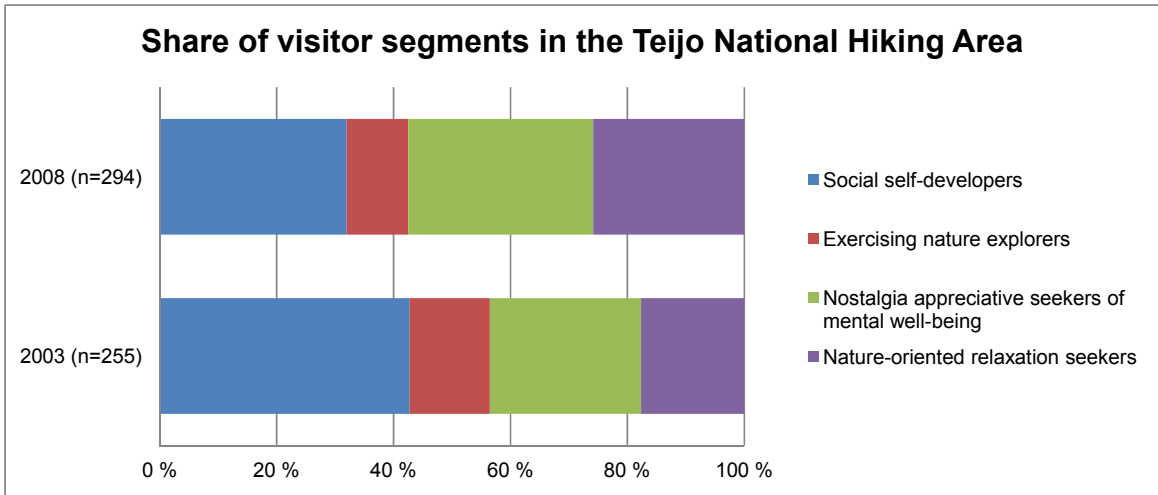


Figure 26. Share of visitor segments in the Teijo National Hiking Area in 2003 and 2008 (χ^2 test: $p < 0.05$).

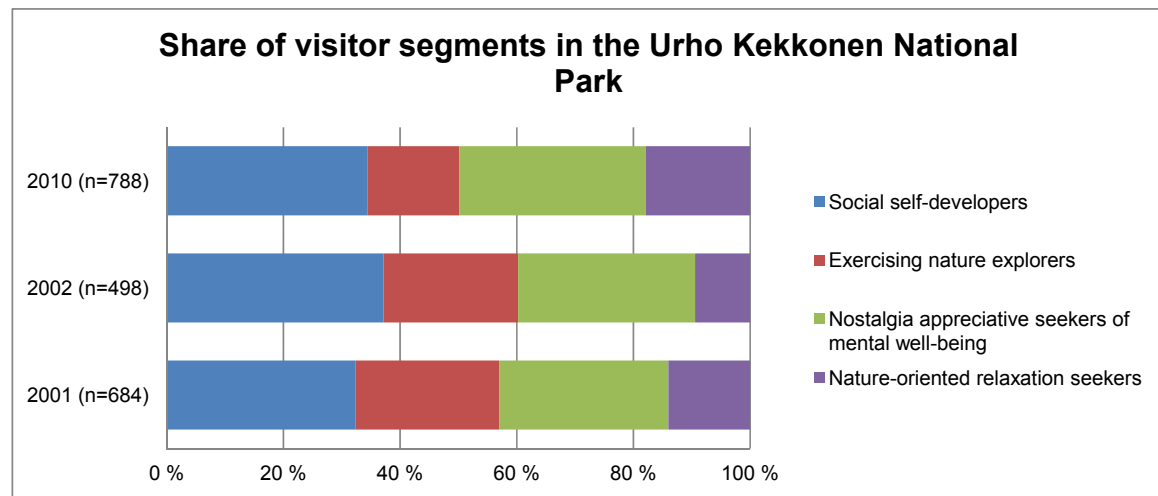


Figure 27. Share of visitor segments in the Urho Kekkonen National Park in 2001, 2002 and 2010 (χ^2 test: $p < 0.001$).

5 Conclusions and discussion

The aim of the study was to identify possible visitor segments of Finnish protected areas. This study gives a wide perspective of motivation segments identified among Finnish protected area visitors. In total, four motivation-based segments that differed significantly from each other were identified: *Social self-developers*, *Exercising nature explorers*, *Nostalgia appreciative seekers of mental well-being* and *Nature-oriented relaxation seekers*. The motivation factors that had the most discriminating power between all the segments were *pleasant old memories*, *experiencing excitement* and *meeting new people*. There were statistically significant differences between the segments concerning geo-demographic factors (age, gender, country of residence and education), travel habits, information sources, satisfaction and places visited. The segments also differed from each other based on their previous visits to the areas. More detailed summaries of individual segments can be found in Appendix 3. It can also be concluded that the REP scale was proven to be suitable for segmenting visitors to Finnish protected areas.

Even though there has been different segmentation studies that have segmented nature tourists, many of the segments are not directly comparable to the segments identified in this study. The reason for this is the diverse factors that are used as a base of the segmentations. Many of the studies have used psychographic or behavioral factors such as environmental attitudes (Zografos & Allcroft 2007), social values (Blamey & Braithwaite 1997) or service expectance and performance (Zanon 2005). In some cases, where motivation factors are used it is not differentiated if the segmentation is based on push or pull motivations or both. In this study, the segmentation is only based on push motivations. This leads to the situation that the results are not comparable for some of the previous motivation studies that have used both push and pull motivations, for example. Another factor affecting comparability to previous studies is that even though many researchers have studied tourism and leisure motivations in a nature-based tourism context, only few studies have used motivation factors as a base

of segmentation. However, there are a few studies on which the results of this study can be reflected to.

One study that used motivations on segmenting nature-based tourists is that of Galloway (2002). The segments he identified had partly similar characteristics as the segments identified in this study. The segment 'Active enjoyment of nature' has similar motivations to *Exercising nature explorers* in this study, while the members of the segment 'Escape stress' had similar motivations as *Nature-oriented relaxation seekers*. The segment *Social self-developers* have somewhat similar motivations than 'Sensation seekers' identified by Galloway (2002). Palacio and McCool (1997) aimed to identify potential ecotourists by using push motivation factors. Some of the segments they identified also had similarities to the segments constructed in this study. The segment 'Nature escapists' was motivated by similar issues as *Exercising nature explorers* while 'Comfortable naturalists' were characterized by similar motivations as *Social self-developers*. Since a segment similar to *Nostalgia appreciative seekers of mental well-being* is not identified in previous push motivation segmentation studies carried out in a nature-based tourism context, it can be assumed that the segment has special features that are only identified among the nature-based tourism market in Finland. It also needs to be noted that as this segment was mainly dominated by Finnish respondents, it can be assumed that the segment emphasises the characteristics of Finnish protected area visitors.

The results showed that the share of different segments altered year by year. The differences are probably partly due to the fact that the data come from different areas each year, and there were statistically significant differences across segments in diverse areas. Nevertheless, the differences might also be attributed to changing motivations of the visitors. Changes in motivations can be due to a visitor's/tourist's experiences – more experienced travelers might value and be motivated by different things (Pearce 2005) or due to changes in society (e.g. economical recession). The results show that the

share of *Nostalgia appreciative seekers of mental well-being* has increased during the last several years. As the segment is strongly motivated by nostalgia and being on their own and were most likely repeat visitors compared to other segments, the trend can be seen to reflect Pearce's (2005) perception that more experienced travelers (or visitors) start to put more emphasis on 'outer-layer motives' (less important) such as nostalgia, social status and isolation.

This study has also managerial implications as the protected areas and businesses cooperating with the protected areas in Finland can benefit from the new data on visitor segments. The results can increase the knowledge of protected area managers and service providers with regard to their customers as well as giving insights into the needs of diverse customer segments.

The results of this study show that there are significant differences between the motivations of protected area visitors. A better understanding of these motivations may help protected area managers develop their services in a demand-oriented way to match expectations. Protected areas may have different strengths in terms of natural resources and built facilities. It is also possible to profile different national parks and protected areas to be suitable for particular target groups. Following the customer insight, managers may profile and differentiate their offering and find a suitable customer target group instead of trying to serve all segments. Targeting services and products to particular segments also helps to optimize the effectiveness of marketing activities. The customers will also benefit as tourism companies will offer specific products and services or the destination will provide facilities and an infrastructure that match customers' needs and interests. Cooperation and differentiation among protected areas would also strengthen the competitive position of Finnish nature tourism.

Collecting data for this study over a ten-year period (2000–2010) has both advantages and drawbacks. On one hand, the large volume of data collected over the period has generated an extensive view of visitors in different protected areas in Finland. On the other hand, however, over such a long period changes take place; for example, when the segmentation is based on motivations it must be taken into account that visitor motivations might have changed over the years.

This study focused on segmenting visitors based on their leisure and travel motivations. However, the motivations as such were not examined in detail. In future research, the changes in motivations during the time period could be analyzed and studied more closely; for example, have some motivation factors been stronger in some years than others and how has this affected the other factors studied (e.g. satisfaction on diverse services and infrastructure). Examining relationships between motivations and satisfaction can also bring productive information to support tourism and leisure activity development in protected areas.

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number	place	visitor	interviewer	post	initials	date	time of day

The person collecting the form will fill in this field:



METSÄHALLITUS

Pyhätunturi National Park

Visitor Survey 20xx–20xx

How to fill in this questionnaire:

The information collected by this Visitor Survey will be used in the management and planning of the [xxx National Park](#). We hope that you answer all the questions. Please note the following instructions:

1. Read the questions with care.
2. Answer the questions **personally** by ticking the appropriate circle (○). Where it is possible to choose more than one alternative, place your ticks in response squares (□). In some of the questions, you can write your answer in the space reserved for it.
3. The questions are about **your current visit to the xxx National Park**
4. Please return the filled-in form to the interviewer, or to the place mentioned in the instructions.
5. For more information, please contact [xxx tel. 0205 64 xxxx \(xxx.xxx@metsa.fi\)](#)

THANK YOU IN ADVANCE!

1. When did you arrive [at the Pyhätunturi National Park](#) (please see the map)?

date _____ and time of day _____

2. How long did you stay or are you going to stay during this visit

a. in the [Pyhätunturi National Park](#)?

(answer in days or hours)

About _____ days or _____ hours

b. altogether in the [Pyhätunturi National Park](#) and in its vicinity, for example in [tourist centre](#) (see map)?

About _____ days or _____ hours

→ If your answer to the previous question (2b) was "more than 1 day", how many times have you visited or will you visit in [Pyhätunturi National Park](#) during this visit?

_____ times

3. If you stayed overnight or will stay overnight ...

(if not applicable, please move on to question 4)

a. in the [Pyhätunturi National Park](#), how many nights did you spend or will you spend in

open wilderness

hut

_____ nights

rental cabins

_____ nights

your own ac-

commodation

(lapp pole tent,

tent etc)

_____ nights

reservable huts

_____ nights

elsewhere,

(where)?

_____ nights

b. in the vicinity of [Pyhätunturi National Park](#), for example in [tourist centre](#) (see map), how many nights did you spend or will you spend in

a hotel

_____ nights

your own cottage

_____ nights

a rental cottage

_____ nights

a campervan or

caravan

_____ nights

elsewhere,

(where)?

holiday club

_____ nights

accommodation

_____ nights

_____ nights

4. Which part of the Pyhätunturi National Park did you visit / will you visit this time?

(Select more than one alternative if applicable)

- Pyhätunturi Nature Centre
- Isokuru
- Karhunjuomalampi
- xxx naturetrail
- Noitatunturi
- Huttuloma
- Luoston kohteet

99 elsewhere, please specify? _____

5a. Which means of transport did you use to travel from your home to the Pyhätunturi National Park?

(please write down all the means of transport you used)

- 1 car
- 2 car and trailer or mobile home
- 3 public transport (bus) 5 train
- 4 charter coach (tour group) 6 airplane

99 other, please specify? _____

5b. By what type of vehicle did you arrive in the area?

Write the number -> _____

6. During this visit to the Pyhätunturi National Park, what is your group like?

I'm alone → move on to question 8.

The size of the group _____ persons

(including yourself) of which _____ persons
under 15 years of age?

Please give the years of birth _____
under 15 years (If all are almost _____

of the same age, please give the _____
most common year of birth) _____

Physically disabled? _____ persons

7. During this visit to the Pyhätunturi National Park your group mainly consists of...

(please choose the most appropriate alternative)

- members of own family
- other relatives
- friends
- co-workers
- school class
- kindergarten children
- student group
- senior citizens
- clients of an enterprise offering organised programmes of activities
- club, association, etc.
- others (what?) _____

8. What was or is important to you during this visit to the Pyhätunturi National Park?

(please respond to each alternative)

(5 = very important, 4 = fairly important, 3 = neither, 2 = of little importance, 1 = not important at all)

	very important	5	4	3	2	1	not important at all
nature experiences		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
scenery		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
being on my own		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
mental well-being		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
getting away from noise and pollution		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
relaxation		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
meeting new people		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
being together with own group		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
pleasant old memories		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
getting to know the area		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
learning about nature		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
improving my own skills		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
keeping fit		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
experiencing excitement		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
getting to know the cultural heritage of the area		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

9a. What did you do or intend to do at the Pyhätunturi National Park during this visit? (please select all that apply)

- 1 walking
- 2 nordic walking
- 3 jogging
- 4 hiking
- 5 observing nature
- 6 picnicking
- 7 bicycling
- 8 fishing
- 9 bird watching
- 10 picking wild berries
- 11 picking mushrooms
- 12 studying plants
- 13 education-related visit
- 14 visiting nature centre
- 15 nature photographing
- 16 scouting
- 17 school camp
- 18 walking with a dog
- 19 orienteering
- 20 hiking (overnight camping in the great outdoors)
- 22 cross-country skiing on tracks
- 24 downhill skiing
- 27 snowshoeing
- 32 dogsledding
- 33 reindeer safaris
- 34 hiking (staying overnight in nature)
- 35 horse trekking
- 36 hunting
- 88 getting to know cultural heritage
- 999 other, please specify? _____

9b. Which of the alternatives that you selected was or is the most important to you during this visit?

Number → [_____]

10a. What did you think about the quality and the quantity of the services, facilities and environment during your current visit to the **Pyhätunturi National Park?** Please answer each question and estimate the **quality** of the services or facilities that you used during your visit. If you did not use the service or facility this time, just cross the alternative "did not use". Please always evaluate the **quantity** of services and facilities.
 Quality assessment scale 5 = very good , 4 = fairly good, 3 = neither, 2 = fairly poor, 1 = very poor
 Quantity assessment scale 3 = too many, 2 = suitable, 1 = too few, or no opinion

	Quality of the environment and of the service and facility I used					did not use	The current quantity of services and facilities				no opinion		
	very good	5	4	3	2		1	poor	too many	3		2	1
parking places	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
road network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
signposts on the routes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
trail and/or skiing track network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
signposts at the trails and/or skiing tracks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
campfire sites and lean-tos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
firewood in cabins and at maintained campfire places	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
public latrines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
realization and guidance of the waste disposal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
paying attention to special needs (accessibility of routes, safety, signposts/information boards etc..)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
lines 11-15 optional, area-specific questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
services provided by enterprises (for example cafes and organised activities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
safety of the routes and structures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
general safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
general cleanliness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
variability of landscapes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
other (what?) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10b. How satisfied are you with the quantity of services and facilities in the **Pyhätunturi National Park as a whole?**
 (5 = very satisfied, 4 = rather satisfied, 3 = neither one nor the other 2= rather unsatisfied, 1= very unsatisfied)

5 4 3 2 1
 very satisfied very unsatisfied

11. Did this visit to the **Pyhätunturi National Park come up to your expectations as regards the following?**
 (5 = very well, 4 = fairly well, 3 = neither, 2 = fairly poorly, 1 = very poorly)

very well 5 4 3 2 1 very poorly

natural environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
opportunities for outdoor activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
routes and facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. On this trip, is the **Pyhätunturi National Park ...**

<input type="radio"/>	your trip's only or the most important destination?
<input type="radio"/>	one among other intended destinations? Other destinations are: _____
<input type="radio"/>	a non-planned destination along your route? Main destination(s) is/are: _____ _____

13. Spending
Have you spent/Will you spend money on various activities in the national park or its environs while on this trip (see area on map 2)?
 yes (→ please answer the following questions)
 no (→ move on to question 14a)

Please tick the box that indicates whether you are estimating
 your personal expenses and your share of your group's joint expenses **OR**
 the total expenses of your family or group.

This is a group trip organised by a travel agency or other travel operator, costing _____ €
 → In addition, please indicate any of your other expenses in the national park or its environs.

Indicate below (points A–G) your total expenses for this trip **in the national park and its environs**. (Write 0 (zero) in the column if you have not spent any money on the activity in question)

A fuel or other purchases from the service station	_____ €
B costs for local transportation (for example local bus or taxi trips)	_____ €
C food and other retail shopping	_____ €
D café and restaurant purchases	_____ €
E accommodation	_____ €
F organised programme and recreational services (eg. guided tours, entry fees and exhibitions)	_____ €
G other expenses (e.g. fishing, hunting or snowmobiling permits, equipment hire, etc.)	_____ €

14a. How often have you visited in the Pyhäunturi National Park before this visit?
 (Please answer all that apply)

This is my first visit → move on to question 14b

During past 5 years _____ times

14b. How many times have you visited a national park, recreational area or other nature destination during the last 12 months?

1 One day trip _____ times

2 At least one night spent in the great outdoors (for example in a tent or wilderness cabin) _____ times
 When was your first visit? In _____ (year)
 When was your last visit? In _____ (year)

14c. What kinds of trips have you made during the last 5 years? (please indicate all you have made)

Independent hiking trips outside sign posted routes
 Long (over 10 km) trips on sign posted routes
 Short (under 10 km) independent trips on sign posted routes and in familiar terrain
 Participation on a guided tour
 other, (what?) _____

15. Did any of the following disturb you this time during your visit in the Pyhäunturi National Park?
 (please respond to each alternative)
 (5 = not at all, 4 = fairly little, 3 = neither, 2 = fairly much, 1 = very much)

	not at all	5	4	3	2	1	very much
erosion of the ground		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
littering		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
treatment of natural environment		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
too many visitors		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
behaviour of other visitors		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
other (what?) _____		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

16. Country of residence?

17. Gender?
 male female

18. Year of birth?
 [_____]

19. Education? (please indicate your highest level of education)

vocational training
 college-level degree
 university bachelor's degree
 university master's degree (or other)
 no vocational/professional qualification

THANK YOU FOR ANSWERING THIS QUESTIONNAIRE!

If there is anything else you would like to tell us, please use the space beside/below.

Optional questions, not in the default structure:

20. Where did you find information about the Pyhäntunturi National Park? (you may choose several alternatives)

- in the visitor centre or customer service point of Metsähallitus
- from relatives, friends, acquaintances
- the internet pages of Metsähallitus (www.metsa.fi or www.outdoors.fi)
- other internet sites
- from brochures or guidebooks (hiking guidebook etc.)
- from TV /radio programmes or newspaper articles
- in the regional tourist agency or tourist information
- from the enterprises of the area (for instance organised activity programmes, accommodation)
- the place is familiar to me from before
- elsewhere (where?) _____

21. Do you know what is permitted in the Pyhäntunturi National Park? (please cross below the things you consider permitted)

- off-trail hiking
- hiking only on signposted routes
- mountain biking off trail
- picking berries or mushrooms
- collecting plants or stones
- fishing
- hunting
- driving a motor vehicle
- making a campfire and wild camping
- using brushwood for firewood

22. After the journey ...

5= very likely, 4=likely, 3=possibly, 2=unlikely, 1= very unlikely

	very likely	5	4	3	2	1	very unlikely
will you come again to this destination?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are you going to recommend this destination to other people?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. Would one of the following services be necessary in the Pyhäntunturi National Park?

	very necessary	5	4	3	2	1	not at all necessary
more extensive wayfinding and information services than currently exist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
open wilderness hut (for staying overnight)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
landing places for canoeing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. Do you know how to get to the Pyhäntunturi National Park destination by public transport?

yes no

25. Which of the following facts influenced your decision to use or not to use public transport in order to arrive at the Pyhätunturi National Park?
(5 = not at all, 4 = fairly little, 3 = neither, 2 = fairly much, 1 = very much)

	not at all	5	4	3	2	1	very much
number of departures		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
time of departure/arrival		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
operated route		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
travel time		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
price		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
comfort reasons		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
freedom to move		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
something else (what?)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

26. How should the public transport service be developed to make it a more attractive alternative to arrive at the Pyhätunturi National Park?

27. What interests you in this area?
(Mark all that apply)

- Historical land use (history of settlement, agriculture, forest use)
- Fishing and hunting culture (history of hunting, fishing, gathering)
- Sámi culture
- Military history
- Ancient relics (archaeological sites)
- Art inspired by the area (painting, music etc.)
- History of nature conservation
- Hiking traditions
- Stories related to the area
- Something else related to the history and culture of the area. please specify

28. How would you like to learn about the cultural heritage and history of the area?
(Mark all that apply)

- On a guided tour
- Visit to a heritage farm or similar site
- Participation in a cultural event or voluntary work
- Independently with a leaflet or booklet
- On a themed nature trail
- Via the website outdoors.fi
- Otherwise, please specify
- Stories related to the area
- Something else related to the history and culture of the area, please specify

29a. Have you found historical/prehistoric sites in the area?
Yes <input type="radio"/> No <input type="radio"/>
29b. If yes, please specify; what and where?

The default structure of the questionnaire and obligatory questions:

Question number	Default	Obligatory
1	x	x
2a	x	x
2b	x	x
3a	x	x
3b	x	x
4	x	x
5	x	x
6	x	x
7	x	x
8	x	x
9a	x	x
9b	x	x
10a	x	x
10b	x	x
11	x	x
12	x	x
13	x	x
14a	x	x
14b	x	
14c	x	
15	x	x
16	x	x
17	x	x
18	x	x
19	x	x
20		
21		
22		
23		
24		
25		
26		

List of visitor surveys used in the study

Number and name of the study in ASTA visitor information data base	Type of the area	Starting date	Ending date	Natural Heritage Services Regional Unit	Number of responses
254 Visitor survey of Evo National Hiking Area 2010	National hiking area	22.03.2010	28.09.2010	Southern Finland	231
136 Visitor survey of Gulf of Finland National Park 2007	National park	21.05.2007	13.08.2007	Southern Finland	266
257 Visitor survey of Liesjärvi National Park 2010	National park	23.05.2010	31.12.2010	Southern Finland	184
222 Visitor survey of Torronsuo National Park 2010	National park	01.01.2010	31.10.2010	Southern Finland	218
94 Visitor survey of Aulanko Nature Reserve 2003	Nature reserve	01.05.2003	12.10.2003	Southern Finland	204
214 Visitor survey of Koli National Park 2009	National park	15.05.2009	15.09.2009	Southern Finland	1,032
204 Visitor survey of Ruunaa National Hiking Area 2009	National hiking area	15.05.2009	15.09.2009	Southern Finland	340
44 Visitor survey of Ruunaa National Hiking Area 2000	National hiking area	05.05.2000	20.09.2000	Southern Finland	373
128 Visitor survey of Kurjenrahka National Park 2007	National park	01.05.2007	31.10.2007	Southern Finland	277
38 Visitor survey of Kurjenrahka National Park 2002	National park	09.06.2002	24.10.2002	Southern Finland	165
138 Visitor survey of Kauhanneva-Pohjankangas National Park 2007	National park	24.05.2007	02.09.2007	Southern Finland	160
101 Visitor survey of Lauhanvuori National Park 2007	National park	10.02.2007	09.09.2007	Southern Finland	400
74 Visitor survey of Hämeen kangas 2006–2007	Natura 2000 -area, area in nature conservation programs	25.05.2006	31.03.2007	Southern Finland	293
132 Visitor survey of Patvinsuo National Park 2007	National park	01.05.2007	30.09.2007	Southern Finland	303
41 Visitor survey of Petkeljärvi National Park 2005	National park	13.05.2005	28.08.2005	Southern Finland	191
100 Visitor survey of Pyhä-Häkki National Park 2007	National park	01.05.2007	15.09.2007	Southern Finland	274
52 Visitor survey of Salamajärvi National Park 2005	National park	28.04.2005	15.10.2005	Southern Finland	318
42 Visitor survey of Puurijärvi-Isosuo National Park 2005	National park	25.04.2005	14.08.2005	Southern Finland	138
227 Visitor survey of Leivonmäki National Park 2010	National park	01.03.2010	31.10.2010	Southern Finland	319
40 Visitor survey of Leivonmäki National Park 2003	National park	29.05.2003	28.09.2003	Southern Finland	157
170 Visitor survey of Päijänne National Park 2008	National park	23.05.2008	25.09.2008	Southern Finland	157
53 Visitor survey of Isojärvi National Park 2005	National park	20.05.2005	16.10.2005	Southern Finland	386
207 Visitor survey of Sipoonkorpi kävijätutkimus 2009	Nature reserve	28.04.2009	30.10.2009	Southern Finland	267
208 Visitor survey of Nuuksio National Park 2009–2010	National park	15.04.2009	25.03.2010	Southern Finland	559
25 Visitor survey of Nuuksio National Park 2001	National park	16.05.2001	22.09.2001	Southern Finland	460
134 Visitor survey of Repovesi National Park 2007	National park	04.05.2007	30.09.2007	Southern Finland	319
43 Visitor survey of Repovesi National Park 2002	National park	20.05.2002	26.10.2002	Southern Finland	389
162 Visitor survey of Archipelago National Park 2008	National park	15.05.2008	14.09.2008	Southern Finland	276
30 Visitor survey of Archipelago National Park 2003	National park	04.06.2003	07.08.2003	Southern Finland	175
165+209 Visitor survey of Punkaharju Nature Reserve 2008–2009	Nature reserve	24.05.2008	31.03.2009	Southern Finland	419
135 Visitor survey of Pihlajavesi Natura 2000 Area 2007	Natura 2000 -area	10.06.2007	16.09.2007	Southern Finland	357
76 Visitor survey of Linnansaari National Park 2006	National park	26.05.2006	17.09.2006	Southern Finland	338
21 Visitor survey of Kolovesi National Park 2004	National park	19.06.2004	11.09.2004	Southern Finland	210
32 Visitor survey of Siikalahti Nature Reserve 2003-2004	Nature reserve	05.06.2003	21.08.2004	Southern Finland	358
148 Visitor survey of Riuttaskorpi Recreational Forest 2007	Recreational forest	16.06.2007	30.11.2007	Southern Finland	46
79 Visitor survey of Helvetinjärvi National Park 2006	National park	25.05.2006	18.10.2006	Southern Finland	260
78 Visitor survey of Seitsemien National Park 2006-2007	National park	24.05.2006	31.03.2007	Southern Finland	539
131 Visitor survey of Ekenäs Archipelago National Park 2007	National park	20.05.2007	17.09.2007	Southern Finland	228
168 Visitor survey of Teijo National Hiking Area 2008	National hiking area	27.04.2008	30.09.2008	Southern Finland	363
34 Visitor survey of Teijo National Hiking Area 2003	National hiking area	19.02.2003	25.08.2003	Southern Finland	307
35 Visitor survey of Tiilikajärvi National Park 2004	National park	03.06.2004	22.08.2004	Southern Finland	218
171 Visitor survey of Simojärvi and Soppana Area 2008	Nature reserve, Old growth forest protection area	26.05.2008	17.10.2008	Lapland	93
75 Visitor survey of Inari Hiking Area 2006–2007	Recreational area	12.06.2006	30.04.2007	Lapland	677

Number and name of the study in ASTA visitor information data base	Type of the area	Starting date	Ending date	Natural Heritage Services Regional Unit	Number of responses
17 Visitor survey of Inari Hiking Area 2000	Recreational area	21.06.2000	24.09.2000	Lapland	198
15 Visitor survey of Lemmenjoki National Park 2001	National park	01.04.2001	14.09.2001	Lapland	1,107
19 Visitor survey of Hammastunturi Wilderness Area 2005	Wilderness area	03.02.2005	24.10.2005	Lapland	932
192 Visitor survey of Käsivarsi-Kilpisjärvi Area 2009–2010	Wilderness area, Nature reserve	01.07.2009	30.04.2010	Lapland	958
203+216 Visitor survey of Pyhä-Luosto National Park 2009–2010	National park	01.07.2009	30.05.2010	Lapland	941
29 Visitor survey of Pyhätunturi National Park 2003	National park	06.08.2003	13.10.2003	Lapland	375
23 Visitor survey of Luosto Area 2000–2001	Nature reserve	04.07.2000	29.04.2001	Lapland	1,222
115 Visitor survey of Arctic Circle Hiking Area 2007	Recreational area	07.05.2007	14.10.2007	Lapland	355
24 Visitor survey of Arctic Circle Hiking Area 2000–2001	Recreational area	01.06.2000	04.10.2001	Lapland	288
248 Visitor survey of Urho Kekkonen National Park 2010	National park	22.03.2010	30.09.2010	Lapland	955
36 Visitor survey of Urho Kekkonen National Park 2001–2002	National park	28.08.2001	23.09.2002	Lapland	1,341
31 Visitor survey of Sallatunturi Area 2003	Forestry area with special recreational values	03.03.2003	22.09.2003	Lapland	228
16 Visitor survey of Kevo Strict Nature Reserve 2002	Strict nature reserve	15.06.2002	15.09.2002	Lapland	552
250 Visitor survey of Pallas-Yllästunturi National Park 2010	National park	22.02.2010	22.10.2010	Lapland	3,071
18 Visitor survey of Pallas-Ounastunturi National Park 2003	National park	31.01.2003	13.10.2003	Lapland	1,038
37 Visitor survey of Ylläs-Aakenus Area 2000	National park	14.02.2000	19.10.2000	Lapland	908
90 Visitor survey of Vattajanniemi 2006	Area in nature conservation programs	09.07.2006	27.07.2006	Ostrobothnia	271
251 Visitor survey of Liminganlahti Nature Reserve 2010	Nature reserve	03.05.2010	31.07.2010	Ostrobothnia	286
111 Visitor survey of Hossa National Hiking Area 2007	National hiking area	20.02.2007	31.10.2007	Ostrobothnia	330
20 Visitor survey of Hossa National Hiking Area 2001	National hiking area	13.04.2001	15.09.2001	Ostrobothnia	763
39 Visitor survey of Kylmäluoma National Hiking Area 2001	National hiking area	26.05.2001	30.09.2001	Ostrobothnia	216
206 Visitor survey of Rahja Archipelago 2010	Area in nature conservation programs	13.07.2009	31.07.2010	Ostrobothnia	23
121 Visitor survey of Itäraja Summer Hiking Route 2005	A trail going through several types of areas	13.06.2005	18.09.2005	Ostrobothnia	36
120 Visitor survey of Murhisalo 2005	Nature reserve	12.06.2005	17.09.2005	Ostrobothnia	44
118 Visitor survey of Martinselkonen Nature Reserve 2005	Nature reserve	06.06.2005	20.09.2005	Ostrobothnia	72
22 Visitor survey of Korouoma Nature Reserve 2000–2001	Nature reserve	13.06.2000	06.05.2001	Ostrobothnia	424
205 Visitor survey of Kvarken Archipelago World Heritage Area 2009	UNESCO World Heritage Area	01.07.2009	30.09.2009	Ostrobothnia	274
144 Visitor survey of Svedjehamn 2007	Natura 2000 -area	30.06.2007	31.08.2007	Ostrobothnia	169
139 Visitor survey of Fäliskär 2007	Natura 2000 -area	15.06.2007	15.08.2007	Ostrobothnia	62
137 Visitor survey of Mikkelsaari Archipelago 2006	Area in coast line protection program	01.06.2006	30.09.2006	Ostrobothnia	135
80 Visitor survey of Sommarö 2006	Area in nature conservation programs	01.06.2006	31.08.2006	Ostrobothnia	114
190 Visitor survey of Oulanka National Park 2009	National park	25.05.2009	01.10.2009	Ostrobothnia	378
106 Visitor survey of Oulanka National Park 2005	National park	27.05.2005	07.11.2005	Ostrobothnia	568
26 Visitor survey of Oulanka National Park 2000	National park	25.05.2000	30.09.2000	Ostrobothnia	337
107 Visitor survey of Riisitunturi National Park 2005-2006	National park	15.06.2005	06.03.2006	Ostrobothnia	130
28 Visitor survey of Oulujärvi National Hiking Area 2001	National hiking area	19.06.2001	30.09.2001	Ostrobothnia	253
223 Visitor survey of Bothnian Bay National Park and Bothnian Islands 2005	National park	02.06.2005	31.12.2005	Ostrobothnia	39
247 Visitor survey of Syöte National Park and National Hiking Area 2010	National park, National hiking area	24.02.2010	10.10.2010	Ostrobothnia	317
33 Visitor survey of Syöte National Park and National Hiking Area 2005	National park, National hiking area	03.03.2005	01.10.2005	Ostrobothnia	304
72 Visitor survey of Hepoköngäs Nature Reserve 2006	Nature reserve	01.05.2006	30.09.2006	Ostrobothnia	513

APPENDIX 2. 3(3)

Number and name of the study in ASTA visitor information data base	Type of the area	Starting date	Ending date	Natural Heritage Services Regional Unit	Number of responses
123 Visitor survey of Siikavaara 2005	Nature reserve	05.06.2005	04.10.2005	Ostrobothnia	84
125 Visitor survey of Hiidenportti National Park 2005	National park	03.06.2005	11.10.2005	Ostrobothnia	561
124 Visitor survey of Iso-Palonen-Maariansärkät Area 2005	Nature reserve	14.06.2005	19.09.2005	Ostrobothnia	61
122 Visitor survey of Elimyssalo Nature Reserve 2005	Nature reserve	02.06.2005	04.09.2005	Ostrobothnia	104
126 Visitor survey of Lentua Nature Reserve 2005	Nature reserve	01.05.2005	30.09.2005	Ostrobothnia	247

SUMMARY OF THE SEGMENTS

Social self-developers

- The biggest segment: 8,990 respondents (31.5%).
- The members of this segment were the most willing to meet new people compared to other segments. They were also motivated by pleasant old memories, improving their skills and experiencing excitement.
- No motivation had a clear dominant role.
- They were somewhat interested in nature experiences, scenery and relaxation.
- The segment is dominated by males (58.7%).
- Over half (50.7%) are 45–65 year olds.
- 93.6% are Finnish and 6.4% come from abroad.
- They mainly have a college-level degree (31.4%) and are the least educated compared to other segments, e.g. the number of the respondents without a vocational/professional qualification was the highest.
- They mainly travelled with members of their own family (49.8%) or friends (26.5%). The group size was distributed rather equally into the three groups of 1 to 2 people (37.1%), 3 to 4 (31.4%), and 5 or more people (31.5%).
- The top 3 information sources:
 1. Relatives, friends, acquaintances (28.9%)
 2. Place was familiar beforehand (22.0%)
 3. Brochures or guidebooks (13.9%)
- The area attracted 21.7% first time visitors and 78.3% repeat visitors.
- The top 10 activities:
 1. hiking
 2. cross-country skiing
 3. observing nature
 4. walking
 5. picnicking
 6. fishing
 7. enjoying nature
 8. viewing the scenery
 9. hiking (overnight camping in the great outdoors)
 10. picking berries



Social self-developers are willing to meet new people, look for excitement and improve their skills. Rafting in the Oulanka National Park. Photo: Minna Koramo.

Exercising nature explorers

- The smallest segment: 5,454 respondents (19.1%).
- Characterized by respondents who are predominantly motivated by keeping fit, learning about nature, improving their skills and experiencing excitement compared to other segments.
- Motivations such as meeting new people and pleasant old memories were less important for them.
- Slightly more males (52%) than females (48%).
- Are mainly 45–54 (25.5%) and 35–44 year olds (20.3%).
- 88.7% are Finnish and 11.3% come from abroad (has the biggest share of foreigners compared to other segments).
- They mainly have college-level (32.4%) or master's degrees (26.1%).
- Travelled mainly with members of their own family (51.8%) in small groups (1–2 persons; 43.8%).
- The top 3 information sources:
 1. Relatives, friends, acquaintances (30.5%)
 2. Brochures or guidebooks (16.7%)
 3. Place was familiar beforehand (14.7%)
- The area attracted 44.5% first time visitors and 55.5% repeat visitors.
- The top 10 activities:
 1. hiking
 2. observing nature
 3. walking
 4. cross-country skiing
 5. hiking (overnight camping in the great outdoors)
 6. enjoying nature
 7. picnicking
 8. fishing
 9. nature photography
 10. canoeing

Exercising nature explorers are motivated more often than the other segments by keeping fit and learning about nature. Paddlers in Linnansaari National Park. Photo: Markus Sirkka.



Nostalgia appreciative seekers of mental well-being

- Number: 7,994 (28.1%).
- Members of this segment are predominantly motivated by *mental well-being, pleasant old memories and being on their own*.
- They are also motivated by nature experiences, scenery, relaxation and getting away from noise and pollution.
- *Meeting new people* and *experiencing excitement* were less important for them.
- Is rather equally distributed between males (50.8%) and females (49.2%).
- The biggest age groups are 45–54 and 55–65 year olds.
- 94.1% are Finnish and 5.9% come from abroad.
- They mainly have college-level (33.3%) or master's degrees (29.7%).
- They mainly travelled with members of own family (66.4%) or friends (22.5%) in small groups of 1–2 people (54.5%).
- The top 3 information sources:
 1. Place was familiar beforehand (25.7%)
 2. Relatives, friends, acquaintances (25.3%)
 3. Brochures or guidebooks (15.4%)
- The area attracted 17.4% first time visitors and 82.6% repeat visitors.
- The top 10 activities:
 1. cross-country skiing
 2. hiking
 3. observing nature
 4. walking
 5. enjoying nature
 6. picnicking
 7. hiking (overnight camping in the great outdoors)
 8. fishing
 9. viewing the scenery
 10. picking berries

Nostalgia appreciative seekers of mental well-being visitors expect mental well-being, pleasant old memories and being on their own. Day hikers on Otsamo fell, Inari. Photo: Kirsi Ukkonen.



Nature-oriented relaxation seekers

- Number: 6,058 respondents (21.3%).
- The members of the segment are predominantly motivated by *nature experiences, scenery, relaxation, being together with their own group* and *getting away from noise and pollution*.
- They are also interested in getting to know the area, but not in meeting new people or improving their skills.
- It is slightly dominated by females 53.5%.
- It has more under 35 year olds compared to other segments (33.4%); however, the median age is 42 years.
- 90% are Finnish and 10% come from abroad.
- They mainly have master's (31.3%) or college-level degrees (29.8%). Compared to other segments, it has the most respondents with a bachelor's degree.
- They mainly travelled with members of own family (54.3%) or friends (27.3%) in small groups of 1–2 people (42.6%) or 3 to 4 people (31.1%).
- The top 3 information sources:
 1. Relatives, friends, acquaintances (33.3%)
 2. Brochures or guidebooks (16.3%)
 3. The internet pages of Metsähallitus (www.metsa.fi or www.outdoors.fi) (13.9%)
- The area attracted 56.9% first time visitors and 43.1% repeat visitors.
- The top 10 activities:
 1. hiking
 2. observing nature
 3. walking
 4. picnicking
 5. enjoying nature
 6. cross-country skiing
 7. viewing the scenery
 8. hiking (overnight camping in the great outdoors)
 9. canoeing
 10. nature photography

Nature-oriented relaxation seekers are especially keen on nature experiences and scenery. A visitor admiring the landscape in the Koli National Park. Photo: Minna Koramo.



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