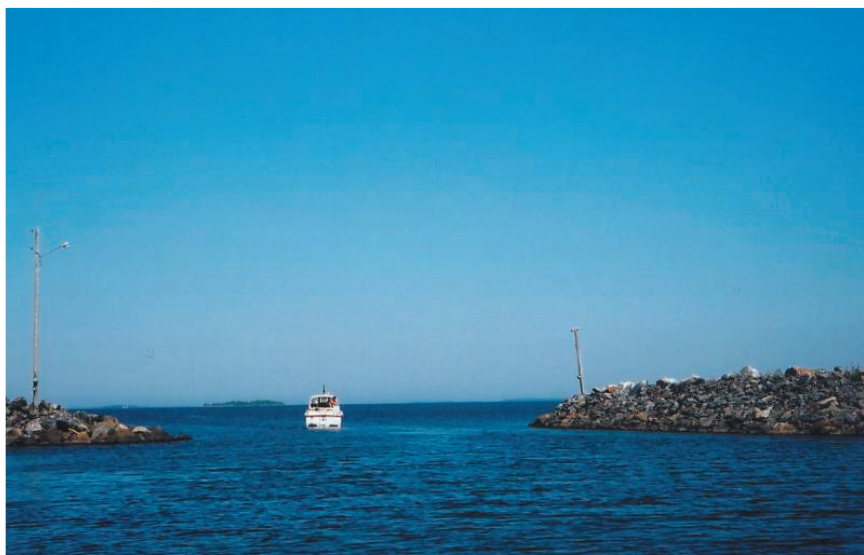


# *Visitor Activities and Attitudes in Coastal Areas*

*A Case Study of the Luleå archipelago, Sweden*

*Rosemarie Ankre*



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## Sammanfattning

### Bakgrund

Kustområden är attraktiva turistdestinationer som erbjuder en varierad turism och olika aktiviteter vid havet. De svenska kustlandskapen och skärgårdarna har tilltalande natur och kultur som lockar besökare. Samtidigt har de svenska kustområdena upplevt en avbefolkning, de tidigare näringarna har färre idkare och i stället har turism vuxit i betydelse.

I kust och skärgård har den svenska fysiska planeringen främst fokuserat på att bevara natur och kultur från att bli exploaterade. Turism ska inte skada miljön och är beroende av landskapet för att kunna utvecklas på ett hållbart sätt. Därmed är planering en viktig länk mellan turismutveckling och bevarande av fysisk miljö.

Många turistdestinationer går en balansgång mellan en strävan att kombinera turism och rekreation med bevarande och skydd. Planering som inkluderar geografisk zonerings av en turistdestination leder till att olika sorters landanvändning delas upp. I svenska kustområden förekommer zonerings i form av nationalparker, naturreservat, fågel- och sälskyddsområden samt strandskydd. Planering av markanvändning och zonerings kopplar samman ett bevarande av natur och kultur med utveckling av turism och rekreation.

Om besöksfrekvensen blir för hög eller om det finns olika grupper av användare i ett område, kan det även uppstå konflikter om besökarna upplever trängsel, buller, har olika uppfattningar om vilken aktivitet som ska ske i området etc. Beroende på bevarandesyften och olika aktörers intressen, kan markanvändningen styras genom zonerings och segmentering av besökarna i olika grupper utifrån deras aktiviteter och attityder. Därmed kan besökarna bli mer nöjda med sin vistelse.

En effektiv planering av ett kustområde kräver kunskap om besökarna och deras attityder eftersom det kan finnas skillnader mellan vad besökarna önskar och den faktiska planeringsstrategin. Utifrån kunskap om besökarna och deras upplevelser samt geografiska spridning i kustområdet, kan olika planeringsmetoder vara ytterligare ett hjälpmedel i turismutveckling för att kommunernas planering ska bli verkningfull.

### Syfte

Syftet med denna studie är att utifrån en enkätstudie i Luleå skärgård sommaren 2003 undersöka besökarnas aktiviteter och geografiska spridning, deras upplevelser av området samt deras attityder till förändringar. Syftet är också att undersöka besökarnas uppfattningar om framtida utveckling av turism och områdets mark- och vattenanvändning, som exempelvis vindkraft.

Rapporten består av en redogörelse av planeringsmetoder med geografisk zonerings i samband med hållbar turismutveckling och konflikter. I undersökningen har för första gången metoden med purismsskala (segmentering av besökare utifrån deras attityder) anpassats till och applicerats på svenska kust- och skärgårdsområden.

### Slutsatser och resultat

Undersökningen visar bland annat:

- En stor andel av besökarna kommer från närområdet Luleå (54%) och från Norrbottens län (78 %)
- Juli, augusti och juni är de mest besökta månaderna, följt av september och mars.
- Huvudorsakerna till att resa till Luleå skärgård är möjligheten att uppleva naturen, havet och stränderna. Möjlighet till lugn och ro lockar också många.
- I skärgården är de vanligaste aktiviteterna sol och bad, att vandra samt att vara med familj och vänner.
- 17,3% av de intervjuade kan tänka sig att bo permanent i skärgården, främst på Sandön och Hindersön.
- Hela 72 % vill att antalet turister i området ska öka något eller öka mycket de närmaste fem åren.
- Bland besökarna som redan hade tillgång till fritidshus vill 8% bo permanent i fritidshus i skärgården.
- Angående förändringar av landskapet i Luleå skärgård är 92,3% positiva till muddring och 35% negativa mot framtida vindkraftsverk.
- Luleå kommun anser att vissa områden i skärgården är mer värdefulla och känsliga än andra. Det har resulterat i en inofficiell zonerings – inre, mellan och yttre skärgård – vilken i dagsläget enbart grundas på natur- och kulturmässiga värden och alltså inte på besökarnas spridning eller attityder.

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## 1. Introduction

*'The coastline with its many islands and islets, all bays, all rivers and streams and every brook offers all year but favourably during summertime when everything is as most delightful in these vicinities, an abundant richness of fish. Outside the coast there are many fair islands which with their trees, herbs and grass give plentiful of pleasure and refreshment. ... During the whole summer there is no darkness, neither any fiery sun, but the air is just enough warm and healthy. Everything here is pleasant, calm and safe.'* (Author's translation. Lundholm, 1986 pp. 12-13).

The Swedish bishop and explorer Olaus Magnus published the very first tourist guide of The Luleå archipelago in 1555 (see above), which can be read in his famous piece Carta Marina. Many centuries later, the qualities of the area described by Olaus Magnus is still appreciated by today's visitors. Coastal tourism grows fast. The Swedish coastal areas have experienced depopulation and fewer persons are involved in the previous industries. Instead tourism is of great importance for these areas but the development should be sustainable.

The preservation of natural, cultural and visual values is the foundation of protected areas. These also consist of the characteristics that correspond with the purposes of tourism and recreation. In multiple use protected areas, many activities need to be accommodated so the environment is preserved and conflicts are diminished so stakeholders continue to act together in an ecologically sustainable way (Lynch et al, 2004). By gathering knowledge about the visitors, the coastal municipalities can create and plan for a suitable management where both prevention and tourism are present. It is important for the determination and acknowledge about both supply and demand (Fredman, 2003).

Different people search for different experiences. By segmenting the users after their mixture of attitudes and experiences, planning for tourism development can improve and be able to offer a diversity of recreation opportunities (Fredman and Emmelin, 2001). Visitor studies develop the tourism industry and give foundations for different sorts of social planning. The knowledge requested is (Fredman, 2003):

- the number of visitors,
- visit patterns in time and space,
- description of the visitors,
- experiences, attitudes and behaviour,
- ecological, economical and social effects,
- changes over time,
- non-visitors (the people who for some reason do not visit the area).

By knowledge about the visitors and their experiences and geographical location at a tourist destination, planning frameworks may combine preservation with tourism development. An effective planning requires knowledge about the visitors and their attitudes since it may be a difference between what the visitors want and the actual management. Also, if different groups of interests or activities use the same land area, conflicts can arise. This can be reduced by planning methods. Furthermore, with studies of visitors' experiences and activities and their effect upon the environment, conflicts can be reduced.

Few coastal areas have been part of larger research projects on tourism and recreation in Sweden and especially the northern parts have not been researched. The report consists of a case study of the Luleå archipelago which is located in peripheral northern Sweden. It consists

of valuable nature and culture and is important for the recreational life of the inhabitants of the Luleå city. Since the area's nature and culture landscape is unique, it is a question of creating a sustainable tourism development to preserve the environment and to keep a permanent living. The municipality wants to extend the archipelago's tourism during summer and winter time. Also, various stakeholders in the archipelago are involved in developing the tourism further.

Out from a questionnaire survey to visitors who stayed in the Luleå archipelago during the summer 2003, the purpose of this paper is to examine the visitors' activities, attitudes and experiences together with their geographical dispersion in this coastal area. Furthermore, the paper investigates if the visitors have recognised any changes in the Luleå archipelago and if these are viewed negatively or positively. The survey in the Luleå archipelago will also analyse different aspects of possible conflicts between tourism and other land use in the Luleå archipelago. Finally, the visitors' attitudes to Swedish coastal areas in general will be studied according to the *purism scale* which segments the visitors after their behaviour and attitudes. It is the first time the method of the purism scale (where the questions have been especially adjusted to coastal areas) will be included in a study of Swedish coastal areas.

## **2. The case study of Luleå archipelago**

### **2.1 A description of the area**

The Luleå archipelago is one of Sweden's most northern island worlds and is to be found only 100 kilometres south of the polar circle. It consists of approximately 750 islands (see figure 1) and is located in the Gulf of Bothnia as part of the Norrbotten archipelago which lies next to the border between the administrative provinces of Västerbotten and Norrbotten to be extended to the Finnish frontier (Hederyd et al, 1999).

The Luleå archipelago lies within the Norrbotten county and Luleå municipality, which has about 70.000 inhabitants. Luleå city, where around 45.000 people live, is the seat of the county government and a natural communication centre because of the geographical position. The harbour is one of the largest in Sweden calculated in tonnage and ore is an important primary product in the region since it is a traditional industry together with steel (Luleå municipality's tourist pamphlet, 2003).



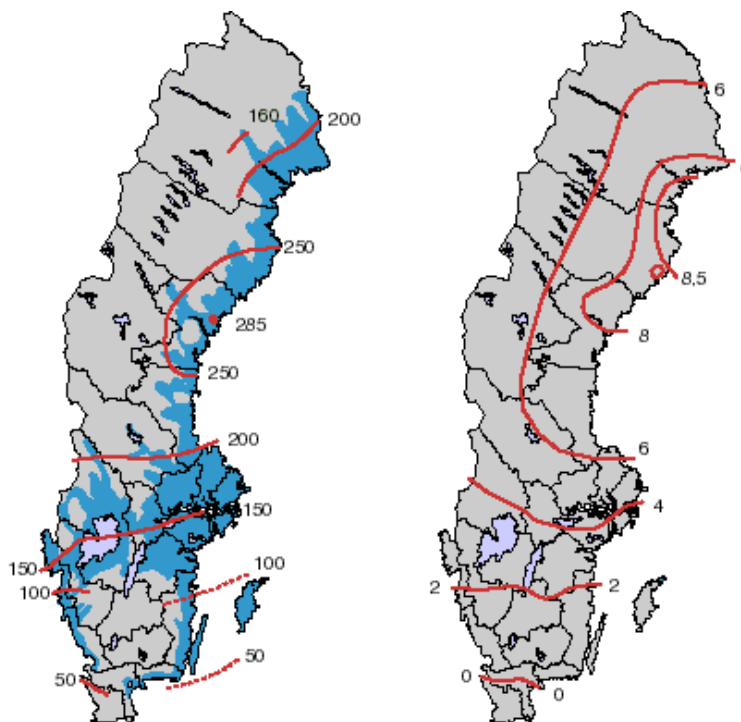
Figure 1. Map of the Luleå archipelago. Sweden's National Land Survey.



Because of the land rise, the formation of the landscape is slowly but persistently changing. When Sweden was covered by the inland ice (the Weichsel glacial period about 20,000 years ago), the earth crust was pushed down by heavy ice. When the ice melted 9 000 years ago, large parts of Sweden were covered by water before land began to rise. The left map of Sweden in figure 2, depicts the limits where the shores were located at their highest (the peak coast-line) and the blue areas illustrate the parts which were below water. The right map shows the land rise in millimetre per year in the present. Today the land rises by just under a centimetre a year in the Gulf of Bothnia which conclusively means that the land area gradually becomes larger and the shoreline higher. The consequences are thereby that the water volume in the Baltic Sea is decreasing, that boat-houses and bridges end up on dry land and that the groundwater level is reduced (SNA, 1992).

**Figure 2.** *The land rise in Sweden.*

From the web place of the Geological Survey of Sweden. © The Geological Survey of Sweden (SGU). Permission: 30-1135/2004.



Moreover, the Baltic Sea is one of the world's largest areas with brackish water. The low content of salt is caused by fresh water from rivers and a cold climate. The brackish water and the land rise have together created certain prerequisites for a special nature development. The Luleå archipelago has been declared as an especially valuable landscape with extraordinary nature and culture, with several nature reserves and bird sanctuaries (Hederyd et al, 1999).

During both summer and winter time, the archipelago is a place for outdoor life for the inhabitants of Luleå and visitors. Pleasure boats are one of the main activities. More than 8.000 small boats within Luleå make it one of the Swedish municipalities with the most boats. It is one pleasure boat on every eight inhabitant in Luleå (Everything about Luleå. Internet 2004-03-04).

Lastly, tourism is viewed as the next productive industry in the Luleå archipelago. The landscape has special qualities for outdoor life, and many people have second homes in the

area. The active outdoor life like sailing, driving snowmobile, skiing and skating together with fishing, is also intense in the archipelago. Several islands have accommodations and facilities (e.g. bridges, barbecue places, guest harbours and saunas) which the municipality has built and manages (Hederyd et al, 1999; Luleå municipality, 2000).

## 2.2 The Swedish local planning system

In Sweden, there are national, regional and local levels of responsibility and obligation within the planning systems. The municipalities have a great opportunity to influence the land and water use, because of their control over the planning system. As a complement, the county administration boards provide with basic data for planning. The municipalities have to find a balance between individual interests in the juridical *detail plans* and regulations, but also make adjustments between different public interests. Certain areas can be planned more specifically by so called detail plans which are legally binding and are a support to further planning and permissions. The detail plan is a tool to proceed with the intensions of the municipal planning (National Board of Housing, Building and Planning, 1996). Since the municipalities have the right to make the decisions in their detail planning, the government and the municipality have to agree how land and water mainly should be used and how the national interests should be looked after (Boverket, 1997).

The Swedish central environmental legislation is since 1999 gathered in the *Environmental Code* which function is to promote a sustainable development. It consists of three parts, firstly goals and guiding principles for a sustainable development, secondly rules of protection of nature and animals, and finally regulations for activities with environmental influence and rules for probations, supervision etc. (Nyström, 2003). The Environmental Code not merely promotes the interest of preservation, but it is an instrument which balances different interests (Turistdelegationen, 1998).

The Environmental Code also describes certain areas of *national interest* where nature and culture are of priority when diverse demands compete with each other. The environment should be used so that ecological, social and socio-economic requirements are satisfied and that good management is promoted. Some areas of specific interest can also be indicated, like areas for outdoor life and nature conservation which are principal for tourism (Turistdelegationen, 1998). An important part of the Swedish authorities' work is to develop the descriptions of various areas which are of national interest and thereby expand the motives for their basis of forming judgements. The knowledge about these areas should progress and be complementary added with new valuations. E.g. the Swedish Environmental Protection Agency is responsible for the basis of knowledge for the areas of national interest concerning nature protection and outdoor life (Boverket, 1996).

Another important Swedish law is the *Planning and Building Act*. It legalises the spatial which should planning obtain a high-quality economising of land, water and building. It gathers a large part of the legislation and regulates the municipalities and the nation's participation in the spatial planning and in exploitation processes. The Planning and Building Act makes relatively direct demands on the planning documents' content (Nyström, 2003).

On the local level of planning, a *development plan*<sup>1</sup> is the obligation of every municipality by Swedish law since 1987. The development plan has a central role in the Swedish planning and

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<sup>1</sup> In Swedish "översiktsplan". A translation is somehow difficult; other terms could be *master plan* or *synoptic plan*. However, in this paper development plan was regarded as the most significant translation. Author's comment.

building legislation and covers the whole municipality and its land and marine areas. It is a source of knowledge where the public interests are considered together. Different users – e.g. politicians, planners, the public and different groups of interest – have different benefits and usage of the plan (Boverket, 1996). It is obligatory in all countries within the European Union (EU) with development plans which cover a municipality, according to the National Board of Housing, Building and Planning (1996). However, in Sweden the legislation is different because the development plan is not connected to the authorities and it is not subordinated to the national or regional planning.

The function of the development plan is initially visionary for a future development and it gives guidance for the municipalities and other authorities' decisions about the land and water use, and for their continued planning and examination of e.g. building permits. Finally, the development plan is an instrument in the mutual work of the state and the municipality since it is necessary with a base for their discussions around public interests and limitations (Boverket, 1997; Luleå development plan, 1990). The confidence in the development plan relies on the national and local authorities' acceptance of the development plan's guiding principles and that the authorities use it as a foundation for their decisions. Also, by the development plan, the regulations in the Environmental Code are made more useful and easier to understand (Boverket, 1996).

Every municipality can rather freely decide the contents of its development plan, but the municipal council must accept it first. Even though the development plan is obligatory, it is not legally binding. Therefore, the municipalities can relinquish from it when creating other plans. Noticeably, the development plan does not determine how separate interests should be adjusted to public interests and it is not binding for future decisions. But, it does affect the municipality's decisions with a different degree of force, depending on how distinct and well motivated the development plan is in that particular case (Boverket, 1997; Nyström, 2003).

According to Emmelin (1997), the municipal planning consists of different goals; to preserve, to gain optimal exploitation and to strengthen tourism and other local industries on the market's conditions. He also thinks that Swedish planning is consequently indistinct: "*It is not obvious which different sorts of goals can be united and this should be discussed instead of hidden by general phrases which cover different types of goals.*" (Author's translation. Emmelin, 1997 p. 104). If it was more apparent which the guiding principles were, the planning would gain of this. All the municipal ambitions cannot be united and it is not possible to achieve 100% within every part. To obtain the balance between the two parts in figure 2, planning is a crucial tool. By understanding and applying the connection illustrated, there is a possibility to realize every goal.

Changes of the development plan can be made by an *advanced plan*, addition or revision. The development plan should give clear directions and information to the municipality's inhabitants, the involved authorities and the individuals which may require a clarification by an advanced plan where the planning decisions deal with a clearly-defined geographical area. It can be a population centre but also land and water areas with evident prerequisites for activities or areas with strong competition between interests, e.g. coastal areas. Advancements of the development plan have proved to be useful in creating a dialogue between citizens. Ultimately, it is the area's character and proportion that influence the plan's shape which contributes to the diverse appearances and contents of the advanced plans (Boverket, 1996). Because of new knowledge, development of society and changed values, the development plan needs to be overviewed regularly.

The National Board of Housing, Building and Planning (1996) states that the Swedish development plans' implications have not been clearly detached from each other. Thereby the development plans have not had the significance they were supposed to have. However, since the changes of law 1<sup>st</sup> January 1996, the meaning of the development plan has increased (Boverket, 1996):

- the status as a guidance for following decisions has improved,
- the demands on the obligatory content has enhanced,
- a requirement of a consequence analysis has been implemented,
- the consultation has been given a greater importance,
- the work of the county administration board is more comprehensible and,
- the demand on follow-up and the demand on topicality are more precise.

Before the Environmental Code and the Planning and Building Act, the main question of spatial planning was to promote changes and solve conflicts by keeping various interests apart and solve the problems separately. At present, the task is to support a living environment of good quality and maintain sustainability by making the changes out from the current values (Boverket, 1996).

### **2.3 The Swedish regional and national planning systems**

On a regional level, the county administration boards represent the state and take care of and co-ordinate the interests of the nation in the planning system. The Swedish national goals within various activities have to be adjusted and fulfilled in the municipal planning. The county administration boards are responsible for investigating the work of the municipalities and have the power to invalidate their plans and to demand new outlines from the municipalities. The duties of the county administration boards are both to forward knowledge and give advice respectively watch over and intervene (Boverket, 1996).

The county administration boards supervise certain questions that concern the municipalities when these need extra support. It is especially the planning issues concerning the areas of national interest, health and security that are of importance. It is the responsibility of the county administration boards to continually give information of the national interests to the municipalities. In relation to a so called formal up-dating<sup>2</sup> of the development plan, the county administration board has to present its views concerning the interests of the nation which in so doing could affect the municipality's decisions (Boverket, 1997).

The national authorities (e.g. the Swedish Environmental Protection Agency, the National Heritage Board and the National Road Administration) control the municipalities' fulfilment of superior aims which exist within the spatial planning. These authorities are responsible for the contribution of basic data for planning within their sectors, especially within the areas of national interest (Boverket, 1997). Sweden has no specific legislation for its coastal areas except the shore protection, but there are some important political documents which purpose is to influence the development, e.g. Sweden's National strategy for sustainable development, the Swedish Environmental Quality Objectives and additionally the municipal development plans (Glesbygdsverket, 2003).

When Sweden joined the EU in 1995, the nation agreed to participate in the work of *Natura 2000*. It is a network of areas with valuable nature, animals and plants which should be

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<sup>2</sup> During every term of office, the municipal councils have to examine how present their development plans are. This is done by a formal up-dating, in Swedish 'aktualitetsförklaring'. Author's comment.

protected. Natura 2000 is based on two main pieces of legislation - the *Bird Directive* (1979) and the *Habitats Directive* (1992). A favourable preservation status must be sustained for nature and species. To considerably affect nature within a Natura 2000 area in Sweden, it is required with authorisation as stated by the Environmental Code 1<sup>st</sup> July 2001 (Natura 2000, internet 2004-08-04).

Certain threatened or unique species and environments are listed within the directives above and nearly 4000 areas are part of the network in Sweden. Every Natura 2000 area should have its own preservation plan which in detail explains what to be protected, how and when. The county administration boards are responsible of making the plan together with land owners, stakeholders and authorities before year 2005. However, it is the Swedish Environmental Protection Agency which coordinates the work of Natura 2000, while the county administration boards are in charge of the management, protection and supervision (Swedish Environmental Protection Agency, internet 2004-08-4).

By Sweden's membership in the EU the national nature conservation thereby has international conventions to adjust to and pursue. To begin with, the *Convention on Biological Diversity* (CBD) is an "umbrella convention" of nature and natural resources which commitments concern the preservation of biological diversity and sustainable use of biological resources (Swedish government, 2001). In addition, there are other conventions and programmes, like the *Agenda 21* (Agenda for the 21<sup>st</sup> Century).

In 1992, at the United Nations' Conference Environment and Development in Rio de Janeiro, the document Agenda 21 was accepted by government representatives from around the world. The countries were united to work against pollution and other environmental problems to create a sustainable development. The action plan Agenda 21 identified various solutions so that sustainable development may be accomplished and accepted (Falkenmark et al, 1999). In Sweden, most municipalities work with the questions concerning environment that were introduced in Agenda 21 (Nyström, 2003).

Another document to achieve the goals of a sustainable development is the *Baltic 21*. It is a long term middle state<sup>3</sup> co-operation within the Agenda 21. The work of Baltic 21 is divided in nine sectors which are regarded as vital for the economic and the environmental development; industry, agriculture, energy, fishing, foresting, transports, education, spatial planning and tourism. Every sector has a planning of action, goal and scenery for sustainable development (NUTEK, internet 2004-05-04).

#### **2.4 Tourism in the Swedish municipal development plan**

*"Planning is a process of knowledge. The considerations which lead to the standpoints of the right usage of land and water areas need to proceed transparently, partly to be discussed openly during the process, partly to understand how a certain viewpoint came about afterwards."* (Author's translation. Boverket, 1996 p. 71).

In 1991, the National Board of Housing, Building and Planning executed an investigation of how the Swedish coastal areas and the coastal water were considered in the municipal development plans. A total of 78 development plans of coastal municipalities were analysed.

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<sup>3</sup> Countries involved are Sweden, Denmark, Estonia, Finland, Iceland, Lithuania, Lithuania, Norway, Poland, Germany, the north-western part of the Russian Federation and EU.

As indicated by the investigation, the most important questions proved to be (Boverket, 1995):

- an active outdoor life as a priority	17 municipalities
- preservation of a living archipelago	16
- preservation of natural values in the coast zone	14
- improvement of sea environment and water quality	12
- make the development of tourism possible	8

Of these coastal municipalities, 38 were planning to invest in tourism. In areas where the physical environment is vital for the tourism industry, it needs to take a considerable place in the planning process since the sea and the landscape and the tourist destinations in coastal areas together have a great impact upon the visitors' experience (Boverket, 1997). The necessity of preservation of nature to protect outdoor life and culture is to be found in most of the coastal municipalities' development plans. But even if these claims concern the coastal areas, it is mainly referred to the land areas and not the water areas. The National Board of Housing, Building and Planning noticed in its examination of the development plans, that the municipalities were unsure if the use of the water areas could or should be regulated by their planning. Many of the coastal municipalities thought that the use of the coastal water areas was controlled by other authorities and nothing they should be responsible for (Boverket, 1995). If a municipality wants to encourage a tourism development, the development plan should also consider the water areas and its use.

In year 2000, the Swedish government was suggested by the Environmental Advisory Council, that the development plans should be in focus in the work of the coastal municipalities. The development plans' quality is a serious problem (SOU 2000:67). Municipalities of seven counties were chosen to make expanded development plans for their coastal areas and archipelagos. Together with the Environmental Advisory Council, these seven Swedish county administration boards drew regional environmental and economising water and land programs for their archipelagos. The programs showed that there are not any standard models which can be used to solve the existing problems. The extended work should be completed before 2005, while other coastal municipalities (that were not part of the study) were given a time limit until year 2009 (SOU 2000:67).

Each archipelago had its contradictions, but also mutual co-operation and dependency within its area. Nevertheless, the work with the programs is important for a future sustainable development (including tourism) in other archipelagos. An increased co-operation between the tourism industry and the social planning improves an area's opportunities for tourism. To attain a sustainable development in the archipelagos, the Environmental Advisory Council states that the development plans cannot give a proficient guidance for any action in practice.

In the Swedish development plans, tourism needs to be viewed comprehensively and should be discussed collectively. As maintained by the National Board of Housing, Building and Planning and the Swedish Tourist Authority (1997), there has not been a dialogue between planners and representatives for tourism in all municipalities. The planners do not consider tourism as essential in the spatial planning and the tourism sector does not understand the importance of being a part of the planning process. If the development plans emphasised questions that were important to tourism, the interests of tourism could be put in relation to other land use. One has to understand that there is a connection between tourism and planning, the environment and occupations (Boverket, 1997).

## 2.5 Management of the Luleå archipelago

In 1995, the municipal council of Luleå established a separate programme called *Luleå municipality Archipelago*<sup>4</sup> within the committee for recreational activities' field of interest in Luleå. In 2004, the programme was subordinated under *Luleå municipality Leisure*<sup>5</sup> with a special division called *Archipelago/Outdoor life*<sup>6</sup> which manages the municipality's establishments for the active outdoor life on the main land and in the archipelago (Everything about Luleå, internet 2004-03-04).

All establishments and activities concerning the archipelago are gathered within the division *Archipelago/Outdoor life*. Its work has to be carried out in co-operation with other administrations, various associations of interest, organisations and companies, and together with the population of the archipelago. The division's goal is to take care of the interests of the archipelago's resident population and to create better possibilities for the industry and the market activities. It should also take action for the preservation of nature and culture, and encourage the visiting industry and tourism to develop. *Archipelago/Outdoor life* is responsible for transports, garbage collections, markings and maintaining establishments and excursions (Hederyd et al, 1999).

*Archipelago/Outdoor life* co-operates with the Luleå harbour and the Swedish Maritime Administration to improve the sea safety. To some extent the division is also answerable for the marking of fairways for pleasure boats and the fishing industry (Hederyd et al, 1999). In the archipelago, there are four fairways, 50 firm navigation marks and 61 floating navigation marks (Everything about Luleå, internet 2004-03-04). To the visitors' convenience there are additionally seven rest hostels, five saunas, 30 lavatories and 26 barbeque places. Luleå municipality has four cabins on the islands Kluntarna and Småskär which are for rent during both summer and winter. Other holiday villages of the municipality are run by entrepreneurs (Wallin 11/3-03; Luleå kommun verksamhet, internet 2004-04-19).

The use of the Luleå archipelago has to be recognized through the perspective of sustainability, according to the municipality. The division *Archipelago/Outdoor life* has thereby an in-official zoning of the archipelago. In consideration to the nature interests and the environmental differences of vulnerability, there is an informal policy regarding how many people it should be in various parts of the archipelago (Session report, Luleå municipal executive board, 2002). The inner zone consists of 5 islands<sup>7</sup>, the middle of 19 islands<sup>8</sup> and the outer zone of 15 islands<sup>9</sup> (see also figure 1 and 3).

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<sup>4</sup> In Swedish: Luleå kommun Skärgård.

<sup>5</sup> In Swedish: Luleå kommun Fritid.

<sup>6</sup> In Swedish: Skärgård/Frileuftsliv.

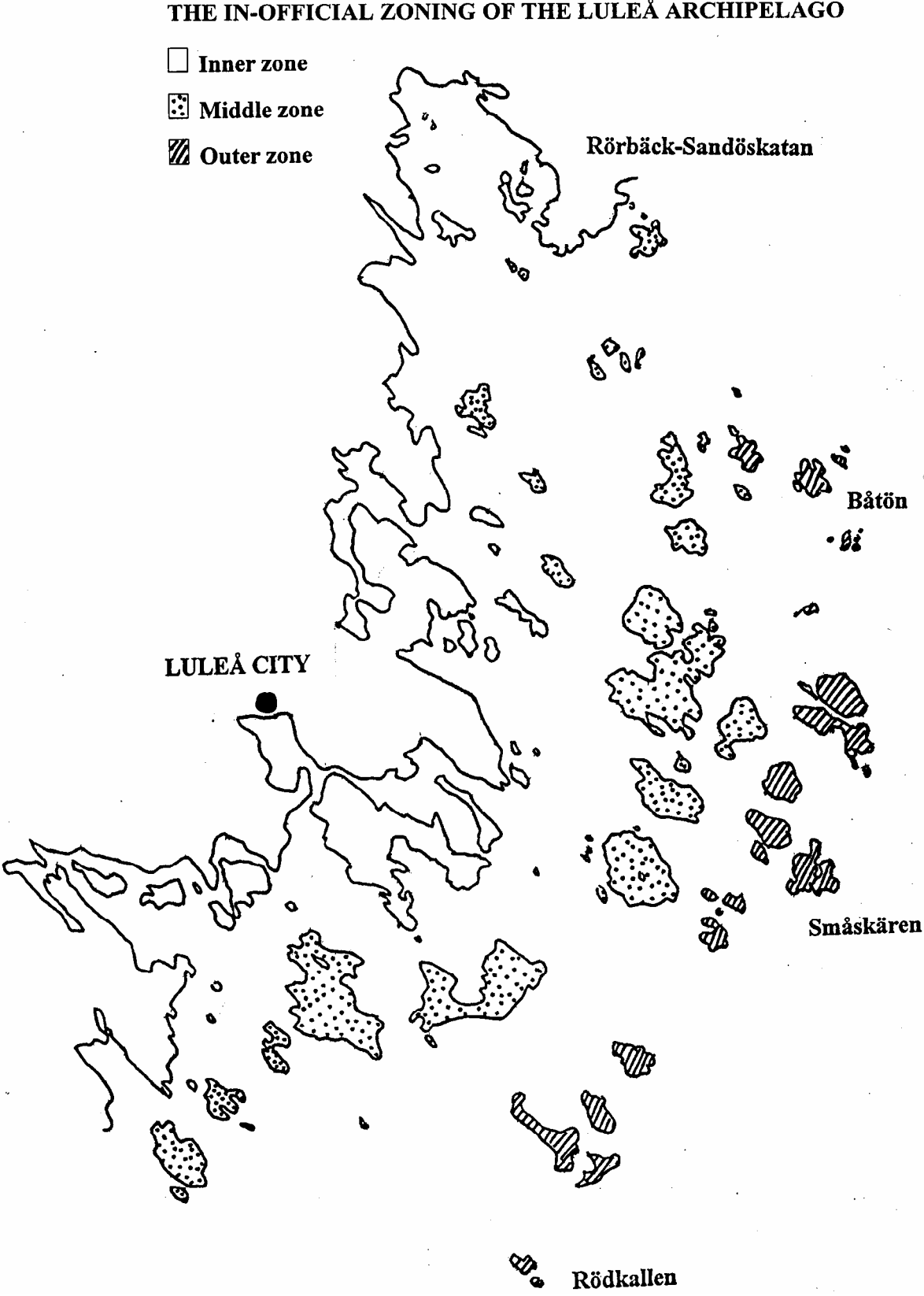
<sup>7</sup> Brändön, Hertsölandet, Laxön, Likskäret, Rörbäck-Sandöskatan and Sandön.

<sup>8</sup> Altappen, Bockön, Degerön, Fjuksön, Germandön, Hamnön, Hindersön, Junkön, Kallaxön, Lappön, Långön, Mannön, Nagelskäret, Sandskäret, Sigfridsön, Storbrändön, Stor-Furuön and Tistersöarna.

<sup>9</sup> Bastaskäret, Brändöskäret, Båtön, Estersön, Finnskäret, Kluntarna, Mjoön, Norr-Espen, Rödkallen, Sandgrönnorna, Saxskäret, Smålsön, Småskär and Sör-Espen.



Figure 3. The islands in the in-official zones of the Luleå archipelago.



According to Göran Wallin, the head of division, the in-official zoning was established after what the municipality has considered the archipelago's carrying capacity concerning how many visitors the area can manage: '*We mean that the outer islands are the most vulnerable [areas] and that the islands closest to the mainland can get by with considerably more visitors. And it is in relation to how many people who impact on vulnerable vegetation and of course that the vegetation is more sensitive the further out one comes.*' (Author's translation, Wallin 14/5-04). The largest amount of visitors is directed to the inner parts of the archipelago while it is more restricted against visitors in the outer zone (Session report, Luleå municipal executive board, 2002).

Furthermore, the municipality has a *Nature conservation plan* (2000) as a device to accomplish the intentions of Agenda 21. The plan describes and systematises areas that should be protected and the plan has to be implemented in Luleå municipality's respective boards and committees' plans of activities. It expresses the background and the motives for the municipal preservation of nature in Luleå municipality, but outdoor life is not included in the document (Luleå municipality, 2000).

In 2002, Luleå municipality's environmental office and its ecologist studied the usage of the nature conservation plan in the municipality's work. The administrations that mainly were affected by the nature conservation plan was e.g. the programme *Luleå municipality Leisure*. The investigation showed that the division *Archipelago/Outdoor life* had not planned any defined activities in direct connection with the nature conservation plan. However, one had the plan constantly present in the daily work and considered the interests of the plan. E.g. the division looks after the nature reserves voluntarily without any agreement with the county administration board (Session report, Luleå municipal executive board, 2002).

## **2.6 The planning of the Luleå archipelago**

The development plan of Luleå municipality was accepted by the municipal council board in 1990. In the development plan, the goals have been divided after firstly the public interests, thereafter the fundamental features of the land and water use and buildings, followed by the recommendations of planning, probation of permissions etc. The comprehensive goals and planning prerequisites consist firstly of the ones of population and employment. It is founded on an expected growth of population and an expansion of building. However, if these would become stagnant, some other possibilities of action are held in reserve. Industry is judged to expand which therefore is of priority in the planning to create more work opportunities. The need of buildings, infrastructure and service is viewed as great, especially within Luleå city. In the countryside, new buildings for permanent living should mainly be executed in combination with the practising of industry (Luleå development plan, 1990).

Concerning second homes, tourism and outdoor life, the municipality states in its development plan that: '*A great environment for leisure time for the municipality's inhabitants along with good requirements for tourism is important to the municipality's future in the 21<sup>st</sup> century. An expanded building of second homes can be permitted on suitable places in the municipality, but not within the near zone of Luleå city in a radius of about 15 kilometres.*' (Author's translation. Luleå development plan, 1990 p. 7). The conclusion is that tourism and recreation should be carried out so that The Luleå archipelago's values and biological variety would not be threatened. The main priority is to uphold the recreational life so that the inhabitants of Luleå have access to satisfactory recreation areas. Through the development plan's clarification of changes and preservation of the cultural landscape and the buildings, cultural environmental control and conservation should be more obvious (Luleå development plan, 1990).

The balance of use and preservation is maintained by economising environmental and natural resources, ecology together with environment protection. In 2000, the goal concerning the nature preservation in The Luleå archipelago is according to the municipality, '[that] *the untouched overall character of The Luleå archipelago and its biological, geoscientific and culture-historical values should be preserved. ... The forestry in the archipelago should be carried out with particular respect to nature and culture values. Tourism and recreation should be carried out so the values of the archipelago and the biological diversity would not be threatened.*' (Author's translation. Luleå municipality, 2000 p. 39).

Several areas in The Luleå archipelago are part of EU's ecological network, the Natura 2000: Bådan, Likskäret, Norr-Espen, Sör-Espen, Rödkallen, Lappön, Haruffjärden, Sikören, Båtöfjärden, Furuholmen, Skäret, Bergöfjärden, Hästholmen, Skatabryggan, Rånefjärden and Kluntarna (see figure 1 for localisation). Most of the places are protected as nature reserves (Natura 2000, internet 2004-08-04). A significant part, 82%, of the protected areas in Luleå municipality consists of water. There are protected areas of different degrees against exploitation and influences in the archipelago. In the bird sanctuaries it is prohibited to go ashore 1 May to 31 July when the birds are breeding (Luleå municipality, 2000):

- 16 nature reserves (16 340 hectares where 1 392 is land)
- 8 bird sanctuaries (1 670 hectares where 366 is land)
- 1 biotope protected area<sup>10</sup> (5 hectares of land)

A majority of the nature reserves and bird sanctuaries are situated in the so called outer zone of the archipelago – on the islands Rödkallen, Sandgrönnorna, Sör-Espen, Norr-Espen, Kluntarna, Småskären and Deferö-Börstskären. Also the bays Bergöfjärden, Båtöfjärden and Haryfjärden are nature reserves with specific regulations. In the middle zone the islands Lappön, Likskäret and Storbrändön have some nature reserves. Finally, the inner zone has a nature reserve on Sandön (Hederyd et al, 1999).

Regarding preservation, the county administration board of Norrbotten and Luleå municipality do not always value an area the same way. For example, in the development plan of Luleå, the municipality does not think two islands in the archipelago are of national interest for nature conservation. The scientific values are regarded as less on the islands Sandön and Likskäret, than the surrounding areas. This valuation is in contrast to the county administration board's opinion (Luleå development plan, 1990).

### **3. The questionnaire survey in the Luleå archipelago**

#### **3.1 Introduction**

With a case study approach, a typical place is selected for a study because it is believed to possess particular characteristics (Robinson, 1998). By this means, the Luleå archipelago is viewed as an appropriate place to examine since tourism and recreation in coastal areas in northern Sweden have very seldom been investigated. In the Luleå archipelago the nature is unique and is of national interest for recreation and because of the nature. During summer and winter, Luleå municipality wants to expand the archipelago's tourism. Furthermore, in the area there are various groups of stakeholders. It is thereby interesting to investigate this area since there are conflicts between preservation and usage. Case studies are also apt when one wants to

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<sup>10</sup> Smaller land or water area which is an environment for life of animals or plants that are threaten or worth protecting. Within a biotope protected area, there can be no activity or means that could harm the environment (County administration board Västerbotten, internet 2004-06-30).

do a profound analysis of e.g. planning and the processes, as in the case of the Luleå archipelago which will be done more in depth in the thesis.

Yin (1994) states, that generalisation can be made from case studies to theory. In an analytic generalisation, already developed theories give the foundation for the empirical investigation. Within tourism research, case studies as analytic tools are common especially concerning spatial change, tourist flows or physical change due to tourist developments. In relation to tourist attitudes, it is less common even though there are some works on behaviour patterns (Ryan, 1995). In this paper, visitors' geographical distribution and attitudes will be investigated by a case study which thereafter will be discussed thorough in relation to theory in the thesis.

Except for literature studies, field trips were executed both during winter time (March 2003) and summer time (July 2003) to get an opinion of the archipelago and the landscape. During the winter field trip, an informal interview conversation with Göran Wallin, head of the division *Archipelago/Outdoor life* of Luleå municipality was performed. In addition, an informal interview took place with Captain Lennart Hennix during the summer field trip while going with the tour boat *M/S Ronja* in the archipelago. Notes were taken during both occasions. During the field trips, contacts with other municipal staff and local inhabitants were established. Except from gathering data and information, the field trips resulted in a wider understanding of the area.

### **3.2 On site data collection**

A significant part of the study is a questionnaire survey to visitors in the area summer 2003. The questionnaire survey is to a small part a retrospective study with questions about past visits and changes in the area. It is a common method to document time-bound changes for the same respondents. Since the study is done at one occasion there are fewer problems with accumulative decline or misleading results because of interview effects. The limitation of the retrospective study is the respondents' inadequate ability to remember the correct facts since they have occurred in the past. Still, retrospective questions are generally no difficulty when asking for information about actual situations (Djurfeldt et al, 2003).

In this paper, the notion of costal areas includes both coast and archipelagos within the municipal boundaries of Luleå indeterminate areas. Thereby the respondents' addresses were collected from establishments both on the islands in the archipelago and on the coastal mainland.

Many visitor studies face problems whether the surveys are representatively or not. The size and type of the whole population is hardly ever identified which makes it difficult to estimate the sample size and if it is representative. It is vital to register external factors that may affect the visitors and their activities e.g. the weather, special campaigns or events. Even holidays should be registered (Vuorio, 2003). In the survey, the ambition was to get a representative sample. It was achieved by collecting addresses during an extended period of time during the summer 2003. The goal was also reached by gathering addresses from various places in the area.

The address collection included addresses from Luleå municipality and Luleå tourist agency. At the islands Kluntarna and Småskär (see figure 1), where the municipality has lodges for rent, the addresses referred to people who visited the area January-August in 2003. Addresses of the leaseholders of second homes and people, who had bought season cards for the guest harbours, were also sent by the municipality. Two camping locations, Brändö Camping and Rörbäck Camping, provided the study with addresses. The addresses from Brändö Camping

included guests during May-September. The visitors signed in by themselves and the addresses were sent as copies to the author. The visitors at Rörbäck Camping had been at the location June-August. They also signed in by themselves, but these addresses were copied by staff at the camping.

During 17 July - 13 August, people visiting the Luleå archipelago were asked to complete registration cards (see Appendix 2) at several locations. Registration cards were handed out among the people at the tourboat *M/S Ronja*, the youth hostel Småskär, the Neptun Clubhouse, the Klubbviken's seaside resort, the LSS Clubhouse, the Ettan's marina (in central Luleå) and the Arcus Camping. The visitor was asked to fill in his or her name, address, age and gender and describe when he or she had arrived to the area and when to departure. Finally, they should answer what the main purpose had been with the visit in the Luleå archipelago.

The establishments' staffs were contacted and an agreement of how the work with the registration cards should proceed was made. A variety of staff would hand out the cards to visitors. The registration cards were sent by mail to the establishments (together with a filled-in example of a card), signs with information in Swedish and English, and a letter with instructions. Included were also addressed and stamped envelopes so that completed registration cards could be sent back to the sender. At *M/S Ronja*, the author spent the 15th July 2003 to hand out registration forms among its passengers. Thereafter, the staff of the tourboat handed out registration forms during the following two weeks.

**Table 1.** *Collected addresses in the Luleå archipelago 2003.*

<b>Source and place</b>	<b>Females (N)</b>	<b>Males (N)</b>	<b>Total number (N)</b>
Brändö Camping	37	50	87
Rörbäck Camping	47	154	201
Likskär second homes	5	10	15
Kluntarna second homes	5	15	20
Rödkallen second homes	7	26	33
Season-card guest harbour	33	117	150
Youth hostel Småskär	4	-	4
Leaseholders of second homes	37	126	163
Visitors Kluntarna	54	26	80
Visitors Småskär	16	10	26
LSS Clubhouse	7	1	8
Neptun Clubhouse	6	30	36
Klubbviken's seaside resort	7	-	7
Tourboat M/S Ronja	49	12	61
<b>TOTAL</b>	<b>314</b>	<b>577</b>	<b>891</b>

All gathered addresses (see table 1) were selected to be part of the study. Four people from other European countries than the Nordic countries were excluded. From abroad, only visitors from the Nordic countries (Norway, Denmark and Finland) were chosen to get the questionnaire. Respondents from the same household got to be part of the survey, but these got a questionnaire per individual and were still considered as being representative of the relevant population.

Based on addresses collected on site a mailed questionnaire was distributed after being pre-tested on co-workers at the European Tourism Research Institute (ETOUR). It consisted of attitude questions in relation to development in the Luleå archipelago, the visitors' geographical location, activities and experiences. Moreover, the method of the purism scale was used where the respondents gave their opinion of Swedish coastal areas in general. The questionnaire also contained a section of questions about sailing. Finally, there were economic questions and demographical variables.

The survey was posted by mail in 2003 the 24th November. A remainder letter was mailed in 2003, the 12th December to 530 of the respondents who had not returned completed surveys by this date. A second letter and a replacement survey were mailed the 15th January 2004, to 411 of the respondents who still had not completed the survey.

Question C1 had its answer statements varied in three different ways (see Appendix 1). Thereby the questionnaire was printed in three different documents (A, B and C) and thereafter evenly distributed between the different groups of respondents which were structured after the collection of addresses (see table 1). Note that the only difference between the forms A, B and C was question C1 where the respondent gives a general opinion about Swedish coastal areas. The number of respondents who completed the questionnaire A was 169 individuals, questionnaire B was completed by 123 and questionnaire C by 230.

The questionnaire was mailed to 891 individuals and the total number of completed surveys was 522. Seven surveys were sent in, but with no answers. Because of wrong addresses, a total of 42 surveys were returned to the sender. The final response rate was 62% of the survey calculated as  $891 - 7 - 42 = 842$  and  $522/842 = 61,9\%$ . The number of non-respondents was thereby 310 persons.

Mailed questionnaires:	891
Completed questionnaires:	522
Not completed questionnaires:	7
Non-deliverable questionnaires because of wrong addresses:	42
Non-respondents	310

Among the 310 non-respondents, 42 informed in writing that they were not interested in answering the questionnaire, or that they lacked out of time or that they claimed that they had not been to the Luleå archipelago. Some of the respondents were not able to answer the questionnaire since they had passed away. Others were travelling abroad. There is no special non-response analysis included in the study.

In relation to the discussion above, the issue of gender should be recognised. The concept *gender* stands for social and cultural distinctions learned in society between males and females whereas *sex* means the biological differences. Both gender and sex may have an effect on recreational behaviour. The males and females' similarities and divergences in recreational behaviour have been investigated in several studies. Apparently, males and females have more noticeable similarities than differences. The recreational activities where the gender differs are the more demanding and traditionally masculine activities like fishing, hunting and the wilderness-related (Manning, 1999).

As demonstrated in table 1, the number of males dominated within the address groups of second homes and guest harbours where the season cards for boat places had been purchased.

This can be related to who is in charge of the boat, where males more often tend to be the “captain” of the boat and therefore also take the administrative responsibility (Meyer, 1999).

Significant more males owned second homes than females in the survey. Perhaps it is also more common that males are in the registering as the owners of second homes than females, even though second homes are own by couples. It was also more respondents among the ones who had been to the camping places. The reason could be that it is the male of the household who sign in when register and also is the one who is taking care of the economic responsibilities during the vacation. In comparison, women dominated in the groups where the respondents travelled around in the archipelago, as being visitors to Klubbviken, Kluntarna and Småskär. Noteworthy is that there were more female respondents among the visitors who went with the tour boat than males in the survey.

### **3.5 Data analysis**

The coding of the questionnaires began in January 2004 and was finished in March 2004. Question A29 and A30 were not coded at this phase. The data was analysed by using the data programme *Statistical Package for Social Sciences* (SPSS) and Excel. Frequencies were counted and the results were summarised in frequency tables (see Appendix 1).

In question A5, new variables were added since the choice “Other transportation” proved to have a high percentage of the transports of tourboat and snowmobile, as in question A6 which was added with the variables car and snowmobile. In question A31, a high number of respondents especially appreciated sauna and fishing in the Luleå archipelago which also were included as new variables. In question D10, two new variables were included (cross country skiing and snowmobile), since many had noted these activities. Also, in relation to question A26 asking if one could consider living permanently in the Luleå archipelago, three variables with the seven most frequently mentioned places were included. This because the question was an open query and the other mentioned islands were too few to make any observations.

### **3.6 Survey research problems and errors**

It proved to be difficult to gather a sufficient number of addresses of visitors in the Luleå archipelago. A misconception was the number of people who would fill in the registration cards. The returned registration cards proved to be fewer than expected and the staff at the establishments explained that they had had little or no time to fulfil the agreement. Ettan’s marina and Arcus Camping did not send any registration forms at all since they did not forward any registration cards to their visitors. One possible weakness is that the survey had a dominance of men, as only 36,4% of the respondents were females. On the other hand, there might be an uneven distribution of male and female visitors in the area.

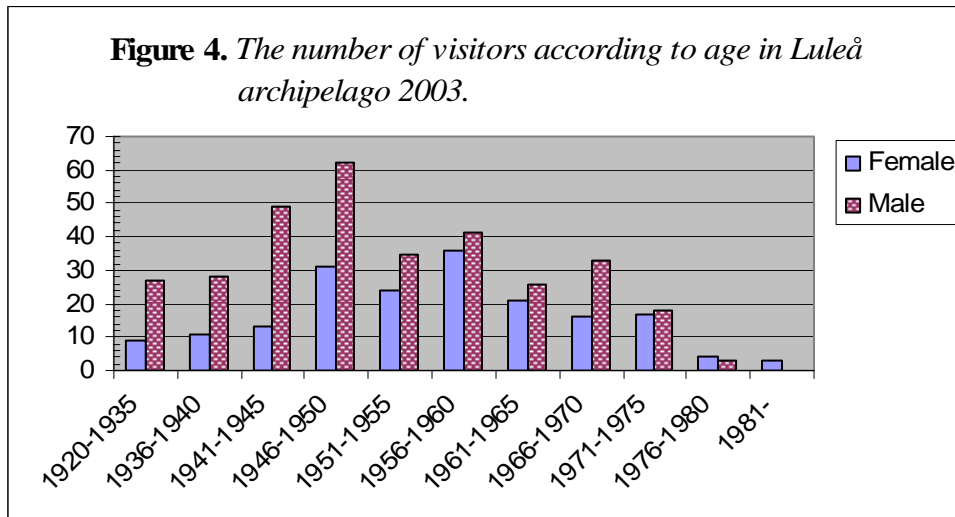
The respondents who claimed that they had not visited the Luleå archipelago during the summer of 2003, had either not been to their second home during the period or had been to Rörbäck Camping. The latter is located on the coast in the northern part of the municipality (see figure 1). Some of the visitors at Rörbäck stayed only for a night during their vacation by car or caravan, and therefore they claimed that they had not been in the archipelago and could not answer the questionnaire’s questions.

A total of 42 surveys were returned as non-deliverable. This concerned especially the respondents who had stayed at the Rörbäck Camping. An explanation could be that the handwritten addresses had been copied incorrectly by the establishment.

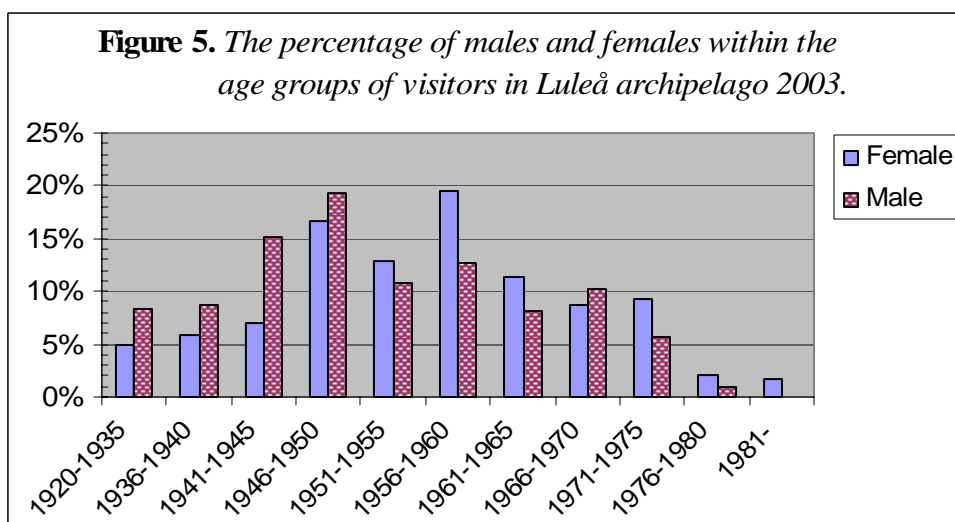
## 4. Case study results

### 4.1 The visitors and their reason for visiting

The area's visitors were dominated by Swedes and only about 5% was from Norway, Denmark and Finland. A significant number (54,2%) of the visitors came from Luleå and all together 78% from the county of Norrbotten of northern Sweden.



Approximately 55% of all respondents were born 1946–1965. Of the respondents in the survey, about 63% are males, see figure 4. As figure 4 shows, there are more males within every age group except from the ones born in 1976 and later. The highest number of men is among the ones born in 1941-1950, in comparison to the age group of women which is 1946-1960. The mean age of all respondents is 50 years old. Noteworthy is that 7,1% of the respondents are seventy years or older.

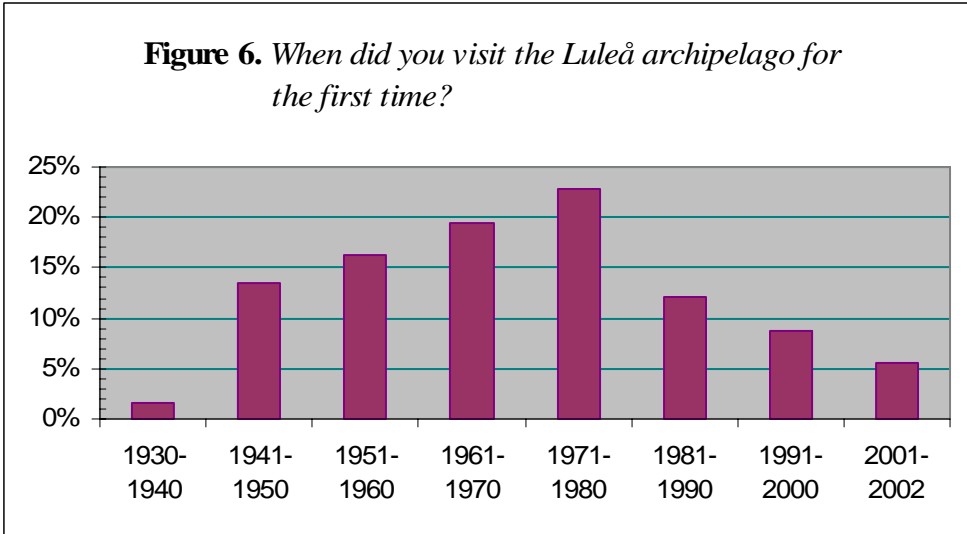


Within the age groups of the visitors in the Luleå archipelago 2003, the highest percentage of females is found in the age group 1956-1960 while the highest percentage of males is within the age group 1946-1950. As figure 5 depicts, the *older* the respondents are, the higher percentage of males. The *younger* the respondents are, the higher percentage of females (with an exception of age group 1966-1970).



Concerning the respondents' highest education, 27% had a university bachelor's degree and another 21,5% had a bachelor's degree. The total sum of income of the visitors' households was primarily between SEK 200 000-399 999 a year.

The dominating way of transportation to the Luleå archipelago from the homestead, is either by own car (54,4%) or by own boat (53,3%). Within the coastal area of Luleå, motorboats (56,9%) and going by tour boat (28,4%) are revealed to be the most frequent transportation mean. Also, sailing boat and snowmobile are usual vehicles with approximately 12% each. Since the respondents also have been to the area during other periods except summer, there are other various transports like snowmobile included. About 67% has a positive or a very positive opinion of the accessibility in the area. On the other hand, a pretty high number of respondents (69,6%) think that the accessibility with public transportation within the Luleå archipelago should improve.



Approximately 14% of the respondents had their first visit to the area in year 2003. As viewed in figure 6, 13,5% of the respondents who had had their first visit in the Luleå archipelago during the 1940's, in comparison to 16,3% in the 50's. Since the mean age mean age of all is 50 years old, it is not surprising that the highest percentage of first visits (42,3%) occurred during the time period of 1961-1981.

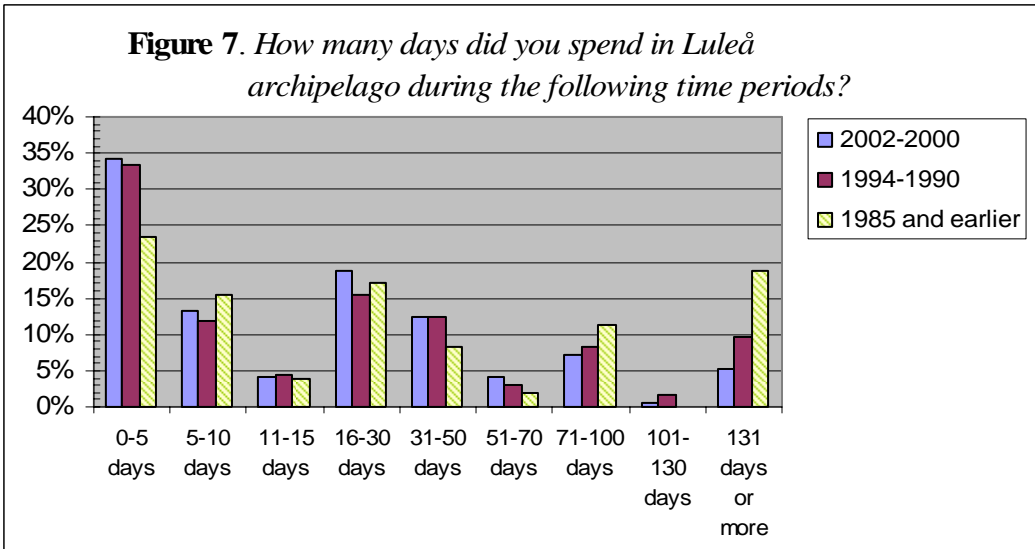
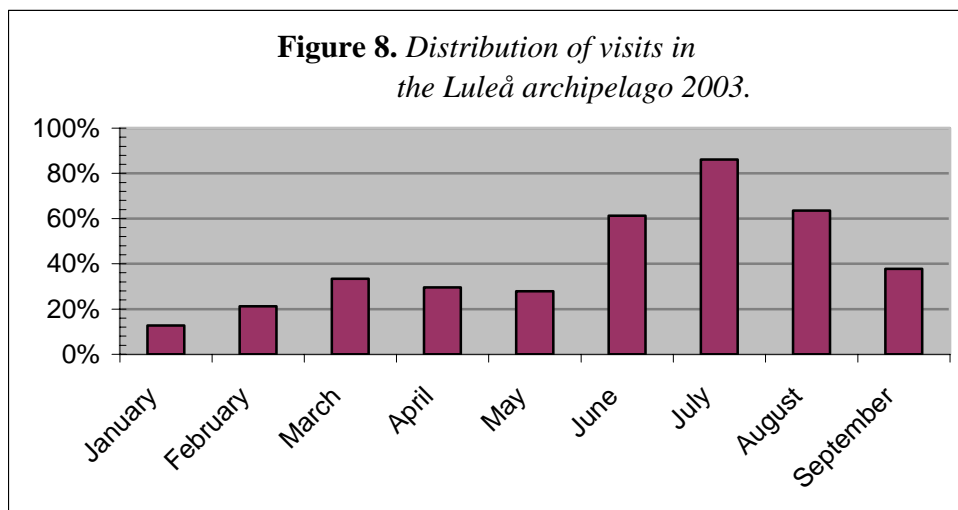


Figure 7 illustrates how many days the respondents spend in the area during the time periods of year 2002-2000, year 1994-1990 and year 1985 and earlier (see question A11 in Appendix 1 for further information of the time periods 1999-1995 and 1989-1985). The majority of the respondents, 56,4%, spend the night at the one and same place during the visit, while almost 35% slept at different places. Only 8,7% answered that they had not taken any lodgings in the archipelago over the night.

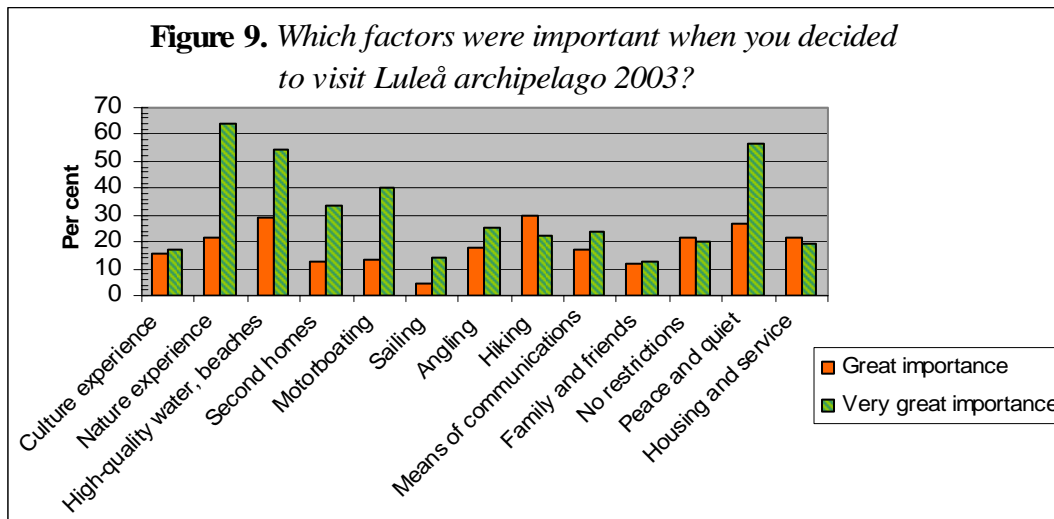
The respondents, who spend time in the Luleå archipelago 1985 and earlier, either stayed for a couple of days or spend 131 days or more in the area (see figure 7). Why did more people spend 131 days or more in the archipelago during this time period in comparison to the other time periods? A probable answer is because they had access to a second home. Historically, the term “leisure” did not have the same implication as today. Yet, people in the peasant society in some parts of Sweden moved out from their main houses to summer houses on their farms or went to cabins with the cattle. To spend the whole summer in another place was necessary economically but also a pleasant interruption of the everyday life (SNA, 1993). According to Malmstad (2002) it was common to spend the whole summer in the archipelago during the 1950’s and 60’s.

It is a greater difference between the numbers of days in 2002-2000 where a short stay had a high percentage while staying during many days had a very low percentage.

Conclusively, the peaks of visits were 16-30 days and 71-100 days in all three time periods. Also, during all three time periods visiting in 0-5 days had the highest percentage. However, according to the survey’s result it was less common to be in the area 0-5 days twenty years ago or earlier, in comparison to the other time periods.



Since the questionnaire survey was mainly directed to people visiting the area during the summer 2003, the month most frequently visited proved to be July, followed by August and June, see figure 8. However, March and September as well had many visitors. Just above 40% of the respondents had also been to the Luleå archipelago during the months of September-December year 2002.



In question A21 (see Appendix 1), the respondents were asked to consider different statements and indicate which factors that had had no importance and very great importance for their decision to visit the Luleå archipelago. The statements were graded between five levels of importance; *no importance* to *very great importance*.

To begin with, around 20% of the respondents view the possibility of a nature experience as of great importance and by 64% as of very great importance, in comparison to the possibility of an experience of culture where 16% believe it as of great importance and 16,8% as of very great importance (see figure 9).

The statement of high-quality water, beaches and bottoms is considered by about 29% as of great importance and by 54,4% as very great importance. The possibility of peace and quiet is viewed of approximately 27% as of great importance and of very great importance by 56,7% when choosing the destination.

As already mentioned, pleasure boats is a main activity in the Luleå archipelago. Nonetheless, as many as 55,1% regard sailing as of no importance while 4,7% believe it as of great importance and almost 14% as of very great importance when deciding to go to the Luleå archipelago. Instead motorboating is of great importance to 13,7% and of very great importance to 40,3%. The means of transportation in the archipelago is of great importance to 17,4% and of very great importance to nearly 24%.

Housing and service is viewed by 22% as of great importance and by nearly 20% as of very great importance (see figure 9). If approximately 25% believe visiting family and friends as of great importance or of very great importance, roughly 40% answer that it is of no importance. When the respondents decide to visit the archipelago, access to a second home is regarded as of great importance by 13% and of very great importance by 33,3%. In comparison, 30,9% believe that access to a second home is not important.

The possibility of hiking is viewed as of great importance or of very great importance by around 50%. The absence of regulations and impediments within area, is believed by 21,5% as of great importance and by around 20% of the respondents as of very great importance for their decision to go to the Luleå archipelago. The possibility of angling is of great importance to 18% and of very great importance to 25%.

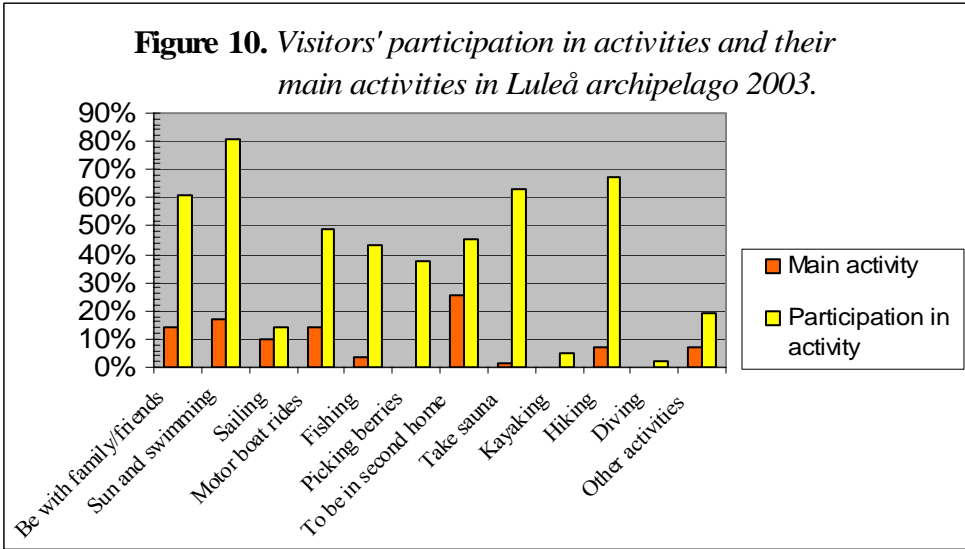
In the survey the respondents were asked to mark specific parts that they appreciated the most during their stay (the result will not be included in this paper). In relation to this question, the respondents explained what they appreciated with the area (see question A31 in Appendix 1). The sea and the beaches are very pleasing; nearly 80% of the respondents regard these as valuable when paying the Luleå archipelago a visit. Experiencing calmness together with feeling peace and quietness please 79,1 per cent and being out in the nature and come into contact with culture make 63,1% content. Furthermore, housing of good quality is appreciated by around 38,1% and the accessibility is appreciated by 35,5%. Sailing and boating is pleasing by more or less 19%.

Conclusively, the visitors are satisfied with their stay in the Luleå archipelago. A majority (90,2%) maintain that they surely will return for another visit. By roughly 55%, the judgement is that the visit was very satisfactory and by 32,5% that their visit was satisfactory with only a few requests for improvements. Among the respondents, 65,3% indicate that the most common source of knowledge about the area was by earlier visits and about 16% had heard about the area from family and friends. A major part of the respondents visit the area with somebody, mainly with their family as company.

**4.2 Activities when visiting the Luleå archipelago**

In the survey the respondents were asked to point out which activities they had carried out during their stay. The activities were specified in the questionnaire but the respondents could also add other activities to their replies where the most common were barbequing, bird watching, relaxing and experiencing culture.

Despite the tourist destination’s location by the sea, kayaking and diving are the activities with the fewest performers. Of course, there was a low percentage who went cross country skiing and used snowmobiles since it was a survey conducted in the summer.



As figure 10 demonstrates, being in the sun and swimming is a popular activity followed by hiking, taking sauna and being with friends and family. It is a considerable difference between the participation of sailing and motor boating where the later is carried out by nearly 50%. Recreational activities like fishing and picking berries together with being in second homes is quite common.

Many respondents express taking a sauna as an activity during their stay in the Luleå archipelago. However, it is a service provided by the municipality on some of the islands and perhaps many have saunas in their second homes since it is a traditional activity in northern Sweden.

The main activity with the highest percentage is spending time in second homes followed by being in the sun and swimming, as viewed in figure 10. Except for being with family and friends, also going by motor boat is viewed as one of the most central activities. In comparison, only 9,9% estimate sailing as their main activity. Picking berries, kayaking together with the winter performances of cross country skiing and snowmobile are not viewed as the main activity by anyone. Lastly, nearly 70% has a lot of experience of their main activity.

In coastal areas, boat activities are a major part of the visitors' stay. Almost 58% of the respondents have access to a motor boat during their holiday in the Luleå archipelago. Around 16% spend time on the activity of sailing and 14,7% has admittance to a sailing boat. More or less 71% of all respondents are little or not at all disturbed by back washes from larger boats, while only 1,2% mean that they have been disturbed much or greatly by this. Of the 81 respondents who had been sailing in the Luleå archipelago in 2003, it is 75% who are experienced or greatly experienced with the activity of sailing. Of these, 97,5% believe that the Luleå archipelago is big enough for several days of sailing.

**Photograph 2.** *Guest harbour at Junkön, the Luleå archipelago. Rosemarie Ankre 16/7-03.*



Photograph 2 depicts the encounter between the former and the present way of livelihood of the archipelago in the guest harbour on Junkön which has place for ten boats, and offers fresh water, toilets and a café (Hederyd et al, 1999). In the foreground of the picture, there are fishing nets and an old boat which is part of an exhibition of the archipelago's traditional living. In the background, a modern boat is berthed at the quay. As the picture shows, there is also a possibility to throw garbage so the archipelago can remain clean.

Close to 60% think that there is an adequate amount of guest harbours in the area. Around 30% of the respondents who have been sailing in 2003, would have stayed longer if there had been

more guest harbours. In the survey, the judgement of the guest harbours' service with water, disposals, and gas and shopping is positive or very positive by 50%. Around 16% condemned the service negatively or very negatively.

Furthermore, all respondents had to consider the importance of service, like purchases of general goods and gas. 8,4% view service as not important at all and 17,4% say service is virtually not at all important. 28,3% mean it is quite important and 22,5% very important.

#### **4.3 The geographical dispersion of the visitors and their activities**

In the survey, the respondents notified which islands in the Luleå archipelago they had been to during their stay. There were 39 islands which could be the choice of the respondents. The islands were on a map in the questionnaire survey, but also other islands could be added. E.g. the islands Antnäs-Börtskäret and Degerö-Börtskäret proved to be frequent.

Table 2 depicts the islands with or with over 10% of the visits among the respondents in the Luleå archipelago. Obviously the respondents could have been to more than one island during their stay. The islands Kluntarna, Hindersön and Småskären had the highest percentage of visits in the survey. The islands with less than 10% of the visits see Appendix 1, question D13.

**Table 2.** *The visited islands with or with more than 10% of the visits in the Luleå archipelago in 2003.*

<b>Island</b>	<b>Percentage %</b>
Kluntarna	55,5
Hindersön	52
Småskären	50,6
Brändöskäret	39,4
Sandön	39,2
Junkön	38,2
Altappen	36,7
Likskäret	32
Hertsölandet	31,4
Brändön	29,6
Kallaxön	25,5
Uddskäret	24,9
Rödkallen	24,3
sandgrönnorna	20,6
Finnskäret	16,3
Storbrändön	13,7
Långön	13,1
Bastaskäret	11,4
Germanön	10,8
Rörbäck-Sandöskatan	10,8
Estersön	10,4
Smålsön	10
Other islands	19,6

The visited islands with or with more than 10% of the visits in the Luleå archipelago (see table 2) was thereafter geographically dispersed after the in-official zoning of an inner, middle and outer archipelago (see figure 3) and the results are shown in the figures 11, 12 and 13.

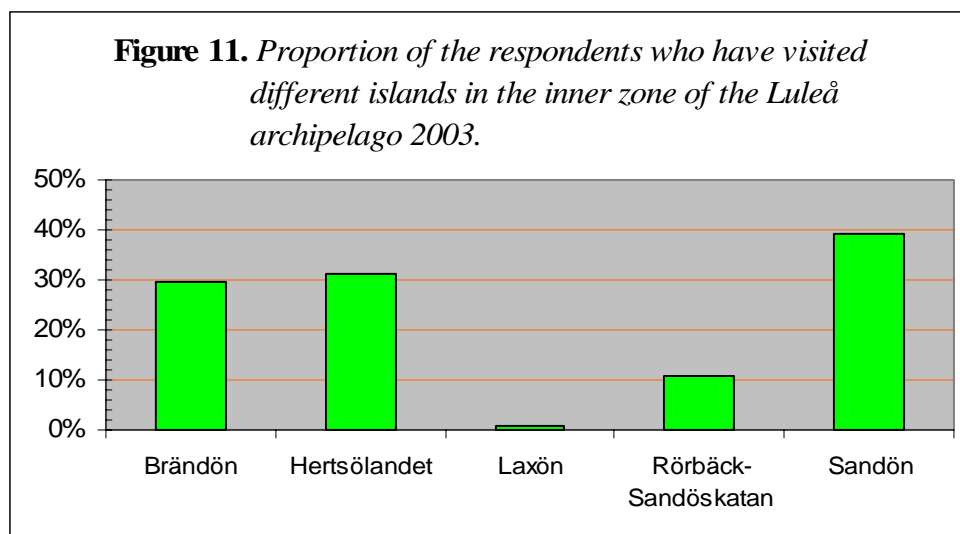
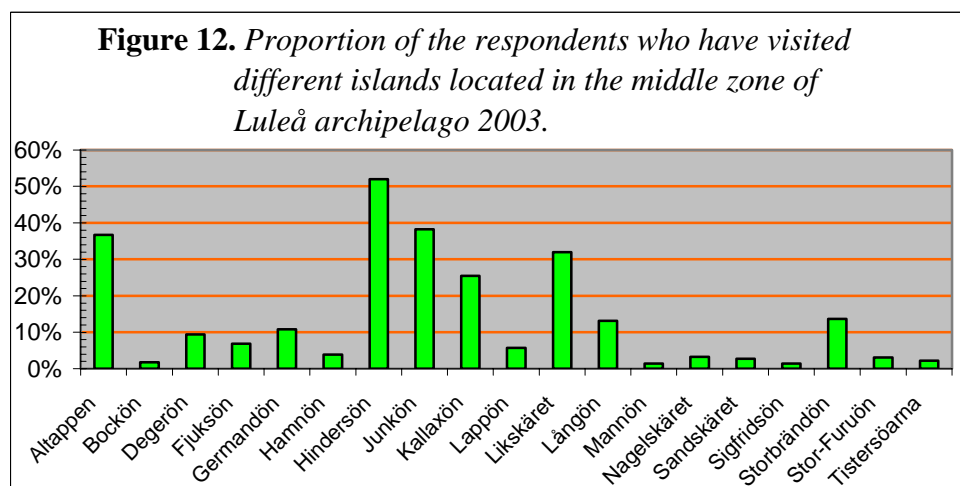


Figure 11 demonstrates the percentage of the respondents who were on the five islands located in the inner zone of the Luleå archipelago. Sandön, Hertsölandet and Brändön had 30-40% each of the visits. Laxön was hardly visited by anyone that together with Rörbäck-Sandöskatan are located in the northern part of the archipelago. An explanation might be that these islands are viewed as too peripheral. Laxön has a lot of forest, some nice swimming places but no service (Hederyd et al, 1999). The only way to get to Laxön is by own boat, whereas the tourboat went to Rörbäck once a week on a special tour in 2003.

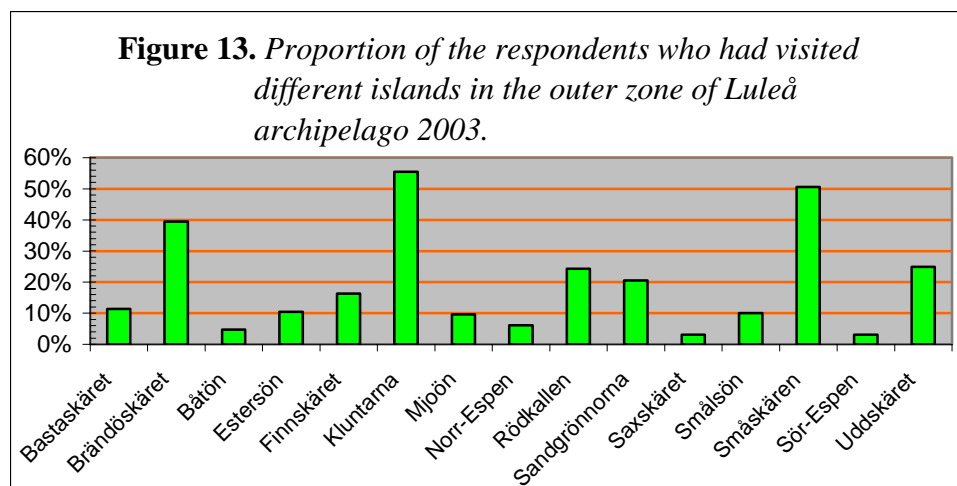


According to the percentage, visits within the middle zone of the archipelago were particularly popular at the islands Hindersön, Junkön, Altappen and Likskäret which had 30-50% each of the visits, as viewed in figure 12. Also Kallaxön with about 25% had quite many stays.

Hindersön is one of the biggest islands and is the most populated by locals in the archipelago. There is access to phone, toilets, sauna and fresh water on the island. The municipality holds a youth hostel, Jopikgården, with a restaurant and there are also nice places for camping in the area. The island Junkön has a newly built settlement in an old fashioned style which shows how a fishing village used to appear. There is also a café and an exhibition of the former life in

the archipelago (Hederyd et al, 1999). During the high season in 2003, the tourboat stopped at Hindersön and Junkön every day.

Bockön is in the northern archipelago (see figure 1) and offers no service. Some parts of Bockön are a nature reserve. Stor-Furuön is not easy to get ashore and is also placed in the northern archipelago. In the northern part, Tistersöarna (a group of smaller islands) are located alone in a bay and are very exposed to wind which makes it difficult to land (Hederyd et al, 1999).



Among the respondents, the three islands in the outer zone of the Luleå archipelago with the largest proportion of respondents were Kluntarna, Småskären and Brändöskäret with 40-50% each (see figure 13). These islands could also be visited by going with the tourboat in comparison to the other islands in the outer archipelago. An exception is Rödkallen which twice a week during high season was trafficked by a special tour boat.

Kluntarna is a nature reserve and has a great variety of nature and there are also some of the ancient stone labyrinths. It has a guest harbour, access to phone, toilets, sauna and fresh water. There is also a café and lodging. Småskären has about 120 second homes and several swimming-places. The island is not a good place for camping, but there is a rest hostel, a sauna, fresh water and toilets (Hederyd et al, 1999).

The waters around Brändöskär offer good fishing and the island's fishing village is the archipelago's last civilisation with fresh water and toilets. Sör-Espen has no natural anchorage and is a nature reserve with prohibition against going ashore 1 May to 31 July when the birds are breeding (Hederyd et al, 1999).

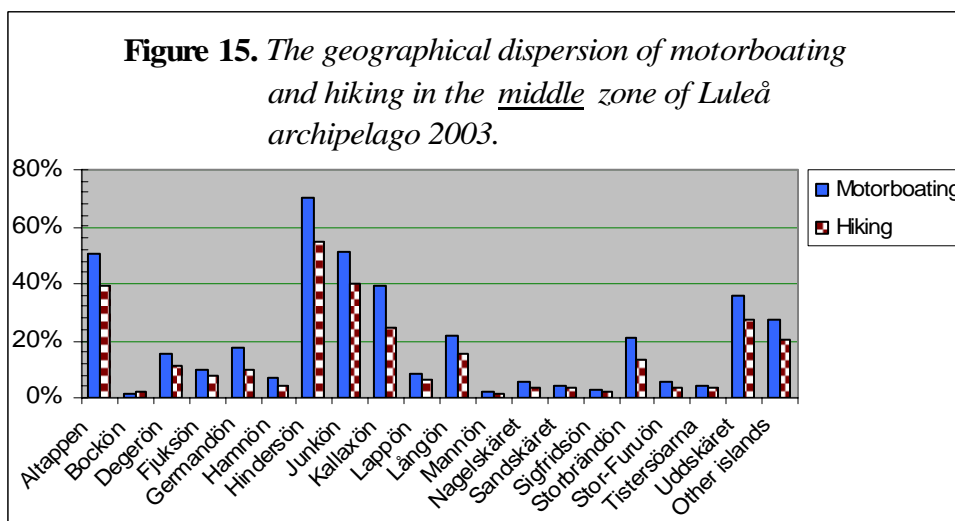
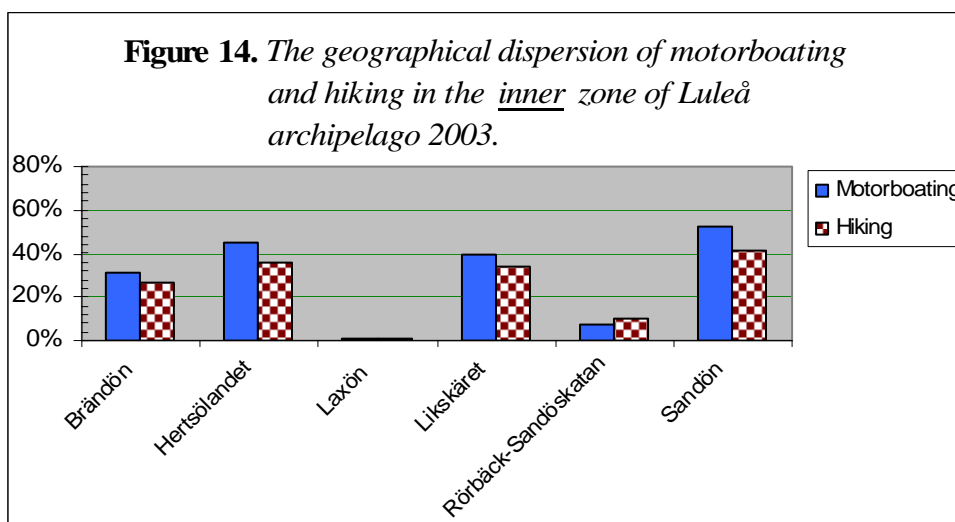
The geographical dispersion of the activities in the Luleå archipelago was examined out from question D10 (see Appendix 1) where the activities were to be with family, sun and bath, sailing, motorboating, angling, to be in second home, sauna, hiking and other activities. Firstly, on some islands it was a high percentage of performance of all the activities. In the inner archipelago (see figure 3) this emerged on Brändön, Hertsölandet and Sandön and in the middle archipelago it emerged on the islands Altappen, Hindersön, Junkön, Kallaxön and Likskäret. Lastly, Brändöskäret, Kluntarna and Småskär in the outer archipelago had a high percentage of a performance of all activities. All together, Bockön, Laxön, Stor-Furuön, Sör-Espen and Tistersöarna were the islands with no or the fewest activities (see Appendix 3).

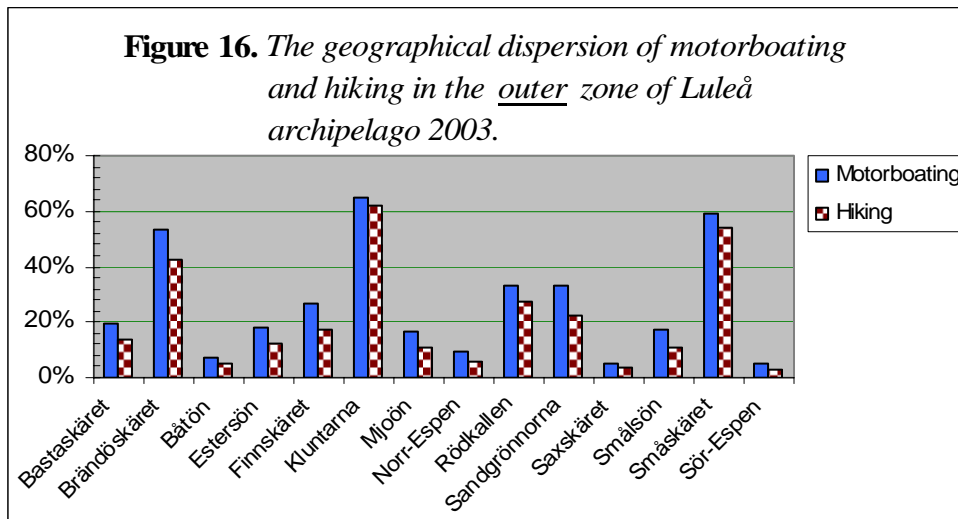


Not unexpectedly, the activities of being in second homes and taking saunas overlap well with each other on various islands. Of all islands in the archipelago, Småskären had the highest percentage of respondents being in second homes, preceded by Hindersön and Kluntarna. Taking sauna was most frequent on Småskären, Kluntarna and Hindersön. Except that saunas may be frequent in connection with the presence of second homes, Luleå municipality manages saunas on some islands, e.g. Kluntarna which may explain the high percentage.

Surprisingly, in comparison to the number of people who went sun bathing and swimming, Brändön was not visited by many of the visitors who had either a sailing or motor boat despite its marina with place for 60 boats. Perhaps it is because of its coastal location in the northern archipelago.

To demonstrate the geographical differences between the activities, a comparison was made between which islands the visitors went to when participating in the activities of motorboating and hiking, see figure 14, 15 and 16.





There were differences in the usage of islands e.g. Hindersön, Kluntarna, Småskär and Rödkallen were more popular for hiking. The tourboat improves the accessibility to these islands and there are numerous paths where one can go on a ramble. Motor boating was also common on these islands which may be justified by the islands' harbours, accommodations and other service. The only islands with a higher percentage of hiking than motorboating were Rörbäck-Sandöskatan and Bockön.

Brändöskäret and Uddskäret were more used for motor boating than hiking. Even though the two places are located close to each other (see figure 1), more people hiked on Brändöskäret than on Uddskäret. Both places have bays and harbours, but the tour boat only goes to Brändöskäret. Its nature is more of the outer archipelago and there is a path which reaches the cliffs and a view of the sea. Uddskäret has swamps and woods where the inland of the island has been cut down. It is also difficult to get through the vegetation (Hederyd et al, 1999).

#### 4.4 Permanent living and second homes

*'In the future treatment of the housing conditions for a permanent living in attractive areas, it is particular important to acknowledge the significance the settled population has for a living archipelago.'* (Author's translation. SOU 2000:67 p. 9).

The Environmental Advisory Council (SOU 1996:153) argues in its proposal for a sustainable development of the Swedish coastal areas that the process of sustainability concerns three factors linked with each other - economy, society and environment. Therefore, a sustainable development must include prospects for the local population to be able to live and prosper in the archipelagos.

There are roughly 80 people living permanently in the Luleå archipelago (Hederyd et al, 1999). Some of the permanent inhabitants are old people, who always have lived on the island but are now retired. There are also people living in summerhouses permanently. Some of them are retired and some commute while others live there part time or use the summerhouse as a workplace. Many of them have flats in town (Nilsson and Ankre, 2004).

In the Luleå archipelago, industries such as forestry, agriculture and fishing still remain to some level which supports the local population. There are twelve active fishermen in the Luleå archipelago geographically spread over seven islands, but two of these live on the mainland. All of them have flats in Luleå. The fishermen are all single between 35 to 55 years old and

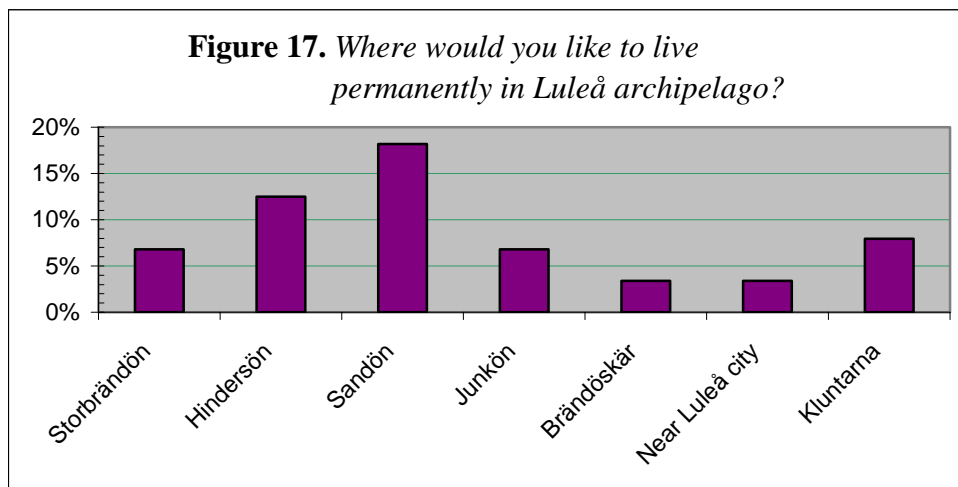
most of them are sons of former fishermen. In the summer, they fish salmon and in the autumn they fish bleak for its roe. Together with one farmer, these men form the labour force of the old traditional agrarian sector (Nilsson and Ankre, 2004). The survey investigates if the respondents have been disturbed by these industries during their visit. Of the respondents, 90,2 per cent reply that they have not been disturbed at all, while 8,8% mean that they have been disturbed virtually not at all or to some extent.

The respondents were asked if they viewed the area's industry as vital for the tourism development. About 22% think the industry is important to some extent for the tourism development in the Luleå archipelago. 4,6% answer that they believe it as not important at all while 4% believe it as virtually not important at all.

Of the respondents, 8,5% think that a permanent population in the archipelago is not important at all and 10,9% that it is virtually not important at all. Around 24% mean a permanent population is to some extent important.

Nearly 58% of the respondents partly or totally agree with the statement that they could identify themselves with the lifestyle and the people of the area. Only 10,4% totally or partly disagree of the statement, while 31,7% is neutral.

Furthermore, 5% partly or totally agree with the statement that they occasionally feel as strangers when visiting the Luleå archipelago. Practically 17% is neutral while 78,1% partly or totally disagree to statement that they feel like strangers when staying in the area.



Among all the respondents, 17,3 per cent answer that they would like to have their home in the Luleå archipelago permanently. The respondents who could consider a permanent living were asked to specify where in the archipelago they would live. Figure 17 illustrates the six most popular islands in the Luleå archipelago together with the vague notion of “near Luleå city”. The island Sandön is regarded as the most appealing places to live, followed by Hindersön. Sandön is within the inner zone of the archipelago and is the biggest island located very near Luleå city (see figure 1 and 3). There are many pleasant beaches, a guest harbour and a car road through the island. During the latest years, many of the second homes on Sandön have actually been transformed to permanent houses (Hederyd et al, 1999).

Many Swedish coastal areas have been subject to an expansion of second homes. The number of newly built second homes in Norrbotten archipelago after 1970 are as many as the ones built in the Swedish east and west coastal areas after 1970, but with less density. Along the Norrland's coast, more than fifty second homes have been built every year 1950-1980, while only a few numbers of permanent houses have been built (National Rural Development Agency, 2003).

One important factor why second homes are so common in Sweden is that the country is sparsely populated with large areas without buildings. Especially in the early stage of the growth of the second homes (1950-1970), it was possible to built second homes in attractive areas. A variety of culture and nature is appealing and the most second homes are to be found at the boundary of different landscape types. The majority of the Swedish second homes are located in the archipelagos, in the areas around the big lakes, on the islands Gotland and Öland and in areas close to the mountains (SNA, 1993).

According to the Environmental Advisory Council, the settlements of second homes in Norrbotten do not involve great problems for the municipalities in general. There is enough space in the region so there should not be any friction between tourism and recreation on one hand, and nature conservation and culture environmental control on the other hand. As maintained by the Environmental Advisory Council, a second home nearby in the archipelago of Luleå could even be an approach to attract people to settle down in the municipality. In the outer archipelago of Luleå, the numbers of second homes are considerable less than along the coastline which was the most exploited (SOU 1996:153).

However, people who are permanently living in the existing second home settlements nearby Luleå city are viewed as a problem because of an expansion of the population centre and the necessity to invest in roads, water and sewers, are discussed in the development plan of Luleå to hinder these from occurring. The second homes have poor sewage systems with insufficient sewage treatment and it is problematic with transportations (Stadsarkitektkontoret, Luleå, 1990).

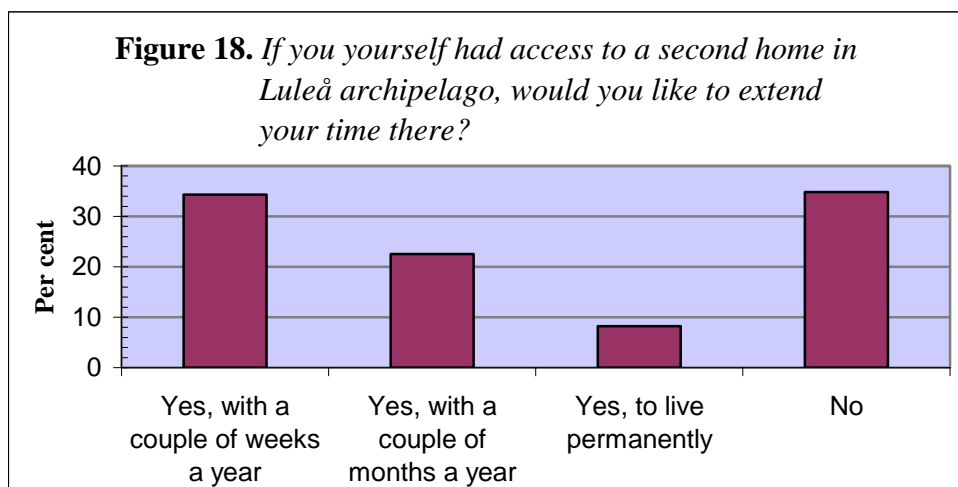
According to the development plan established in 1990, the municipality of Luleå has to set up restrictions for the region or make detail plans to try to prevent the development of a possible permanent establishment of people in second homes. The second home settlements should not expand so the region becomes concentrated or is used too intensely, which could resolve in private or ecological nuisance. It was nonetheless thinkable to increase the second home settlements in some places around the city of Luleå, but not within a radius of 15 kilometres. The inhabitants must have these areas for recreation, but at the same time one should not constrain future prospects of buildings in the near zone of the city (Stadsarkitektkontoret, Luleå, 1990). In the outer archipelago of Luleå, the numbers of second homes are considerable less than along the coastline which is the most exploited (SOU 1996:153).

**Photograph 3.** *Second homes at Småskär, the Luleå archipelago.* Rosemarie Ankre, 16/7-03.



In photograph 3, a group of second homes on the island Småskären in the Luleå archipelago is depicted. There is something like 120 second homes on the island (Hederyd et al, 1999). In the survey, Småskären is the island with the highest ranking of the activity of being in a second home.

In the survey, the willingness of buying a second home in the archipelago is not great. However, approximately 17% could consider a purchase of a second home for visits during both summer and winter in comparison to the 3,4% who would consider it only for use during the summer. As many as 77,6 per cent is not interested in buying a second home which can be explained by the fact that the respondents already own a second home or have access to one. In the survey, 38 per cent have regular access to a second home in the Luleå archipelago. Mainly the ownership is by the respondent (79,2%) or by family (14,2%).



Almost 35% would like to extend the time with a couple of weeks every year and 22,6% with some months, see figure 18. Just above 8% would like to live permanently in their summer

house. In addition, 2,5 per cent would be interested in buying a second home for permanent living.

Approximately 13% of the respondents agree partly or totally that the expansion of second homes typifies the landscape of the Luleå archipelago. Almost 39% disagree totally or partly to the statement.

#### **4.5 Visitor segmentation based on the purism scale**

The purpose of the purism scale used in the questionnaire survey is to understand the visitors' general ideal of Swedish coastal areas and archipelagos, not a particular area. The method fragments the visitors and disperses their question results on a *purism scale*. It is a classification model where people are separated into different groups in relation to their motives and behaviours. One can estimate the visitors' ideals in relation to "purism" by asking questions about different indicators of untouched nature. The visitors are divided into three main groups: "purists", "neutralists" and "urbanists" (also called "non-purists") depending on their attitudes.

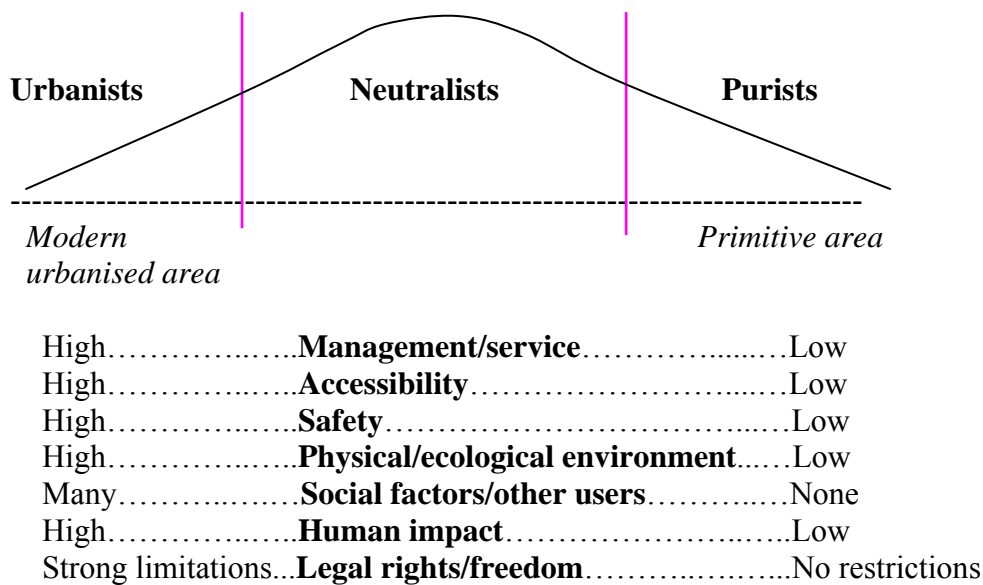
The purists are regarded as the most sensitive group. These visitors want to experience freedom and loneliness; they request an untouched environment (primitive area) with little visible land use and minimal contact with other visitors. The urbanists are the opposite group who wish for service (modern urbanised area) and have higher acceptance of other users. The group of neutralists is in between. By segmenting the visitors into these three groups, there is an interesting and practical opportunity to understand the visitors' preferences (Vuorio, 2003). The questions are divided after a Likert scale in 5 grades – very positive, positive, neutral, negative, and very negative. The purism scale becomes a one-dimensional summary by adding the answers of all the questions which represent different dimensions (Stankey, 1973).

The dimensions of the purism scale are founded on the three dimensions of the planning framework *Recreation Opportunity Spectrum* (ROS). The dimensions are managerial, social and physical. By further development of the method, especially in Scandinavia, the dimensions have been added to also include management/service, accessibility, safety, physical/ecological environment, social factors/other users, human impact and legal rights/freedom. An even distribution of questions over these dimensions should be sought, though it should be acknowledged that some of the dimensions intermingle (Fredman and Emmelin, 1999).

The ROS classifies and divides areas after the environmental conditions and the recreational activities. This has been done in the Swedish national park Fulufjället. "*The strength of the model [ROS] is that it links psychosocial needs and characteristics of recreational users with specific environmental attributes and experiences.*" (Kaltenborn, 1999 p. 46).

Figure 19 below depicts how the visitor segmentation is dispersed after the dimensions of the purism scale. According to the respondents' points in the statements, the seven dimensions can be viewed either as low or high.

**Figure 19.** Visitor segmentation dispersed after the dimensions of the purism scale.  
(Reproduced after Emmelin, 1997; Fredman and Emmelin, 1999).



The purism scale classifies the visitors' attitudes towards management, social factors and the physical environment. The method has been criticised for having a limited value as predictor of behaviour, but Fredman and Emmelin (1999) state that so do most other indicators of attitudes if used alone. The method should be used to get a compounded ideal view among the respondents, not how this opinion has been formed by the individual (Emmelin, 1997). The purism scale predicts interesting aspects of management and shows a relationship with use patterns. Using the method, visitor segmentation corresponding to attitudes can be made (for further discussion see Cole, 2001). However, it is important to know that the purism scale is relative. The purists are defined as a group who diverge in a statistical defined way in a purism direction from the group's mean value. Thereby different investigations cannot be compared without control (Hörnsten and Fredman, 2002).

The purpose of the purism scale is to understand the visitors' *general* attitudes, not their anticipations on a specific area. Depending on whom they are people look for assorted experiences in different environments. Their viewpoints depend on the situation they are in. Subsequently, the method will not comprehend the standpoints or attitudes to a certain area (Emmelin, 1997). Ultimately, it is a direct connection between planning and the identification of the visitors' attitudes where the purism scale is a useful method to estimate management<sup>11</sup> in relation to the visitors' wishes. The method fragments the visitors and disperses their question result on the purism scale. Many of the Swedish coastal areas undergo great pressure from tourism and the purism scale is useful when creating a variation of supply in a destination, dealing with conflicts and for sustainable management of resources.

Question C1 in the questionnaire (see Appendix 1), had 26 various statements which ranged from -2 ("very negatively") to 2 ("very positively"). The scale was thereafter adjusted to match prior expectations of the categories where the purists got the highest scores and the urbanists the lowest. The dimensions used within the purism scale in the study were management/service, accessibility, safety, physical/ecological environment, social factors/other

<sup>11</sup> E.g. visitor segmentation and spatial differentiation can increase the total benefits among Swedish visitors by 1 million SEK, as part of the present management strategy (see Fredman and Emmelin, 1999).

users, human impact and legal rights/freedom. After the statements' points ( $X_{ij}$ ) were summarised for all the questions across the respondents (i), the three categories of purists, neutralists and urbanists could be recognized across the respondents. By calculating the sample mean ( $\mu_x$ ) and the standard deviation ( $\sigma_\mu$ ), the three groups were identified as follows (Fredman, 2000):

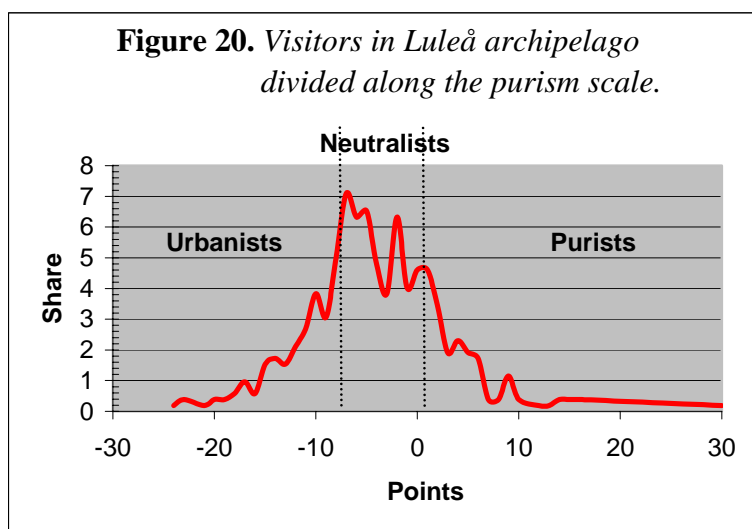
Purist	if	$X_i \geq \mu_x + 0.5 \sigma_\mu$
Neutralist	if	$\mu_x - 0.5 \sigma_\mu < X_i < \mu_x + 0.5 \sigma_\mu$
Urbanist	if	$X_i \leq \mu_x - 0.5 \sigma_\mu$

The purists are identified as the individuals who had a higher score than or equal to the mean added with 0,5 standard deviation. Thereby, the urbanists were the individuals who had a lower score than or equal to the mean added with 0,5 standard deviation (Fredman and Emmelin, 2001; Wall, 2003). In this investigation the 0,5 standard deviation will be used since it includes a more equal amount of respondents in each category. It is preferable for statistical analysis, e.g. Fredman used the 0,5 standard deviation in his thesis (Fredman, 2000).

**Table 3.** *The purism scale classification of visitors in The Luleå archipelago 2003.*

Standard deviation of respondents	Classification groups	Percentage and number
1 std	Purists	13,4 % (62)
	Neutralists	71,6 % (331)
	Urbanists	14,9 % (69)
0,5 std	Purists	27,7 % (128)
	Neutralists	43,9 % (203)
	Urbanists	28,4 % (131)

In table 3, the percentage and the number of the respondents are depicted. By using the one standard deviation, the most extreme purists and urbanists are identified. In the Luleå archipelago, 13,4% were purists while 15,2% were urbanists.





In figure 20, the result in the Luleå archipelago 2003 was divided after the purism scale depending on the respondents' points (-2 to 2) which thereby creates the three groups of purists, neutralists and urbanists. Calculated by 0,5 standard deviation, the mean value was 4,17 and the standard deviation 6,735. As the diagram above shows, the purists were above 0,8 points and the urbanists were below -7,5.<sup>12</sup>

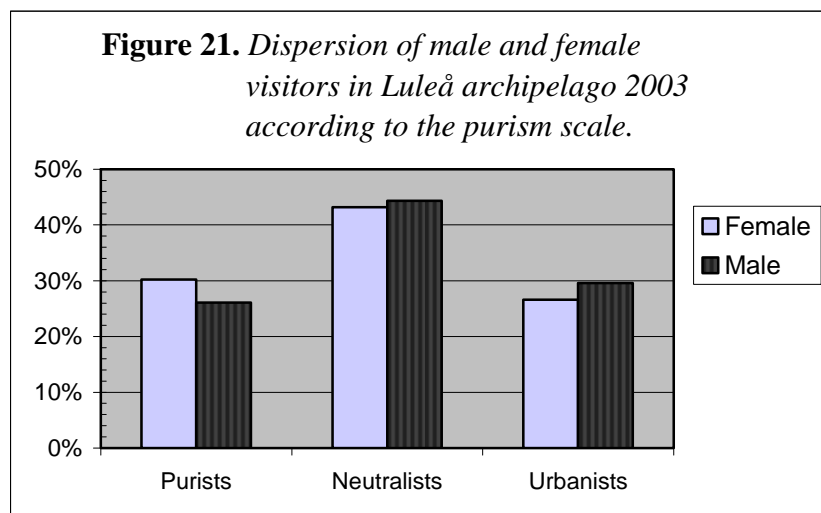
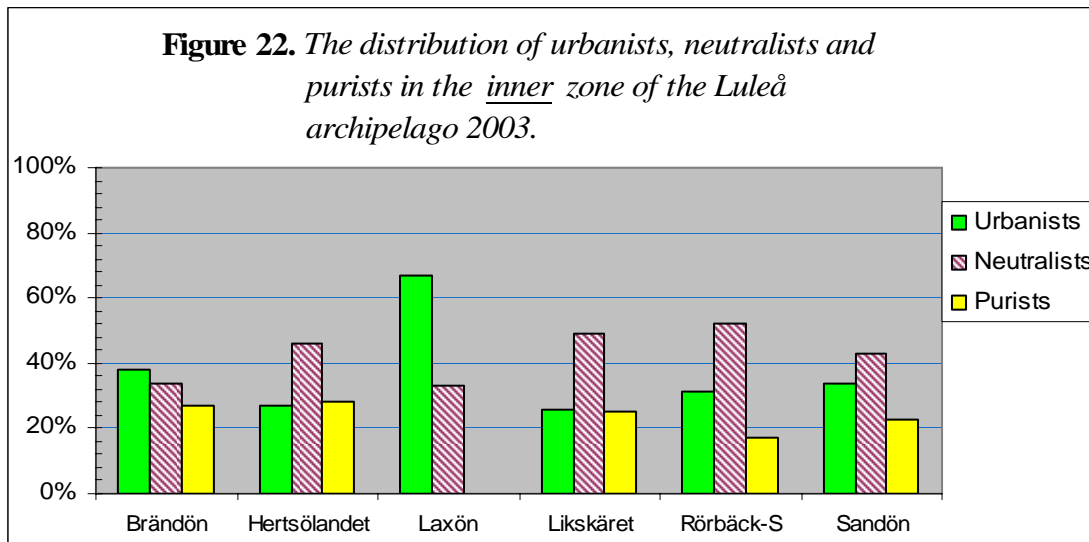


Figure 21 depicts the dispersion of male and female visitors in the Luleå archipelago 2003 according to the purism scale. Both males and females were around 44% within the group of neutralists. By additional 4% females tended to be more of purists in comparison to males, while the latter was slightly more urbanists.

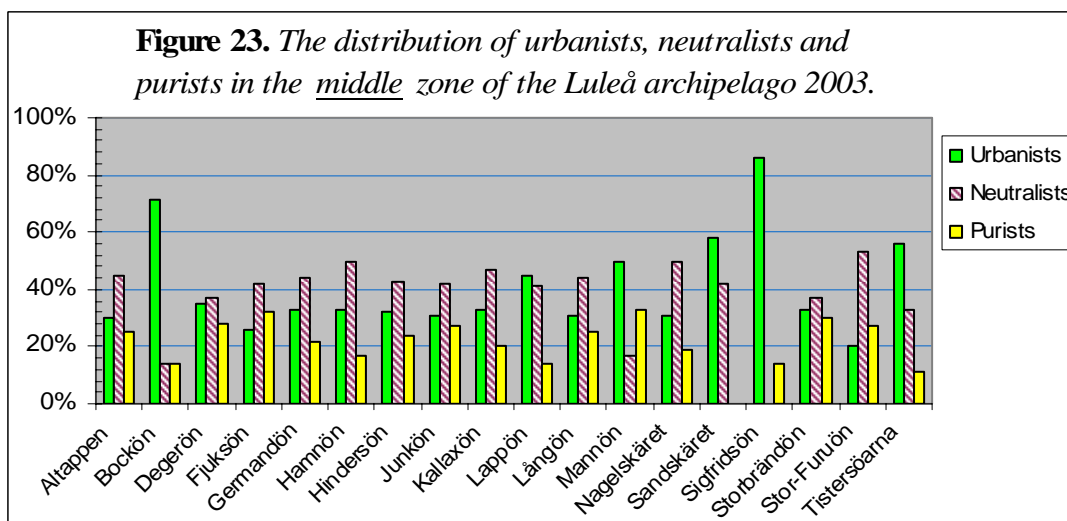
The purism scale has earlier been applied on mountain areas in Sweden (i.a. Fredman 2000; Hörnsten and Fredman, 2002; Vuorio, 2003; Wall, 2003) and Norway (for comparisons and results see Emmelin and Iderot, 1999). With the case of the Luleå archipelago, it is the first time the purism scale will be included in a study of Swedish coastal areas. The questions have been especially adjusted to coastal areas.

The figures 22-24 display how the survey's dispersion of the purism scale is at each island in the inner, middle and outer zones of the Luleå archipelago (for exact percentage, see Appendix 4).

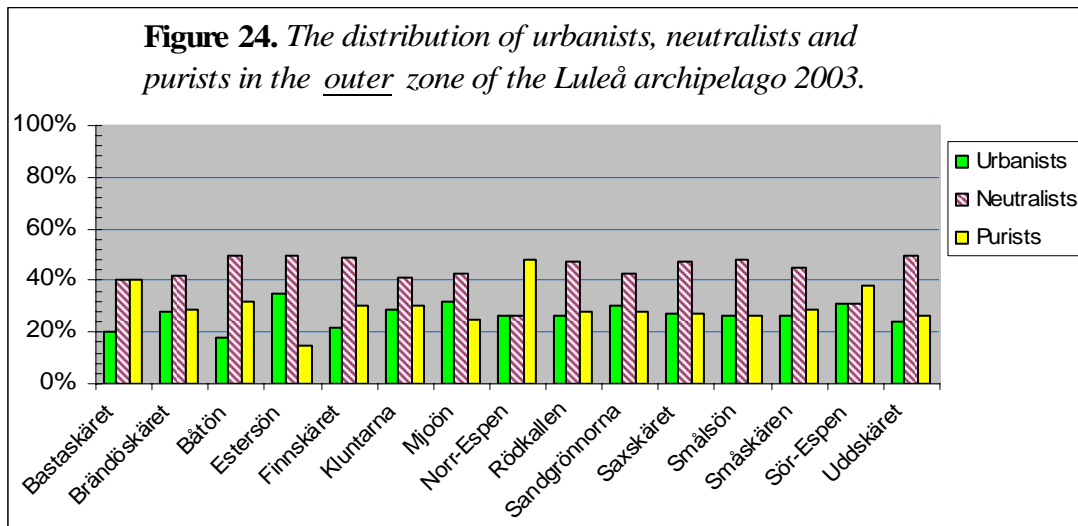
<sup>12</sup> Calculated by 1 standard deviation, the purists were above 2,6 points and the urbanists below -10,9 points.



In the inner zone of the archipelago there is a higher percentage of urbanists than purists on all islands apart from Hertsölandet (see figure 22). According to the survey, Laxön has the highest percentage of urbanists and has not been visited by any purists. The coastal area of Rörbäck-Sandöskatan (see figure 1) has the peak of neutralists in the inner zone.

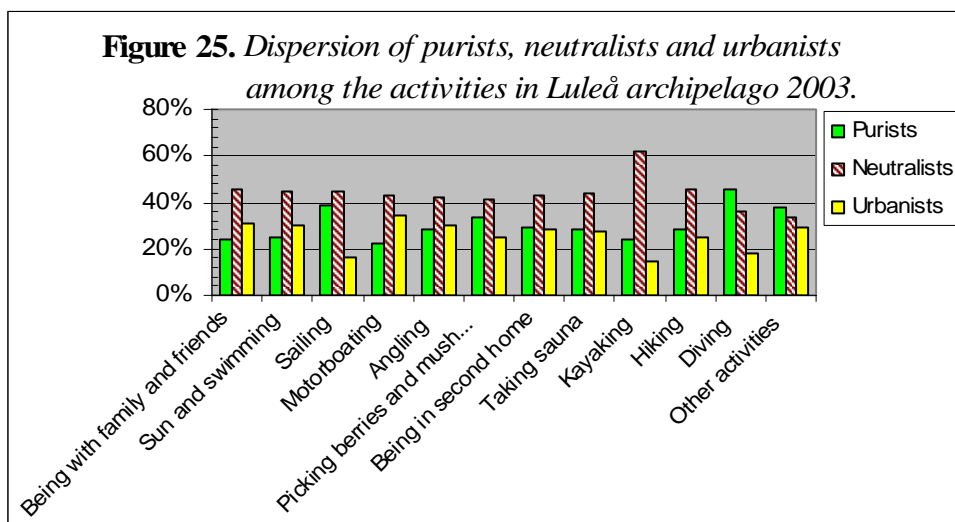


In the middle zone, there are a higher percentage of urbanists in comparison to purists on all islands except on Fjuksön and Stor-Furuön. On Sandskäret, there were no purists visiting. Especially Bockön, Sandskäret, Sigfridsön and Tistersöarna have a high percentage of urbanists among the visitors (see figure 23). The group of neutralists has quite an even percentage on all islands in the middle zone other than the island Sigfridsön which had no neutralists visiting and Bockön with relatively few neutralists.



In the outer zone of the archipelago, the group of neutralists is equally scattered on the islands (see figure 24). Moreover, there are a higher percentage of purists in comparison to urbanists. However, three islands have a higher percentage of urbanists; Estersön, Mjoön and Sandgrönorna. The islands Saxskäret and Smålsön have an even percentage of urbanists and purists among the respondents. The islands in the outer zone with the highest percentage of purists are Norr-Espen, Bastaskäret followed by Sör-Espen.

Figure 25 below, demonstrates how purists, neutralists and urbanists are dispersed among the activities carried out in the Luleå archipelago. The activity of motorboating proved to have more urbanists than purists among its performers. This is also the case among the performers of being with family and friends, being in the sun and swimming, and angling.



The remaining activities (see figure 25) are performed by more purists in comparison to urbanists. Especially sailing and diving have a high percentage of purists in comparison to urbanists. Among the performers of being in second home and taking sauna, the difference between the two groups of purists and urbanists is not large.

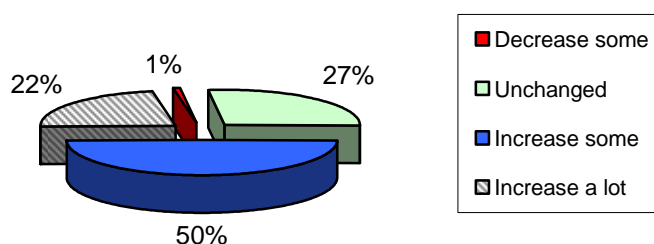
The percentage of the neutralists is approximately 45% within all activities. Exceptions are the neutralists who performed kayaking (62%), diving (36%) and other activities (32%).

## 4.6 Visitors' attitudes to developments of the Luleå archipelago

### 4.6.1 Tourism development

The respondents were asked to comment on the number of tourists in the area and strikingly only two per cent believe there is to some extent too many visitors. Instead approximately 45% deem the amount of tourists as to some extent too few or simply too few. Around 61% disagree totally or partly with the statement that the landscape of the Luleå archipelago has had a development of crowding with too many visitors, while a third is neutral (see question B1 in Appendix 1).

**Figure 26.** Which change do you want to occur regarding the number of tourists in Luleå archipelago within the next 5 years ?



Asked how the future development of tourism should proceed within the next five years, no one thinks that the numbers of tourists should decrease a great deal. Remarkably, almost 50% think the number of tourists should increase to some degree and 22% think it should increase a lot, as viewed in figure 26.

Around 23% totally disagree that the landscape of the Luleå archipelago is characterised by an expansion of holiday camps and 15,7% disagree partly to statement while 42,1% is neutral (see question B1 in Appendix 1). According to the survey, 18,7% totally disagree that an expansion of second homes is significant for the Luleå archipelago and nearly 20% disagree partly. In comparison, 11,4% agree partly that the expansion of second homes is a considerable development in the area and 2,1% totally agree.

Additionally, the respondents expressed if they agree or disagree with a variety of statements regarding the future tourism development in the Luleå archipelago (see question B19 in Appendix 1). 3,4% totally disagree and nearly 8% disagree partly that tourism *contributes* to a preservation of the nature and culture environment. In comparison, roughly 25% totally disagree that tourism *threatens* the nature and culture environment while 33,5% disagree partly of this statement.

Almost 4% totally disagree and 8% disagree partly that *more* cabins and holiday camps should be established in the area. In contrast, 38,6% totally disagree and nearly 24% disagree partly that there should be *less* cabins and holiday camps (see question B19 in Appendix 1).

In the future, 5% totally disagree and around 7% disagree partly that there should be *more* bathing places in the archipelago. Practically 35% totally disagree and 19,8% disagree partly that there should be *fewer* bathing places.

In the survey, 41,7% of the respondents believe that there has been a pretty large alteration of the area since their first visit in the Luleå archipelago and 18,7% think there had been a great

change. Among the respondents who have experienced any changes, the attitude towards the changes is predominantly positive by 55,1% and very positive by 23%.

As a visitor, one may build up a relationship to the area. Nearly 65% partly or totally agree that they have emotional strings attached to the Luleå archipelago and that the area mean something to them, while around 12 per cent partly or totally disagree. Something like 70% partly or totally agree that the development of the area is important to them personally. Practically 91% partly or totally agree that they feel relaxed and fulfilled when visiting the area in respect of 0,8% who partly or totally disagree.

#### ***4.6.2 Changes of environment; dredging, wear and litter***

In coastal areas, natural beaches are filled out, marinas are being built and natural vegetation is being cleared away. Alone, dredging<sup>13</sup> of fairways, marinas and increased building of second homes are small threats against the environment in the Luleå archipelago, according to the Nature conservation plan of Luleå (2000). Yet, if combined these impacts could lead to greater consequences in the future (Luleå municipality, 2000).

Because of the land rise in the archipelago of Luleå, it is vital to dredge some of the harbours and the navigable fairways. Dredging leads to a greater access for the shipping, which is positive for the ferryboats and the sailing boats. It results in greater approachability for more people, but it is also hazardous for the sea and its quality, since the procedure tears the sea bottom open. The interference can alter the natural beach processes and it creates sediment traps which prevent a natural transport of the bottom material. The dredge wastage may moreover contain various substances, which could harm the environment (SOU 1996:153).

The Nature conservation plan of Luleå states that dredging could disturb a main part of the biological production of the area. Another problem is that the dredging deposits are being dumped on valuable beaches and wetlands (Luleå municipality, 2000). Nevertheless, the tour boat's captain Hennix believes that these environmental problems will not occur in the Luleå archipelago. Many fairways are impassable because of the land rise and which should be dredged (Hennix, 16/7-03).

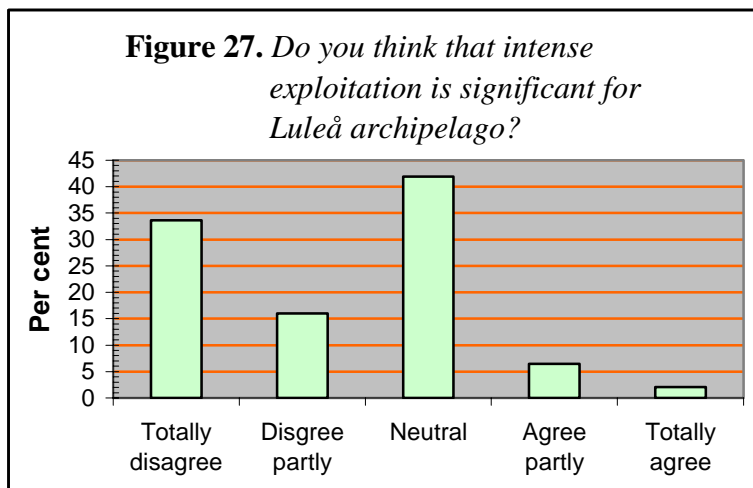
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<sup>13</sup> To remove bottom masses from harbours and navigable fairways. Author's comment.

**Photograph 4.** *The establishment of a new quay on Brändöskär, the Luleå archipelago.*  
Rosemarie Ankre, 16/7-03.



Far out in the Luleå archipelago, the work with a new quay on the island Brändöskär (see photograph 4) began in 2003 which was financed by the municipality. Hennix (16/7-03), is pleased with the development since it has been crowded with other boats at Brändöskär which makes it difficult for the tour boat to approach the quay. The municipality has another project on Rödkallen which harbour will be restored and dredged. In the survey, 92,3% of the respondents were positive towards dredging in the Luleå archipelago.



The visitors' experiences of exploitation of the landscape (see question B1 in Appendix 1) is investigated in the survey. As figure 27 shows, around 33% totally disagree that exploitation is significant for the landscape while 16% disagree partly. Nearly 42% is neutral of the statement and just above 8% agree partly or totally that intense exploitation is significant for the Luleå archipelago.

Neither wear on land and vegetation is considered as a significant development of the archipelago where around 28% totally disagree and 24,9% disagree partly of the statement (see

question B1 in Appendix 1). Around 10% agree partly or totally agree that there is wear on land and vegetation in the area.

According to the survey, the Luleå archipelago is viewed as relatively spared from wear and litter. Around 60% of the respondents observe no or very little wear on land and vegetation during their visit 2003. Not any or very little litter is spotted by 54,9% and quite little litter by virtually 20%. Neither is lavatory disposals in the sea any problem since relatively 85 per cent has been very little disturbed nor not at all by this sort of littering.

Furthermore, 41,5% totally disagree that there is crowding with too many visitors in the area and roughly 20% disagree partly.

#### 4.6.3 Noise

Noise is an important factor in nature and culture settings and in recreation areas. In these environments it should be considered how much individuals are disturbed by noise when discussing how burdened an area is by noise. E.g. in an area where individuals do not assume noise, low sound-levels may be very annoying in comparison to an area where one expect noise (Banverket et al, 2002).

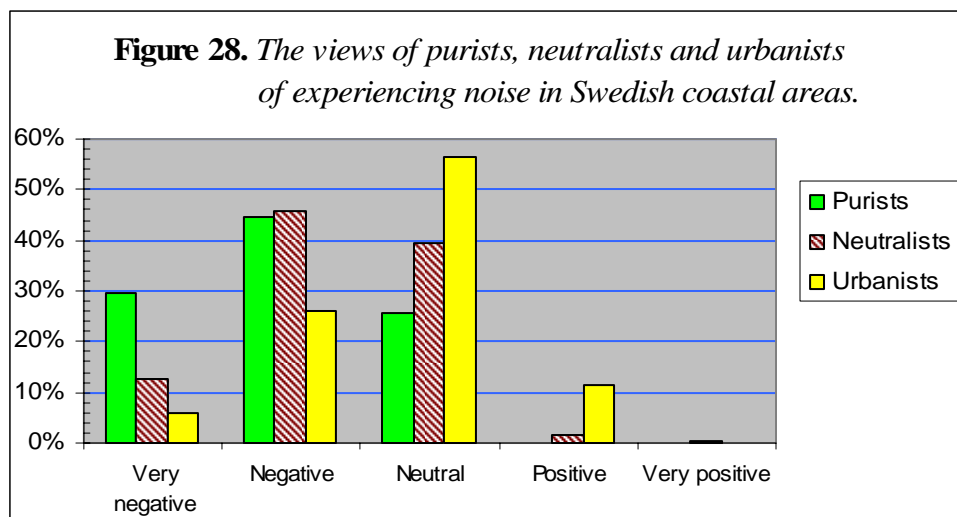


Figure 28 shows what purists, neutralists and urbanists think of experiencing noise in Swedish coastal areas. More purists than urbanists are very negative or negative to experiencing noise. No purists are positive to noise in Swedish coastal areas while around 10% of urbanists view noise as positive. A higher percentage of urbanists than purists are neutral to the statement. The group of neutralists has the highest percentage of being negative to noise followed by being neutral. Finally, a tiny percentage of neutralists view noise as very positive in Swedish coastal areas.

In the survey the respondents were asked if they had experienced noise from boat engines, jet ski, road traffic, air planes and helicopters or other objects (see question B15 in Appendix 1). The respondents should estimate their experience of noise on a five level scale between *not at all* to *a lot*.

Among the respondents, 79% has not at all experienced any noise from jet ski and around 13% almost not at all. Nearly 86% affirm that road traffic have not at all caused any noise and almost not at all by 12%. The respondents have not at all experienced any noise from air planes

and helicopters by around 56%, while roughly 25% has almost not at all experienced that kind of noise. Nearly 15% say that they have experienced some noise from air planes and helicopters.

In the survey, the respondents have experienced no noise at all from boat engines by 38,7% and almost not at all by just about 38%. Some noise from boat engines have been experienced by 21%.

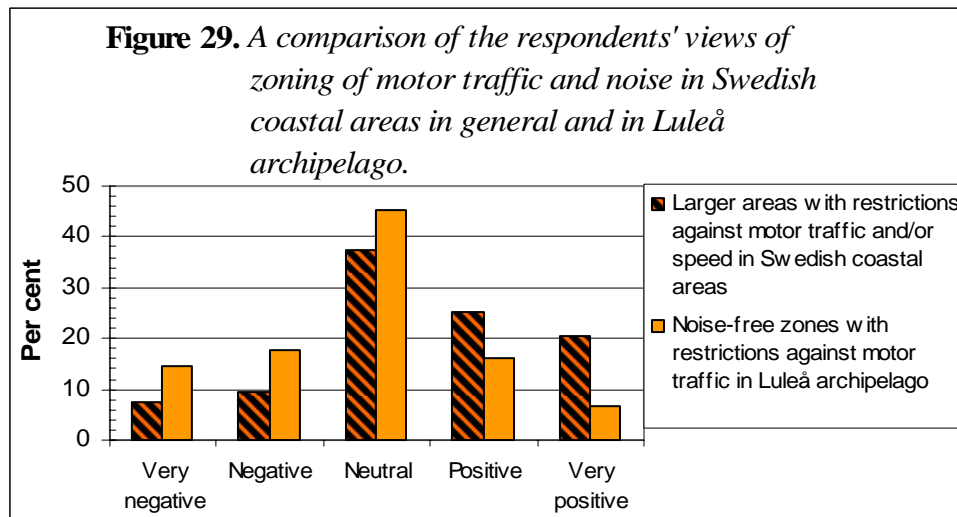


Figure 29 depicts the respondents' views of larger restricted areas in Swedish coasts and archipelagos where motor traffic should not be allowed and/or be restricted by speed limits (see question C1 in Appendix 1). Also, the figure includes the opinions of noise-free areas with restrictions against motor traffic in the Luleå archipelago to make a comparison.

The respondents are very positive or positive by more or less 45% to restricted areas against motor traffic when they are visiting general Swedish coastal areas. However, when specifying the restrictions to the area of the Luleå archipelago, the respondents' opinions change to be very positive or positive by around 23%.

Continually, when visiting general Swedish coastal areas, 7,3% is very negative and 9,3% is negative to large areas with restrictions against speed and/or motor power (see figure 29). In contrast, the respondents view restrictions in the Luleå archipelago as very negative by 14,4% and by 17,6% as negative. A higher percentage of the respondents are neutral towards restrictions within the Luleå archipelago than in Swedish coastal areas in general.

#### 4.6.4 Shore protection and protected areas

*The right of public access*<sup>14</sup> is a concept in the Environmental Code and within the Swedish constitution. The right of public access can be identified as a "free space" between different restrictions of economic interests, privacy, preservation and the usage of the landscape. However, the value or the substance of the free space may decrease by e.g. exploitation, crowding or noise since the right of public access does not include any right to demand how the landscape should be used or transformed (Vuorio, 2003). The right of public access is not specified according to Sandell (2002). This makes it difficult to identify the limits of the right of public access. However, in the legislation it is e.g. included that landowners must make

<sup>14</sup> In Swedish: *Allemansrätt*.



arrangements so that people may pass properties. Land owners have to accept other people's occasional presence on their land. Of course, there should be no damages or disturbances.

The authorities are responsible for the preservation of nature by e.g. various protections where the Swedish Environmental Protection Agency (SEPA) forwards information of the regulations to Swedes and foreign visitors. The right of public access has become a natural part of the Swedes' connection with and usage of nature. At present, the right of public access is also a vital part in the Swedish tourism industry and other outdoor activities (see further discussion in Sandell, 1997 and 2002).

The coastal areas and the beaches are strongly protected in the Swedish legislation by the *shore protection*. Its function is to preserve the environment ecologically and for recreation. The shore protection is current by the sea, lakes and streams, and includes land and water areas 100 meters from the shore line which can be extended to 300 meters (Frisén, 2000). New buildings cannot be built without permission and buildings cannot be rebuilt for another purpose. Additionally, no constructions are allowed; e.g. fences, wind power stations, flagpoles, roads, parking places, piers and boat-bridges, golf courses et cetera without permission (SOU 2000:67). Plant and animal life should maintain qualified conditions on land and in water. The shore protection has a long-term purpose and people should be able to visit the beaches at the present and in the future.

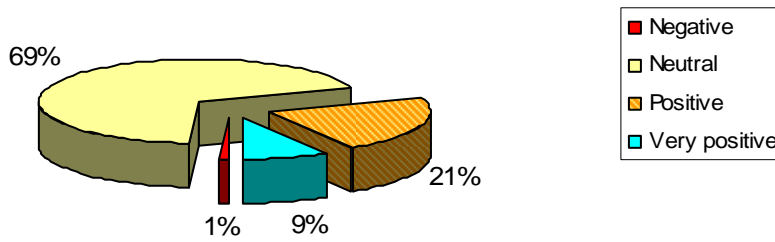
*'... the protection of the beaches is of national concern, but it is also of regional and local interest to maintain the beaches intact, in the present and for the future. The beaches are one of the most valuable resources for recreation and outdoor life in all their forms.'* (Author's translation, SOU 2000:67 p. 94).

To perceive a sustainable development of coastal areas, it is fundamental with a long-term economising with the assets of the beaches. The shorelines give opportunity to outdoor life which leads to claims on these areas. At the moment, the changes are slow. However, in the future, there could be requests that limit the access to the beach and the sea which Swedes consider as free and available for everyone (SOU 2000:67). Luleå municipality has the right to give exception from the shore protection in the inner parts of the Luleå archipelago, while the county administration board of Norrbotten can give exemptions in the middle and the outer parts of the archipelago (Luleå municipality, 2000).

The legal right to enter private land still prevails in the Luleå archipelago. But there are restrictions to some land areas, since they are established as bird and/or nature reservations (see figure 1 for these areas in The Luleå archipelago). In the bird sanctuaries it is prohibited to go ashore 1 May to 31 July when the birds are breeding. Over 80 per cent of the survey's respondents judge that their planning of the visit in the Luleå archipelago has not been affected by bird sanctuaries or areas with protection of seal during their stay. Neither have the restricted areas with protection of seal or the bird sanctuaries hindered the respondents from moving freely in the Luleå archipelago, as stated by around 83 per cent.

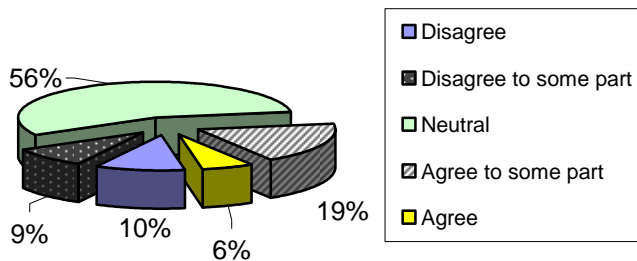
According to Hennix, captain on the tour boat M/S Ronja (16/7-03), there are no signs with "private" in the area and it is seldom Hennix hear any complaints about the restrictions, with the exception of Skvalpen which is part of the island Sandgrönnorna (see figure 1). It is only possible to go there by own boat. Some areas are prohibited to enter during the birds' breeding, but Hennix' opinion is that people in northern Sweden appreciate and have interest of high-quality environments and the birds' well-being. People have respect for nature.

**Figure 30.** *How did the nature reserves affect your visit in Luleå archipelago 2003?*



Practically 50% of the respondents have been to any of the nature reserves in the Luleå archipelago. Of the respondents 21% think that the nature reserves were positive for the outcome of their stay while 9% believe them to be very positive, as depicted by figure 29. Even though a majority is neutral to this statement, only 1% declare that the nature reserves have affected their stay in the Luleå archipelago negatively.

**Figure 31.** *Should there be more nature reserves in Luleå archipelago?*



As figure 31 shows, 25 % of the visitors in the Luleå archipelago agree or to some part agree with the statement that there should be *more* nature reserves in the area. 19% disagree or disagree to some part, while a majority was neutral.

**Figure 32.** *Should there be fewer nature reserves in Luleå archipelago?*

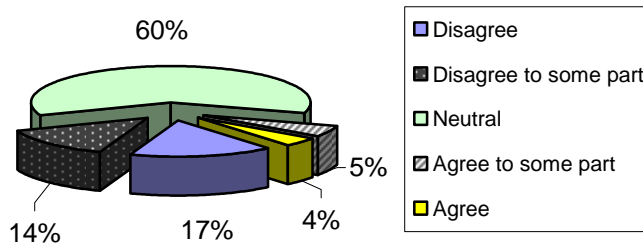
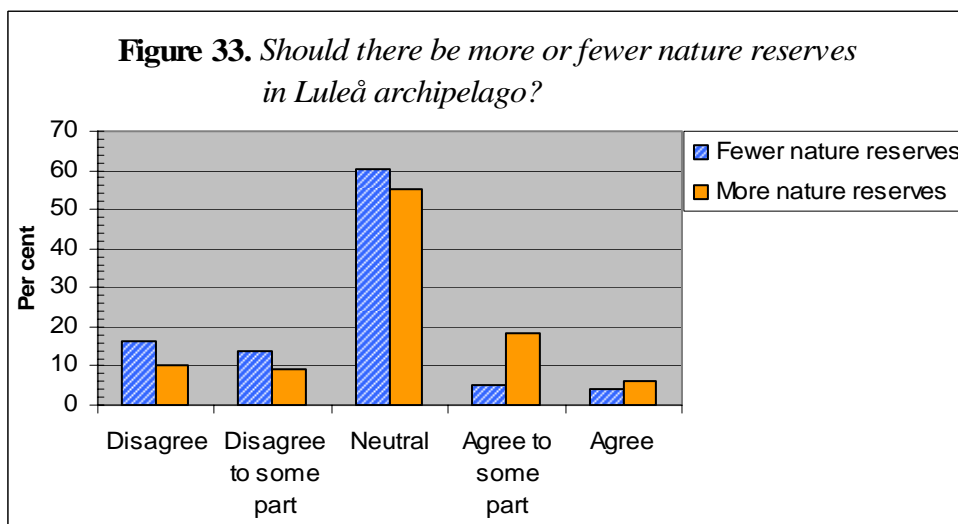


Figure 32 illustrates that 31 % of the respondents disagree or disagree to some part to the statement that there should be *fewer* nature reserves. 9% agree or agree to some part. A majority was neutral that there should be fewer nature neutral.



If the attitudes toward more or fewer nature reserves in the Luleå archipelago are put together, one can see that a higher percentage of respondents *agree to some part* or *agree* that there should be more nature reserves than fewer (see figure 33).

A higher percentage of respondents *disagree to some part* or *disagree* with the statement that there should be fewer nature reserves in the area in comparison to more nature reserves. More respondents are neutral against fewer nature reserves than more nature reserves in the Luleå archipelago.

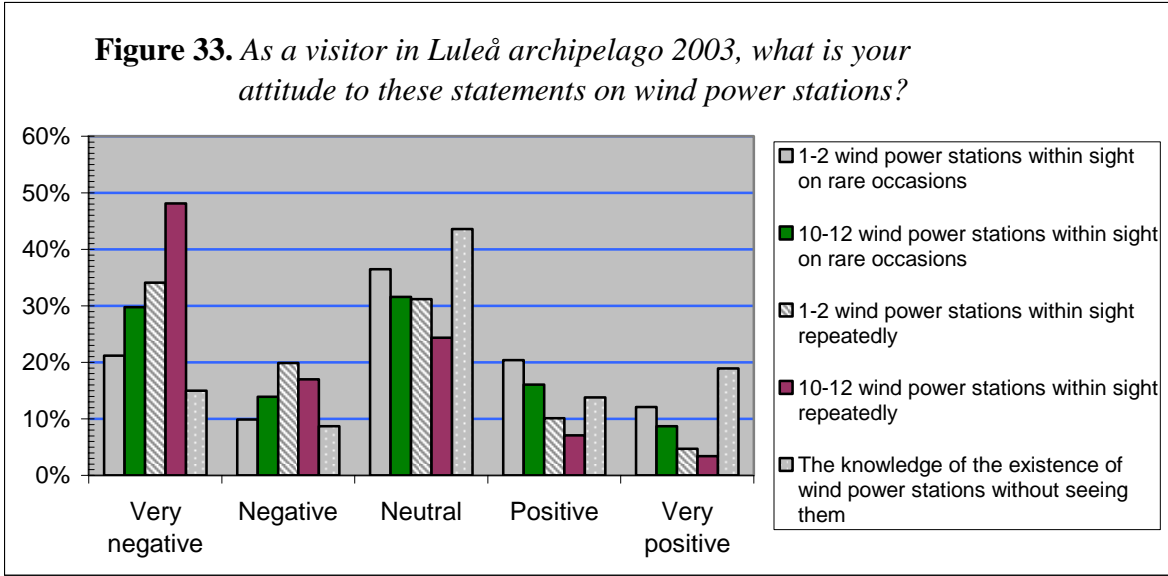
#### **4.6.5 Wind power stations and telecommunication**

The county administrative board of Norrbotten does not believe that an establishment of wind power stations is possible in the archipelago of Luleå. The nature and culture values are too high and of national interest, and the archipelago is also an area where tourism and recreation is important. The outdoor life should not be hindered and the protection of the right to use the beaches, forbids establishment of constructions that prevent people from entering a domain

which they otherwise would have had free access to. Nevertheless, wind power stations can be realised even in these valuable areas if there are any exceptional cases according to the county administration board of Norrbotten (1998).

*‘In case of any future extensions of wind power stations in the municipality, claims can be put to locate them on banks, primarily in the southern part of the outer archipelago, and /or on islands in the intermediate and outer archipelago.’ (Author’s translation. Stadsarkitektkontoret, Luleå, 1990 p. 42).*

Yet, wind power stations might become reality on land in the stretch of the northern coast. The appropriate areas are those that already are affected by exploitation for other purposes than second-homes settlements. The Luleå municipality does not want to include restrictions against wind power stations in the archipelago. Instead, the municipality states that there is a lack of central and regional basic data to present a collected municipal addition to the development plan (Aktualitetsplan Luleå. Report of the proceedings of the Luleå municipality, 2002).



Wind power stations mean a visual change of the landscape and in the survey the visitors were asked to describe their opinion of seeing or having the knowledge about possible wind power stations in the archipelago, see figure 33.

10-12 wind power stations within sight repeatedly have the highest percentage of a very negative attitude among the respondents. Experiencing 1-2 wind power stations repeatedly have the highest percentage of a negative attitude.

The highest percentage of a positive attitude among the respondents was towards 1-2 wind power stations within sight on rare occasions. The knowledge about the existence of wind power stations without seeing them, have the highest percentage of a very positive attitude. 1-2 or 10-12 wind power stations within sight repeatedly had the lowest percentage among the respondents with a positive or very positive attitude.

In the survey, the feelings among the respondents towards a future building of wind power stations in the Luleå archipelago is very negative or negative by around 35%, while 25% is positive and 7,5% very positive to such a development.

Finally, the respondents are neutral by 47,4% towards telecommunication pylons, while almost 15% is negative and just above 20% is positive to this development in the Luleå archipelago. Besides, close to 40 per cent view the coverage of mobile phone as pretty important or very important and finally, 26,9% believe this as extremely important.

## **5. Discussion and summary**

By gathering information about visitors, it becomes less problematic to combine sensitive nature and culture with a sustainable tourism development. E.g. islands that are visited frequently and which have sensitive vegetation could undergo great wear on the natural surroundings if the attendance rate gets too high (Luleå municipality, 2000). Therefore information about visitors is important and should be applied in land-use planning. The municipalities need information such as statistics of the visitors' attitudes and their geographical dispersion to make progress in their planning and to diminish conflicts between different user groups.

Who are the visitors in the Luleå archipelago? A questionnaire survey directed to visitors in The Luleå archipelago summer 2003, shows that experiencing nature, the sea and beaches are viewed as very important when visiting the area and according to the survey, the visitors are mainly from Luleå or Norrbotten county and are returning guests. Sun and swimming is the most frequent activity, while being in a second home is the most common main activity.

Regarding various developments of the area, nearly 80% of respondents think that tourism may increase some or increase a lot within the next five years. However, wind power stations are not looked upon with encouragement and the more of these one would encounter and the more often, the greater negative attitude. If one does not see the wind power stations and just have knowledge about these, the visitors are neutral or positive to the establishment.

Even though the municipality has tried to prevent permanent living in second homes, it is a development which proceeds. Especially on Sandön which is the island that the respondents regard as the most attractive place to live permanently. As many as 17% of the visitor could consider moving to the archipelago and of the visitors who had regular access to a second home, there is a small part who would like to move into their second home permanently. Only 2,5% could consider buying a second home for a temporary living. In conclusion, there are demands for further second homes in the outer archipelago and new second home settlements. The municipality has failed to stop the number of permanent living in the second homes which has increased (*Aktualitetsplan Luleå*. Report of the proceedings of the Luleå municipality, 2002).

The survey depicts that there are more urbanists than purists in the inner and middle zones of the Luleå archipelago in comparison to the outer zone, where there are a higher percentage of purists. Sailing, picking berries and mushrooms, diving, kayaking and hiking has a noteworthy higher number of purists as performers than urbanists. Furthermore, a higher percentage of purists are negative or very negative to experiencing noise.

A future zoning in Swedish coastal areas are restrictions against noise and motor traffic. When comparing the respondents' views of this type of zoning in the Luleå archipelago and in Swedish coastal areas in general, the survey shows one is more negative to noise-free zones with restriction against motor traffic in the Luleå archipelago than in Swedish coastal areas in general. More respondents are positive or very positive to large areas with restrictions against

motor traffic and/or speed in Swedish coastal areas than in the actual visited area; the Luleå archipelago.

The in-official zoning (see figure 3) is established after what the municipality has considered the archipelago's carrying capacity concerning how many visitors the area can manage. A majority of the nature reserves and bird sanctuaries are situated in the so called outer zone of the archipelago – on the islands Rödkallen, Sandgrönnorna, Sör-Espen, Norr-Espen, Kluntarna, Småskären and Deferö-Börstskären. Also the bays Bergöfjärden, Båtöfjärden and Haryfjärden are nature reserves with specific regulations (Hederyd et al, 1999). However, Luleå municipality has four cabins on the islands Kluntarna and Småskären which are for rent during both summer and winter. There are also many second homes, barbeque places, lavatories etc. The tour boat gives regular access to the islands in summer.

Is there a contradiction between the purpose of the in-official zoning and the actual tourism development of the area? Despite the in-official zoning and its purpose as stated above, the island with the highest percentage of visits (55,5%) is Kluntarna, located in the outer zone. Among the nine islands with 30% of the visits or more, three of the islands are geographically located in the outer zone and three in the middle zone. The survey also shows that in the outer zone, the islands Kluntarna, Småskär and Rödkallen were popular for hiking, but motor boating was also common on these islands.

In the development plan of Luleå it also is stated that *'A great environment for leisure time for the municipality's inhabitants along with good requirements for tourism is important to the municipality's future in the 21<sup>st</sup> century. An expanded building of second homes can be permitted on suitable places in the municipality, **but not within the near zone of Luleå city in a radius of about 15 kilometres.**'* (Author's translation. Luleå development plan, 1990 p. 7). The question is, where in the Luleå archipelago does the municipality want to develop the tourism; in the outer or the inner zones of the archipelago? Future research will investigate if the vision of the municipality is equal to the reality of the planning and if there might be any conflicts.

Also, it will be examined if the management's vision of the archipelago's future tourism development is comparable with the visitors'. Which group of visitors does the municipality want to attract by its tourism development? An effective planning of a coastal area requires good and reliable knowledge about the visitors and their attitudes since there could be differences between what the visitors demand and the actual planning strategy.

## 6. References

### Published literature

- Banverket et al. (2002). *Ljudkvalitet i natur- och kulturmiljöer. Förslag till mått, mätetal och inventeringsmetod*. Bulleransvariga myndigheter, samverkansgruppen. Stockholm.
- Baum, T. (1995). The fascination of islands: a tourist perspective in *Island Tourism. Trends and Prospects*. eds., D. G. Lockhart and D. Drakakis-Smith. pp. 21-34. Pinter, London and New York.
- Boverket. (1995). *ÖP-analys kust och hav. En utvärdering av kustkommunernas översiktsplaner*. National Board of Housing, Building and Planning. Boverket, Karlskrona.
- Boverket (1996). *Boken om översiktsplan del II. Översiktsplanen i lagstiftningen*. National Board of Housing, Building and Planning, Boverket, Karlskrona.
- Boverket och Turistdelegationen (1997). *Planera för turism – varför hör turism och samhällsplanering ihop?* National Board of Housing, Building and Planning and Swedish Tourist Authority. Boverket, Karlskrona.
- Butler, R. and Hall, C.M (1998). Conclusion: the sustainability of tourism and recreation in rural areas in *Tourism and Recreation in Rural Areas*. Eds., Butler, R., Hall, CM., and Jenkins. J. John Wiley & Sons, New York.
- Castensson, R and Falkenberg, M. (1999) Steps to be taken for integrated land and water management in *Water a reflection of land use. Options for counteracting land and water mismanagement*. Eds., Falkenmark, M et al. Swedish Natural Science Research Council, Stockholm.
- Cole, D. (2001). Visitor Use Density and Wilderness Experiences: A Historical Review of Research in *Visitor Use Density and Wilderness Experience: Proceedings, Missoula, Montana June 1-3, 2000*. pp. 11-20. Rocky Mountain Research Station.
- County administration board of Norrbotten. (1998). *Vindkraft i Norrbotten – Länsstyrelsens syn på vindkraft, ett policydokument*. Nr 7/1998, Norrbottens Länsstyrelse, Luleå.
- Djurfeldt, G., Larsson, R and Stjärnhagen, O. (2003). *Statistisk verktygslåda – samhällsvetenskaplig orsaksanalys med kvantitativa metoder*. Studentlitteratur, Lund.
- Driver, B.L. et al. (1987). The ROS Planning System: Evolution, Basic Concepts, and Research Needed in *Leisure Sciences* vol. 9, nr. 3, 1987 pp. 201-212. Taylor & Francis, London.
- Emmelin, L. (1997). *Turism – friluftsliv – naturvård. Ett triangeldrama*. Rapport 1997:1. Mitthögskolan, Miljövårdsberedningen, Östersund.
- Emmelin, L. and Iderot, A. (1999). *Mittåkläppen – en omstridd naturattraktion*. Working paper 1999.11. ETOUR, Östersund.
- Ewert, A., Dieser, R., and Voight, A. (1999) Conflict and the Recreational Experience in *Leisure Studies. Prospects for the Twenty-first Century* eds., Jackson, E and Burton, T. Venture Publications, College State Pennsylvania.
- Fredman, P. and Emmelin, L. (1999). *Values of Mountain Tourism. Economic Benefits Across Visitor Segments in Femundsmarka, Rogen and Långfjället*. European Tourism Research Institute, Working Paper 1999:26.
- Fredman, P. (2000). *Environmental Valuation and Policy: Applications in the management of endangered species, recreation and tourism*. Silvestria 136, Department of Forest Economics, Umeå.

- Fredman, P. and Emmelin, L. (2001). Wilderness purism, willingness to pay and management preferences: a study of Swedish mountain tourists in *Tourism Economics* vol. 7, 2001 pp. 5-20.
- Fredman, P. (2003). Före och efter... forskning om besökare i Fulufjällets nationalpark in *Rekreation, friluftsliv och turism i naturskyddade områden – Kunskapsbehov för planering, förvaltning och utveckling*. pp. 9-10. Rapport från seminarium i Stockholm, 16th June 2003.
- Frisén, R. (2000). *Kust- och skärgårdsområden i Sverige. Bevarandestrategi*. Naturvårdsverket Förlag, Stockholm.
- Glesbygdverket (2003). *Sveriges kust och skärgårdar – en faktasamling om boende, arbete, service och kommunikationer*. National Rural Development Agency. Glesbygdverket, Östersund.
- Gullstrand, M., Löwgren, M and Castensson, R. (2003). Water issues in comprehensive municipal planning: a review of the Motala River Basin in *Journal of Environmental Management* 69 (2003) pp. 239-247.
- Hall, C. M. (2000). *Tourism Planning. Policies, Processes and Relationships*. Prentice Hall, London.
- Hederyd, S., Wallin, G., Westerberg, A., and Blom, L. (1999). *Din egen lots till Luleå skärgård*. Luleå kommuns informationsavdelning, Luleå.
- Hörnsten, L and Fredman, P. (2002). *Besök och besökare i Fulufjället 2001 – en studie av turismen före nationalparksbildningen*. ETOUR Utredningsserien 2002:6, Östersund.
- Jacob, G., and Schreyer, R. (1980). Conflict in outdoor recreation: A theoretical perspective in *Journal of Leisure Research* Vol. 12, pp. 368-80.
- Kaltenborn, B and Emmelin, L. (1993). Tourism in the high north: management challenges and recreation opportunity spectrum planning in Svalbard, Norway in *Environmental Management* Vol. 17, 1993 pp. 41-50.
- Kaltenborn, B. (1999). Setting preferences of Arctic tourists: a study of some assumptions in the recreation opportunity spectrum framework from the Svalbard Archipelago in *Norsk Geografisk Tidsskrift* Vol. 53, 1999 pp. 45-55.
- Lindberg, K., Denstadli, J., Fredman, P., Heldt, T., and Vuorio, T. (2001). *Skiers and snowmobilers in södra Jämtlandsfjällen: Are there recreation conflicts?* ETOUR Rapport 2001:12, Östersund.
- Luleå municipality. (2000). *Nature Conservation plan Luleå*. in Swedish *Naturvårdsplan, Luleå*. Luleå kommun, Luleå.
- Luleå municipality. (2002). *Aktualitetsplan Luleå*. Report of the proceedings of the Luleå municipality, Luleå.
- Lundholm, K. (1986). Skärgård förr och nu in *Norrbottnens natur, temanummer om Norrbottens skärgård* ed., Lennart Wikström. Naturskyddsföreningen i Norrbottens län, årgång 42, årsskrift 1986.
- Lynch, T., Melling, L., Hamilton, R., Macready, A. and Feary, S. (2004). Conflict and Impacts of Divers and Anglers in a Marine Park in *Environmental Management* Vol. 33, No. 2, pp. 196-211.
- Malmstad, I. (2002). *Från Laxfällor till Kärleksmums. Återblickar och episoder från Luleå stad och skärgård*. Hammerdal Förlag & Reportage, Hammerdal.
- Manning, R. (1999). *Studies in Outdoor Recreation. Search and Research for Satisfaction*. 2<sup>nd</sup> ed. Oregon State University Press, Corvallis.
- Manning, R. (2004). Recreation Planning Frameworks in *Society and Natural Resources. A Summary of Knowledge*. Eds., Manfred, M. et al. Modern Litho, Jefferson, Missouri.
- Mathieson, A. and Wall, G. (1982). *Tourism economic, physical and social impacts*. Longman, London and New York.



- Mels, T. (1999). *Wild Landscapes. The Cultural Nature of Swedish National Parks*. Lund University Press, Lund.
- Meyer, R. (1999). *Cognitive and Behavioral Aspects of People-Place Interactions in Recreational Boating*. Norges teknisk naturvitenskapelige universitet, NTNU. Trondheim.
- Müller, D. (1999). *German Second Home Owners in the Swedish Countryside*. ETOUR Vetenskapliga Bokserien V 1999:4, Östersund och Umeå.
- Nilsson, P. and Ankre, R. (2005). *A Northern Island World –Luleå archipelago, Sweden. Work in progress*. Centre for regional and tourism research, Denmark and Mid Sweden University and Etour, Sweden.
- Glesbygdverket. (2003). *Sveriges kust och skärgårdar – en faktasamling om boende, arbete, service och kommunikationer*. National Rural Development Agency. Glesbygdverket, Östersund.
- Norstedts Svenska Ordbok (1999). Norstedts Förlag AB, Stockholm.
- Nyström, J. (2003). *Planeringens grunder. En översikt*. Studentlitteratur, Lund.
- Pigram, J. and Jenkins, J. (1999). *Outdoor Recreation Management*. Routledge, London.
- Orams, M. (1999). *Marine tourism. Development, impacts and management*. Routledge, London.
- Robinson, G. (1998). *Methods & Techniques in Human geography*. John Wiley & Sons, New York.
- Ryan, C. (1995). *Researching Tourist Satisfaction – issues, concepts, problems*. Routledge, London and New York.
- Sandell, K. (1997). *Naturkontakt och allemansrätt: Om friluftslivets naturmöte och friluftslandskapets tillgänglighet i Sverige 1880-2000*. Svenska Geografisk Årsbok 1997, Vol. 73, p. 31-65.
- Sandell, K. (2000). *Ett reservatsdilemma – Kiruna nationalparksförslag 1986-1989 och makten över fjällen som fritidslandskap*. ETOUR Rapport 2000:5, Östersund.
- Sandell, K. (2002). *Några aspekter på svenska reservatsdilemmans förutsättningar. Arbetsrapport om allemansrätt, naturvård och landskapsperspektiv inför fördjupade studier i forskningsprogrammet Fjällmistra om fjälllandskapets tillgänglighet*. Landskapet som arena nr. 4, Umeå universitet, Umeå.
- Segrell, B. (1995). *Den attraktiva kusten. Synsätt, konflikter och landskapsutnyttjande*. The Institute of Tema Research – Water and Environmental Studies, Linköping University, Linköping.
- Shaw, G. and Williams, A. (2002). *Critical Issues in Tourism. A Geographical Perspective*. 2<sup>nd</sup> ed. Blackwell Publishers, London.
- Shafer, C. S. and Inglis, G. (2000). Influence on Social, Biophysical, and Managerial Conditions on Tourism Experiences Within the Great Barrier Reef World Heritage Area in *Environmental Management* Vol. 26, No. 1, pp. 73-87.
- SNA Sveriges Nationalatlas. (1992). *Hav och Kust*. Ed., Sjöberg, B. SNA Förlag, Stockholm.
- SNA Sveriges Nationalatlas. (1993). *Kulturliv, rekreation och turism*. Ed., Aldskogius, H. SNA Förlag, Stockholm.
- Stadsarkitektkontoret, Luleå. (1990). *Luleå development plan*. In Swedish *Översiktsplan för Luleå kommun*. Luleå.
- Stankey, G. (1973). *Visitor perception of wilderness recreation carrying capacity*. USDA Forest Service Research paper INT-142 1973. Intermountain Forest and Range Experiment Station, Ogden, Utah.
- Statens offentliga utredningar. (1996). *Hållbar utveckling i Sveriges skärgårdsområde*. 1996: 153. Miljödepartementet, Stockholm.
- Statens offentliga utredningar.(1996). *Fritidsbåten och Samhället*. 1996:170. Kommunikationsdepartementet, Stockholm.

- Statens Offentliga Utredningar. (2000). *Levande skärgård – Utvärdering av de regionala miljö- och hushållsprogrammen*. 2000:67. Miljödepartementet, Stockholm.
- Sundberg, M and Öhman, J. (2000). Hälsa och livskvalitet in *Friluftslivshistoria. Från "Härdande friluftslif" till ekoturism och miljöpedagogik*. Eds., Sandell K. and Sörlin, S. Carlsson Bokförlag, Stockholm.
- Swedish government (2001). *En samlad naturvårdspolitik*. Regeringens skrivelse 2001/02:173. Stockholm.
- Turistdelegationen (1998). *Hållbar utveckling i svensk turistnäring*. Swedish Tourist Authority, Turistdelegationen Stockholm.
- Vuorio, T., Göransson, S. and Emmelin, L. (2000). *Vandrare i Södra Jämtlandsfjällen – underlag för översiktlig planering*. Working paper 2001:11. ETOUR, Östersund.
- Vuorio, T. (2003). *Information on recreation and tourism in spatial planning in the Swedish mountains – methods and need for knowledge*. Department of Spatial Planning, Blekinge Inst. of Technology and European Tourism Research Institute, Lic. Dissertation Series 2003:03.
- Wall, S. (2003). *Tourists' Behaviour and Attitudes in the Northern Part of the Swedish Mountains*. Working paper 2003:6. ETOUR, Östersund.
- Wallsten, P. (1988). *Rekreation i Rogen tillämpning av en planeringsmetod för Friluftsliv*. Kommitrapport 1988:2, Trondheims universitet, Trondheim.
- Wiklund, T. (1995). *Det tillgjorda landskapet: en undersökning av förutsättningarna för urban kultur i Norden*. Korpen, Göteborg.
- Öhman, M. (2000). Skärgårdsmiljön och människan in *Skärgårdsmiljöer – nuläge, problem och möjligheter*. Ed., M. von Numers, pp. 223-231. Europeiska regionala utvecklingsfonden, Åbo.

### **Unpublished literature**

- Luleå kommuns turistblad* (2003). Luleå municipality's tourist pamphlet. Luleå kommun, Luleå.
- Turlista skärgårdsbåtarna* (2003). Tour list of the archipelago boats. Luleå kommun, Luleå. *Session report*, Luleå municipal executive board, 2002-04-15.

### **Internet**

- Everything about Luleå, internet 2004-03-04*.  
[http://www.lulea.se/lulea/AlltomLulea/Svenska/Sport\\_fritid/skargard/personal/default.htm](http://www.lulea.se/lulea/AlltomLulea/Svenska/Sport_fritid/skargard/personal/default.htm) 4/3-04
- County administration board Västerbotten, internet 2004-06-30*  
<http://www.y.lst.se/4.17431b9f544f8dca97fff3224.html> 30/6-04
- Luleå municipality Leisure, internet 2004-04-15*.  
<http://www.lulea.se/lulea/LuleaKommun/Verksamhet/Skargard/fakta/faktasiffror.asp> 15/4-04
- Luleå municipality administration, internet 2004-04-19*.  
<http://www.lulea.se/lulea/LuleaKommun/Verksamhet/Skargard/levandeskargard/default.htm> 19/4-04
- Miljömålsportalen, internet 2004-01-14*.  
[http://www.miljomal.nu/nar\\_vi\\_malan/miljomalen/delmal10.php](http://www.miljomal.nu/nar_vi_malan/miljomalen/delmal10.php) 14/1-04
- Natura 2000, internet 2004-08-04*.  
<http://www.bd.lst.se/livsmiljo/naturvard/n2000/vad.htm> 4/8-04.
- Swedish Environmental Protection Agency, internet 2004-08-4*.  
<http://www.naturvardsverket.se/dokument/natur/n2000/2000dok/lathund.htm> 4/8-04
- NUTEK, internet 2004-05-04*.  
<http://www.nutek.se/sb/d/211/a/488> 4/5-04

*Sveriges Geologiska Undersökning SGU, 2004*

[http://www.sgu.se/geologi/jord/jordart/landhojn\\_s.htm](http://www.sgu.se/geologi/jord/jordart/landhojn_s.htm) 14/6-04

*Swedish Environmental Protection Agency, internet 2003-08-1.*

<http://www.naturvardsverket.se/dokument/friluft/turism/turism.html#Okande> 1/8-03

### **Interviews**

Göran Wallin. Head of the division *Archipelago/Outdoor life* of Luleå municipality.

Date 11/3 2003.

Lennart Hennix. Captain of tour boat *M/S Ronja*.

Date 16/7 2003.

### **E-mail**

Göran Wallin. Head of the division *Archipelago/Outdoor life* of Luleå municipality.

Date 14/5-03.

## Appendix 1: *Questionnaire in the Luleå archipelago 2003.*

### **Enkätundersökning A** **Ditt besök i Luleå skärgård år 2003**

**19 november, 2003 Östersund**

Detta frågeformulär vänder sig till Dig som har besökt Luleå skärgård under året 2003. Området som ingår i studien kan Du studera på enkätens karta s. 6. Denna enkät syftar till att studera besökarens aktiviteter i Luleå skärgård år 2003, var i området de har varit och vad de har upplevt. Därför är just Ditt svar mycket viktigt för mitt forskningsprojekts framåtskridande. För att resultaten ska bli tillförlitliga är det angeläget att alla utvalda svarar på enkäten.

Genom ett slumpmässigt förfarande har Du valts ut att medverka i enkätundersökning.<sup>15</sup> Du deltar naturligtvis konfidentiellt och kodnumret på svarskuvertet (som sedan förstörs) är endast till för att jag inte ska skicka en påminnelse till Dig som redan har svarat. När undersökningens resultat redovisas, kommer det aldrig att framgå vad enskilda personer har svarat.

Jag och nedanstående personer, som står bakom undersökningen, ber Dig vänligen att skicka tillbaka den ifyllda enkäten i det portofria kuvertet snarast möjligt.

Har du några frågor om undersökningen, kontakta projektledare Rosemarie Ankre.

#### **Ett varmt tack på förhand för Din medverkan!**

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Luleå kommun Fritid



Mitt namn är Rosemarie Ankre och jag är forskarstuderande i fysisk planering vid turismforskningsinstitutet ETOUR och Blekinge Tekniska Högskola. Mitt forskningsprojekt handlar om planering och turismutveckling i svenska skärgårds- och kustlandskap. Om Du vill läsa mer om projektet och ETOUR, är Du välkommen att besöka hemsidan [www.etour.se](http://www.etour.se)

<sup>15</sup> Adresserna kommer från olika källor: Luleå Turistbyrå, Luleå kommun, Brändö konferens och fritidsby, Rörbäck Camping samt utdelade registreringskort i Luleå skärgård sommaren 2003.

# FRÅGEFORMULÄR

**A. Till att börja med, några allmänna frågor om Ditt besök i Luleå skärgård år 2003, när Du var i området, vad Du gjorde samt tidigare besök.**

**A1. Under vilka månader år 2003 besökte Du Luleå skärgård?**

Januari	12,8 %	April	29,5 %	Juli	86,2 %
Februari	21,2 %	Maj	27,8 %	Augusti	63,5 %
Mars	33,4 %	Juni	61,2 %	September	37,7 %

**A2. Har Du även besökt Luleå skärgård under månaderna september-december år 2002?**

Ja 42,1 %      Nej 57,9 %

**A3. Hur har Du främst fått kunskap om Luleå skärgård?**

Egen erfarenhet från tidigare besök	65,3 %
Släkt och vänner	15,9 %
Internet	2,6 %
Radio, TV eller tidningar	1,4 %
Resebyrå, kataloger och broschyr	5,4 %
Annat sätt	9,4 %

varav 2,8 % har stuga/fritidshus  
1 % är lulebo  
0,6 % bor/är uppväxt i skärgården  
5 % övrigt

**A4. Vilket var Ditt sällskap under besöket i Luleå skärgård år 2003?**

Familjen och släkt	81,5 %
Vänner och bekanta	14,1 %
Arbetskamrater	1 %
Övriga personer	0,7 %
Inget sällskap	2,7 %

**A5. Vilket/vilka färdmedel använde Du för att ta Dig till Luleå skärgård från Din hemort år 2003?**

Egen bil	54,4 %
Hyrbil	0,6 %
Bil med husvagn/husbil	6,8 %
Egen båt	53,3 %
Tåg	0,8 %
Buss	1,7 %
Flyg	2,3 %
Turbåt	6,3 %
Skoter	10,7 %
Annat färdmedel	6,8 %

**A6. Hur har Du färdats inom och på Luleås kustlandskap under Ditt besök år 2003?**

Segelbåt	12,7 %
Motorbåt	56,9 %
Turbåt	28,4 %
Kanot/kajak	3,4 %
Vandringsleder	6,2 %
Cykel	3 %
Bil	10,2 %
Skoter	12,6 %
Annat färdmedel	12,1 %

**A7. Hur är Din uppfattning om tillgängligheten med kollektiva färdmedel inom Luleå skärgård?**

Mycket negativ	1,2 %
Negativ	3,6 %
Neutral	28,5 %
Positiv	48,4 %
Mycket positiv	18,4 %

**A8. Bör tillgängligheten med kollektiva färdmedel förbättras inom Luleå skärgård?**

Ja 69,6 %	Nej 30,4 %
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**A9. Har Du besökt Luleå skärgård före år 2003?**

Ja 86,3 %	Nej 13,7 %
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**A10. Vilket år besökte Du Luleå skärgård för första gången?**

År 1930-1940	1,7 %
År 1941-1950	13,5 %
År 1951-1960	16,3 %
År 1961-1970	19,5 %
År 1971-1980	22,8 %
År 1981-1990	12 %
År 1991-2000	8,7 %
År 2001-2002	5,5 %

**A11. Ange ungefär hur många gånger Du har varit i Luleå skärgård under följande tidsperioder:**

År 2000-2002		Antal svarande 379 personer:	
0-5 dagar	34,3 %	5-10 dagar	13,2 %
11-15 dagar	4,2 %	16-30 dagar	18,7 %
31-50 dagar	12,4 %	51-70 dagar	4,2 %
71-100 dagar	7,1 %	101-130 dagar	0,5 %
131 dagar och mer	5,3 %		

<b>År 1995-1999</b>		<b>Antal svarande 348 personer:</b>	
0-5 dagar	31,6 %	5-10 dagar	12,9 %
11-15 dagar	3,4 %	16-30 dagar	15,8 %
31-50 dagar	12,1 %	51-70 dagar	4 %
71-100 dagar	9,2 %	101-130 dagar	1,4 %
131 dagar och mer	9,5 %		

<b>År 1990-1994</b>		<b>Antal svarande 323 personer:</b>	
0-5 dagar	33,4 %	5-10 dagar	11,8 %
11-15 dagar	4,3 %	16-30 dagar	15,5 %
31-50 dagar	12,4 %	51-70 dagar	3,1 %
71-100 dagar	8,4 %	101-130 dagar	1,5 %
131 dagar och mer	9,6 %		

<b>År 1985-1989</b>		<b>Antal svarande 324 personer:</b>	
0-5 dagar	33,3 %	5-10 dagar	13,3 %
11-15 dagar	4,6 %	16-30 dagar	15,1 %
31-50 dagar	10,2 %	51-70 dagar	2,5 %
71-100 dagar	9,9 %	101-130 dagar	1,9 %
131 dagar och mer	9,3 %		

<b>År 1985 och tidigare</b>		<b>Antal svarande 293 personer:</b>	
0-5 dagar	23,5 %	5-10 dagar	15,4 %
11-15 dagar	3,8 %	16-30 dagar	17,1 %
31-50 dagar	8,2 %	51-70 dagar	2 %
71-100 dagar	11,3 %	101-130 dagar	0 %
131 dagar och mer	18,8 %		

**A12. Du som har besökt Luleå skärgård tidigare än år 2003, tycker Du att området har förändrats år 2003, jämfört med det allra första besöket?**

Inte alls	3,2 %
Nästan inget	8 %
Något	28,5 %
Ganska mycket	41,7 %
Mycket	18,7 %

**A13. Om Du upplevt förändringar i Luleå skärgård sedan Du besökte området för första gången, vilken är Din huvudsakliga uppfattning om dessa?**

Mycket negativ	0,2 %
Negativ	4,7 %
Neutral	13,3 %
Positiv	55,1 %
Mycket positiv	23 %
Ingen åsikt	3,7 %

**A14. Vad har Du för åsikt om antalet turister i Luleå skärgård år 2003?**

Alldeles för få	22,1 %
Något för få	21,5 %
Varken eller	54,5 %
Något för många	2 %
Alldeles för många	0 %

**A15. Vilken förändring vill Du ska ske angående antalet turister i Luleå skärgård de närmaste 5 åren?**

Minska mycket	0 %
Minska något	0,8 %
Oförändrat	27,4 %
Öka något	49,4 %
Öka mycket	22,4 %

**A16. Vilken betydelse har en permanent befolkning i Luleå skärgård för Din besöksupplevelse?**

Ingen alls	8,5 %
Nästan ingen	10,9 %
Någon	24,1 %
Ganska stor	35 %
Stor	21,6 %

**A17. Stördes Du av att det fanns åretrunt boende personer under Ditt besök i Luleå skärgård år 2003?**

Inte alls	94,9 %
Nästan inget	4,3 %
Något	0,2 %
Ganska mycket	0,2 %
Mycket	0,4 %

**A18. Upplevde Du skogs-, jordbruks- och fiskenäringen som störande under besöket i Luleå skärgård?**

Inte alls	90,2 %
Nästan inget	5,7 %
Något	3,1 %
Ganska mycket	0,6 %
Mycket	0,4 %



**A19. Anser Du att skogs-, jordbruks- och fiskenäringen är viktig för turismutvecklingen i Luleå skärgård?**

Inte alls	4,6 %
Nästan inget	4 %
Något	22,2 %
Ganska mycket	36,4 %
Mycket	32,9 %

**A20. Vilken betydelse har tillgång till service (varuförsäljning, bensinförsäljning el. dyl.) i Luleå skärgård för Dig?**

Ingen alls	8,4 %
Nästan ingen	17,4 %
Någon	23,4 %
Ganska stor	28,3 %
Stor	22,5 %

**A21. Vilka faktorer hade betydelse för Dig vid beslutet om att besöka Luleå skärgård?**

	Ingen betydelse	Liten betydelse	Viss betydelse	Stor betydelse	Mycket stor betydelse
Möjligheter till naturupplevelse	0,6 %	1,4 %	12,7 %	21,4 %	64 %
Möjligheter till kulturupplevelse	10 %	17 %	40 %	16 %	16,8 %
Bra vatten, stränder och bottnar	2,2 %	2,6 %	12,1 %	28,8 %	54,4 %
Tillgång till fritidshus	30,9 %	10,8 %	12 %	13 %	33,3 %
Möjligheter till segling	55,1 %	11,4 %	14,9 %	4,7 %	13,9 %
Möjligheter att nyttja motorbåt eller annan båt	22,6 %	8,3 %	15,1 %	13,7 %	40,3 %
Möjligheter till fritidsfiske	22,6 %	12,4 %	22,2 %	18 %	25 %
Möjligheter till fotvandring	9 %	7,8 %	31,3 %	29,5 %	22,4 %
Kommunikationerna till och från öarna	22,2 %	13,2 %	23,2 %	17,4 %	23,8 %
Tillgången på boende och service	15,8 %	12,2 %	30,5 %	22 %	19,6 %
Att besöka släkt och vänner	41,3 %	10,6 %	23,6 %	11,6 %	12,8 %
Frånvaro av restriktioner och hinder	19,5 %	7,8 %	30,9 %	21,5 %	20,3 %
Möjlighet till lugn och ro	1 %	2 %	13,6 %	26,7 %	56,7 %

Finns det andra faktorer som hade mycket stor betydelse, ange i så fall vilka ....

**A22. Har Du regelbundet tillgång till fritidshus i Luleå skärgård?**

Ja 38 %                      Nej 62 %

**A23. Vem äger fritidshuset Du har tillgång till?**

Jag själv	79,2 %	Jag hyr/lånar regelbundet av någon annan	3,6 %
Släkt	14,2 %		
Vänner och bekanta	3 %		

**A24. Om Du själv har tillgång till ett fritidshus, skulle Du vilja utöka tidsperioden av Ditt boende i Luleå skärgård?**

Ja, med ett par veckor per år	34,4 %
Ja, med ett par månader per år	22,6 %
Ja, för att bo permanent	8,2 %
Nej	34,9 %

**A25. Skulle Du vilja bo permanent i Luleå skärgård?**

Ja 17,3 %                      Nej 82,7 %

**A26. Var i Luleå skärgård skulle Du vilja bo permanent?**

**A27. Är Du intresserad av att köpa ett fritidshus i Luleå skärgård?**

Ja, för att besöka sommartid	3,4 %
Ja, för att besöka både sommar- och vintertid	16,6 %
Ja, för att bo permanent	2,5 %
Nej	77,6 %

**A28. Hur övernattade Du under Ditt besök i Luleå skärgård år 2003?**

Jag övernattade inte i området	8,7 %
Jag övernattade på ett och samma ställe	56,4 %
Jag övernattade på flera olika ställen	34,9 %

**A29. Se symbolerna nedan för olika sorters boenden. Markera på kartan på nästa sida, var Du övernattade inom Luleå skärgård samt Ditt boende med hjälp av symbolerna.**

➔ **Skriv även det antal nätter Du övernattade vid varje markering! *Not coded.***

- |   |                                 |
|---|---------------------------------|
| ■ Eget fritidshus                               | <b>H</b> Husvagn eller husbil   |
| <b>P</b> Hyrt privat hus eller fritidshus       | <b>S</b> Släkt och/eller vänner |
| <b>X</b> Vandrarhem, hotell eller konferensgård | <b>B</b> Båt                    |
| ▲ Tält  |                                 |

**A30. Se på kartan igen s. 6. Ringa in den del av Luleå skärgård som Du uppskattade mest under Ditt besök. *Not coded.***

### A31. Vad uppskattar Du med området Du markerat på kartan?

Stillhet, lugn och ro	79,1 %
Bra boende	38,1 %
Att kunna uppleva natur och kultur	63,1 %
Lättillgängligt	35,5 %
Havet och stranden	79,5 %
Segling och båtsport	19,1 %
Bastu	3,8 %
Fiske	4,2 %
Annat	13,8 %

**B. Nu följer några frågor om de upplevelser Du har haft under Ditt besök i Luleå skärgård år 2003. Av intresse är också Ditt känslomässiga förhållande till Luleå skärgård och områdets utveckling i samband med turism.**

### B1. Vilka av följande utvecklingar anser Du kännetecknar Luleå skärgårdslandskap?

	Helt oenig	Delvis oenig	Neutral	Delvis enig	Helt enig
Stark exploatering	33,6 %	16 %	41,9 %	6,4 %	2,1 %
Slitage på mark och växtlighet	28,5 %	24,9 %	36,3 %	8,5 %	1,9 %
Trängsel (för många besökare)	41,5 %	19,9 %	34 %	4,1 %	0,4 %
Utbyggnad av fritidshus	18,7 %	19,9 %	47,9 %	11,4 %	2,1 %
Utbyggnad av semesteranläggningar	22,9 %	15,7 %	42,1 %	14,5 %	4,8 %

### B2. Upplevde Du slitage på mark och växtlighet under besöket i Luleå skärgård år 2003?

Inget	23,8 %
Mycket lite	37,2 %
Ganska lite	17,8 %
Lite	14,1 %
Ganska mycket	5,9 %
Mycket	0,2 %
Väldigt mycket	1 %

### B3. Upplevde Du nedskräpning under besöket i Luleå skärgård år 2003?

Inget	14 %
Mycket lite	40,9 %
Ganska lite	19,7 %
Lite	18,1 %
Ganska mycket	6,1 %
Mycket	0,8 %
Väldigt mycket	0,4 %

### B4. Vilken är Din inställning till muddring av farlederna och hamnplatserna i Luleå skärgård?

Positiv	92,3 %	Negativ	7,7 %
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**B5. Vilken är Din inställning till strandskydd (förbud mot bebyggelse 100 m från strandlinjen) i Luleå skärgård?**

Positiv 62,8 %                      Negativ 37,2 %

**B6. Påverkade fågel- och/eller salskyddsområden (med besöksrestriktioner) Din planering av besöket i Luleå skärgård år 2003?**

Ja, något 15,7 %  
Ja, mycket 2 %  
Nej, inte alls 82,4 %

**B7. Har fågel- och/eller salskyddsområden (med besöksrestriktioner) hindrat Dig från att röra Dig fritt under besöket i Luleå skärgård år 2003?**

Ja, något 14,7 %  
Ja, mycket 2 %  
Nej, inte alls 83,3 %

**B8. Har Du under Ditt besök i Luleå skärgård år 2003, varit i ett eller flera av naturreservaten?**

Ja 49,6 %                      Nej 50,4 %

**B9. Hur påverkade naturreservaten i Luleå skärgård Ditt besök år 2003?**

Mycket negativt 0,2 %  
Negativt 1,2 %  
Neutral 68,5 %  
Positivt 21,4 %  
Mycket positivt 8,7 %

**B10. Tag ställning till nedanstående påståenden om Din relation till Luleå skärgård.**

	Helt oenig	Delvis oenig	Neutral	Delvis enig	Helt enig
Hur området utvecklas är viktigt för mig.	1,6 %	1,8 %	26,1 %	31,7 %	38,8 %
Jag har känslomässiga bindningar till området; det betyder något för mig.	8,7 %	3,4 %	23,4 %	23 %	41,5 %
Jag identifierar mig med livsstilen och de människor jag möter i området.	5,8 %	4,6 %	31,7 %	35,1 %	22,8 %
Jag känner inte till något annat område som ger mig samma möjligheter att göra saker på fritiden.	16,6 %	16,2 %	28,8 %	19,4 %	19 %
Jag känner mig avkopplad och tillfreds när jag besöker området.	0,2 %	0,6 %	8,4 %	25,7 %	65,1 %

Ibland känner jag mig som en främling när jag besöker området.	65,7 %	12,4 %	16,9 %	4,8 %	0,2 %
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**B11. Vad anser Du om telemaster i Luleå skärgård?**

Mycket negativt	10 %
Negativt	14,6 %
Neutral	47,4 %
Positivt	20,7 %
Mycket positivt	7,3 %

**B12. Hur viktigt är det för Dig att ha täckning för mobiltelefon i Luleå skärgård?**

Inget	2,3 %
Mycket lite	6,2 %
Ganska lite	7,8 %
Lite	15,6 %
Ganska mycket	19,9 %
Mycket	21,2 %
Väldigt mycket	26,9 %

**B13. Stördes Du av större båtar (svallvågor, buller etc.) under Ditt besök i Luleå skärgård år 2003?**

Inget	43,7 %
Mycket lite	27,6 %
Ganska lite	12,9 %
Lite	12 %
Ganska mycket	2,5 %
Mycket	0,6 %
Väldigt mycket	0,6 %

**B14. Stördes Du av att det fanns toalettavfall i vattnet under Ditt besök i Luleå skärgård år 2003?**

Inget	72,4 %
Mycket lite	14,2 %
Ganska lite	4,9 %
Lite	4,1 %
Ganska mycket	1,6 %
Mycket	0,8 %
Väldigt mycket	2 %

**B15. Upplevde Du något slags buller under Ditt besök i Luleå skärgård år 2003?**

	Inget	Nästan inget	Något	Ganska mycket	Mycket
Båtmotorer	38,7 %	37,9 %	21 %	1,8 %	0,6 %
Jetski/vattenskoter	79 %	12,9 %	5,7 %	1,6 %	0,8 %
Vägtrafik	85,7 %	12 %	2,1 %	0 %	0,2 %
Flyg/helikopter	56,2 %	25,5 %	15,3 %	2,2 %	0,8 %
Annat	78 %	7,4 %	7,1 %	3,9 %	3,5 %

**B16. Vilken är Din uppfattning om bullerfria zoner med restriktioner för motortrafik i Luleå skärgård?**

Mycket negativt	14,4 %
Negativt	17,6 %
Neutral	45,2 %
Positivt	16 %
Mycket positivt	6,8 %

**B17. En utbyggnad av vindkraft innebär framförallt en visuell förändring i landskapet. Som besökare i Luleå skärgård år 2003, tag ställning till följande påståenden:**

	Mycket negativt	Negativt	Neutral	Positivt	Mycket positivt
1-2 vindkraftverk inom synhåll vid <u>enstaka</u> tillfälle	21,2 %	9,9 %	36,5 %	20,4 %	12,1 %
10-12 vindkraftverk (samlade i grupp) inom synhåll vid <u>enstaka</u> tillfälle	29,8 %	13,9 %	31,6 %	16,1 %	8,7 %
1-2 vindkraftverk inom synhåll vid <u>uppregade</u> tillfällen	34,1 %	19,9 %	31,2 %	10,1 %	4,7 %
10-12 vindkraftverk (samlade i grupp) inom synhåll vid <u>uppregade</u> tillfällen	48,1 %	17 %	24,4 %	7,1 %	3,4 %
Själva vetskapen om att det finns vindkraftverk i skärgårdsområdet, utan att jag ser dem	15 %	8,7 %	43,6 %	13,8 %	18,9 %

**B18. Vad anser Du om eventuella byggen av vindkraftverk i Luleå skärgård?**

Mycket negativt	21,4 %
Negativt	13,9 %
Neutral	32,2 %
Positivt	25 %
Mycket positivt	7,5 %

**B19. Nedan följer ett antal påståenden kring framtida turismutveckling i Luleå skärgårdsområdet. Markera vad som stämmer bäst med Din uppfattning.**

	Helt oenig	Delvis oenig	Neutral	Delvis enig	Helt enig
Turismen bidrar till ett <u>bevarande</u> av natur- och kulturmiljön	3,4 %	7,8 %	25,3 %	47,1 %	16,4 %
Turismen <u>hotar</u> natur- och kulturmiljö	24,7 %	33,5 %	23,3 %	16,8 %	1,6 %
Det bör finnas <u>fler</u> naturreservat	10,4 %	9,4 %	55,3 %	18,6 %	6,2 %
Det bör finnas <u>färre</u> naturreservat	16,5 %	3,9 %	60,4 %	5,1 %	4,1 %
Det bör finnas <u>fler</u> badplatser	5 %	6,6 %	40,9 %	30,7 %	16,8 %

Det bör finnas <u>färre</u> badplatser	34,8 %	19,8 %	42,2 %	2,1 %	1,2 %
Man bör anlägga <u>fler</u> övernattningsstugor och fritidsbyar	3,6 %	8 %	29,6 %	37,4 %	21,5 %
Det bör finnas <u>färre</u> övernattningsstugor och fritidsbyar	38,6 %	23,6 %	34,5 %	1,8 %	1,4 %

<p><b>C. Nu kommer en fråga om vad Du tycker är <u>allmänt</u> viktigt när Du besöker skärgårds- eller kustlandskap generellt i Sverige.</b></p>
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**C1. När Du besöker ett svenskt kust- eller skärgårdslandskap, vad anser Du om:**

	<b>Mycket negativt</b>	<b>Negativt</b>	<b>Neutral</b>	<b>Positivt</b>	<b>Mycket positivt</b>
att det finns campingplatser och övernattningsstugor	0,8 %	2 %	17,8 %	42,6 %	36,8 %
att det finns gästhamnar	0,4 %	0,4 %	16,8 %	33,7 %	48,7 %
att det finns tillgång till toalett, varm dusch, möjlighet till matlagning inomhus mm	1,2 %	1,2 %	15,4 %	40,9 %	41,3 %
att det finns badplatser med badvakt och service	4,4 %	5,4 %	43,2 %	28,9 %	18,1 %
att det finns skyddade naturområden	0,8 %	1,6 %	23,2 %	41,6 %	32,9 %
att det finns markerade vandringsleder	0,8 %	1,8 %	17,6 %	48,5 %	31,4 %
att det finns utprickade farleder/båtsportsleder	0,6 %	0,2 %	16,3 %	22,8 %	60,1 %
att det finns informationstavlor om natur och kultur	0,2 %	0,4 %	5,9 %	43,7 %	49,8 %
att det finns regelbundna båtturer till öar	0,8 %	0 %	14,2 %	38,3 %	46,7 %
att det finns guidade turer i området	2,2 %	6,1 %	48,6 %	29,4 %	13,6 %
att det finns allmänna kommunikationer inom området (turbåt, buss, järnväg etc.)	1,8 %	2,8 %	26,7 %	40,7 %	28,1 %
att det finns större områden med restriktioner mot hastighet och/eller motorstyrka	7,3 %	9,3 %	37,4 %	25,3 %	20,6 %
att se spår efter andra besökare (ex. eldplatser, slitage, skräp)	43 %	37,9 %	16,2 %	2,4 %	0,6 %
att höra buller (t ex. motorljud)	15 %	39,9 %	40,5 %	4,2 %	0,4 %
att det finns installationer (telemaster, vindkraftsverk)	13,6 %	22,4 %	48 %	11,8 %	4,2 %
att träffa andra människor	0,2 %	1,2 %	19,8 %	51,1 %	27,7 %

att det finns en bofast befolkning	0,6 %	0 %	17,2 %	44 %	38,2 %
att kunna uppleva avskildhet och stillhet	0 %	0,4 %	9,3 %	36,5 %	53,8 %
att det är ett område med längre än 5 km till närmsta bebyggelse, hamn, väg etc.	3,6 %	9,5 %	59,7 %	19,2 %	8,1 %
att kunna övernatta utom syn- och hörhåll från andra människor	1,6 %	3,2 %	41,9 %	34,6 %	18,8 %
att det finns lättillgängliga badstränder	0,2 %	0,6 %	20,1 %	40,6 %	38,4 %
att det finns av människan orörd natur	0,2 %	2,2 %	19,2 %	40,7 %	37,7 %
att det finns nödtelefoner	0,2 %	0,6 %	20,8 %	35,6 %	42,9 %
att det finns sällsynta djur och växter	0,4 %	1,4 %	23,8 %	39,2 %	35,2 %
att kunna övernatta fritt i tält, segelbåt etc.	0 %	0,6 %	12,1 %	31 %	56,3 %
att kunna röra sig fritt i området	0 %	0 %	4,7 %	32,9 %	62,3 %
	<b>Mycket negativt</b>	<b>Negativt</b>	<b>Neutral</b>	<b>Positivt</b>	<b>Mycket positivt</b>

**D. Denna del innehåller frågor om Dina aktiviteter under Ditt besök i Luleå skärgård år 2003.**

**D1. Hade Du tillgång till en segelbåt i Luleå skärgård år 2003?**

Ja 14,7 % Nej 85,3 %

**D2. Hade Du tillgång till en motorbåt i Luleå skärgård år 2003?**

Ja 57,6 % Nej 42,4 %

**D3. Seglade Du under besöket i Luleå skärgård år 2003?**

Ja 16,2 % Nej 83,8 %

**D4. Hur stor erfarenhet har Du av segling sen tidigare?**

Ingen	8,8 %
Viss erfarenhet	16,3 %
Har erfarenhet	25 %
Har mycket erfarenhet	50 %



**D5. Tycker Du att Luleå skärgård är tillräckligt stort för flera dagars turer med båt?**

Ja 97,5 % Nej 2,5 %

**D6. Tycker Du att det finns tillräckligt många gästhamnar i Luleå skärgård?**

Ja 60,5 % Nej 39,5 %

**D7. Om Du svarade nej på föregående fråga, var borde det anläggas fler gästhamnar i Luleå skärgård?**

**D8. Skulle Du ha stannat längre i Luleå skärgård år 2003 om antalet gästhamnar varit fler?**

Ja 29,3 % Nej 70,7 %

**D9. Vad anser Du om gästhamnarnas service gällande avfallshantering, dricksvatten, bensinförsäljning och allmän handel i Luleå skärgård?**

Mycket negativt	1,6 %
Negativt	14,5 %
Neutral	33,9 %
Positivt	35,5 %
Mycket positivt	14,5 %

**D10. Vilken/vilka aktiviteter ägnade Du Dig åt under vistelsen i Luleå skärgård år 2003?**

Träffa släkt och vänner	60,9 %	Vistas i fritidshus	45,1 %
Sola och bada	80,9 %	Bada bastu	63,3 %
Segling	14,5 %	Kajakturer	5,1 %
Motorbåtturer	48,8 %	Vandringar till fots	67,4 %
Fiske	43,2 %	Dykning	2,3 %
Bär- och svamplockning	37,5 %	Andra aktiviteter	18,8 %

**D11. Se ovan fråga D10. Ringa in den huvudsakliga aktiviteten. Även om Du bara har angett ett alternativ ovan, så ska Du ringa in den!**

Träffa släkt och vänner	14,3 %	Vistas i fritidshus	25,7 %
Sola och bada	17,2 %	Bada bastu	1,2 %
Segling	9,9 %	Kajakturer	0 %
Motorbåtturer	14,3 %	Vandringar till fots	7,3 %
Fiske	3,4 %	Dykning	0 %
Bär- och svamplockning	0 %	Andra aktiviteter	6,8 %

**D12. Hur stor erfarenhet har Du av den aktivitet Du ringade in?**

Ingen	1,4 %
Viss erfarenhet	5,4 %
Har erfarenhet	23,9 %
Har mycket erfarenhet	69,3 %

### D13. Vilken/vilka öar besökte Du i Luleå skärgård år 2003?

Altappen	36,7 %	Hindersön	52 %	Rörbäck – Sandöskatan	10,8 %
Bastaskäret	11,4 %	Junkön	38,2 %	Sandgrönnorna	20,6 %
Bockön	1,8 %	Kallaxön	25,5 %	Sandskäret	2,7 %
Brändön	29,6 %	Kluntarna	55,5 %	Sandön	39,2 %
Brändöskäret	39,4 %	Lappön	5,7 %	Saxskäret	3,1 %
Båtön	4,7 %	Laxön	1 %	Sigfridsön	1,4 %
Degerön	9,4 %	Likskäret	32 %	Smålsön	10 %
Estersön	10,4 %	Långön	13,1 %	Småskären	50,6 %
Finnskäret	16,3 %	Mannön	1,4 %	Storbrändön	13,7 %
Fjuksön	6,9 %	Mjoön	9,6 %	Stor-Furuön	3,1 %
Germandön	10,8 %	Nagelskäret	3,3 %	Sör-Espen	3,1 %
Hamnön	3,9 %	Norr-Espen	6,1 %	Tistersöarna	2,2 %
Hertsölandet	31,4 %	Rödkallen	24,3 %	Uddskäret	24,9 %
Andra öar	19,6 %				

**E. Nu följer några frågor om Dina ekonomiska utlägg för resan till och inom Luleå skärgård år 2003. Observera att om Du haft sällskap under resan ska Du endast svara för Din resa, Ditt boende etc. och inte för hela gruppen. Har ni exempelvis åkt flera personer i samma bil, räkna då ut din andel av kostnaden för bilresan.**

**Samma sak gäller om någon annan har betalat hela eller delar av resans kostnader. Försök att ange de kostnader som Ditt deltagande medför, även om Du själv inte har betalat dem. I vissa fall kanske det är svårt att exakt minnas alla belopp, men försök att svara så noggrant som möjligt.**

### E1. Hur många dagar reste Du sammanlagt från det att Du lämnade bostaden till det att Du kom hem?

0-5 dagar	46,9 %	6-10 dagar	14,5 %
11-15 dagar	11,2 %	16-25 dagar	12,8 %
26-35 dagar	5,9 %	36-45 dagar	2,8 %
46 dagar och mer	5,9 %		

### E2. Hur många dagar vistades Du inom Luleå skärgård?

0-5 dagar	38,3 %	6-10 dagar	12,8 %
11-15 dagar	8,4 %	16-25 dagar	9,3 %
26-35 dagar	11,8 %	36-45 dagar	3,4 %
46-65 dagar	7,3 %	66-85 dagar	1,4 %
86-115 dagar	3,2 %	116 dagar och mer	4,1 %

### E3. Fördela Dina totala utlägg för resan och besöket i Luleå skärgård år 2003:

Transport till och från Luleå skärgård (inklusive ev. övernattnng, mat, bensin etc:			
0-999 kr	55,3 %	1000-2999 kr	23,9 %

3000-4999 kr	6,5 %	5000-9999 kr	9,7 %
10 000-14 999 kr	2,9 %	15 000-19 999 kr	0,3 %
20 000-	1,3 %		

Boende i Luleå skärgård (t ex. campingavgift, tältavgift):

0-999 kr	74,9 %	1000-2999 kr	18,3 %
3000-4999 kr	2,6 %	5000-9999 kr	2,6 %
10 000-14 999 kr	1 %	15 000-19 999 kr	0 %
20 000-	0,5 %		

Gästhamnsavgifter:

0-999 kr	99,3 %	1000-2999 kr	0,7 %
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Inköp av livsmedel i Luleå skärgård:

0-999 kr	72,8 %	1000-2999 kr	95 %
3000-4999 kr	3,3 %	5000-9999 kr	1,1 %
10 000-14 999 kr	0,6 %	15 000-19 999 kr	0 %
20 000-	0 %		

Lokala transporter (t ex. turboat):

0-999 kr	97,7 %	1000-2999 kr	1,5 %
3000-4999 kr	0 %	5000-9999 kr	0,8 %

Bensin:

0-999 kr	42,2 %	1000-2999 kr	24,2 %
3000-4999 kr	15,2 %	5000-9999 kr	12,7 %
10 000-14 999 kr	4,1 %	15 000-19 999 kr	0,8 %
20 000-	0,8 %		

Kurser och guidade turer:

0-999 kr	95,3 %	1000-2999 kr	4,7 %
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Kvällsnöjen, inträden etc:

0-999 kr	97,3 %	1000-2999 kr	1,4 %
3000-4999 kr	1,4 %		

Restaurangbesök, café etc:

0-999 kr	81,1 %	1000-2999 kr	18,4 %
3000-4999 kr	0,5 %		

Inköp av souvenirer och presenter i Luleå skärgård:

0-999 kr	91 %	1000-2999 kr	6,4 %
3000-4999 kr	2,6 %		

Hyra av utrustning i Luleå skärgård:

0-999 kr	100 %		
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Hyra av utrustning utanför Luleå skärgård som Du sedan tagit med till resmålet och använt där:

0-999 kr	95,2 %	1000-2999 kr	2,4 %
20 000-	2,4 %		

Inköp av livsmedel utanför Luleå skärgård som Du sedan tagit med till resmålet och använt där:

0-999 kr	44,5 %	1000-2999 kr	22,7 %
3000-4999 kr	13,4 %	5000-9999 kr	13,4 %
10 000-14 999 kr	4,3 %	15 000-19 999 kr	1 %
20 000-	0,7 %		

Inköp av utrustning, kläder etc. i Luleå skärgård:

0-999 kr	74 %	1000-2999 kr	12,3 %
3000-4999 kr	2,7 %	5000-9999 kr	4,1 %
10 000-14 999 kr	2,7 %	15 000-19 999 kr	2,7 %
20 000-	1,4 %		

**E4. Ungefär hur stora blev Dina totala utlägg under Ditt besök i Luleå skärgård år 2003?**

0-999 kr	20,1 %	1000-2999 kr	24,4 %
3000-4999 kr	13,5 %	5000-6999 kr	9,2 %
7000-9999 kr	7,4 %	10 000-14 999 kr	10,2 %
15 000-19 999 kr	6,1 %	20 000-24 999 kr	4,8 %
25 000-29 999 kr	1,5 %	30 000-34 999 kr	1,5 %
35 000 kr och mer	1,3 %		

**F. Slutligen, några frågor om Dig själv och Ditt hushåll. Alla svar behandlas naturligtvis konfidentiellt och i redovisningen framgår det aldrig vad enskilda personer har svarat.**

**F1. Vid tiden för resan till Luleå skärgård år 2003, ange Din bostads:**

Ort:

Boden	7,5 %	Linköping	0,6 %
Bureå	0,6 %	Luleå	54,2 %
Gammelstad	3,6 %	Piteå	1,9 %
Göteborg	0,6 %	S Sunderbyn	2,9 %
Kalix	1,5 %	Skellefteå	1,9 %
Kiruna	1 %	Älvsbyn	0,8 %
Kåge	0,8 %		

Övriga orter 22,1 %

Hemland:

Sverige	95,4 %	Norge	4,2 %
Danmark	0,2 %	Finland	0,2 %

**F2. När är Du född?**

År 1924 – 1935	7,1 %
År 1936 – 1945	19,9 %
År 1946 – 1955	30 %
År 1956 – 1965	24,5 %
År 1966 – 1975	16,6 %
År 1976 –	2 %

**F3. Kön** Kvinna 36,4 %                      Män 63,6 %

**F4. Vilken är Din högsta avslutade utbildning?**

Grundskola/Realskola	13,4 %
Gymnasium	24,7 %
Folkhögskola	4,7 %
Universitet/högskola upp till 120 poäng	21,5 %
Universitet/högskola över 120 poäng	27 %
Annan utbildning	8,7 %

**F5. Ungefär hur stor var den *sammanlagda* disponibla inkomsten i Ditt hushåll under år 2002 efter avdragen skatt?**

Upp till 99 999 kr	2,1 %	100 000 – 199 999 kr	13,2 %
200 000 – 299 999 kr	28,2 %	300 000 – 399 999 kr	28,2 %
400 000 – 499 999 kr	16,9 %	Över 500 000 kr	11,3 %

**F6. Kommer Du att besöka Luleå skärgård igen?**

Ja, helt säkert	90,2 %
Ja, kanske	9,8 %
Nej	0 %

**F7. Totalt sett, vilket omdöme ger Du besöket i Luleå skärgård år 2003?**

Mycket bra	55,1 %
Bra endast några saker kunde ha varit bättre	32,5 %
Ganska bra, några saker kunde ha varit bättre	12 %
Dåligt, det mesta kunde ha varit bättre	0,4 %
Mycket dåligt	0 %

*Varmt tack för Din värdefulla medverkan i forskningen!  
Använd det portofria svarskuvertet och återsänd vänligen  
enkäten snarast möjligt!*

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Appendix 2: Registration card in the Luleå archipelago 2003.

**Skärgårdsbesökare 2003/ Archipelago visitors 2003/ Schärengartenbesucher 2003**

Fyll i ett kontaktkort per person. Om ni är flera i gruppen ber vi alla över 15 år att fylla i ett kort./  
One card per person, please./ Eine Karte pro Person, bitte.

Ifyllt/ Filled in/Ausgefüllt am:      **Dag/Day/Tag**                       **Månad/Month/Monat**

**Namn/Name/Name** \_\_\_\_\_

**Address/Address/Strasse u Hausnr.** \_\_\_\_\_ **Postnr/Postcode/Postleitzahl** \_\_\_\_\_

**Hemort/Town/Wohnort** \_\_\_\_\_ **Land/Country/Staat** \_\_\_\_\_

**Födelseår/Date of birth/Geburtsdatum** \_\_\_\_\_ **Man/Male/Männlich**  **Kvinna/Female/Weiblich**

1. **När anlande Du till Luleå skärgård och när planerar Du att lämna området?/** When did you arrive to the archipelago of Luleå and when do you think you will leave the area?/ Wann sind Sie im Schärengarten von Luleå angekommen und wann gedenken Sie, das Gebiet wieder zu verlassen?

**Ankomstdatum/Day of arrival/Tag der Anreise**                      **Dag/Day/Tag**                      **Månad/Month/Monat**  
**Avresedatum/Day of departure/Tag der Abreise**                      \_\_\_\_\_                      \_\_\_\_\_

2. **Vilken är Din huvudsakliga aktivitet under besöket? /What is your main activity during the visit?/ Welche ist die hauptsächliche Aktivität während Ihres Besuches?** \_\_\_\_\_

**Tack för Din hjälp!/ Thank you for your help!/ Vielen Dank für Ihre Mithilfe!**

*Rosemarie Ankre*

*Lars Emmelin*

*Göran Wallin*

*Projektledare*

*Prof. Fysisk planering*

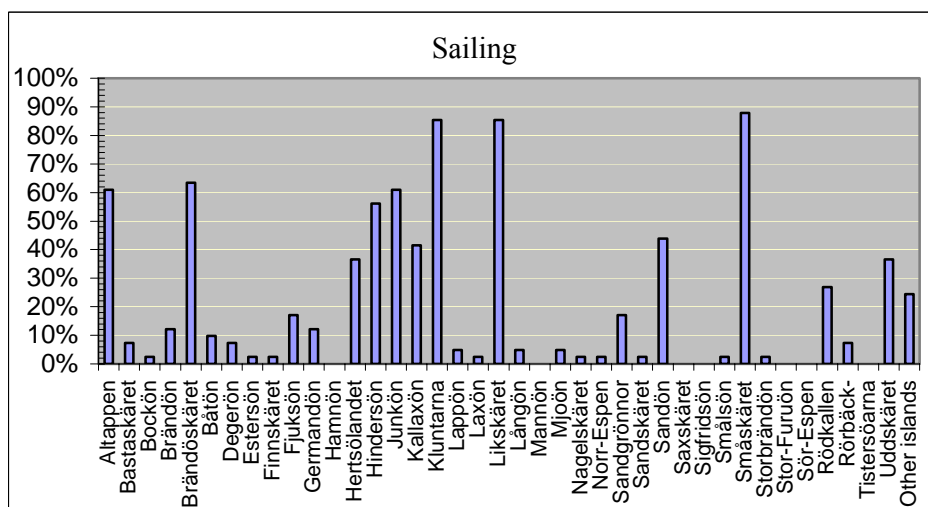
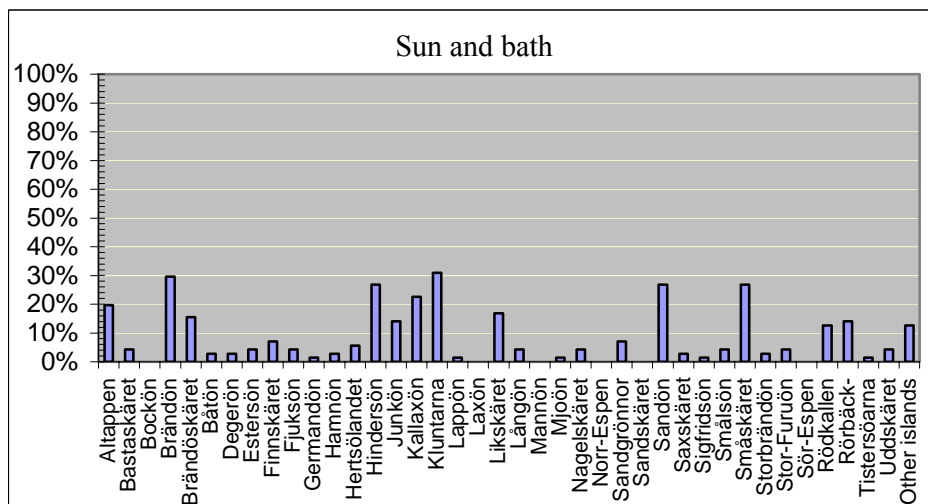
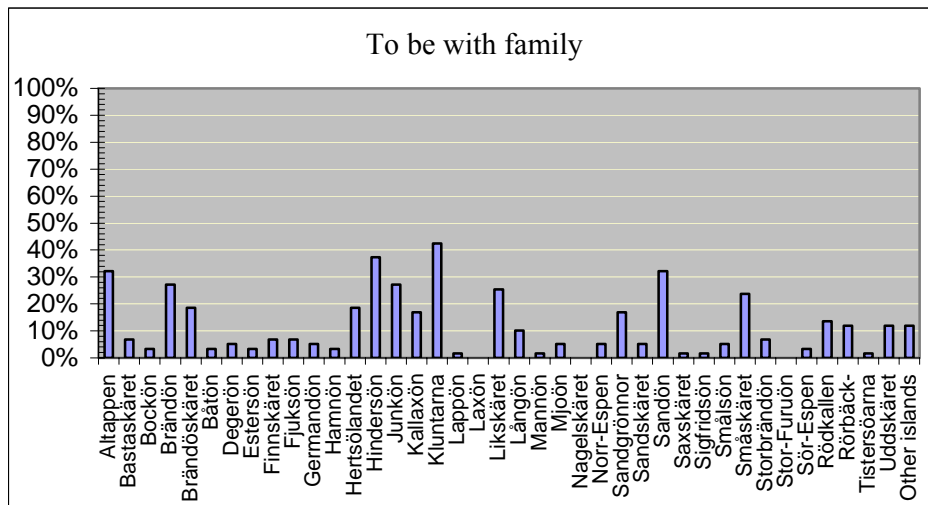
*Avd. chef Skärgård/Friluftsliiv*

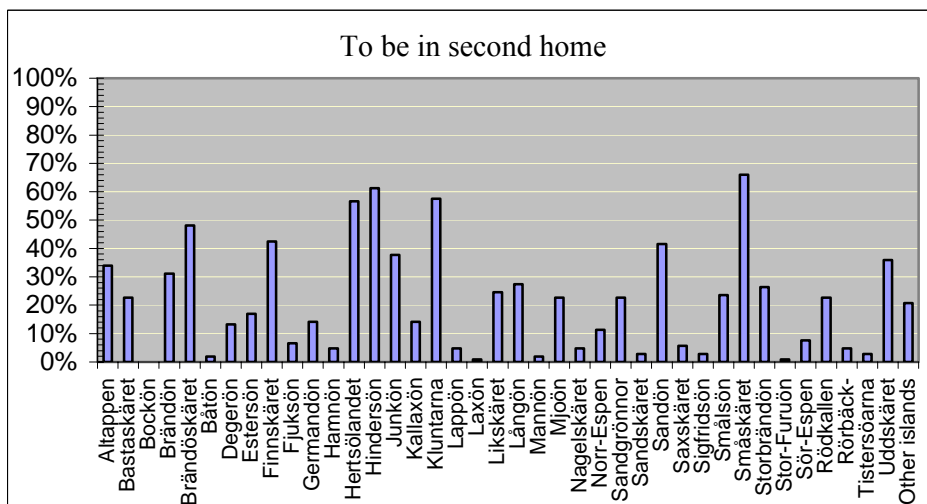
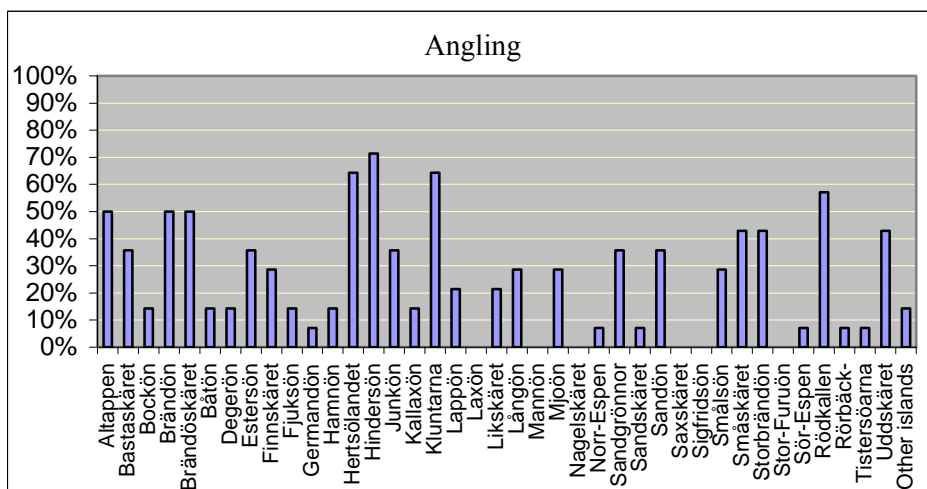
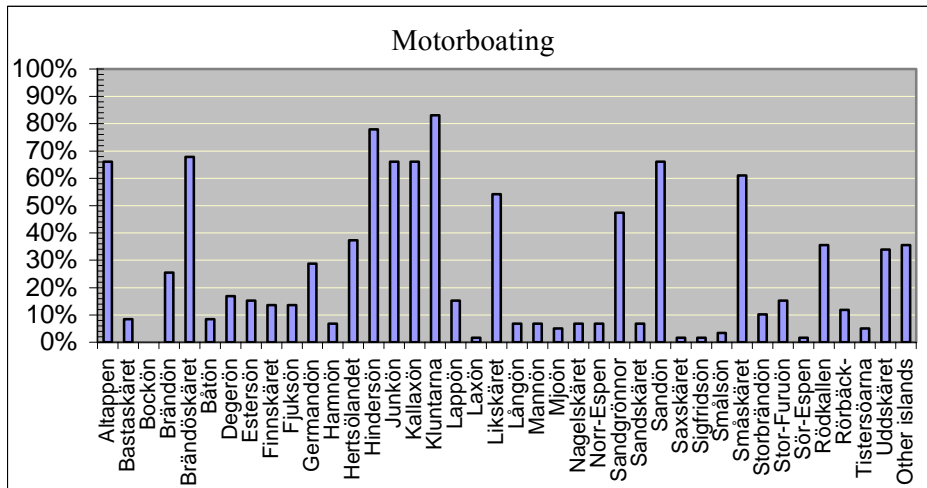
*ETOUR*

*ETOUR*

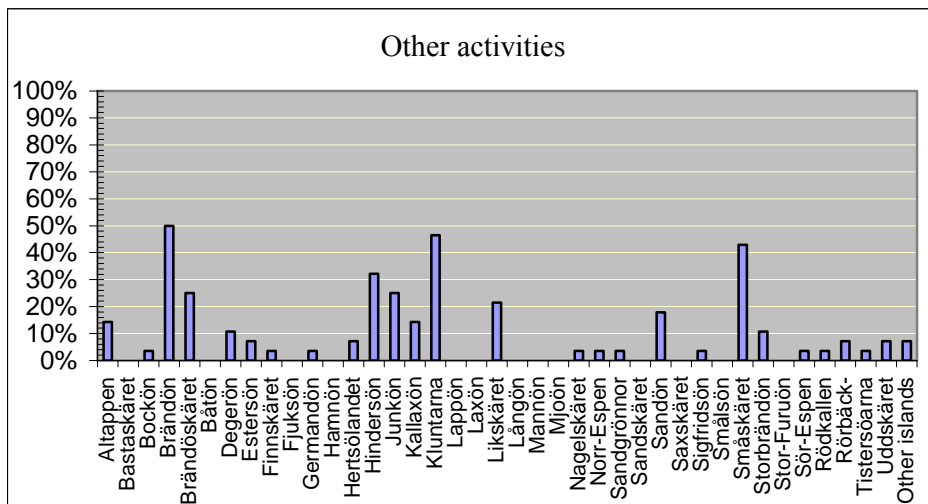
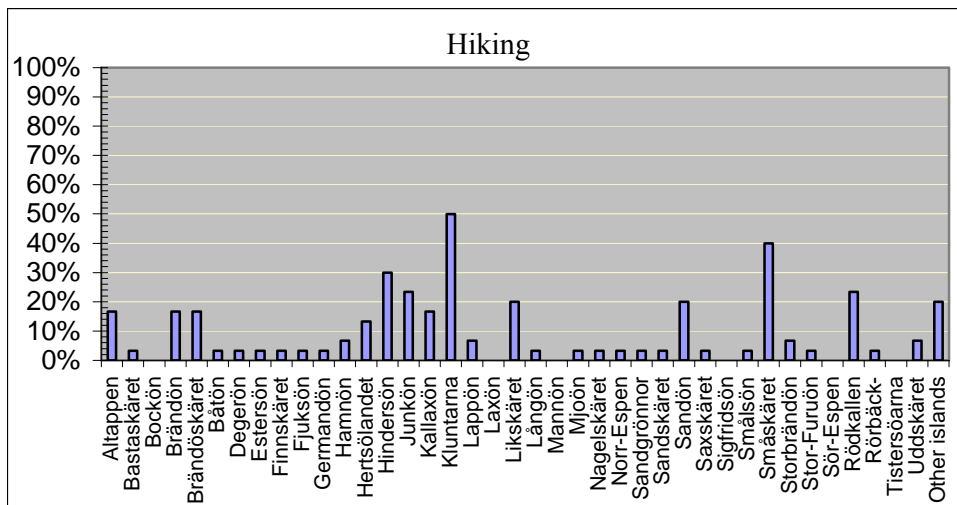
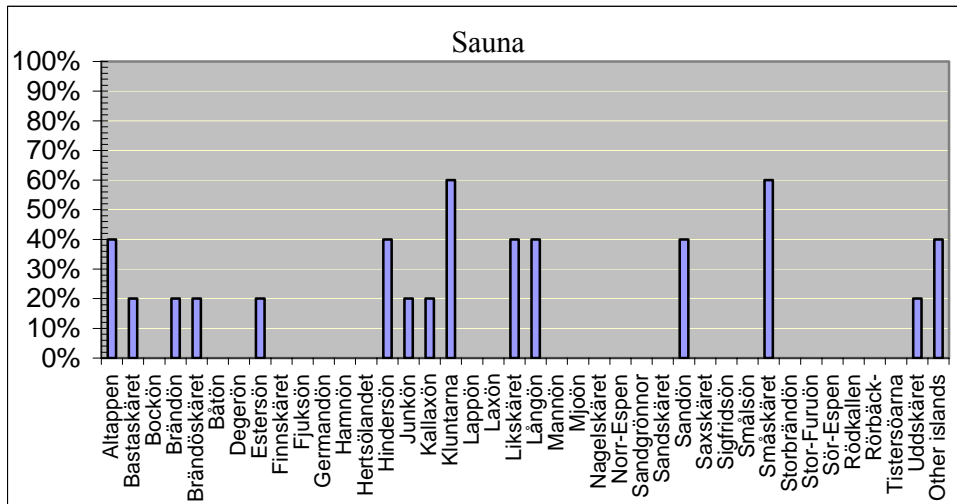
*Luleå kommun Fritid*

Appendix 3: The activities (see question D10 Appendix 1) geographically dispersed on various islands in Luleå archipelago 2003.









Appendix 4: *Dispersion of purism scale in the in-official zones of the Luleå archipelago 2003.*

1. Percentage of the purism scale in the inner zone of the Luleå archipelago.

<b>Islands</b>	<b>Urbanists</b>	<b>Neutralists</b>	<b>Purists</b>
Brändön	38%	34%	27%
Hertsölandet	27%	46%	28%
Laxön	67%	33%	0%
Liskäret	26%	49%	25%
Rörbäck-S	31%	52%	17%
Sandön	34%	43%	23%

2. Percentage of the purism scale in the middle zone of the Luleå archipelago.

<b>Islands</b>	<b>Urbanists</b>	<b>Neutralists</b>	<b>Purists</b>
Altappen	30%	45%	25%
Bockön	71%	14%	14%
Degerön	35%	37%	28%
Fjuksön	26%	42%	32%
Germandön	33%	44%	22%
Hamnön	33%	50%	17%
Hindersön	32%	43%	24%
Junkön	31%	42%	27%
Kallaxön	33%	47%	20%
Lappön	45%	41%	14%
Långön	31%	44%	25%
Mannön	50%	17%	33%
Nagelskäret	31%	50%	19%
Sandskäret	58%	42%	0%
Sigfridsön	86%	0%	14%
Storbrändön	33%	37%	30%
Stor-Furuön	20%	53%	27%
Tistersöarna	56%	33%	11%

3. Percentage of the purism scale in the outer zone of the Luleå archipelago.

<b>Islands</b>	<b>Urbanists</b>	<b>Neutralists</b>	<b>Purists</b>
Bastaskäret	20%	40%	40%
Brändöskäret	28%	42%	29%
Båtön	18%	50%	32%
Estersön	35%	50%	15%
Finnskäret	22%	49%	30%
Kluntarna	29%	41%	30%
Mjoön	32%	43%	25%
Norr-Espen	26%	26%	48%
Rödkallen	26%	47%	28%
Sandgrönnorna	30%	43%	28%
Saxskäret	27%	47%	27%
Smålsön	26%	48%	26%
Småskären	26%	45%	29%
Sör-Espen	31%	31%	38%
Uddskäret	24%	50%	26%