CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE
Faculty of Forestry and Wood Sciences
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ANALYSIS OF PUBLIC OPINION OF FOREST AND FORESTRY IN SELECTED AREAS

ANALÝZA NÁZORŮ VEŘEJNOSTI NA LES A LESNÍ HOSPODÁŘSTVÍ NA VYBRANÝCH ÚZEMÍCH

DOCTORAL THESIS

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Declaration

I declare that I wrote this doctoral thesis on my own, and have been used only quoted references.

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25.5.2013

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Abstract

Currently, more and more people want to spend their leisure time in nature, especially in forested areas. Even though recreation is one of the most common uses of forested areas, there is scarce data about users and their opinions. This is why a comprehensive overview of the current state of research about public opinion with regard to forests and forestry is provided.

The aim of this dissertation is to make out the matter of public opinion on forest and forestry in selected areas; specifically to find answers concerning how often people go to the forest and why, how they perceive different types of forest, and what they think about forest management and the facilities for visitors near forest tourist routes. Another goal is to ascertain visitors' profiles and to determine in what respect it is different from the total population of the Czech Republic.

The basic survey method used in this case was 'on-site' questionnaire inquiry. Research was focused on tourists in Protected Landscape Area (hereafter referred to as PLA) Blaník, a well-known recreational area where required data about visitors is lacking. Directly asking about visitors' opinions and preferences is an important informational tool for planning in this area. Results have brought forth many pieces of information which could be useful for decision making in the field of tourism. Results show, for instance, that the majority of respondents (nearly 1/3) go to the forest from 6 to 11 times per year. More than half of them were satisfied with the frequency of their forest visits. Interestingly, visitors mostly prefer 'maintained trails'. When planning their trip, more than 4/5 of respondents chose their trail depending on whether it went through the forest. According to forest visitors' opinions, the most convenient facility to place near the forest tourist trail is the 'nature trail panels'. Furthermore, based on the acquired data, it was possible to create a visitor's profile. This profile is important for the respective research and other case studies in similar areas, as well as for managers of protected landscape areas who wish to comply with both the visitors' needs and the needs of the protected area.

This thesis also contains a comparison between results from the Czech Republic and results of an analogous study carried out in Italy. In addition, it considers findings from other studies concerning the issue of tourism in protected areas and/or the attendance and preferences of forest visitors.

Keywords

Forest; Forest Visits; Public Opinion; Preference Survey; Tourists; Protected Landscape Areas; PLA Blaník; Czech Republic; Italy.

Abstrakt

V současné době chce stále více lidí trávit svůj volný čas v přírodě, zejména v zalesněných oblastech. Přestože je rekreace jedním z nejčastějších využití zalesněných oblastí, existuje poměrně málo informací o uživatelích a jejich názorech. To je důvod, proč je v práci uveden obsáhlý přehled o současném stavu výzkumu veřejného mínění o lesích a lesním hospodářství.

Cílem této disertační práce je zjistit názory veřejnosti na les a lesní hospodářství na vybraných územích, zejména najít odpovědi na otázky jak často lidé chodí do lesa a proč, jak vnímají různé typy lesů a co si myslí o lesním hospodářství a o zařízení pro návštěvníky u lesních turistických stezek. Dalším cílem je rozpoznat profil návštěvníků a určit, jak se liší od celkové populace České republiky.

V daných případech bylo základní metodou průzkumu ‚on-site' dotazníkové šetření. Výzkum je zaměřen na turisty v Chráněné krajinné oblasti (dále jen CHKO) Blaník, známé rekreační oblasti, kde potřebné informace o návštěvnících chybí. Přímé zjišťování názorů a preferencí návštěvníků je důležitým informačním nástrojem pro plánování v dané oblasti. Výsledky přinesly množství informací, které mohou být užitečné při rozhodování v oblasti turismu. Výsledky například ukazují, že většina dotázaných (téměř 1/3) chodí do lesa 6 až 11 krát za rok. Více než polovina z nich byla spokojena s frekvencí jejich návštěv lesa. Zajímavé může být i zjištění, že návštěvníci nejvíce preferují ‚udržované trasy'. Při plánování výletu více než 4/5 dotázaných vybírá trasu v závislosti na tom, zda vede lesem. Dle názorů návštěvníků lesa je nejvhodnějším vybavením k umístění vedle lesní cesty ‚panel naučné stezky'. Navíc, na základě získaných dat bylo možné vytvořit profil návštěvníka, důležitý pro vlastní výzkum a další případové studie v obdobných oblastech, i pro manažery chráněných krajinných oblastí v souladu s požadavky návštěvníků i potřebami chráněné území.

Součástí práce je také porovnání výsledků z ČR s výsledky obdobné studie provedené v Itálii, i s dalšími studiemi zabývajícími se problematikou turismu v chráněných oblastech a/nebo návštěvnosti lesa a preferencí návštěvníků.

Klíčová slova

Les; Návštěvy lesa; Veřejné mínění; Průzkum preferencí; Turisté; Chráněné krajinné oblasti; CHKO Blaník; Česká republika; Itálie.

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1. Introduction

There are many studies investigating public opinion concerning nature. Nevertheless, tourists in protected areas as a target group of research are still not very common. Squire (1994) argues that tourism research has been somewhat isolated from wider disciplinary trends. Jacobsen (2007) has recognized that few empirical studies of tourists' landscape perceptions and preferences have been completed; Torbidoni (2011) adds that many studies have considered visitor characteristics and patterns of use of protected natural areas, and that it is crucial to seek a better understanding of public opinion of forest environments. Broadhurst and Harrop (2000) underline, "Arguably we also need to do more research in good practices. Much of the previous work of forest research has been concerned with forest science, but a significant body of work has been building up in recent years related to social forestry, and the field is developing".

Currently, more and more people want to spend their leisure time in nature. Van der Zee (1990) highlights, "Recreation as a form of land use is of increasing importance in many parts of the world". In particular, protected areas often attract tourists like a magnet. De Aranzabal et al. (2009) observe, "In protected areas, one of the dimensions to be kept in mind on evaluating landscape as a potential value refers to public enjoyment and tourism. Tourism in these areas is one of the most common uses". Protected areas are major draws for tourism, particularly nature-based tourism; the demand for natural areas has increased dramatically in recent years and the pressures on land use are becoming more obvious, both in developed and developing countries (Font and Tribe, 2000; Kearsley, 2000; Nyaupane and Poudel, 2011). The Czech Republic is not an exception; the number of tourists in protected areas is increasing.

In the Czech Republic there is still scarce data on the subject. Banaš and Zahradník (2012) confirm this, "Information about what opinion visitors have on the planned development of recreational activities and tourism infrastructure in relation to nature protection is practically missing". Therefore, we decided to identify the social composition of forest visitors as a target group as well as their needs and expectations in the Czech Republic's well-known natural and recreational area, PLA Blaník (Drábková and Šišák, 2013).

Over the last few decades, crucial changes have taken place in the views of and demands on forests by society at large (ECORYS, 2009). People use forests, not only economically but for other purposes, such as recreation. Šišák (2009a) states, "Relaxation is the most frequent reason for going to a forest, including forest fruit picking". Price and Chambers (2000) suggest, "In the era of multi-purpose forestry, providing recreational opportunities rightly takes an important place among objectives for forest management". A review of the suitability of forest sites for tourism will usually show that a large portion of forested land would be adequate for tourism purposes; at the same time, tourism can represent an extraordinary and sometimes unexpected source of development for local communities in forested areas (Font and Tribe, 2000; Minca and Linda, 2000). The Food and Agriculture Organization of the United Nations, hereafter referred to as FAO, (2011) confirms that the management of forests for social and cultural functions is increasing. Torbidoni et al. (2005) sound a warning, "The increased recreational demand for areas of high ecological value implies potential conflicts between conservation and recreational goals". Torbidoni (2011) adds that achieving and maintaining an appropriate balance between conservation and use of these areas for recreation, sport, and tourism is not an easy task.

Traditional management methods are no longer adequate. Kearsley (2000) sees the solution

in a greater understanding not of forest ecology, but of the perceptions and expectations of the participants themselves. The importance of getting to know a typical visitor's profile is corroborated, among others, by Sayan and Karagüzel (2010), "Visitor demographics, perceptions and their relationships are investigated to determine the problems and issues for outdoor recreation". For this reason it is necessary to identify the composition of the target group as well as their needs and expectations (Drábková and Šišák, 2013). Šišák (2011) specifies, "An objective survey of what forest visitors know about the issues in question is a very important informative source for forest policy as well as forestry public relations plans and activities". Hearne and Salinas (2002) continue this argument, stating that protected area managers must be able to develop infrastructure, access, and use restrictions, which facilitate the dual goals of conservation and tourism development. Thanks to data, resulting from our study, the managers of the PLA will be able to improve evaluation of the current state of the recreation facilities as well as find a way to adjust the forest environment in accordance with visitors' demands and expectations. It is important to balance demands of recreation while maintaining the objectives of nature conservation (Drábková and Šišák, 2013).

2. Hypotheses and Goals

The basic premise for this study is the fact that people go into the forest. Consequently the main questions that follow are how often and why they do it, and which type of forest they would prefer to visit. It is supposed that the most common reasons for staying in the forest will be relaxation (especially enjoying nature) and mushroom and/or berry picking. Based on the acquired data it will be possible to, among other things, determine preferences for different types of forests and to find an answer to the following question: What would the forest which respondents want to visit look like?

Another hypothesis should concern confirmation or refutation, wherein the general public is unable to distinguish the differences between the forest itself and the level of forest management in the protected landscape area. This work should help to clarify whether common forest visitors have some knowledge about nature oriented forestry inside the limits of PLAs in the Czech Republic, as the case study area is PLA Blaník.

As no available materials existed, it was necessary to carry out new research to obtain data for statistical evaluation. The first objective was to identify the most attractive places and the visitation rate in a study area. The best way to determine this was to walk along the most frequented tourist trails and simultaneously make photographic documentation. A sociological survey followed. An on-site questionnaire was chosen as the best survey method. The data collection took place on the top of the memorable hill Velký Blaník, which lies in the heart of the study area. Because tourists make up the majority of forest visitors in PLA Blaník, they were destined to be a target group for this survey.

It is essential to focus on different ways of protecting and utilizing forest areas (e.g. for recreation purposes). Recreation is currently the most common use of protected areas and is becoming increasingly important. For this reason it is necessary to identify the composition of a population of tourists as well as their needs and expectations. After statistical data evaluation it will be possible to determine the types of routes and accessible facilities tourists prefer.

Results of this research will be used not only for publication in scientific journals but also practically, as recommendations and proposals for how to improve conditions in the tourism industry (e.g. modifying the forest environment) for management of protected landscape areas.

3. Literature Search

A wide literature search which forms the theoretical part of this study was focused on the forest's influence and importance on society, as well as other aspects of the current use of forests. Briefly are mentioned (at this time increasingly commemorated) forest functions; special attention is paid to non-productive forest functions, especially the recreational one.

Another important pillar of the literature review includes characteristics of protected areas, and different forms and possibilities for their use, including potential restrictions. Because recreation and tourism are the main themes of the thesis, they play a substantial part in the literature search. Various types of tourism are described in detail; the most important concepts are explained and examples are mentioned as well. It is also necessary to highlight the chapter about tourist trails and the signposting system in the Czech Republic.

A summary of findings from the field of landscape engineering then follows. Evaluation of landscape aesthetics, perceptions, and preferences are topics of discussion in many studies. But these discussions deal mainly with an assessment of the landscape as a whole, with the forest as only one of its components.

Last but not least, studies about forest visits and the preferences of respondents are presented. These works are very significant contributions and serve as examples for comparisons of the results in the next section of the thesis. Attentive readers will not miss that almost all the studies point out the lack of data and call for further research.

The author of the thesis tried to put side by side the findings of many authors, often from various corners of the world. Therefore a large number of foreign sources are cited. However, the thesis is focused mainly on the Czech Republic, so even by local standards it was not forgotten and plenty of citations by Czech authors can be found in the text.

3.1. Forests in the Czech Republic

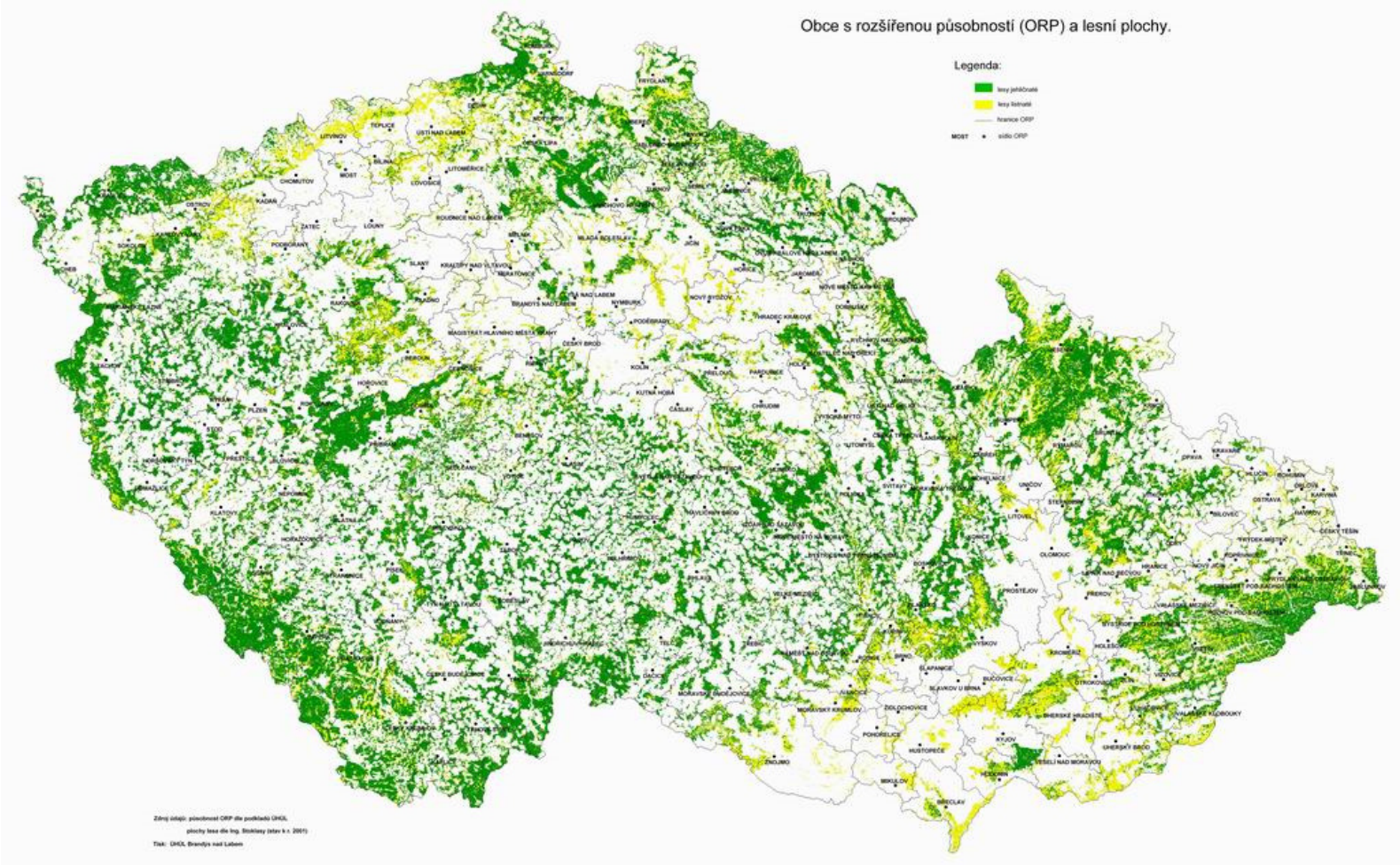
3.1.1. State of the Art

The Czech Republic is among the countries around the globe with high forest coverage. Within Europe, it has the 12th highest coverage, measured by percentage of the total country area (eAGRI, 2010). The reported (forest) area for Europe excluding the Russian Federation was 196 million hectares in 2010 (FAO, 2011). Forest land in the Czech Republic currently covers 2 659 837 hectares, 33.8% of the total territory of the state (eAGRI, 2013). This is slightly more than the global standard in which "forests cover 31% of total land area" (FAO, 2011), but less than the European standard in which "forests cover about 43% of total land area...ranging from 0% in Monaco to 73% in Finland" (FAO, 2011).

The forest area in Europe continues to expand (FAO, 2011) and the Czech Republic is no exception. Since the second half of the 20th century, the area of forests here has gradually (and steadily) increased. As a result of long-term reforestation of barren agricultural land, this increase amounts to approximately 700 hectares per year (eAGRI, 2010).

For the location and composition of forests in the Czech Republic, see Figure 1.

Figure 1: Location and Composition of Forests in the Czech Republic



Legend: Green = coniferous forests, yellow = broadleaved forests

Source: ÚHUL (2011)

Table 1 reflects the composition of forests in the Czech Republic in 2011, according to eAGRI (2013).

Table 1: Forest Composition in the Czech Republic

Composition Category	Inventory Units		
	Predominantly Coniferous	**Predominantly Broadleaved**	**Mixed**
Share	less than 25 % of Broadleaved	less than 25 % of Coniferous	
% of Total Timber Land Area	**66.2**	**15.4**	**17.2**

Source: eAGRI (2013), graphical desing by Alena Drábková

Concerning ownership, more than half (exactly 59.8%) of the forestland is owned by the State. Šišák (2009a) presents a list of establishments responsible for an administration of state-owned forests, "The largest of them is the State Enterprise 'Forests of the Czech Republic' (hereafter referred to as LČR), responsible for 1.359 million hectares, which is 51% of the total forest area. Other managers are Military Forests and Farms (5% of the total forest area) and four national parks (4% of forests) belonging to the Ministry of the Environment. Apart of them certain areas of forests were managed by two agricultural universities (faculties of forestry) and by the Office of the President of the Czech Republic". Šišák (2009a) goes on to argue that 23.2% of forestland was in the hands of private owners and 15.5% of the total forest area was owned by some municipality in the year 2006. eAGRI (2013) adds that recent years have not brought any significant changes in the ownership of forested lands. For a table showing the ownership structure of forested lands in the Czech Republic in the year 2011, see Appendix I.

3.1.2. Brief Introduction to the History of Forest Protection Rules in the Czech Republic

Szabo´ (2010) summarizes the facts like this, "European woodlands have been directly influenced by human activities for at least 8,000 years. As a consequence, knowledge of the long-term history of human impacts is essential to understanding the ecology of present-day forests". Forest protection is nothing new. That is confirmed by Zahradník and Geráková (2010), "Nature conservation in the Czech Republic has had a long tradition and is very closely linked to forestry".

Simanov (2009) states that enlightened rulers have reacted to the cheerless state of forests with legislative protection and penalties for illegal mining in efforts to prevent the devastation of forests. According to Mikeska and Vacek (2006), in one of the economic lessons by Charles the Great (founder of the Frankish Empire, which was administered by a uniform legislative system at the turn of the 9th century), we can read, "We want our forests and woodlands to be under supervision and we will not allow their parts to be covered only by shrubs. Where forests should be, we can not afford even their high deforestation and degradation". Vančura (2009) writes that the first systematic attempt at the protection of forests, a chart of a provincial code called 'Maiestas Carolina', was submitted by King Charles IV in 1348 but was not

admitted by the Landtag. After that, forest regulations were gradually created pursuant to which, for example, "nobody could cut down the forest without the permission of the forester" and other restrictions. "But history has shown that a passive protection of forests, albeit enforced by draconian punishments, does not lead the objective if there is no substitute for the demand for wood" (Simanov, 2009).

Hrib (2009) indicates the Cheb's forest rule dating to 1379 is the oldest preserved forest rule in the country. Mikeska and Vacek (2006) continue, "According to the Regulation of the Czech Royal Chamber in 1569, when felling of trees, the long term conservation of forests should be the primary factor taken into account". Significant forest regulations were subsequently released by Maria Theresa in the years 1754 (for Bohemia and Moravia) and 1756 (for Silesia). By them she established state control over forests (Řezáč, 2002).

3.1.3. Currently Valid Legal Standards

Currently valid legal standards are briefly introduced by Šišák (2009a), who writes, "Forest is generally accepted as a multifunctional natural resource. The principles of sustainability, environmentally friendly management and enhancement of the biodiversity in forests have been included in Forest Acts and other relevant regulations like the National Forest Program, etc. Forestland is usually considered a national heritage that forms an irreplaceable element of the environment and the Acts for the Protection of Nature and Landscape state that forests are significant factors in landscape use".

3.1.3.1. Czech Act No. 289/1995 Coll.

As was written in the previous text, legal rules and standards have evolved and changed over time. At this time, one of the most important tools of forest protection is the Czech Act No. 289/1995 Coll., on Forests and Amendments to some Acts (the Forest Act), dated 3 November 1995.

To begin, it is necessary to explain common terms. They are described in § 2 of this Act: Definition of Terms. Here are some of them, which may be used in this thesis:

"*Forests* shall mean a forest stand with its environment and land designated for the fulfilment of forest functions;

Forest functions shall mean contributions towards the general well-being of society conditional on the existence of forests, which consist of wood-producing and non-wood-producing functions;

Forest stand shall mean trees and shrubs of forest tree species which, in their particular environment, fulfil forest functions;

Forestry shall mean regeneration, protection, tending, and felling of forest stands and other activities securing the fulfilment of forest functions;

Forest protection shall mean activities aimed at the reduction of the influence of harmful factors, protective measures against harmful factors, and reduction of their impact;

Natural forest areas shall mean continuous areas with comparable conditions for forest growth;

Management sets shall mean units to differentiate between management methods in forests laid out within individual natural forest areas, based on their function, natural condition, and the state of forest stands" (MŽP, 2013). (MŽP, 2013; Drábková, 2009)

3.1.3.2. Czech Act No. 114/1992 Coll.

Currently the most important legal standard governing the relationship of man to nature is the Czech Act No. 114/1992 Coll. of the Czech National Council of 19 February 1992 on the Conservation of Nature and Landscape.

§ 3 specifies Definition of Terms. For example, "A *specially protected part of nature* shall mean a very significant and unique part of animate and inanimate nature; it can be a part of the landscape, a geological formation, tree, animal, plant, or mineral, declared to be specially protected by a state authority, under Part Three or Four of this Act" (MŽP, 2011); or "a *landscape* shall mean a part of the Earth´s surface, with a characteristic relief, formed by a complex of functionally integrated ecosystems and elements of civilisation" (MŽP, 2011).

Part III, Specially Protected Areas, is important for the topic of this thesis. They are defined this way: "Naturally, scientifically, or aesthetically significant or unique areas may be proclaimed Specially Protected Areas. When they are so proclaimed, the conditions of their protection must also be specified. The categories of Specially Protected Areas shall be as follows:

- National Parks;
- Protected Landscape Areas;
- National Nature Reserve;
- Nature Reserve;
- National Natural Monuments;
- Natural Monuments" (MŽP, 2011). (MŽP, 2011; Drábková, 2009)

Miko and Hošek (2009) divide the territorial protection in the Czech Republic into three basic forms:

- A large area of specially protected areas (National Parks and Protected Landscape Areas);
- A small area of specially protected areas (National Nature Reserve, Nature Reserve, National Natural Monuments, and Natural Monuments)
- Natura 2000 areas (Special Protection Areas and Sites of Community Importance)[1].

Zahradník and Geráková (2010) state, "When accessing the European Union, the existing Czech national system of protected areas had to be supplemented by the European system – the ecological network of protected areas, Natura 2000, so as to meet the requirements of EU legislation". Holý (2005) explains, "Natura 2000 is the European system of areas, which shall ensure the protection for natural habitats of European importance and the habitats of species".

Protected Landscape Areas are established in § 25. More can be found in chapter 3.3.2.1. – Protected Landscape Areas by Law.

3.1.3.3. Czech Act No. 449/2001 Coll.

Equally important is the law which the Czech Parliament passed on 27 November 2001 - Act No. 449/2001 Coll. Game Management Act (as subsequently amended).

Dog owners should be mindful of § 14, The gamekeeper guard's authorisation, paragraph 1:

[1] In the Czech language, the network of Natura 2000 is divided into 'Ptačí oblasti' and 'Evropsky významné lokality'.

The game-keeper guard shall be authorised, according to letter (e), "to kill strolling dogs in the hunting area beyond the control of their handler when pursuing game at a distance larger than 200 m from the nearest real estate used for dwelling; ..." (eAGRI, 2013a).

(eAGRI, 2013a; Drábková, 2009)

3.1.3.4. Czech Act No. 409/2008 Coll.

Another law governing the behaviour of people in forests is Act No. 409/2008 Coll. promulgated by the Prime Minister. It is a full text on Act No. 246/1992 Coll., concerning the protection of animals against cruelty, as subsequently amended by later regulations.

Drábková (2009) concludes with the relationship between human behaviour in the forest and law, "It is logical that everybody can not know the whole valid legislation of the Czech Republic and all current legal standards. Despite (or perhaps) because of this, every person should have a certain moral code of their own and behave so as not to disturb or destroy the nature. How to behave in the forest properly should be something people learn in childhood, and it is parents' task to teach their children. Sad events occurring when people are just evil are fortunately scarce, and the fact remains that most errors occurring due to ignorance and often well-intentioned acts (eg. take charge of an abandoned baby animal) are more detrimental".

3.1.4. Right of Common Access

Like other countries, the Czech Republic recognises the Right of Common Access. According to § 63 of Czech Act No. 114/1992 Coll., concerning the conservation of nature and the countryside, "Everyone has the right to free passage over lands in the possession or tenancy of the state, a municipality, or other legal person, provided that he does not cause damage to the property or the health of another person, and does not transgress the rights for the protection of another person's property or the rights of neighbours. A person utilizing this right is obligated to respect the legitimate interests of the owner or tenant of the land, and the relevant generally binding regulations" (MŽP, 2011).

According to Bostedt and Mattsson (1995), this means that tourists are allowed to freely enter and enjoy any forest, no matter who owns it, without having to pay. Šišák (2009a) argues, "The importance of public access to forests is being recognised as a public interest and is usually supported or guaranteed by legislation in many countries". Lundmark et al. (2010) clarify, "The right of public access is a fundamental aspect of outdoor recreation, nature-based tourism, and conservation in northern Europe. In Sweden, this tradition means that everyone has the right, within certain restrictions, to move freely across private land holdings and to pick mushrooms, flowers, and berries provided that one does not disturb or damage the property of the local inhabitants".

In the Czech Republic access and entrance to forests in all kinds of ownership has been generally unrestricted and free of charge, with some exceptions according to individual localities, forest owners, and time (Šišák, 2009a). According to Pearse (1990), the visitors who are not required to pay a price for access to a forest for recreational purposes are likely nevertheless to incur costs when they take advantage of this opportunity. That point of view is confirmed by Šišák (2009a), "Visitors are the most negative about paying if they do not get anything special in return. Results show that an average of 91% of the respondents in both areas

agree or strongly agree that forests should be freely accessible for walking and cycling".

Font and Tribe (2000) offer a solution, "One of the ways that forest sites can generate revenue is through entry charges (e.g. some national parks and nature reserves)". Figueroa and Aronson (2006) elaborate, "Tourism levies on entrance fees can be used to upgrade roads and other services in the protected area's neighbourhood". Šišák (2009a) is of the same opinion (concerning forests), "An average of 49% of the respondents in both areas agree or strongly agree that a forest owner should be able to ask for money for additional facilities, such as mountain-biking and horse-riding trails. Another conclusion is that, if the respondents know that their money is spent on additional facilities, their acceptance of paying is higher. Thus a customer-orientated information policy on the activities undertaken will reduce price resistance".

3.2. Significance of Forests for Humanity

Forests have an ecological, economic and social significance (Petrescu, 2009). They are an important and significantly effective component of the landscape. In addition to effects on the environment, forests have a large influence on human society. Zatloukal (2009) believes that these effects are thoroughly positive. Karjalainen et al. (2010) mention the fact that forests provide numerous ecosystem services that help in maintaining and improving healthy living environments. Šišák (2009a) adds that, generally, the forest is accepted as a multifunctional natural resource, which is both a production and a non-production factor in the life of society. Rametsteiner and Weiss (2005) agree, "The many values that forests have for humankind have also been named 'multifunctionality'". Matejíček (2003) defines the term *multifunctional forest management* as "Forest management in order to obtain multiple products and benefits (production forests, protection forests, protected forests). Multifunctional forest management applies an integrated approach towards the different categories of forests and includes scientific, cultural, recreational, historical, and other values of forest resources".

3.2.1. Timber Production vs. Nature Conservation

Font and Tribe (2000) wrote that forest land has traditionally been considered of lower economic value than agricultural land, and that the main output has been the production of timber. Likewise Ewald (2001) has argued that foresters do not perceive their forests in a landscape context; most of them still see forests primarily as an area of timber and timber production. Conversely, Panagopoulos (2009) advocates for them, "Foresters have sought to bring their activities more into line with natural processes under the influence of scientific, political, and public pressure". Simanov (2009) pointed out, "The mistake of foresters is that they recede into those unjustifiable requirements in the hope that this will improve forestry's current bad image in the media". Krečmer (2005) agrees, "Embracing the public interest was regarded by the foresters as a prerequisite for obtaining greater public support".

"Humanity has a big impact on nature and cannot exist without it, cannot even be a passive element. This demands of society direct involvement in the protection of nature" (Синицын, 1980). The conservation of nature is very important, however it is not possible (not even socially desirable) to obstruct full-area economic forest exploitation, because wood is presently, and continues to be, one of the most widely used materials. Simultaneously, exploitation of wood as a renewable resource and environmental raw material is a significant part

of environmental protection (Reynolds et al., 2007). Notaro et al. (2008) state that the evolution of forest ecosystem management has depended on society's changing interests in natural resources. Szabo´ (2010) agrees, "Throughout European history, people used various management forms to produce the kinds of trees they needed for specific purposes. As their needs changed through time, so did the forms and extent of forest management". But forests do not serve only for wood production. Šišák (2009a) says, "Under the multifunctional concept of forestry and forest management, the economic effectiveness of forestry based only on market timber production can be considerably affected by claims of intensification of nonmarket forest services. Forestry as a timber production activity can be restricted to a great extent for different reasons, but especially for enhancement of nonmarket environmental services". ECORYS (2009) concludes from results of a public opinion survey that "EU citizens in total consider the provision of opportunities for recreation to be more important than the provision of wood as a renewable material or as a source for bio energy", and "on the whole, all regions prioritise more active management of forests so as to increase recreational opportunities".

3.2.2. Forest Functions

Šišák (2011) confirms, "The structure of forest functions and their evaluation have been discussed in many publications". For this reason, only the main points concerning this topic will be presented here. Specifically, the evaluation of forest functions is left out because it is not the topic of this thesis.

Krečmer (2008) introduces the subject, "We often talk about the public benefits or social functions of forests". Šišák et al. (2003) argues that there should be a distinction among the terms '*functions of forests*' and '*functions of forest management*'. "The former is a function of a reproducible object, while the latter is a function of the reproductive process. And they are different in many cases" (Šišák et al., 2003).

Šišák and Pulkrab (2008), as well as other authors, divide forest functions into two categories: market (production) and non-market (non-productive). They write, "In terms of the content of its socio-economic effects, i.e. its scope within the society, the category of non-market (non-productive) forest functions is diverse and much dispersed in the conditions of the Czech Republic". In contrast, Vyskot (2003) is of the opinion that the forest does not produce social functions, because "recreation is not the activity of forests, but humans". He suggests breaking down these functions by the principle of utility, i.e. an appropriate utilization of forests by man.

Roček and Zich (2009) argue that non-productive forest functions have gained an unprecedented importance in the Czech Republic and are often unequivocally dominate. Šišák (2009a) agrees, "It becomes more and more evident that forest market production (especially timber production), and occasionally other traditional forest market products, will not be able to finance the increasing demand of societies (public) for non-market forest services in individual countries. The supplying of such services usually increases the cost of production and reduces the income from timber supplies. Therefore, forest owners and tenants have to look for other possibilities for how to include traditional non-market forest products and services into the market frame". From this argument there emerges an entirely new perspective on solving the issues of multi-purpose forest management (Roček and Zich, 2009).

Matějíček (2003) points out, "The concept, classification, and description of individual

functions of forests have considerable discrepencies among authors. Similarly, the classification of functions in various international documents is also inconsistent". Due to this inconsistency, and the fact that this is not a major topic of this thesis, exact division of forest functions is not included here; Recreational function of forest and a non-market benefits are the only topics discussed.

3.2.2.1. The Recreational Function of Forest

According to Vyskot (2003), the recreational function is divided into two sub-functions: hunting and tourism. Řezáč (2002) points out the fact that hunting was a priority for humans up until the 13th century- in that time forests were valued primarily as a source of venison. "The definitive separation of forestry (the care and management of forests) from hunting (a human activity without dependence on external needs) took place in the 18th century" (Řezáč, 2002).

Kroupová (2008) presents an opinion that the recreational function of forests is accepted by people automatically. Mráček (1975) underlines, "Every forest can fulfil the recreational function". Kroupová (2008) adds that the recreational function is one of the most frequently utilized functions of the forest.

Mráček (1975) uses the term *recreational forest* to mean "The forest, where it is necessary to recognize specific measurement and to equip it with facilities as needed, in order for that forest to fulfil the recreational function". Attendance in important types of recreational forests (such as urban and suburban forests, spa forests, forests surrounding sanatoriums and other medical centres, and especially forests in national parks and protected areas) is fairly high in many countries, as is the case in the Czech Republic (Mráček, 1975; Šisák, 2009a). Krečmer (2005) specifies, "According to the level of attendance we can distinguish:

- *Recreational forests,* requiring only maintenance of the forest environment with an attendance of up to 100-370 persons per 100 ha (410,000 ha, 15.6% of the total forest area). These forests have a recreational function equivalent to a production function;
- *Recreational forests with special economic adjustment,* with an attendance of 370-1500 persons per 100 ha (140,000 ha, 5.3%). This forest's recreational function is equivalent to the production function or a primary function;
- *Forest parks and suburban forests,* with an attendance of over 1500 persons per 100 ha (47,000 ha, 1.8%) with an exclusive function. The same characteristic is found in *spa forests* (8,000 ha, 0.3%) with an exclusive medical function".

Krečmer (2005) highlights that the situation in the Czech Republic is questionable, "The problem with the recreational function of forests in our country lies in the fact that a spontaneous function must be tolerated by the owners and managers of the forests, unless entry into the forest is forbidden by a specific legal norm. A managed function, as the primary planned economic activity, is only realized exceptionally because activities carried out and financed by the general public are neither thought out properly nor legally treated". Šišák (2009a) complements, "Under present conditions in the CR, the Forest Act still does not treat the possibility of planned production and harvest of non-timber forest products (hereinafter referred to as NTFP) by forest owners and tenants. The Forest Act does not protect such forest producers against pickers of commercially produced NTFP".

3.2.3. Non-Market Benefits

Šišák (2009a) argues, "Forests represent important objects of public interest as they provide the public with many other benefits apart from timber. In particular these benefits include water control, soil protection, climate regulation, recreation, landscape formation, conservation of the unique character and biodiversity of wildlife, and last but not least forests provide inhabitants with non-wood products". Ouma and Stadel (2006) add that in the context of forests and rural communities, forests provide livelihood assets in the form of timber and non-timber forest products and services.

Pearse (1990) has seen a wide variety of other products and services produced in forests ranging from livestock forage and water to recreational, aesthetic, and environmental benefits. The importance of these non-timber benefits varies widely. Pearse speculates, "In some forests they are insignificant, while in other forests or parts of the forest one or more of them constitute the dominant value". Šišák et al. (2003) supplement, "These values have a different meaning in a social degree, and therefore a different social value (prize)". ECORYS (2009) is of the same mind, "Different economic, social, and environmental factors and events have influenced and will influence public opinion on forests and forestry".

Broadhurst and Harrop (2000) state, "It is clear that forestry today is about many benefits". Mantau et al. (2001) continue, "In general, the main benefit is abstract in nature. A variety of forest facilities are classified as non-material goods". Pearse (1990) points out that the fact that non-market benefits are not priced does not mean that they are valueless. Šišák (2009a) clarifies the terminology by saying that non-wood forest products (hereinafter referred to as NWFP) and services are often called positive forest externalities.

The NTFP include services like outdoor recreation and amenities, as well as a significant abundance of goods for domestic use and for market, including charcoal, firewood, small fruits (wild berries), mushrooms, honey, medicinal herbs, forage, thatch grass, and a large variety of wild animals (bears, boars, foxes, lynxes, black-cocks, wolves, and chamois), which offer opportunities for hunting (Ouma and Stadel, 2006; Pearse, 1990; Petrescu, 2009). Šišák (2009a) specifies the same for the conditions of the Czech Republic, "The group of products includes traditional forest products like berries, nuts, other fruits, mushrooms, medicinal plants or parts of plants, shrubs and trees, decorative parts of trees, Christmas trees, ornamental plants and flowers, honey, juices, saps, and other products, e.g. those used for handicrafts".

3.2.4. Significance of Forest Visits for Human Health

The significance of forest visits for human health is summarized by Karjalainen et al. (2010), who argue that forest environments promote humans' mental and physical health in many ways: forests help in reducing stress and in recovering from attentional fatigue, and generally forests strongly enhance both psychological and physical rehabilitation. Drábková (2013) adds that forest visits are necessary for vital life. Kroupová (2008) agrees, "The forest is here for everybody. Everyone who wants to stop in this hectic time and recharge has a unique chance here". Karjalainen et al. (2010) continue with the statement that the relationships between human health and well-being, biodiversity, healthy ecosystems, and climate change have in recent years received increasing attention in international discussion and policy processes. Šišák (2009a) adds, "Health and hygiene forest services reflect the fact that people use the forest environment for recreational relaxation and to improve their health". The results of a vast

amount of research show that forest visits promote both physical and mental health by reducing stress (Karjalainen et al., 2010). Krečmer (2005) corresponds, "A complex of factors including radiation, heat, and water work together with the decline of air flow, forest air properties, aesthetic perceptions, and natural serenity to create a beneficial effect on humans somatically as well as mentally".

3.3. Protected Areas

3.3.1. Protected Areas throughout the World

Many authors point out the significance of protecting nature. Examples include: Nyaupane and Poudel (2011), who argue that to prevent the loss of biodiversity, many protected areas have been established throughout the world; Alpízar (2006), who points out that most countries have reserved a portion of their territories for the protection and preservation of natural environments; Hearne and Salinas (2002), who write that many nations are expanding their systems of national parks and protected areas in order to protect biodiversity and other ecological services; and Daşdemír (2005), who states that each country has developed its own national park system, depending on its social, economic, and cultural requirements, and on its mix of natural resources. Reinius and Fredman (2007) agree, "Most nations use multiple categories of protection, including different management objectives where a variety of types of human use are permitted".

Similarly to forests, protected areas as a whole provide many benefits. Holý (2005) explains, "We determine the state of nature and the landscape (their value or quality) especially by their degree of environmental stability, biodiversity, representation of valuable (endangered) species of plants and animals (and their habitats), and expressions of the value of the landscape's character".

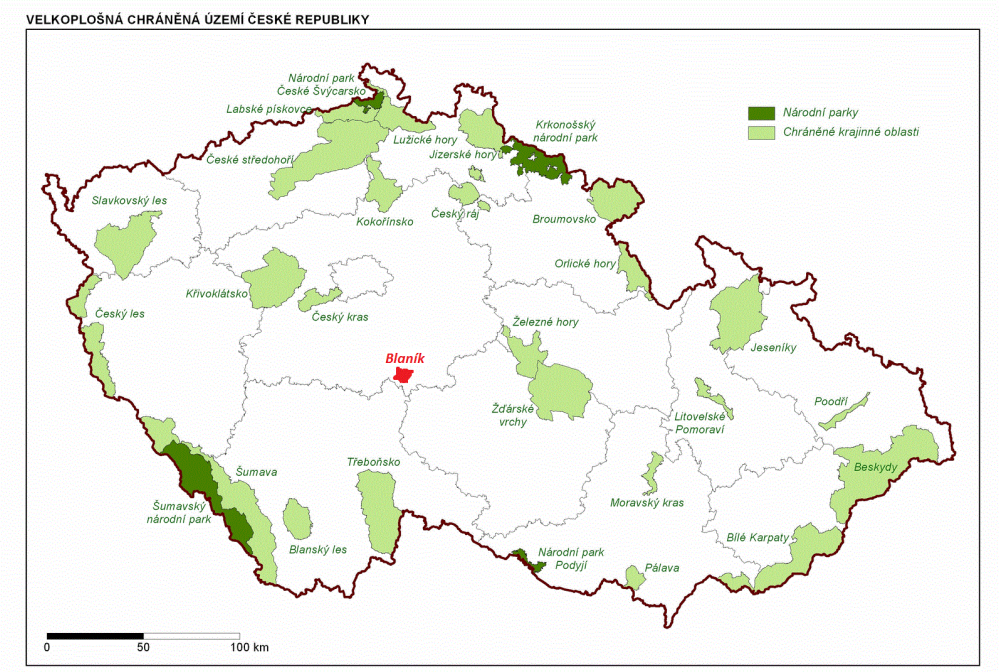
3.3.2. Protected Landscape Areas in the Czech Republic

Currently in the Czech Republic there are 25 PLAs with a total area of 1,086.700 ha (eAGRI, 2011). All PLAs together represent 13.78% of the total area of the Czech Republic (Machar et al., 2012). PLAs as well as national parks are shown in Figure 2.

In total, all specially protected areas make up 15.85% of the area of CR. However, due to possible overlaps of categories this is not the sum of the area, which would be 12,498 km^2 (Miko and Hošek, 2009). The table showing an overview of all protected areas can be found in Appendix II.

Zahradník and Geráková (2010) are of the opinion that there is currently a widely developed system of small and large sized protected localities and regions in the Czech Republic. (Clasification of the categories of specially protected areas is described in chapter 3.1.3. - Currently Valid Legal Standards, part 3.1.3.2. - Czech Act No. 114/1992 Coll.).

Figure 2: Large Specially Protected Areas: National Parks and Protected Landscape Areas in the Czech Republic



Legend: Dark green = national parks, light green = Protected Landscape Areas, red = PLA Blaník Source: Jelínek (2010) – amended by Alena Drábková

3.3.2.1. Protected Landscape Areas by Law

As was already mentioned, Protected Landscape Areas are designated in Czech Act No. 114/1992 Coll., on the Conservation of Nature and Landscape. As with national parks, PLAs fall within the category of protection defined by that law as 'a large area of specially protected areas'. Likewise, PLAs could be proclaimed 'large areas' with a harmoniously formed landscape, characteristically evolved relief, a significant proportion of natural forest ecosystems and permanent grassland, with abundant trees, or with preserved historical settlements.

In the territory of a PLA, there are miscellaneous provisions and legislative limitations. Recreational use is permitted if it does not damage the natural values of protected areas. Economic exploitation of these areas is carried out according to three or four graded protection zones, the first zone having the strictest protection requirements. This system is designed to preserve and improve the natural state and to sustain and create the optimal ecological functions of these territories. That is why the forests in PLAs are different from forests which are fully exploited economically (eAGRI, 2011; MŽP, 2011).

3.3.2.2. Forests in Protected Landscape Areas

In Europe, 4% of the total forest area used to be located within formally established protected areas. Excluding the Russian Federation, this figure then rose to 12% (FAO, 2011). The sum acreage of forests in *all protected areas* in the Czech Republic currently stands at 749.600 ha, equivalent to 28.83% of total forested land. Of that figure, 588.518 ha fall within PLAs. The average forest coverage in a PLA is 54% (eAGRI, 2011). eAGRI (2013) elaborates, "Forest ecosystems occupy most of the territory of specially protected areas and they are an extraordinarily valuable part. Their total acreage currently stands at 751.1 thousand ha, which

constitutes 28.26% of the area of all the forests of the Czech Republic; these are mainly stands of modified species in zones with a lower degree of protection. The area of natural forests is 29.2 thousand ha, which represents only 1.1% of the area of all forests in the Czech Republic". Pelc (1999) provides further figures, "Forest coverage in each PLA is variable, from less than 9% of the area in the PLA Poodří, to up to 80% in PLA Jeseníky. The average forest coverage in the PLAs reaches over 51%". A table showing an overview of specially protected areas, their area, and forest coverage can be found in Appendix II.

Forests in the PLAs are economically exploited, but there is an effort to spare them with environmentally friendly forms of management (Roth, 1999). Roth (1999) observes, "Forestry interventions in PLAs are focused on maintaining and promoting the natural species composition and emphasis is placed on increasing the stability of forest ecosystems". Pelc (1999) reminds us that the strategy of care and protection of forest ecosystems in a PLA should be implemented differently according to zone. He has also suggested criteria for the classification of forest stands in their relevant zones. Additionally, the appearance of the forest is different in each zone. According to Morávek (1999), in the majority of specially protected areas there are not significant conflicts between foresters and the protection of nature.

3.4. Tourism

Braithwaite (2000) defines *tourism* as "The sum of the phenomena and relationships arising from the interaction of tourists, business suppliers, host governments, and host communities in the process of attracting and hosting tourists and other visitors". Broadhurst and Harrop (2000) argue that by the 1960s, people most certainly began to think about recreation and tourism in a way they had not before. The travel industry, aided by the upsurge in nature travel, was expected to quickly become the largest industry in the world (Giannecchini, 1993). After a few years, this was confirmed by Bosselman (1999), "Tourism is by many measures the world's largest and fastest growing industry".

Petrosillo et al. (2007) have written that tourism is often deemed an opportunity for promoting economic and social development. De Aranzabal et al. (2002) add that tourism has become much more than a mere complement to local and national economies. Its development requires an environmental rationality, land planning, and management which must be "ecologically feasible, economically convenient, and culturally desirable" (De Aranzabal et al., 2002). Kuvan (2005) underlines that while tourism has become an undeniable fact of modern life as an important means of stimulating economic growth; its negative environmental effects are discussed by environmentalists, researchers, and natural resource managers, especially in the fields of forestry, agriculture, and wildlife.

Edgell (2006) states that in the past travel was primarily a means of survival through hunting, fishing, and food gathering. Presently, recreation and leisure play an important role in sustaining human life along with political, technological, cultural, economic, and social developments (Gül et al., 2006). Drábková (2012) adds, "The development of tourism in recent years implies that this way of spending leisure time has become essential for many people". Tourists, with leisure time and relatively large amounts of money to spend, want to escape from their urban existence into the beauty, simplicity, and adventure of nature – their motives are based on experience and relaxation (Giannecchini, 1993; Gössling, 2002).

Van der Zee (1990) is of the opinion that people travel from their home because they want a type of recreation that cannot be provided there. That theory is confirmed by Minca and Linda (2000), "Certainly, we can assert that the tourist is particularly attracted by the most evident and spectacular forms of the 'special' identity that territorial systems exhibit, largely because one of the motivations of his/her departure is the search for a break from everyday life".

Pearse (1990) highlights that outdoor recreation is pursued in many forms, but most recreational experiences are a combination of anticipation, travel to and from the site, on-site activity, and recollection afterwards. Price and Chambers (2000) specify, "Users choose activities that agree with their idea of a good time. This, together with the fact that people have voluntarily chosen their activity and have invested time and money in it, leads to a positive evaluation of the experience. Expressing dissatisfaction with a chosen activity confesses incompetence in making the choice".

3.4.1. Nature-Based Tourism

De Aranzabal et al. (2002) argue that in recent years, new forms of tourism have arisen based on the environmental potential of a given territory, such as the attraction of certain ecological processes, whether taken for their own value or reflected in the quality of their fauna, vegetation, etc. However, tourism is increasingly built on the marketing of nature and natural resources, as the demand for natural areas where outdoor recreation can take place has increased dramatically in recent years (Gössling, 2002; Kearsley, 2000). Gül et al. (2006) have written that the significance of natural locations and forests as recreational areas has increased consistently over the last few decades. Törn et al. (2009) agree, "Nature-based tourism in protected areas has increased and diversified dramatically during recent decades."

Many nations promote the development of nature-based tourism (particularly in sparsely populated areas) in order to ensure the dual goals of biodiversity conservation and developing a sustainable way to generate income (Hearne and Salinas, 2002; Lundmark et al., 2010). Reinius and Fredman (2007) state, "When human use in the form of tourism and recreation is encouraged or supported in protected areas, it is often done with the argument of economic benefits to the local communities". Nyaupane and Poudel (2011) speculate that tourism development can offer economic justification for protected areas established for the purpose of biodiversity conservation. Bartoš and Novák (2008) conclude, "The possibility of recreation can be beneficial for natural areas in many ways, due to the pressure to maintain and improve the natural environment (e.g. the prevention of industrial or other economic use) or even to create it (reclamation of industrial zones in suburban areas). It can also benefit the environment in other ways, such as improving the quality of infrastructure, preserving cultural heritage, creating a financial source for nature conservation, etc."

It should be noted that not all landscapes give rise to the same reaction; various landscape types and elements may have different levels of suitability and/or attractiveness for recreation (Múgica and De Lucio, 1996; Van der Zee, 1990). De Aranzabal et al. (2002) specify, "The territory is one of the most important factors of the tourism product- it represents the 'offer', and the quality of the offer depends on the quality of the surroundings, which is what attracts the visitors and is therefore one more reason for protecting it". Kearsley (2000) adds that visitors come to the back country above all to find natural, scenic beauty and to enjoy the outdoors. Green areas can also help in establishing personal and community identity, social activity, and social participation (Karjalainen et al., 2010).

3.4.2. Impact of Tourism on Ecosystems

Petrosillo et al. (2007) argue that it is crucial to seek a better understanding of how individuals form their perceptions about environmental quality and environmental impacts due to tourism. Holý (2005) is more specific, "An unsustainable pressure on local ecosystems is often created by a large number of sporting activites which are carried out in an environmentally careless manner, as well as the actual behaviour of visitors". Mercado and Lassoie (2002) agree, "Tourism planners worldwide are realizing that there is a need to establish a balance and that sustainable development or management may be a way to achieve this goal". Holý (2005) confirms, "Conscious, professionally oriented objectives for the development of sports activities may be in harmony with the interests of the preservation of the state of natural ecosystems". Intensive and unplanned uses have played a role in the destruction of the natural balance and put into danger the sustainability of parks (Daşdemír, 2005). Petrosillo et al. (2007) explain by giving an example, "If a site, characterized by rich biological and cultural values, becomes popular and is not properly managed, it is more likely that it will become degraded due to heavy visitation, diminishing the quality of the recreational experience".

3.4.3. Protected Areas as Tourist Attractions

Reinius and Fredman (2007) argue, "Since the ideas of nature preservation emerged over a century ago, national parks and other protected areas have been marked off, interpreted, and labelled for the purposes of tourists and society". Bosselman et al. (1999) add that history tells us that special places have attracted visitors from the earliest days. "However, protected land attracts large numbers of visitors to enjoy those natural resources, putting high pressures on the environment. Therefore, only quiet enjoyment is promoted" (Font and Tribe, 2000). Reinius and Fredman (2007) agree, "Analysis concerning the reasons to visit the surveyed areas clearly shows that tourists come to experience nature, peacefulness and silence, and to hike (backpack). These are all typical elements of natural environments inherent in area protection".

Sayan and Karagüzel (2010) emphasize the necessity of collecting information from visitors for recreational planning and management, "In the absence of base information, a range of problems may occur. For example, inadequate toilet facilities could create problems for people of different genders or ages; steep slopes could be a problem for older or disabled visitors; language used on signs may not be comprehended by visiting nationalities" and so on. Cunha (2010) adds that in recent decades numerous studies have evidenced visitor traffic and other tourism activities negatively impacting ecosystems and species. Kořínek et al. (2005) specify, "Tons of garbarge are collected along paths annually. The undergrowth is already completely destroyed in many places". Instead of focusing on the quantity of users, the type of activities and the sensitivity of habitats to different activities should be the major consideration in the planning and management of nature-based tourism (Törn et al., 2009).

3.4.4. Recreation in Forests

Forests and woodlands are part of the environment in which tourism and recreation take place (Font and Tribe, 2000). Fyhri et al. (2009) add that forests have been found to be a favoured type of landscape among some holidaymakers. Accordingly, Font and Tribe (2000) argue that forests are the part of the countryside that visitors most enjoy. It is necessary to highlight that

the demand for recreation can be fulfilled by the majority of managed forests growing in various nature conditions (Mráček, 1975). Stibral (2006) remarks, "If today's modern man wants to experience a feeling that may be called beautiful (or just wants to relax), he goes...especially to the countryside – the best being in the mountains or the forest".

Mráček (1975) is of the opinion that the development of recreation in forests depends on several factors, including the distance to the forest from settlement units, the ability to travel to the forest by public or private transport, the type of forest, and, of course, the cultural and economic maturity of the nation. eAGRI (2013) observes, "Attendance to the forest is rather locally differentiated; it is connected not only with the availability of large settlements, recreational attractions and amenities, and forest coverage, but also with the presence of forest products". Forestry and tourism are two fields which have received much international attention in recent years, and the development of sustainable forest recreation and tourism can more easily meet the demand for more recreational opportunities (Broadhurst and Harrop, 2000; Kuvan, 2005). Nevertheless, forest tourism should be considered within a wider framework of agro-tourism and regional tourism in respective countries (Šišák, 2009a). Kuvan (2005) specifies, "Forests as a key resource for recreation and tourism are an integral component of the tourism product together with accommodation, transport facilities, and service infrastructure. In addition, it is widely recognized that the dominance of natural attractions plays a significant role in the competitiveness of tourist destinations".

The presence of forests seems to have a positive impact on tourism, as a forest setting is attractive for many activities (Abrudan et al., 2009; Van der Zee, 1990). Font and Tribe (2000) summarize that there are very few outdoor settings for recreation that do not have trees, either close up or in the background, and very few tourist activities cannot take place in a forest environment. Forest tourism and different recreation activities have a range of impacts on natural environments, thus they need to be put in the context of other uses of the forest in order to assess their compatibility or conflict; therefore, managers of the area should decide whether cycling, observing wildlife, and other sports or game activities are to be encouraged or not (Daşdemír, 2005; Font and Tribe, 2000; Törn et al., 2009). Daşdemír (2005) explains, "The optimum mix of activities should focus mainly on picnicking, viewing the scenery, and nature walks. Collecting mushrooms and photography/video could also be included". The recreational use of forests, which traditionally includes various opportunities including picnicking, trekking, cycling, ecological tours, hunting for deer and pigs, fishing, and so on, has psychological and physical benefits for people (Gül et al. 2006; Kearsley, 2000).

Karjalainen and Tyrväinen (2002) think that moving through the landscape is essential to experiencing a real landscape. The most typical manor of moving through nature is hiking, defined by Torbidoni (2011) as "all kinds of sporting or tourist activities that involve walking in the countryside, the forest, or the mountains along trails or paths". Font and Tribe (2000) add that sports requiring long distances, such as horseback riding, cross-country skiing, and running, can be better enjoyed in partly forested landscapes.

3.4.5. Tourists Trails

Lethinen and Sarala (2006) present an opinion that nature trails at tourist destinations are situated in places that have something special to see. They add, "These features are the key to creating the perceptions of hikers and other tourists that these areas are unique". De Souza

and Martos (2008) argue that trails are the most appropriate way for each visitor to know and learn about an environment's specific natural cycles, soil conditions, climate, plants, and animals. Šišák (2009a) underlines, "The quality of tourist routes is a very important factor, as well as the security of forest visitors". This is confirmed by Torbidoni et al. (2005) who say that studies show accessibility and satisfaction to be critical factors in visitors' trail choices. Font and Tribe (2000) share the opinion that the majority of visitors are happy to stay on trails, logging roads, and in recreational areas catering to them.

Šišák (2009a) states, "In many countries the quality and quantity of such infrastructure (tourist routes, accommodations and food, information centres, security, etc.) has been gradually increasing as a result of the work and innovation of different interested local, regional, and state organs and organisations. For example, the Czech forests are interwoven with a dense network of tourist routes not only for pedestrians on foot, as used to be the case, but there are also bike trails and horseback riding routes". Forest roads and paths are ideal for hiking, skiing, biking, and horseback riding and are very popular among tourists (Pernica and Markvart, 2008).

3.4.6. Signposting System in the Czech Republic

An introduction to the signposting system in the Czech Republic is given by Pernica and Markvart (2008), "Signposting has already existed for more than 100 years as part of the system of forest roads and paths. In the last decade, trails for skiing and biking were added and marked, while the marking of equestrian trails for horseback riding is entirely new". Because this thesis is concerned with tourists in the forest, especially hikers, this chapter focuses on the signposting system for walking (hiking) routes.

The current methodology of the Czech Hiking Club is described by Pernica and Markvart (2008). They write that this organisation requires the network of tourist-marked routes be indicated by square marks with a side length of 100 mm. The basic trail mark is composed of three equally wide horizontal lines where the margins are white (a warning colour) and the middle line is coloured (colour head). If there is no forking on the trail, one mark in each direction for every 250 m is enough– this is called a reassurance mark. For branching paths, there must be two marks: the first, before the crossroad (in an arrow shape) and the second immediately beyond the crossroad. All these marks should be at eye level for a person of average size, meaning roughly 160 cm above road level. Some examples of tourist marks can be seen in Appendix III.

The quality of the existing system for marking hiking trails in the Czech Republic is highly appreciated by domestic and foreign tourists. It is even considered the best in Europe and the world. This is caused by two factors. The first is that in the Czech Republic hiking trails are marked by a unified system which completely covers the entire territory of the country. The same mark, directional sign, and other signage elements can be found in the city, in the mountainous border areas, and in the lowlands. The second, crucial factor in this evaluation is a functioning system of regular inspection and maintenance of signs. Marks on foot, ski, and now also horseback riding routes are re-painted every three years while damaged directional signs are continuously replaced with new ones. The total route network is constantly updated (Pernica and Markvart, 2008).

3.5. Landscape Perception and Preferences

3.5.1. Aesthetics in Nature

Lothian (1999) states that in evolutionary terms it is the ability of humans to accurately perceive their surroundings, and to understand and interpret any threats or opportunities, which have been fundamental to human survival. Kalivoda et. al (2010) write that the earliest civilizations judged areas to live, at least in part, according to the "pleasure of the view". Aesthetic evaluation is a consequence of long cultural development, and present aesthetic values are different from previous ones (Stibral, 2005). Panagopoulos (2009) agrees, "Aesthetics is a philosophical idea that changes with time according to the evolution of civilisation". Stibral (2005) gives an example, "Forests, mountains, and rocks, which are presently common tourist attractions, represented for our ancestors clear examples of hideous abominations".

Landscape can be defined as any part of the Earth's surface upon which various aspects, such as the terrestrial, aquatic, natural, and cultural, are interacting with differing dominance (Ewald, 2001). Daniel (2001) describes alternatives to how a *landscape* could be defined as well, writing, "The dictionary offers several definitions of landscape: 1. A picture/view of natural inland scenery; 2. The landforms of a region in the aggregate; 3. A portion of a territory that the eye can comprehend in a single view. All of these definitions emphasize a limited area of land surface".

Landscape perception is complex and consists of the more 'technical' aspects of vision and psychology related to cognition, effect, and evaluation (Sevenant and Antrop, 2009). Tahvanainen et al. (2001) emphasize that aesthetics in nature is perceived subjectively and affects a person's mental and emotional state. Fyhri et al. (2009) confirm this with their statement that a great deal of research on tourism has determined the personal, subjective sense of viewing a landscape. Daniel and Meitner (2001) point out that there are many different approaches for landscape evaluation; however the "human perception-based approach" is prevalent in many of the studies. Tveit (2009) concludes, "The preference approach is an integrative way to study the human-landscape relationship".

Perceptions, preferences, and assessments are related to mode of experience (Fyhri et al., 2009). Scott and Canter (1997) explain, "*Experience* is a sum total of knowledge which is gained from what people see, hear, feel, smell, and taste. Furthermore, the reason a person has for being in a particular place and what they have done or can do there also shape their experience of that place". Panagopoulos (2009) writes that the experience of beauty is subjective, then he specifies, "Beauty is the quality that gives pleasure to the senses and is studied as part of aesthetics". Also Bell (2009) has found a relation between perception and the aesthetic preference.

3.5.2. Scenic Value of Forests

In recent decades, however, the amenities of the forest, such as scenic beauty and recreational value, have become increasingly significant (Tahvanainen et al., 2001). Hammitt et al. (1994) point out that scenic resources are an important element in the recreational experiences of forest visitors, and methods that aid in focusing attention on those landscape themes and features of highest scenic quality are likely to be increasingly important in the future. Panagopoulos (2009) argues, "Although some scientific research has been carried out on scenic landscapes

as a social value, no objective and official process for measuring the aesthetic value of forests has been recognized until now". Conversely, other authors have a different idea; many studies assessing scenic quality evaluations of forest environments have measured public response to landscape scenes (Hammitt at al., 1994), and an extensive body of empirical research exists focusing on public preferences for forest landscapes (Carvalho-Ribeiro and Lovett, 2011).

Kellomäki and Savolainen (1984) write, "The scenic value of forests is related to several structural characteristics common to all forests and tree stands". Gobster (1999) adds, "Aesthetic values of the forest relate to preferences people have for beholding and experiencing forests."

Tahvanainen et al. (2001) point out, "Aesthetic quality, however, may not be a key factor in all recreational activities. A clear cut area, for example, can have a high recreational value for someone picking berries even though the scenic beauty is not appreciated". Furthermore, there are still unresolved questions regarding the importance of aesthetics in understanding and affecting landscape change and the ways in which aesthetics and ecology may have either complementary or contradictory implications for a landscape (Carvalho-Ribeiro and Lovett, 2011). Karjalainen and Tyrväinen (2002) add that perceptions and a person's relationship with nature are also dependent on the speed at which it is enjoyed, the means of transport (on foot, by car, by bike, on horseback), and the activities performed (hunting, sightseeing, camping, and so on).

3.6. Studies Concerning Forest Visits and Preferences and/or Tourism in Protected Areas

3.6.1. Scarce Data and Necessity of More Research

Despite the fact that there are some studies focused on forest visits and preferences and/or tourism in protected areas, there is still scarce data about visitor opinions, perceptions, and preferences. Many authors bluntly emphasize the need for more research:

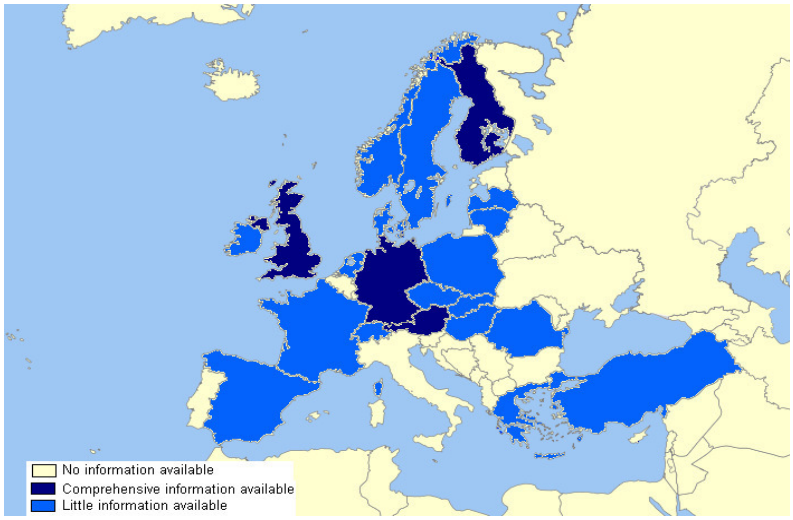
- "… more research needs to be done on visitors' perceptions, preferences, and expectations" (Roovers et al., 2002).
- "However, there is a lack of systematic studies which test for relationships between visual indicators and landscape preference" (Ode et al., 2009).
- More research and working with the public to help them to understand the importance of sustainable development in modern society is needed (Mercado and Lassoie, 2002).
- "Further and detailed analyses have to be addressed to evidence all impacts and possible benefits of visitation for wildlife ..." (Cunha, 2010).

Other authors call for additional research more obliquely:

- Little is known in depth about the interaction between the structural characteristics of the recreational site and recreation patterns in particular (Bell, 1997).
- "In spite of the existing research base, still more evidence and systematic rigorous research is needed on the mental and physical health effects of forests. Little is known about the positive health benefits of forest types and how forests should be managed to maximize those health benefits" (Karjalainen et al., 2010).
- While the social impacts of tourism have been extensively researched, nothing is known about the changes it initiates in human–environmental relations (Gössling, 2002).

- "An objective survey of what forest visitors know about the issues in question is a very important informative source for forest policy and forestry public relations plans and activities" (Šišák, 2011).
- "Understanding the opinions and preferences of visitors in protected areas is one of the fundamental sources for setting up an appropriate tourism management in a number of protected areas" (Banaš and Zahradník, 2012).
- Achieving and maintaining an appropriate balance between conservation and use of these (protected) areas for recreation, sport, and tourism is not an easy task, and any information that can be obtained is necessary and welcome (Torbidoni, 2011).
- Management of recreational areas requires regular surveys of visitors (visitor monitoring) to ascertain the number of visitors and their distribution in time and space, as well as their profiles, opinions, and needs (Bartoš and Novák, 2008).
- "Given the call for understanding the tourism market's attitude and preferences for the natural and traditional cultural environment, there is a clear need for the application of comprehensive surveys to collect primary data to access such preferences" (Mercado and Lassoie, 2002).
- "In the absence of adequate data, protected area managers have to guarantee infrastructure and control" (Cunha, 2010). He also writes, "Researchers and managers need to work together to couple this economic activity with environmental conservation".
- ECORYS (2009) created a map showing how much information is available for European countries, (see Figure 3). Only little overall information was available for most of the displayed nations (ECORYS, 2009).

Figure 3: Overview of Information Available from European Countries



Source: ECORYS (2009)

In the conditions of the Czech Republic, the situation is aptly concluded by Banaš and Zahradník (2012), "In the Czech Republic, monitoring the attendance of and communicating with visitors in protected areas is generally under-estimated. Information about visitors and their perception of some of nature conservation's issues are mainly available from the national parks, and occasionally from protected landscape areas".

3.6.2. Worldwide Studies

3.6.2.1. EU-27 Survey provided by ECORYS

ECORYS (2009) confirms that public opinion on the productive functions of forests has been studied in many European countries. There is, however, still a lack of surveys about awareness of non-productive functions. Therefore, one of the widest studies in Europe was made for the European Commission: DG Agriculture and Rural Development by the agency ECORYS. Though, experts agree that this study reveals many interesting findings, for the purpose of this thesis only the outcomes brought forth by the representative EU-27 survey will be considered. "Various, publically available surveys and scientific studies from European countries have been found and assessed. A broad range of sources has been identified, ranging from forest associations, non-governmental organizations, research institutes, and the forest industry to government bodies. Further sources for the meta-analysis include academic studies (journal articles, master's theses, doctoral dissertations), journals, press releases, newsletters from industrial associations, and trade journals, as well as databases of Eurobarometer studies, some of which touch upon forest issues" ECORYS (2009).

3.6.2.2. Other Worldwide Studies

Roovers et al. (2002) introduce their study by stating, "Socio-demographical characteristics of visitors are examined, as are their recreational preferences and forest perceptions… Our questionnaire focused on visitors' profiles, origins, complaints, and preferences concerning activities, forest structure, and infrastructure". That survey took place in central Belgium.

A study by Torbidoni et al. (2005) also presents some interesting information, "The recreational supply (trails) and demand (visitor characteristics), as well as some other features of a recreational system, were typologically studied" in one National Park in Spain. Torbidoni et al. (2005) specifies, "Visitors were classified according to a selection of indices that defined their characteristics, motivations, and recreational preferences. The survey included demographic data, visitor characteristics, trails visited, facility demand, previous knowledge of the National Park, level of satisfaction, main motivations for the visit, trail choice, and recreational activity".

Gössling (2002) focused his survey on tourism in developing countries, namely Tanzania. He writes, "The survey conducted for this study is based on interviews with tourists in different categories (charter and individual) as well as local residents with varying tourist contact intensities. In addition, a number of interviews were carried out with hotel managers".

Ouma and Stadel (2006) did a study which investigated the nature and extent of linkages and interactions between the adjacent Forest Community and Kakamega Forest, Western Kenya. Data was obtained using structured and semi-structured interviews (questionnaire-based), in-depth interviews, discussions and participant observations.

Nyaupane and Poudel (2011) tried to explore "how tourism, particularly nature-based tourism, can help link biodiversity conservation and livelihood improvement". The study was conducted in Chitwan National Park, Nepal.

Research by Mercado and Lassoie (2002) had more goals; one of these goals was "to illustrate the importance of assessing tourists' preferences when designing programs and policies central to the sustainable development of a tourism area". Another goal was to study tourists' interests in sustainable development. Tourists from Europe, Latin America, and North America were interviewed in Punta Cana in the Dominican Republic.

Drábková (2012) adds, "There are some studies which have investigated the impact of tourism on the landscape, e.g. Törn et al. (2009), De Souza and Martos (2008), Cunha (2010), and others".

3.6.3. Studies in the Czech Republic

One of the first researchers in the Czech Republic was Professor Jaroslav Stoklasa. In March of 1979 he did research among tourists coming to the Krkonoše Mountains to enjoy winter activities (Stoklasa, 1981). He continued with his research over the years, focusing on the winter tourist rate in the Krkonoše Mountains. "A theoretical and methodological basis [was] formulated in this work for searching out optimal land use in order to meet the needs of man and society while preserving and developing natural conditions and their dynamic equilibrium" (Stoklasa, 1983).

Mráček (1975) also completed some studies about recreation in forests, but his work was focused mainly on urban and suburban forests.

A wide study about the attendance in one urban forest – Hostivař – was performed by Bartoš and Novák (2008). They focused their attention on many topics, but predominantly the issue of path networks and their utilization by visitors.

The company Taylor Nelson Sofres Factum, Ltd. (hereafter referred to as TNS Factum) conducted research for the Forests of the Czech Republic, S.E., studying the opinions of Czech citizens on the importance of forests, forest management, and the need for information about forests (TNS Factum, 2001). Another study made by TNS Factum was a psychological analysis of public attitudes towards forests (TNS Factum, 2003).

One important author on this subject is Professor Ivan Roček, who writes, "In the years 1997 and 1998, we were dealing with two research tasks within the National Agency for Agricultural Research. The first was called 'Determining the Attitudes of Czech Citizens to Forests and Forest Management'. The second was entitled 'Opinions of Private Forest Owners'. Both of these studies were based on the urgent need to identify the current perception of the forest and its role in the present time" (Roček and Zich, 2009). For the first study a questionnaire was used and inquiry was focused on several topics: the individual's relationship to the forest and an evaluation of its importance, attendance, evaluation of the state of Czech forests and the level of forest management, behaviour of people in the forest, property situations, and the definition of the term *forest* (Roček and Zich, 2009). Roček et al. (1997) explains that forest visits (frequency, distance, reasons, costs), evaluation of forests, favourite forest type, and more were examined in this study. Demographic characteristics taken into account included the age, residence, and profession of respondents.

Significant research of non-wood forest products was started in the Czech Republic in 1994 by the team of Professor Luděk Šišák. From 1994 to 2006 thirteen surveys based on interviews and questionnaires were completed (Šišák, 2009a). "The questions asked and the extent of elaboration was different in individual years depending on the financial means available in those respective years. Nevertheless, questions concerning the number of forest visits, the kind and amount of NWFP collected by households, and unit price of the marketed commodities were repeated in every year the survey was administered" (Šišák, 2009a).

Another study done by Kalivoda et al. (2010) focused on tourists' manners and their perceptions of the landscape. This study was titled, 'Influence of Aesthetic Values on the Tourist Trade in Protected Landscape Areas', and, as it name suggests, investigated tourists' perceptions and preferences within selected protected landscape areas. Drábková (2012) specifies, "The main goal of this project was to find out whether there is any correlation between preferences of aesthetic values of landscape and the rate of attendance at given places. Another task was to establish the level of tourism on selected trails and to define the profile of visitors".

Data were collected on-site, by a questionnaire survey. "Questions from the first part of the questionnaire were focused on information about staying in PLAs and using services inside the limits of PLAs. The second part of the questionnaire focused on assessing satisfaction with services in PLAs and with overall visual aspects of particular items in PLAs: landscape, settlements, and forests" (Drábková, 2012). Questions ascertaining data about an assessment of photographs were also included, as well as questions about the socio-demographic characteristics of respondents, important for statistical data evaluation (Drábková, 2012).

3.7. Importance of the Visitor's Profile

The importance of visitors' profiles is aptly introduced by Roovers et al. (2002), "Visitor characteristics are very important variables explaining recreational activity. Knowledge about these characteristics is essential to focus on the totality of the visitor population and their inherent demands and needs". Torbidoni et al. (2005) supplement, "Detailed knowledge of the relationships between the motivation or the socio-economic characteristics of a particular visitor group and the characteristics of the trails visited may contribute to the design of strategies aimed at increasing visitors' satisfaction without having harmful effects on the protection of these natural areas. This is particularly important in areas with reduced dimensions and great visitor demand, where the potential for emerging conflicts over use emphasizes the importance of careful planning". Henderson (2000) adds that visitors' perceptions of their experience and satisfaction with it are another important matter and it would be useful to discover at what point they feel that their enjoyment of the natural surroundings is marred by the sight and activity of others.

Besides assessing the type of forest that can accommodate tourism, the forest manager needs to understand the type of forest which visitors wish to visit (Font and Tribe, 2000). "Knowledge of the composition of the population of tourists and the determination of their preferences form the basis for proposals for the improvement and reasonable development of tourist movement in forests" (Drábková, 2010). Roovers et al. (2002) argue, "A lot of attention is paid to the link between visitor characteristics and their behaviour in a broad spectrum of recreational

activities".

Torbidoni (2011) emphasizes that it is also important to focus on the main profile of visitors, based on the set of motivations that determine the choice of a certain area, or some of the main behaviours that are easy to observe (the size and type of the group, duration of the visit, number of visits to a trail or area, etc.) and can be extrapolated. In particular, the demographics and perceptions of visitors (such as perceptions of crowding) at different destinations can be used for park planning and management and help to identify a range of problems and issues for outdoor recreation (Sayan and Karagüzel, 2010). Banaš and Zahradník (2012) confirm, "Communication with visitors offers important feedback for decision-making to the administration of the protected area".

4. Methodology

Because of the specificity of the task, using existing materials was not possible (as no available materials existed). Thus it was necessary to carry out new research to obtain data for statistical evaluation.

4.1. Methods Used in Forestry Survey

Pospíšilová (2012) specifies various methods which are used for monitoring the significance of the recreational function of forests in the Czech Republic and the European Union, "For the implementation of the survey, there are a variety of methods to be used:

- 'Face to face' interview (the most expensive, most common practise, conducted on or off site);
- 'Self-filled' questionnaire (questionnaire filled out on site directly by the respondent without the help of an instructor);
- 'Mail-back' questionnaire (respondents get the questionnaire during their forest visit and are asked to fill it out and return it by mail);
- Mailed questionanaire (suitable for respondents living in the areas surrounding the area of interest);
- Phone interview (suitable for respondents living in the areas surrounding the area of interest);
- Interviews with forest managers;
- A combination of these methods".

Each method has some positives and some negatives. Different authors prefer different methods. For example, Roovers et al. (2002) prefer interviews, "The oral questionnaire offers the possibility of clarifying questions by direct interaction between interviewer and interviewee, enhancing the reliability of the answers". Conversely, the sociologist Miroslav Disman (2009) argues that respondents could be influenced by the presence of an interviewer and, in consequence of this, answers could be distorted. Another advantage of completing the questionnaires without the presence of an interviewer is the fact that there is no time limit for completion. In some studies researchers had to take breaks during their interviews, especially when using photographs. "To avoid the effects of fatigue, the respondents were given a small break after every eighth picture" (Tveit, 2009). Karjalainen and Tyrväinen (2002) continue,

"On-site visits fulfil most of the criteria for appropriate visualization methods in forest landscape preference research. These include technical accuracy, choice of viewpoint, data integrity, and movement of the viewer. However, it has some severe disadvantages that restrict its use, e.g. on-site visits are expensive".

An on-site self-filled questionnaire was chosen as the best survey method. Kalivoda et al. (2010) corroborate, "For examining general preferences, a questionnaire is considered to be a good choice. It is a good compromise between reliability and costs".

Some authors consider the necessity and manner of counting visitors in study areas. "The quantification of attendance is mostly recorded manually (although advanced technologies, such as infrared counters, are becoming more frequent)" (Bartoš and Novák, 2008). Nevertheless, Zahradník et al. (2012) warn, "Counting visitors in protected areas with automatic counters is relatively new in the Czech Republic. This fact unfortunately leads to situations where these devices are sometimes incorrectly positioned in the outdoors. This situation causes biased results".

4.2. On-site Survey – Place Experience

The data about visitor preferences have their limitations. One of these limitations is described by Herrick and Rudis (1994), "Because respondents were interviewed at recreational areas, it is suspected that respondents may have been describing scenes in and around the interview site". Karjalainen and Tyrväinen (2002) explain, "Movement of the viewer through the landscape is the typical way of experiencing the environment when enjoying recreation in the forest". Being on site implies using all the senses, not vision alone. Furthermore, perception and evaluation are closely related (Sevenant and Antrop, 2009). Scott and Canter (1997) add, "Place experience, including information from graphs displaying different aspects, can be considered suitable stimulation of the senses and evaluation is based primarily on real landscapes". Jacobsen (2007) adds, "It has been pointed out that on-site studies might reduce possible disadvantages of using landscape surrogates, such as still photographs. In the case of tourism, one has the advantage of the respondents' proximity to the landscapes in question". One of the strengths of such qualitative en-route or on-site research is its 'naturalism', contrasting with more 'artificial' experiments in laboratories (Fyhri et al., 2009).

4.3. Questionnaire

4.3.1. Examination of Preferences

Preferences can be examined through verbal questions or visual presentations (Tahvanainen et al., 2001). Karjalainen and Tyrväinen (2002) explain, "Visualization of landscapes is today a central part of forest landscape perception and preference research". Scott and Canter (1997) argue, "For practical reasons, photographs are usually used as representatives of various landscapes, and it is often assumed that the photographs will be evaluated in the same way as the place depicted in the photograph". They disagree with this method and have written a paper to demonstrate theoretically and empirically that there is a difference between an evaluation of the content of a photograph and an evaluation of the experience of a place when the person is actually there. Other authors have similar ideas: "Use of photographs has been criticized, because photos, as well as other forms of visualization, are not able to represent

the whole richness of real nature" (Karjalainen and Tyrväinen, 2002). Ode et al., (2009) underline, "One of the limitations of the use of photographs in preference surveys is the lack of control of the content of the image, which may impact the observer's perception". This exact point was the main reason for the decision to use only verbal questions in the questionnaire for this survey.

4.3.2. Used Questionnaire

Background by NAZV Project No. 71296 QH Systém hodnocení společenské sociálně-ekonomické významnosti funkcí lesů včetně kritérií a indikátorů polyfunkčního obhospodařování lesů (System of Evaluation of the Importance of Socio-Economic Forest Functions Including Criteria and Indicators of Multifunctional Forest Management) was used in compiling the questionnaire for this research (Šišák a kol., 2009). Recommendations from sociology studies were also included, specifically the book *How to Create Sociological Knowledge*, written by Professor Miroslav Disman (Disman, 2009). The final version of the questionnaire was created after consultation with the management of PLA Blaník.

As in a study by Sevenant and Antrop (2009) the questionnaire items combined overall preference judgements and more cognitive ratings. Respondents were asked twelve closed questions and two open-ended questions. The questionnaire contained questions about the frequency of and reasons for forest visits as well as questions ascertaining perceptions of different types of forests, forest routes, and the facilities for visitors near forest tourist routes. Respondents were asked also about their knowledge of the protection of the study area and their opinions on forest management. As in the work of Sayan and Karagüzel (2010), a final open-ended question was asked in order to elicit any suggestions respondents might have had. Finally, five questions were added to determine the socio- demographic characteristics of respondents (Drábková and Šišák, 2013).

For the final version of the questionnaire, see appendices. A Czech version used during data collection is in Appendix IV. An English version - used for presentation of this study to foreign colleagues - is in Appendix V.

4.4. Data Collection

The top of Velký Blaník was chosen as the best place for data collection. The background of the study area is characterized in detail in chapter 4.6. - Characterization of the Study Area - Protected Landscape Area Blaník. A map showing the location where data collection took place can be found in Figure 4.

Figure 4: Map Showing Location Where Data Collection Took Place

Source: Seznam. cz (2013) - amended by Alena Drábková

A point near the view tower was selected as a good strategic point for interviewing people, because it was approximately halfway up the trail and many tourists took a break there before going up to the view tower. There were several tables and benches where respondents could comfortably sit down while completing questionnaires. See Figure 5.

Figure 5: Area Near the View Tower with Tables and Benches

Source: Alena Drábková

4.4.1. Target Group

In their studies, many authors, including Carvalho-Ribeiro and Lovett (2011) and Gössling (2002), have confirmed differences and conflicts in the perceptions and preferences of residents versus non-residents. The target group for this survey included everybody who came to the top of the hill Velký Blaník, because regardless of whether he/she lived nearby or not, each person could be considered a tourist.

Contrary to Hearne and Salinas (2002), Ode et al. (2009), Sayan and Karagüzel (2010), and others, this survey was focused on only one nationality of respondents (Czechs) and the questionnaire was available only in the Czech language.

As in studies by Múgica and De Lucio (1996) and TNS Factum (2001), only visitors over 15 years of age were interviewed. This is contrary to a study conducted by Torbidoni et al. (2005) in which respondents as young as 12 years of age were included, or the study by Petrosillo et al. (2007) in which all tourists were interviewed with the exception of people under 16.

4.4.2. Criteria for Selecting Respondents

Respondents were not selected randomly, but according to this procedure:

- Every third tourist passing through was contacted;
- In the case that the third tourist passing through did not want to take the survey, the next person was asked (meaning the fourth passing through), and then again every third;
- The number of people contacted in a group depended on how many were necessary to ensure compliance with the selection criteria for every third tourist. This means that if the respondent (the third passing through) was contacted and followed by a four-member group, two people were asked to fill in the questionnaire (the initial person and one from the four-member group). If at that moment nobody had been approached (he/she was the first or second passing through), only one person of the four-member group was asked to fill in the questionnaire (Drábková, 2010).

These criteria were applied only during national holidays. During working days criteria were adjusted so that every second passing tourist was approached.

Though De Aranzabal et al. (2009) wrote that respondents in his study were selected randomly, he followed the criterion of not interviewing more than two people from the same group. Identically, in studies completed by Torbidoni (2011) and Múgica and De Lucio (1996), no more than two people per group were interviewed. Conversely, Daşdemír (2005) interviewed every visitor from every group. Gössling (2002) said of the tourists he interviewed, "As they often travelled with a partner or in small groups, the questions were sometimes answered by two or, in rare cases, three respondents simultaneously".

4.5. Procedure

Despite the fact that in some studies (e.g. De Aranzabal et al., 2009) interviewers read questions to the respondents "in order to prevent deficiencies and to obtain reliable answers", or the questionnaires were administered face-to-face by interviews (e. g. Sayan and Karagüzel, 2010; Roovers et al., 2002), in this study questionnaires were filled out without the presence of an interviewer, according to the recommendations of Disman (2009). Drábková (2010) specifies, "This means that the respondent took the questionnaire and then brought it back completed". The exceptions to this procedure included only a few people who asked an interviewer to read the questionnaire aloud because they could not read it themselves (e.g. because they did not have reading glasses with them). The opposite approach is described by Bartoš and Novák (2008), who were very strict, "The interviewer read individual questions and the respondent answered. The interviewer did not let the questionnaire sheet out of his hands for any reason".

4.6. Characterization of the Study Area - Protected Landscape Area Blaník

The protected landscape area Blaník was chosen for this study. Drábková (2012) specifies, "Similar to De Aranzabal et al. (2009), the areas selected are famous for their high environmental value and attractiveness for tourism. Another criterion for the choice was good traffic availability". In the same way, PLA Blaník lies quite close to Prague (the capital city of the Czech Republic). The exact location of PLA Blaník on a map of the whole republic can be seen in Figure 3 in chapter 3.3.2. - Protected Landscape Areas in the Czech Republic.

4.6.1. Basic Characteristics

PLA Blaník is located in the region of Central Bohemia, south of Prague. PLA Blaník, with a total acreage of 41 km^2, was established by the decree of the Ministry of Culture of the Czechoslovak Socialist Republic No. 17 332/1981, coming into effect on January 1, 1982. The purpose of this PLA was the protection of a harmonious, balanced landscape in central Bohemia with its pivotal landmark, the memorable mountain Blaník (Hanel and Klaudys, 2011). The whole area was named Podblanicko, after Velký Blaník (638 m above sea level). The name of the mountain means "hill with wet meadows or pastures" (Maur, 2006).

The basic characteristic of the area is a changing mosaic of forest plants, fields, meadows, and small ponds with suitably incorporated municipal buildings (AOPK, 2011). Múgica and De Lucio (1996) speculate, "Among the traditional reasons for protecting natural areas, landscape features have undoubtedly played a major role". Geographically, Podblanicko was defined on the basis of several criteria by Kovařík, Pánek, and Pešout (1998).

The study area is managed by the Administration of PLA Blaník. What this administration provides for the public is outlined by Hanel and Klaudys (2011), "An integral part of the work of the Administration of the PLA is a systematic interaction with the public, focused on various groups of inhabitants and visitors. Besides publishing and organizing thematic exhibitions, the administration maintains a system of information boards in small protected areas. The popular interactive trail 'S rytířem na Blaník' ('With the Knight to the Blaník Hill') on Velký Blaník was restored in 2006 by the Czech Union for Nature Conservation Vlašim (hereafter referred to as ČSOP Vlašim). This trail is followed by the nature trail, Malý Blaník - Podlesí. Administration staff also provides guide services for tourists. ... For the general public the administration regularly organizes themed walks with botanical, forestry, and other topics. In cooperation with the ČSOP Vlašim the administration publishes a magazine, 'Pod Blaníkem' ('Under the Blaník Homeland'). Current information is presented on the website www.nature.cz. Through intensive encouragement of cooperation among owners, municipalities, non-profit organizations, and the state administration, the PLA administration contributes to the conservation of the natural and cultural values of the area."

4.6.2. Forests in PLA Blaník

Originally forests covered the whole area of Podblanicko. Species composition was appropriate to the third and the fourth altitudinal vegetation zones (oak-beech and beech) (Křivánek, 2009). Currently forests cover 31% of the total area of the PLA (AOPK, 2010). The entire area of this PLA falls into naturally forested area 16 – Českomoravská vrchovina. Křivánek (2009) states, "Naturally forested areas are naturally original units of bio-geographical districts of the landscape used in forestry management in the Czech Republic".

As reported by AOPK (2010) the percentage of tree species in forests within PLA Blaník for the year 2010 was as follows in Table 2.

Table 2: Percentage of Tree Species in Forests Within PLA Blaník

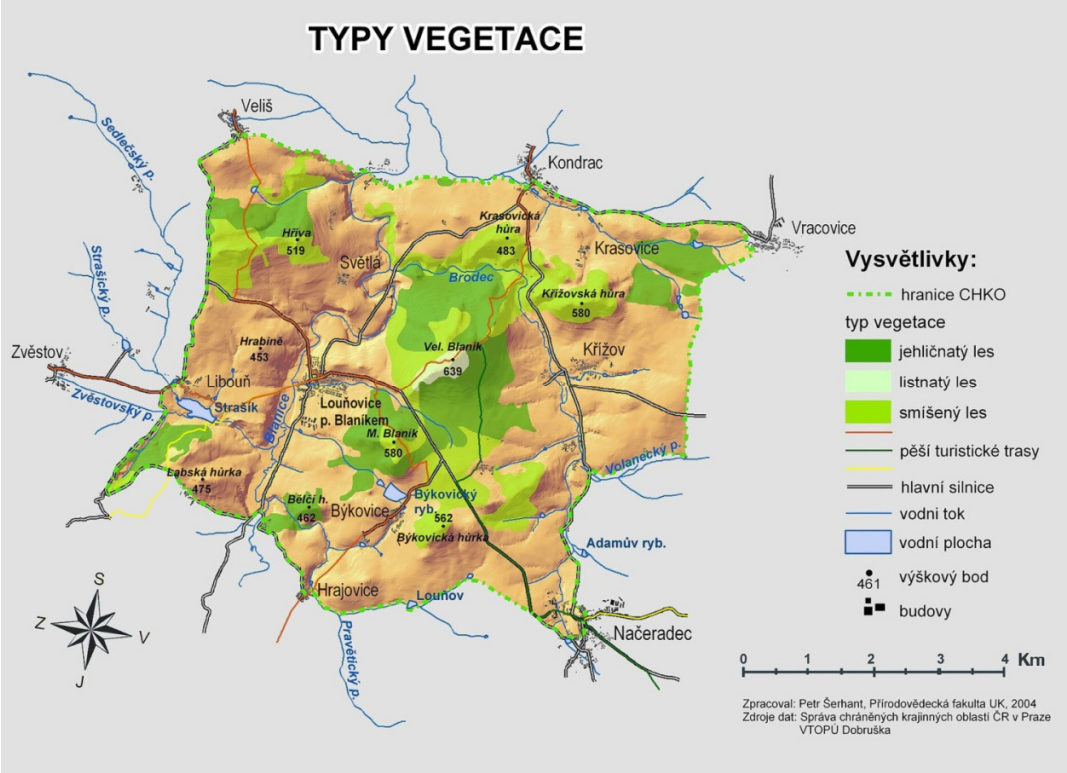
Spruce	Pine	Beech	Larch	Birch	Oak (Summer and Winter)	Hornbeam	Fir
56.9%	20.3%	7.0%	6.6%	2.7%	2%	1%	0.8%

Source: AOPK (2010), graphical design by Alena Drábková

Racková (2001) points out that in forest management an effort is emerging to change the monoculture of spruce forest stands to broadleaf or mixed forests. Hanel (2001) specifies, "Climb up to the top of the trail. The composition of the forest is gradually changing; mixed forests are taking on the characteristics of natural beech forests (which are included in the local nature reserve)". Based on the author's own field observations, it can be noted that the peak of Velký Blaník is mostly covered with beeches, hornbeams, and ashes.

For the location and types of forests in PLA Blaník, see Figure 6.

Figure 6: Location and Types of Forests in PLA Blaník



Legend: Dark green = coniferous forests, light green = broadleaved forests, middle green = mixed forests

Source: AOPK (2010)

An overview of forest categories is determined by a valid forest management plan and forest management chart (Křivánek, 2009).

According to AOPK (2007), forest ownership in PLA Blaník is highly heterogeneous; with 51.8% of forest area (641.41ha) owned by the state and managed by Forests of the Czech Republic, S.E. - Forest District Kácov[2]. There are no state forests which may be managed

[2] Lesy ČR, s.p. – Lesní Správa Kácov

by the Agency for Nature Conservation and Landscape Protection. Private estates, especially small owners, control a portion similar to that of state forests. The situation of ownership of forests is still changing (through inheritance, sales, etc.) but not substantially (AOPK, 2007).

4.6.3. Tourism in PLA Blaník

This highly valued area belongs to our most frequently visited natural reserves. Blaník is a popular destination for recreation and tourism, widely known as a major Czech mountain shrouded in ancient legends (Ložek et al., 2005; Mystika, 2012). Rubín (2003) speculates, "Despite a rather small distance from Prague and regardless of the charming landscape, this area is still not yet fully explored by tourists. The only exceptions are visits to the legendary top of the Velký Blaník nature reservation". Hanel (2012) agrees, "Almost every tourist who is in PLA Blaník goes to the top of Velký Blaník". Cáder (2009) points out that Velký Blaník is well known thanks to a myth about a sleeping army. "The myth says that a huge army of Czech knights led by St. Wenceslas sleeps inside the mountain. The warriors will awaken and help the Motherland when she is in great danger" (Hanel and Klaudys, 2011).

4.6.3.1. View Tower on Velký Blaník

Ložek et al. (2005) point out, "In addition to legends, visitors are attracted to the wooden view tower, offering a beautiful panoramic view beyond the boundaries of Blaník". Tourist interest in Blaník rapidly rose in 1895 when the wooden view tower was constructed on its peak. Today's 30 metre tall wooden, roofed tower in the shape of a Hussite watchtower was built in 1941 and owes its existence to the Czech Hiking Club (Maur, 2006; Mystika, 2012). Drábková (2010a) speculates, "Destinations, desirable for tourists, are positions which offer a view of the countryside, which may explain why the view tower on top of Velký Blaník has become very popular". For photos of the view tower see Figure 7.

Figure 7: View Tower on Velký Blaník

Source: Alena Drábková's archive

Hanel (2012) speaks about attendance to PLA Blaník, "There are no known data about visitation rates in this area as a whole. The only thing that could be measured is the number of tickets sold for the view tower". For these numbers from the last 3 years see Table 3. However, Hanel (2012) points out, "Not everybody who reaches the top continues to the view tower". After a consultation with The Office of Township Louňovice pod Blaníkem Hanel (2012) estimates the number of visitors to Velký Blaník to be around 20,000 to 30,000 per year.

Table 3: Number of Tickets Sold for the View Tower on Velký Blaník

Year	Adults	Children	Together
2009	18162	6151	24313
2010	15301	5415	20716
2011	17568	6945	24513

Source: The Office of Township Louňovice pod Blaníkem (2012), graphical design by Alena Drábková

4.6.3.2. Trails and Tourist Routes in PLA Blaník

This attractive region is interwoven with a wide variety of hiking and bike paths. Cáder (2009) writes, "For admirers of nature's beauties and cultural monuments there are a number of bike paths and natural trails". Hanel and Klaudys (2011) are of the same mind, "The area is interwoven with a network of well-marked hiking trails that lead the visitors to attractions". The most important tourist route goes from Votice, through Louňovice and Velký Blaník to Vlašim and is marked by red colouring (see Figure 8). The small town Louňovice is the nearest settlement to Velký Blaník and offers a bus connection to and from Prague, the capital of the Czech Republic. Hanel (2012) adds, "The location of Podblanicko is important for the visitation rate due to its easy accessibility by car and public transport from the capital, Prague, and also by train from the nearby town of Vlašim".

Figure 8: Red Colouring Tourist Route Goes from Votice to Vlašim

Source: Alena Drábková's archive

The view tower on the top of Velký Blaník lies only 1.5 km from Louňovice Square. Toufar (2002) specifies, "A hike takes about half an hour. Keep in mind that in some places it is quite

steep". Hanel (2001) continues, "Where we follow the red trail towards Krasovice from the view tower on Velký Blaník, we walk through forest stillness, and we are well informed about the surrounding examples of natural phenomena through notice boards". In Vlašim there is a castle with a pleasing park which offers several interesting sites connected by a nature trail.

Along part of the red tourist route, 13 panels mark the nature trail, 'S rytířem na Blaník' ('With the Knight to the Blaník hill'), complemented by 17 playful signs for children. Extraordinarily beautiful nature is suitably complemented by various interactive stops, including, for example, the wooden xylophone. For photos see Apendix VI. The nature trail begins at the car park at the foot of Velký Blaník above the village of Louňovice pod Blaníkem and ends at the crossroads of Kondrac-Krasovice where there is a geological formation of rocks from the Podblanicko area. For bikers there is, for example, the bike path 'Po stopách Blanických rytířů' ('Steps of Blanik Knights') (Cáder, 2009; AOPK, 2011a). For information points and a map of the nature trail 'S rytířem na Blaník', see Appendix VII. Hanel (2012) highlights, "On Velký Blaník there is a nature trail – it was a response to the pressure of visitors (trying to engage and to inform visitors), and not attendance to this location has not been recorded since its placement".

4.7. Processing of the Data

Acquired data were processed statistically. After transferring answers from the handwritten questionnaires into prepared digital tables, the author began to work with statistical software, namely R software, version 2.12.0 (by R Project for Statistical Computing). It was used for basic evaluation as well as for advanced statistical appraisal. For creating graphs and tables, simpler programmes were used, namely Excel and Word (both by Microsoft Corporation).

Note: Not a single questionnaire was totally eliminated because of missing data and/or inconsistencies. Even if a respondent did not mark answer(s) for all questions, the rest of his/her (correctly filled out) questionnaire was included in the statistic analysis. That is why a different number can be seen for the 'total sample' in the results of individual questions.

5. Results

Results were introduced by Drábková and Šišák (2013), "During the survey 267 tourists were asked to fill in the questionnaire. A total of 242 agreed to participate in the study and completed the questionnaire. This means the response rate was more than 90%. That is a rather high number; other studies using direct on-site questioning of tourists report lower response rates". Those researchers reporting lower response rates include Kalivoda et al. (2010) at approximately 88%, Mercado and Lassoie (2002) with nearly 85%, Bartoš and Novák (2008) at exactly 83%, and Heer et al. (2003) with around 75%. Disman (2009) mentions that in many countries a response rate over 50% is considered success.

Drábková (2010) writes, "In accordance with Disman (2009), one of the most effective tools for increasing the response rate is a reward for participating. It is not necessary to make the reward very big - its meaning is symbolic. All approached people were told that for completing the questionnaire they would receive a small gift". In practice this reward was a small biscuit. Drábková (2010a) specifies, "These presents were purposely spread on the table in such a way that everyone could see them well". In the end many respondents seemed to be

happy just to help with the survey and some of them did not take the reward or took it for their children.

In a report from the first inquiry day Drábková (2010a) tried to deduce why all tourists came on foot, "This could be explained by the fact that the top of Velký Blaník would hardly be accessible, for example, by bike". By the standards of Drábek (2005), this is a moderately difficult, hilly terrain for hiking. In the end there were 6 respondents (from all total inquiry days) who came by bike.

To complete the questionnaire, respondents needed approximately 7 minutes.

5.1. Single Inquiry Days

Data collection took place over one year; data were collected during five days on both weekends and weekdays (Drábková and Šišák, 2013). The first and second days (28.10.2009 and 8.5.2010) were national holidays in the Czech Republic. A national holiday means that the majority of the population does not go to work and, when the weather is good, some people will probably go out to enjoy nature. More data were collected on two normal weekdays during the summer of 2010 (11.8 and 25.8), and the last day for collection was again the date October 28th, but in the year 2010.

5.1.1. October 28th, 2009

Drábková (2010a) writes, "For filling out questionnaires in the PLA Blaník, the date 28.10.2009 was chosen because that day is a national holiday in the Czech Republic. In connection with the weather forecast and the fact that in 2009 the holiday fell on a Wednesday, the visit rate could be expected that to be relatively high". This expectation turned up to be a truth[3]. The survey started at 12:05 under the view tower on the Velký Blaník hill. From 50 questionnaires has returned all 50 of them. The response rate 100% is not usual (Disman, 2009). All questionnaires were fulfilled in 2 hours with a criterion to ask every third tourist passing through (more about criteria is written in the chapter 4.4.2. - Criteria for Selecting Respondents). During the survey 1 respondent asked the interviewer to read the questionnaire. For a photo of respondents fulfilling the questionnaires see Appendix VIII.

5.1.2. May 8th, 2010

As was written above, May 8th is a national holiday in the Czech Republic too. In the year 2010 that day was a Saturday. The weather forecast predicted a rain but finally it was very nice and sunny day, even if could be a bit warmer. All 50 questionnaires were fulfilled in 3 hours and 24 minutes. The criterion used was to ask every third tourist passing through. Nobody asked the interviewer to read the questionnaire.

[3] Author's observations from the field, "Already at passing the Louňovice pod Blaníkem we noticed several groups aiming at Blaník. On the parking place below Velký Blaník there were so many cars that we had to search for a place for a long time. On the way up to the hill we passed the crowds of tourists, directed upwards and downwards. At that moment it was clear that it will be enough of respondents. When we reached the view tower we found that this day is in progress an event of the Czech Sokol Organization – Climb on the Blaník. Thanks to that event and favourable weather there were really a lot of tourists on Blaník; for visiting the view tower with a capacity of 15 people they had to wait in a line".

5.1.3. August 11th, 2010

As was mentioned before, August 11th was a normal weekday, Wednesday. Due to expected smaller tourist rate the criterion was change to ask every second passing tourist. From the beginning at 10 o'clock until the end at 15:30 were fulfilled 46 questionnaires. The interviewer read the questionnaire for 2 people. The weather was pleasant (neither hot nor cold), ideal for a summer holidays' trip.

5.1.4. August 25th, 2010

Next inquiry day, August 25th was a normal weekday, Wednesday again. The survey started at 9:23 what was very early because the view tower on the top of the Velký Blaník hill opens at 10 o'clock. The first questionnaire was fulfilled right at 10:09. All 50 questionnaires were completed up to the end of the survey at 15:44. The criterion used was to ask every second tourist passing through. Questionnaires were read for 2 people. This day was a particular in refusing of participation on the survey: 8 respondents did not want to complete the questionnaire! It could be caused by the weather, because this days was extraordinary cold and windy for August. Even though the sun was shining afternoon, anyway, it was very cold.

5.1.5. October 28th, 2010

The last inquiry day was the date October 28th again. In the year 2010 it was a Thursday. As well as previous and every other year there was hold an event Climb on the Blaník organized by the Czech Sokol Organization. Probably that is why all 50 questionnaires were ready during short time: beginning of the survey was at 10:37 and the end at 12:20. Another reason why questionnaires were fulfilled so quickly could be a fact that the criterion was changed to the way that from a group of tourists all people were asked to complete one questionnaire. Every third group passing through was approached. Interesting was an experience when one tourist refuse the participation on the survey but then if he saw his friend to enjoy a fulfilling he came back and ask an interviewer for one questionnaire for him. 2 people needed interviewer's help with reading and completing. The weather was lovely (although could be a bit warmer), just right for trips. There was notably very good visibility from the view tower. For a photo of respondents fulfilling the questionnaires see Appendix VIII.

5.2. Visitor's Profile

One of very important and interesting findings of this study is a possibility to create a visitor's profile. From data evaluation could be determined who are the people coming in the study area, how much they are different from the overall population in the Czech Republic - in accordance with data from Czech Statistical Office (hereafter referred to as CZSO), and if there are any differences among particular inquiry days.

5.2.1. Czech Statistical Office

The Czech Statistical Office (CZSO) is a central body of the state administration of the Czech Republic. It was established on 8 January 1969 by the Act No 2/1969 Sb., passed by the Czech National Council, on establishment of ministries and other institutions of central government of the Czech Republic (CZSO, 2012). CZSO has many activities; namely public

inquiries, current and past events, conferences, collaboration with other institutions, European Statistical System, international co-operation. For public seems to be most interesting the fact that some information is available online and free of charge. CZSO (2012) specifies, "Key Documents - Annual reports, Legislative Documents, Strategic Documents".

5.2.2. Characterization of the Most Common Visitor

The data evaluation shows that the most typical visitor in the PLA Blaník is a female (58.3%) between 35 and 44 years of age (20.3%), a high school graduate (36.5%), with a job of technical specialization (27.2%). She lives in a city with 1 million inhabitants or more (26.1%). Despite the fact it was not the goal of the research and the questionnaire did not ask for the exact place where the respondents live, in this case it is evident – in the Czech Republic there is only one city with more than 1 million inhabitants: the capital Prague (Drábková and Šišák, 2013).

For the visitor's profile in detail, see Table 4.

5.2.3. Comparison of Respondents with an Overall Population in the Czech Republic

Talking about total sample, there were 58.3% of women and 41.7% of men having participated on survey. That makes slightly larger number of women than there are in the overall population in the Czech Republic (male 49.1%, female 50.9%) (Drábková and Šišák, 2013). More could be seen in Table 4.

As for the age, there was a high diversity among particular age groups over 15. The survey was focused to respondents older than 15 years (Drábková and Šišák, 2013). Conversely, as could be seen in Table 4, age groups ratio for the overall population in the Czech Republic ratio is quite balanced (from 12.3% up to 15.4%).

A comparison of respondents' professions with the overall population in the Czech Republic was quite difficult, because the categories were very dissimilar. For an easier comparison, various categories covered by the CZSO were sorted such as classification in the questionnaire. After that it is evident that the majority of respondents (27.2%) as well as the majority of the overall population in the Czech Republic (57.4%) have a profession belonging to technical specialization. (Drábková and Šišák, 2013) The full breakdown of the outcome is in Table 4.

By the level of education, during the survey there was nobody without elementary education completed. We do not know if there was anybody uneducated in the study area – maybe such a person would refuse to participate in the survey because they would not be able to read the text properly. In the Czech Republic there are ca 12.500 persons without elementary education completed (CZSO, 2011) which means almost 0.1% of the overall population (Drábková and Šišák, 2013). From Table 4, perceptible differences among other levels of education can be seen. It could be said that survey respondents were more educated than the overall population in the Czech Republic. This is the most evident on the example of higher degrees of education (like college or university): 37.3% respondents reached higher education vs. 11.8% in the overall population in the Czech Republic.

Table 4: Variables Defining the Sociological Characteristics of Visitors for Each of Inquiry Days and a Comparison with an Overall Population in the Czech Republic in Accordance with Czech Statistical Office, **in Percentages**.

Variables Defining the Sociological Characteristics of Visitors	28.10.2009 (n=50)	8.5.20110 (n=46)	11.8.2010 (n=46)	25.8.2010 (n=50)	28.10.2010 (n=50)	Total Sample (n= 242)	Population in the Czech Republic
Gender							*)
Male	48	43.5	47.8	42	28	41.7	49.1
Female	52	56.5	52.2	58	72	58.3	50.9
Age							**)
Less than 15 years	0	0	0	0	0	0	14.3
15 to 24 years	8	6.7	19.6	42	4	16.2	12.3
25 to 34 years	38	13.3	15.2	14	6	17.4	15.8
35 to 44 years	16	20	21.7	22	22	20.3	14.9
45 to 54 years	24	22.2	15.2	4	22	17.4	13.1
55 to 64 years	10	24.4	13	10	28	17	14.2
65 years and more	4	13.3	15.2	8	18	11.6	15.4
Level of Education							**)
Without Education	0	0	0	0	0	0	0.1
Elementary	0	11.1	10.9	10	4	7.1	14.1
High School	6	13.3	26.1	24	26	19.1	30.3
High School Graduate	24	31.1	37	48	42	36.5	29.3
College	6	11.1	4.3	2	4	5.4	11.8
University – Bach. Degree	64	2.2	0	2	4	31.9	
University – Magister Degree		31.1	21.7	12	18		
University – Post Gradual		0	0	2	2		
Study or Professional Focus							***)
Technical Specialization	22.4	34.9	29.5	24	26.5	27.2	57.4
Scientific or Medical Specialization	14.3	7	9.1	10	18.4	11.9	17.6
Agriculture and Food Industry	6.1	16.3	4.5	10	6.1	8.5	2.9
Forestry	4.1	2.3	0	0	0	1.3	
Economics and Finance Specialization	26.5	16.3	15.9	20	16.3	19.1	13.1
Humanities and Law Specialization	18.4	14	13.6	16	8.2	14	6.6
Another	8.2	9.3	27.3	20	24.5	17.9	2.4

Variables	28.10.2009 (n=50)	8.5.20110 (n=46)	11.8.2010 (n=46)	25.8.2010 (n=50)	28.10.2010 (n=50)	Total Sample (n= 242)	Population in the Czech Republic
Number of Inhabitants in Cities Where Respondents Live							****)
Less than 500	4	17.8	10.9	6	4	8.3	7.9
500-1999	6	4.4	13	12	18	10.8	18.6
2000-4999	18	4.4	17.4	8	22	14.1	11.6
5000-19 999	10	28.9	17.4	12	38	21.2	18.3
20 000-99 999	8	4.4	19.6	30	8	14.1	21.7
100 000-999 999	4	4.4	6.5	10	2	5.4	9.9
1 mil. or more	50	35.6	15.2	22	8	26.1	11.9

*) Source: Population: by Sex and Age Unit (CZSO, 2011)

**) Source: Population Balance and Structure by Educational Attainment, Age Group, and Region in 2010 (CZSO, 2011)

***) Source: Employees and their Average Monthly Gross Wages in the National Economy by Activity and by Size Group of Businesses in 2009 (CZSO, 2011)

****) Source: Population of Municipalities of the Czech Republic, 1 January 2011 (CZSO, 2011a)

The last variable for the comparison is the number of inhabitants in municipalities where the respondents live. The most of respondents come from a city with 1 million inhabitants or more (26.1%) and from towns with 5000–19,999 inhabitants (21.2%). From towns with 500–1,999 inhabitants (which includes also the nearest municipality – Louňovice pod Blaníkem) were only 26 respondents which is less than 10.8%. In the overall population in the Czech Republic, most people live in cities with 20,000–99,999 inhabitants (21.7%) (Drábková and Šišák, 2013). For more information see Table 4.

5.2.4. Differences Among Particular Inquiry Days

All variables defining the sociological characteristics of visitors for each of the inquiry days can be found in Table 4. In this chapter some examples of significant differences among categories during particular inquiry days will be discussed.

The male to female ratio was quite balanced on the first four days, with 52% to 58% of participants being women. Only on the last inquiry day (28.10.2010) were there many more women than men (72% women). There is no known explanation for this.

Looking at the age groups, one may notice that on the third and fourth inquiry days (11.8.2010 and 25.8.2010) many respondents were between the ages of 15 to 24 or more than 60. This could be due to the fact that these days were summer holidays and normal working days so many respondents were likely students or pensioners while people at an 'economically active age' were at work.

In the questionnaire respondents wrote in an exact number for their age. Therefore we are not limited to analyzing visitors by age group (like CZSO). The average age (statistically the mean) of the total sample was 43.1 years. A comparison of all inquiry days is in Table 5.

Table 5: Comparison of All Inquiry Days by the Age of Respondents

	28.10.2009 (n=50)	8.5.20110 (n=46)	11.8.2010 (n=46)	25.8.2010 (n=50)	28.10.2010 (n=50)	Total Sample (n= 242)
Minimum	21	16	15	15	19	15
Mean	39.4	48.4	43.1	34.3	51.6	43.1
Mode	32	61	65	21	44	44
Maximum	67	74	72	81	77	81
P-value	0.069	0.07708	0.9974	0.001031	4.759e-05	0.9969

Note: All p-values came from one-sample t-tests calculated with a hypothesis mu=43.1 (number of average age of all respondents together).

Looking at the level of education, the first inquiry day (28.10.2009) was unique. Of those who filled out the questionnaire, 64% had a university education, and nobody uneducated or with elementary education. In addition, the percentage of respondents with a high school and high school graduate education was much lower than on all following inquiry days.

As was stated above, a comparison based on professional focus was quite difficult. There were considerable differences between particular inquiry days. For example, scientific or medical specialization was selected on 8.5.2010 by 7% of participants while on 28.10.2010, that number rose to 18.4%; agriculture and food industry on 11.8.2010 was selected by 4.5% of respondents, but on 8.5.2010 it was marked by 16.3%. Perhaps these differences were

due to the fact that many respondents were not able to classify their profession into the defined categories and chose to mark 'other'. Here are some examples of other professions mentioned by respondents: education (5 times), student (3 times), state employee (3 times), pensioner (3 times), architecture (2 times), artist (2 times), business (2 times); 1 times were mentioned these: service trades, owner of a recreational facility, real estate activities, housewife, photographer, plumber, driver, social worker, stylist, pedicurist, metal production, maintenance services in green areas, theology, shop assistant, seamstress.

In light of the differences between respondents concerning the size of the population where they were from, the first inquiry day (28.10.2009) was exceptional again. One half of respondents were from a city with 1 million inhabitants or more. In contrast, on the last inquiry day (28.10.2010) only 8% were from cities of that size.

5.3. Forest Visits and Preferences

5.3.1. Frequency of Forest Visits

The first question had the task to clarify how often (in an average year) respondents go into the forest. The most often answer was '1 – 3x per month' (29.8%). The second most common answer was '1x per week' (25.6%). Even though the survey was held in the forest and it was not possible to get there without passing through the forest, one respondent marked 'never' (Drábková, 2013b). More information about the frequency of forest visits, including a chart containing the rate of answers by percentages can be found in Table 6.

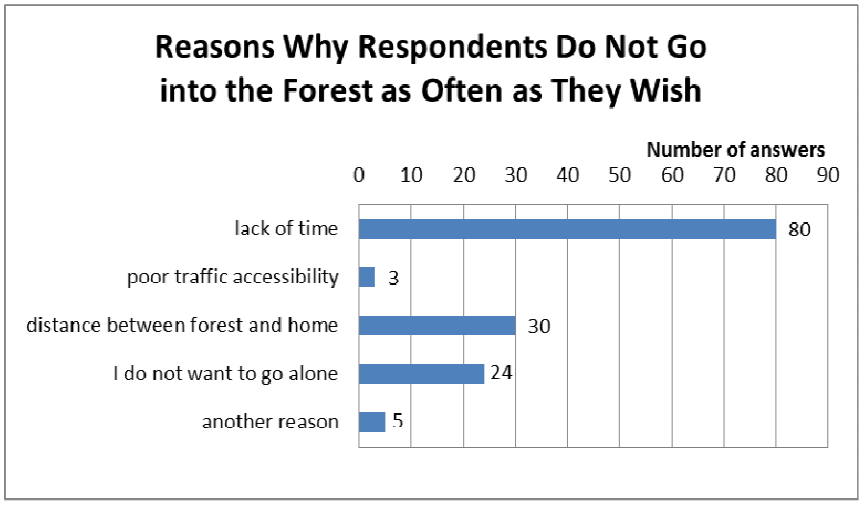
Table 6: Frequency of Forest Visits

Frequency of Forest Visits	Number of Respondents	in Percentages
4x and more per week	19	7.9%
2 – 3x per week	30	12.4%
1x per week	62	25.6%
1 – 3x per month	72	29.8%
6 11x per year	44	18.2%
Less than 5x per year	14	5.8%
Never	1	0.4%
Total Number	242	100%

The second question asked about satisfaction with the frequency of forest visits. The majority (55.2%) of respondents marked 'convenient', while only 0.8% marked 'unconvenient – I am in the forest more often than I wish'. The remaining 44% answered 'unconvenient – I wish to be in the forest more often than I am'. Respondents who marked the last answer were asked to indicate the reason why they do not go into the forest as often as they wish (with the possibility of choosing more than one reason). As can be seen in Figure 9, the main reason was 'lack of time'. Also 'distance between the forest and home' and 'I do not want to go alone' seemed to be important. Under 'another reason' respondents included these:

- I'm a pensioner and I can't breathe well; family obligations; laziness; I do not go in wintertime; a small child lacks the ability to go such a long way (Drábková, 2013b).

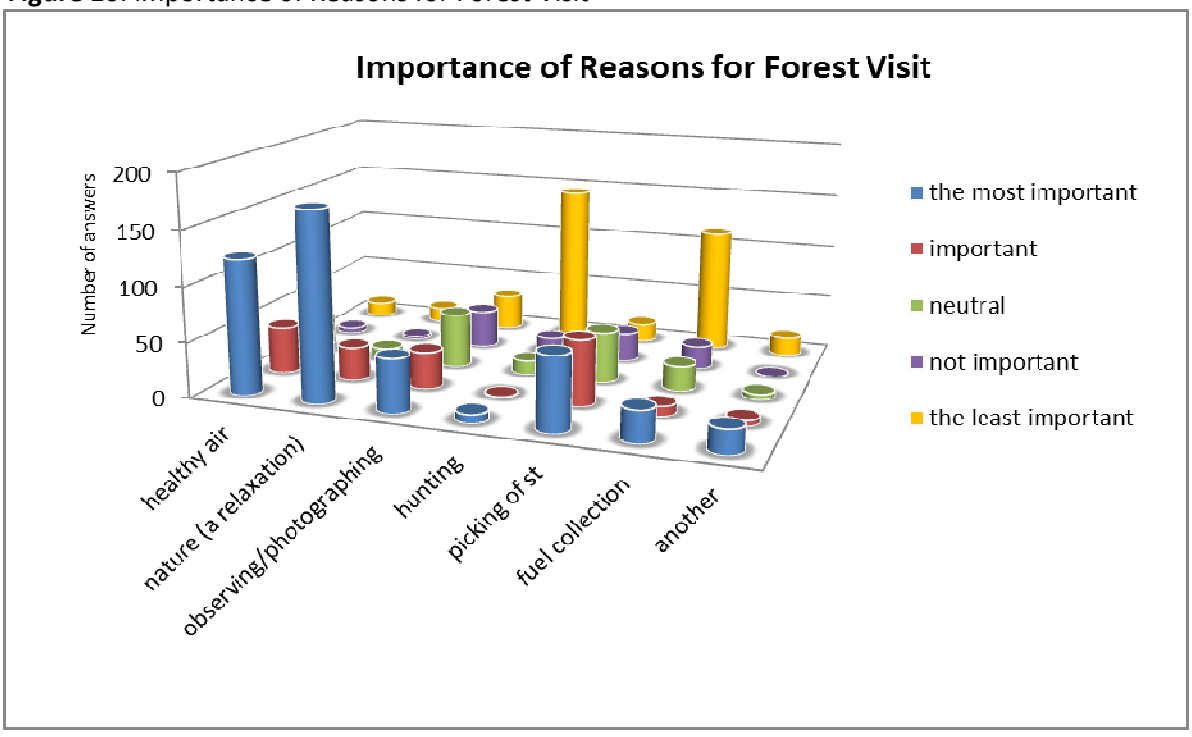
Figure 9: Reasons Why Respondents Do Not Go into the Forest as Often as They Wish



5.3.2. Reasons for Forest Visits

The next question focused on the importance of reasons for forest visits. Respondents were asked to describe, using a numbering system, how important particular reasons were for them. To determine the importance of each reason, this study used a scale from 1 (the most important) to 5 (the least important). In accordance with hypotheses, results showed that the most important reasons for going into the forest were 'beautiful nature or pleasant relaxation', as well as 'healthy air'. These reasons were marked as the most important or important. Interestingly, reasons such as 'I like to watch or to photograph wild plants or animals' and 'picking forest fruits, mushrooms or medicinal plants' had very different levels of importance. The results also showed that 'wood, cone or other fuel collection' had no large importance for many people while 'hunting' was the least important for almost 2/3 of respondents (Drábková, 2013b). For a better idea, see Figure 10.

Figure 10: Importance of Reasons for Forest Visit



Under ‘other’, the following reasons were given:

- walking the dog (9 times); tourism or trip (4 times); sport or movement in the forest (4 times); horseback riding (3 times); job (3 times); to find a clam place (3 times); once were mentioned these reasons: peace of mind for clearing the head; I feel good in the forest; I prefer it to other entertainment (cinema, theater); collection of decorative items, such as cones, beechnuts, etc.; breaking away from bustling city life; observation of relationships between individual systems (e.g. marsh, meadow, forest, rubble, etc.); Junák camp or other event by this organization; children are safe from vehicles here; entomology; meditation on the Supreme Personality of the Godhead, Sri Krishna; relaxation with friends (Drábková, 2013b).

5.3.3. Preferences of Forest Structure and Shape

Another question, ‘What kind of forest do you seek most frequently?’ was separated into two parts: 1) according to the composition of tree species and 2) according to the easy of passage and visibility.

According to the composition of tree species, the majority (48%) preferred ‘mixed forest’, 35% answered ‘I do not know/ I do not care’, 15% chose ‘coniferous’ forests, and only 2% of respondents chose ‘broadleaved’ forests.

In accordance with the ease of passage and visibility, the majority (44.4%) marked forests ‘without undergrowth’, 36% chose ‘I do not know/I do not care’, and the rest (19.6%) chose forest ‘with undergrowth (herbs, brush etc.)’ (Drábková, 2013b).

The next question asked tourists where they prefer to travel. More than 4/5 of respondents (exactly 83.8%) selected ‘to forests with variety, such as small meadows, clear cuts, glades etc.’, while 11.2% chose ‘I do not know/I do not care’. Only 5% marked ‘to forests which are almost monotonous or change very little’ (Drábková, 2013b).

5.3.4. Choice of Route

Subsequent questions explored whether the forest environment had any significance for tourists. Respondents were asked, ‘Do you choose tourist routes depending on whether they go through the forest when you are planning your trip?’. The results were as follows: ‘yes’ from 43.1% of respondents, ‘sometimes’ from 40.6%, ‘I do not know/ I do not care’ from 9.6% and ‘no’ from only 6.7% of respondents (Drábková, 2013b).

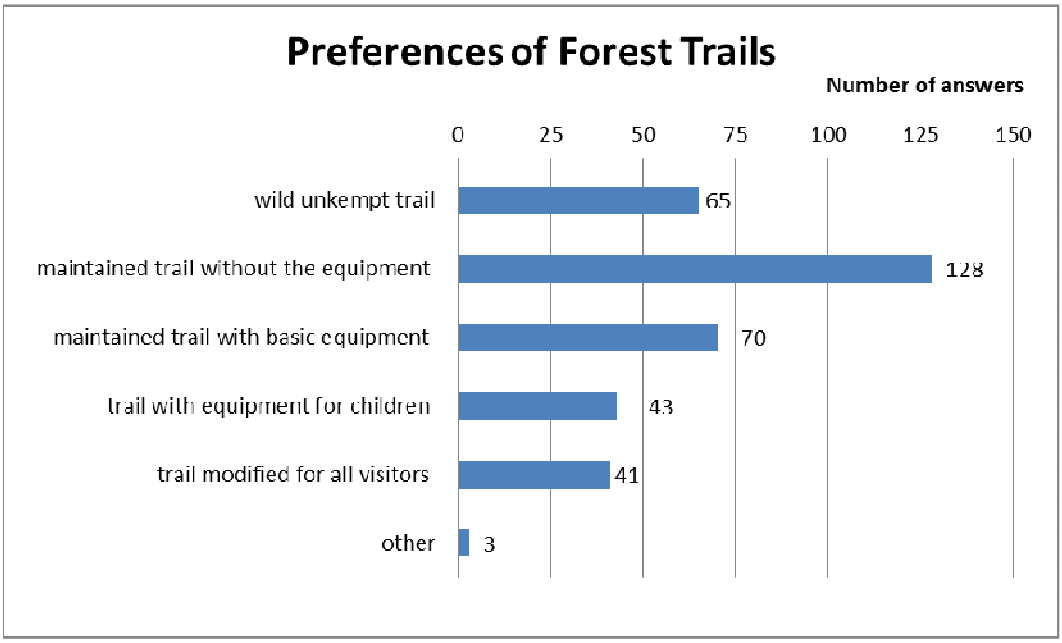
5.3.5. Preferences of Forest Trails and Facilities for Visitors

The following question was which forest trail the tourists prefer (they were allowed to choose max. 2 answers). Results showed that the most preferred was ‘a maintained trail (e.g. with bridges) without any further equipment for visitors’ – more than 1/3 of respondents marked this answer. Also ‘a maintained trail with basic equipment (benches)’ and ‘wild unkempt trail with minimum of equipment’ seemed to be interesting for visitors (Drábková and Šišák, 2013). For more information see Figure 11.

As ‘another’, the respondents wrote:

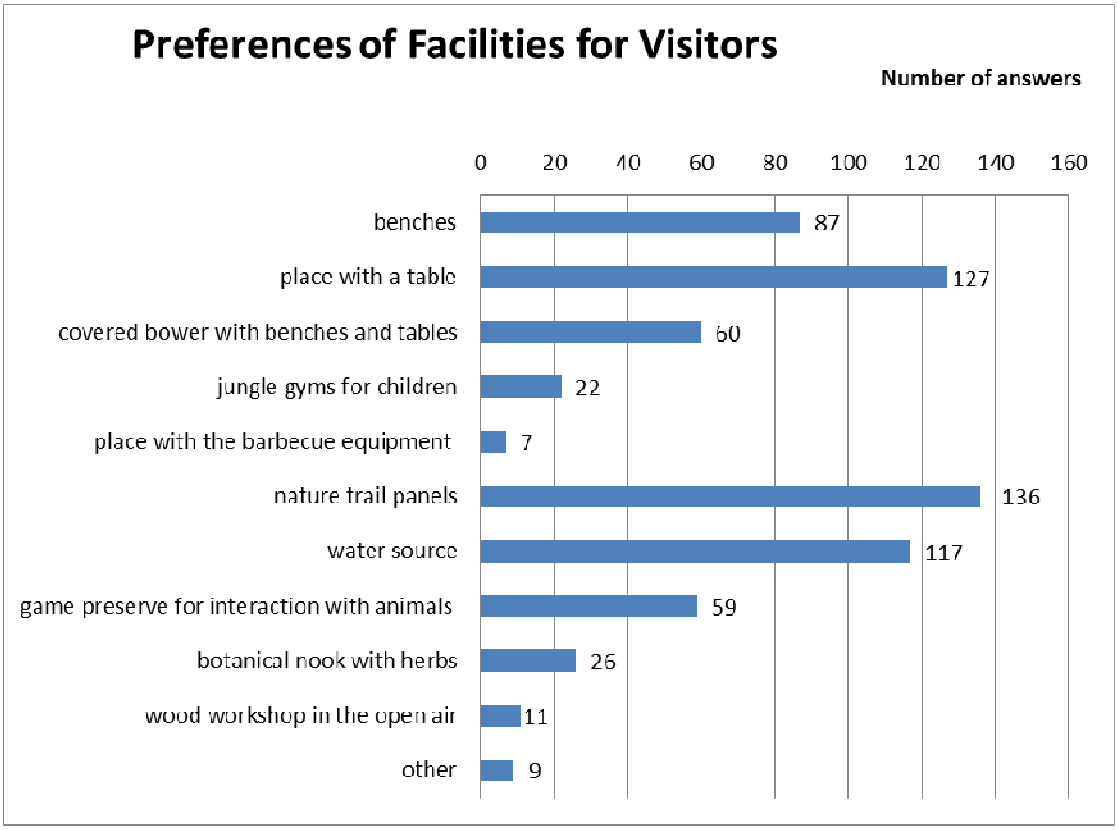
a cultural landmark in the target destination (a castle ruins, church etc.) and a restaurant (snack bar); well-marked, passable and safe trails for children; a tourist landmark at the end of the trail (a view-tower, viewpoint etc.); solitude (Drábková and Šišák, 2013).

Figure 11: Preferences of Forest Trails



The next question was: 'Which of following types of facilities for visitors is, in your opinion, appropriate to place near forest tourist routes? (you may choose more than one)'. The most appropriate facility showed to be 'nature trail panels' and 'a place with a table for having a rest (and eating a snack)'. On the other hand, in the respondents' opinion 'a place with the barbecue equipment' is not necessary or appropriate (Drábková and Šišák, 2013). The numbers of visitors who wish to place particular types of facilities near forest tourist routes could be seen in Figure 12.

Figure 12: Preferences of Facilities for Visitors



As ‘other’ type of facility suitable to place near forest tourist route the respondents mentioned these:

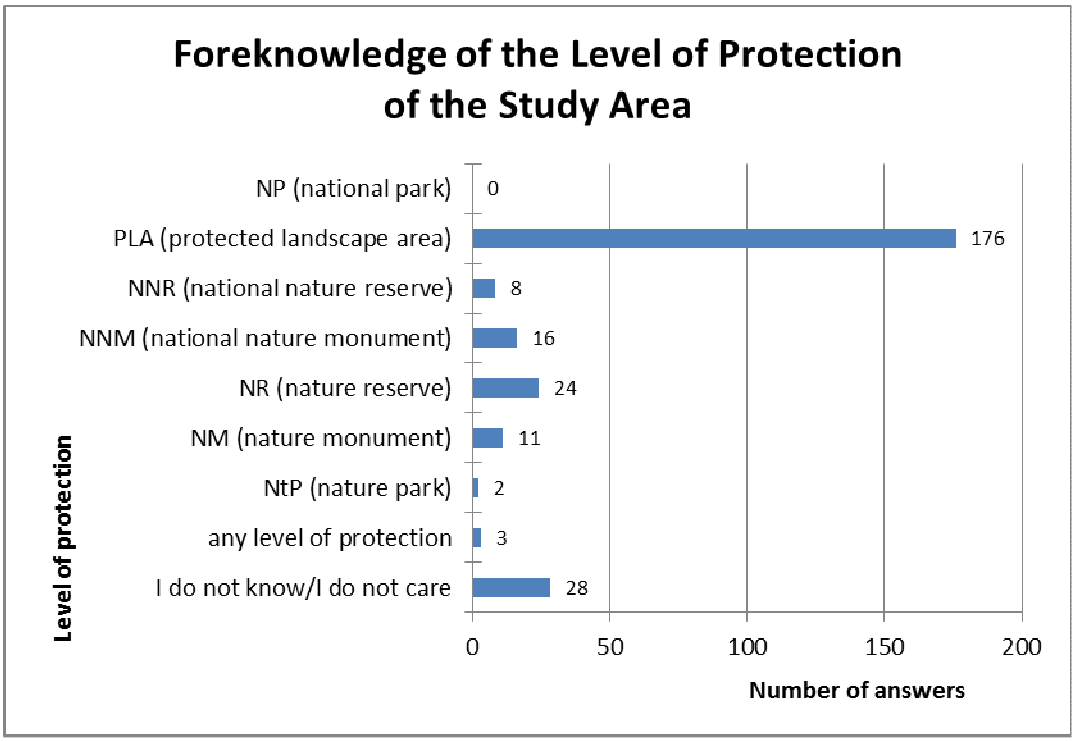
I prefer nature without any human influence; rubbish bins; I do not need facilities, stumps are enough to sit and have a snack on; stones and stumps are enough + another sufficient place to sit (Drábková and Šišák, 2013).

5.4. Foreknowledge of the Area and a Forest Management

5.4.1. Foreknowledge of the Level of Protection of the Area

After that there was a question ‘Do you know which level of protection covers the area we are in now?’ In this question respondents may choose more than one answer. Questionnaires were filled out within PLA Blaník as well as in NR (natural reserve) Velký Blaník. Photos confirming those protection statuses could be found in Apendix IX. As shown in Figure 13, many respondents (almost 73%) correctly marked ‘PLA (protected landscape area)’. From Figure 13 is also evident that nobody chose an answer ‘NP (national park)’.

Figure 13: Foreknowledge of the Level of Protection of the Study Area



5.4.2. Foreknowledge of Forest Management

Further questions focused on foreknowledge of forest management, specifically if people had any knowledge of intensive forest management, nature oriented forestry, or what constantly sustainable forest management is (Drábková, 2013b).

The first two questions asked respondents about differently managed forests (as they saw them). In both cases more than one half of respondents marked ‘forestry interventions take place here occasionally’ (Drábková, 2013b). In reality and thus the right answers were: The forest around the view-tower on Velký Blaník ‘is left to spontaneous progress – foresters do not

interfere here' and, concerning the predominantly coniferous forest around the parking area 'it is intensive forestry managed' (Klaudys, 2012). A full breakdown of participants' answers can be found in Table 7.

Table 7: Respondents´ Opinion on Differently Managed Forests

	Forest around the View-tower on Velký Blaník		**Predominantly Coniferous Forest around the Parking Area**	
	Number of Respondents	in Percentages	Number of Respondents	in Percentages
Is intensively forestry managed	19	7.9%	27	11.3%
Forestry interventions take place here occasionally	141	58.3%	134	56.1%
Is left to spontaneous progress – foresters do not interfere here	56	23.1%	22	9.2%
I do not know	26	10.7%	56	23.4%
Total	242	100%	239	100%

Note: Correct answers are highlighted in grey.

The next question asked, "Old, fallen rotting trunks in the nature reserve are, in your opinion:" A total of 82% of respondents chose 'An example of nature oriented forestry – they have been left here purposely', while 10.5% did not know, and 7.5% selected 'An example of the forester's bad work – he did not make a logging in time' (Drábková, 2013b).

An open-ended question brought interesting results. The question was: 'What do you think the term '*Constantly sustainable forest management*' means?' Respondents wrote numerous varied answers, here are just some examples:

- reasonable logging, replacement of trees by planting, regular juvenile thinning, and care for wildlife,
- planting of new trees, controlled logging, preservation of diversity of vegetation (types of species),
- stable forest stand, usage balanced with a planting,
- that's what people are trying to do now and how it was will see our children's children,
- thus in order to be economically usable forest in the future as well as will perform other functions: tourism, biodiversity,
- reasonable interventions, no large areas of glades, return to the predominant wood species (beech, spruce, and others broad-leaved trees), extending of no managed areas (NtP, NR, etc.),
- 'sensitive' forest management as in order to remain constantly preserved species diversity of plants and animals,
- maintaining the forest in a condition which is also ecologically and touristic attractive,
- forest felling without the intervention of the people thus minimize interferences,
- in order to forests will be even for future generations,
- interaction of human with natural biorhythms, so the original was preserved, or continuously changing ecosystem in the interest of sustainable living.

All answers can be divided into three groups: 1) right answers, meaning the respondent wrote

something in accordance with the real meaning of 'constantly sustainable forest management', 2) wrong answers, meaning the respondent wrote something which was not accurate; and 3) the respondent wrote down that he/she did not know. In total there were 195 answers: 110 of them (56.4%) were correct, 63 (32.3%) were wrong and 22 respondents (11.3%) confessed that they did not know (Drábková, 2013b).

Note: The term 'constantly sustainable forest management' is specified by the United Nations definition in chapter 7. - Discussion.

5.5. Proposals and/or Suggestions

The last question before asking for demographic data was an obvious one: 'Do you have any proposals or suggestions for us?' Only 39 respondents answered with something other than 'I do not know' or 'I do not have any proposals or suggestions'. As we expected, there were many miscellaneous answers (Drábková, 2013b). Here are some of them:

- Okay that someone is interested in the forest and not e.g. in mobile phones,
- there are many routes that are so overgrown that is not possible to pass through, it would be good to keep these routes at least cutting the bushes,
- to plant less trees,
- to increase signposted tourists routes,
- near routes occasionally put bins,
- I wish a change of the Hunting Act - I would like to have a possibility of hunting with a bow and short firearms,
- more information near the route, e.g. the table for mature trees - a specie, how long this concrete tree grows, how much O_2 it produces,
- bowls for dogs near benches,
- Is it necessary to tolerate bikers inside the forest?
- nature conservationists should be allowed for reforestation in areas which are infected by pests, eg. Šumava,
- sometimes there are photos of places on promotional materials and legend is missing,
- good luck,
- in the forest it is smashing ☺

Many proposals and suggestions were concerned with rubbish in the forest; wishing cleanliness would be maintained with natural management. Other proposals were concerned with bikers on hiking paths, beauties of Czech nature, and, last but not least, the behavior of visitors in forests (Drábková, 2013b).

6. Survey in Italy

Note: The whole chapter 6. deals with author's paper **Tourists in Cansiglio Forest, Italy – Case Study about Forests Visitors and Their Opinions** which will be published in *Human Geographies - Journal of Studies and Research in Human Geography*. Therefore, the dividing of this chapter (names and numbering of subchapters, figures, and tables) is not in accordance with the rest of the thesis.

Tourists in Cansiglio Forest, Italy – Case Study about Forests Visitors and Their Opinions

Abstract

The development of the recreational use of forests demands a greater understanding of the profile, preferences and opinions of visitors to these forests. A questionnaire survey was held in Cansiglio forest in northern Italy, which has become a very famous recreational area where many people come to spend their leisure time. The objective of this paper is to ascertain specifics about forest visitors, their preferences of forest structure and shape, and their other opinions, e.g. about regional problems with red deer. Results showed, among other, that almost ¼ of respondents were bikers, the rest were hikers, and the majority was from nearby cities and villages. Most of respondents go to forests from six to eleven times per year, more than ½ of them are satisfied with this frequency of forest visits. Knowing which type of forest visitors generally look for and what kind of activities they want to enjoy there is very important information and useful for management in research areas.

Key words: respondents' profile; preference survey; questionnaire; regional problems with red deer

1. Introduction

In recent decades, the significance of recreation in forests has continuously increased; a large portion of forested land would be adequate for tourism purposes. (Font and Tribe, 2000; Heer et al., 2003). Furthermore, one could say that there are only very few forests where people are unable to run tourism. As is pointed out by Lehtinen and Sarala (2006), Sevenant and Antrop (2009) and others, an increasing tourism puts pressure on the land. It requires objective and meaningful measurements in planning, policy evaluation for analysing the consequences of landscape change, and sustainable development of tourist destinations. That is confirmed by Cunha (2010), "Accurate research assessments and adequate indicators for monitoring tourism impacts have to be developed globally." Food and Agriculture Organization of the United Nations (hereafter referred to as FAO, 2011) states that the management of forests for social and cultural functions is increasing. That has a great importance, because the lack of political guidelines is the main issue in terms of tourism. It has given rise to serious problems involving the degradation of the natural environment and a loss of local identity (De Aranzabal et al., 2009). The significance of planning for recreational purposes is highlighted also by Price and Chambers (2000), "In the era of multi purpose forestry, providing recreational opportunities rightly takes an important place among objectives for forest management".

The planning should be supported by adequate information about forest visitors, as is confirmed by many authors, e.g. Herrick and Rudis (1994) who said that to effectively plan for recreation, land managers need data describing the characteristics and preferences of visitors; Šišák (2011) who argues, "An objective survey of what forest visitors know about the issues in question is a very important informative source for forest policy and forestry public relations plans and activities"; and Drábková (2010) who affirms, "Knowledge of the composition of the population of tourists and determination of their preferences are the basis for proposals

for the improvement and reasonable development of the tourist movement in forests". Font and Tribe (2000) add that the forest manager needs to understand the type of forest which visitors wish to visit. All these references indicate that the development of the recreational use of forests demands a greater understanding of the profile, preferences and opinions of visitors to these forests. Moreover, this knowledge could help to prevent the degradation of nature. Heer et al. (2003) agree, "It is important to understand the users of recreational forests as thoroughly as possible in order to adjust resource management to prevent or at least minimize possible conflicts and damage". Cunha (2010) says that mismanagement of tourism activities could intensify the degradation of nature. Sayan and Karagüzel (2010) add, "Visitor demographics, perceptions and their relationships are investigated to determine the problems and issues for outdoor recreation".

But there are still just scarce data in the hand, especially for forested areas. Sevenant and Antrop (2009) recommend, "Research on landscape perception and preference is more than justified". Mercado and Lassoie, (2002) complement that understanding the tourism market's position and preferences for the natural and traditional cultural environment, there is a clear need for the application of comprehensive surveys to collect primary data to access such preferences. There are many studies (some examples are mentioned in the previous text) about visitors' perceptions and preferences, however, public opinion on forests and forestry is various and changes over time. Carvalho-Ribeiro and Lovett (2011) specify, "Above all, it is apparent that in addition to the visible patterns of the landscape (landscape context), the social/cultural and personal factors affecting the observer (situational context) can influence public preferences for forests." Additionally, it very often happens that due to some limitations (natural, cultural, and others) the proposals proceeding from the results are not usable outside of the region or country where the study took place. That is why it was necessary to carry out a new research to obtain data for statistical evaluation. The objective of this paper is to find out answers to questions about forest visitors in Cansiglio forest, namely: Who are people going into the woodland? Why do they go there? What type of forests do they prefer to visit and what do they think about regional problems with red deer? Knowing which type of forest visitors generally look for and what kind of activities they want to enjoy there is very important and useful information for management in research areas.

2. Methodology

2.1. On- site Survey

The basic survey method was 'on-site' questionnaire inquiry in this case. On-site visits fulfil most of the criteria for appropriate visualization methods in forest landscape preference research (Karjalainen and Tyrväinen, 2002). Sevenant and Antrop (2009) specify, "Being on-site implies all senses and not just visual". The best expression is by given the respondents' proximity to the landscape. Karjalainen and Tyrväinen (2002) explain, "Movement of the viewer through the landscape is the typical way of experiencing the environment when enjoying recreation in the forest". Herrick and Rudis (1994) add interesting observation, "Because respondents were interviewed at recreational areas, it is suspected that respondents may have been describing scenes in and around the interview site".

2.2. Study Area

A survey site was located in Cansiglio Forest in northern Italy (Figure 1). The Cansiglio

is a plateau of the Carnic Alps between the provinces of Treviso, Belluno and Pordenone. The main accesses to the plateau are south through the valley of Crosetta from Vittorio Veneto - the Province of Treviso and north of the valley in the area of Campon Alpago – the Province of Belluno (Tragol, 2011; Figure 2). After a consultation with managers of the area and a subsequent field survey, the best location was chosen: a parking lot in the small village of La Crosetta, near the entrance of the Cansiglio area (Figure 3).

Figure 1: Cansiglio in Northern Italy

Source: Seznam.cz (2011) - amended

Figure 2: Accesses to the Area

Source: Creative Commons (2011)

Figure 3: Study Area

Source: Tragol (2011) - amended

The Cansiglio forest is part of the state property of the Veneto region and is managed by Veneto Agricoltura. Living Dolomiti (2011) writes that the state forest Cansiglio, with its 7,000 hectares of land, is the second largest forest in Italy. The forest is dominated by beech (Fagus sylvatica); going down in altitude, the beech and spruce entirely disappear in the vicinity of the plain where the climate is cold and moist; in these areas man has created patches of monoculture of spruce or fir (Tragol, 2011; Veneto Agricoltura, 2011). Forest management has a long tradition in this area. Veneto Agricoltura (2011) says more, "In the landscape as one sees it the environment is so well maintained as the result of hundreds of years of forest management. The importance of the area was highlighted particularly by the Serenissima Republic of Venice, which has found in it wood of suitable and adequate quality to replenish its powerful arsenal". Even today, the state-owned forest of tall trees is governed according to a plan of adjustment (Living Dolomiti, 2011). Veneto Agricoltura (2011) continues, "In this area, forestry is still actively practised, both for conservation and production. There are many areas still left to natural evolution, that is, areas that, although not subject to special protective restrictions, are still unused".

Hunting is prohibited here; nevertheless, Cansiglio is the place to see fallow deer and red deer, which here are subject to a re population program (Living Dolomiti, 2011; Tragol, 2011). Veneto Agricoltura (2011) specifies, "The most representative species is undoubtedly the red deer (Cervus elaphus), but you can find also roe deer (Capreolus capreolus) and fallow deer (Cervus dama); the latter was first introduced using a wildlife fence, and then released into the forest."

The whole forest is a Site of Community Importance (hereafter referred to as SCI) according

to Directive 92/43/EEC "Habitat" and Special Protection Area (hereafter referred to as SPA) according to Directive 79/409/EEC "Birds", which involves inclusion of these areas in the NATURA 2000. The Regional forest Cansiglio is a part of the SCI and SPA IT3230077 - Cansiglio Forest (Veneto Agricoltura, 2011).

2.3. Questionnaire

The questionnaire was made in order to follow Drábková's (2011) research which was held in the Czech Republic (results will be compared in another paper). Drábková (2011) offers detailed description, "The main task of the questionnaire was to acquire data which would help to find answers to questions concerning how often people go to the forest, why and how they perceive different types of forests, and what they think about forest management and the visitor facilities near forest tourist routes. Another important issue was to establish the composition of tourist populations". In compiling the Italian version of the questionnaire, recommendations were included from Veneto Agricoltura (the management of the Cansiglio area) to offset regional problems and issues. The questionnaire was composed of ten closed questions and one open-ended question. Similar to Sayan and Karagüzel's study (2010), a final open-ended question was asked in order to elicit any suggestions or comments respondents might have had. Also, six questions about the socio-demographic characteristics of respondents were supplemented.

2.4. Procedure

Questionnaires were filled out during two weekends in June 2011. Potential respondents were all people older fourteen years coming into the study area. As in a study by Herrick and Rudis (1994), "due to budget and interview time restrictions, flexibility in the use of additional questions and alternative sampling procedures was limited."

Contrary to many studies using face-to-face interviews, e.g. Mercado and Lassoie (2002), Sayan and Karagüzel (2010) and others, questionnaires were filled out without the presence of an interviewer. This was a recommendation of sociologist prof. Miroslav Disman, who said, "Respondents could be influenced by the presence of an interviewer" and, in consequence of this, answers could be distorted (Disman, 2009). Drábková (2011) refers, "The exceptions from this procedure were only a few people who asked an interviewer to read the questionnaire aloud because they could not read it themselves (e.g. because they did not have reading glasses with them)". Other exceptions were respondents who did not understand because the questionnaire was in Italian. For them the questionnaire was translated into English by the interviewer.

As in a study by Sevenant and Antrop (2009), there was a possibility to talk and hence to consult with other people, even though most of the respondents filled out the questionnaires individually.

3. Results

To complete the questionnaire respondents needed approximately six minutes. In total, 208 people were asked whether they would like to participate in the survey and only 133 respondents agreed. This means more than 36% of asked visitors refused; making the response rate was less than 64%. That is a relatively low number. In other studies which directly asked tourists on-site, much higher response rates were reached; e.g. Kalivoda et al.

(2010) with almost 88%, Mercado and Lassoie (2002) at almost 85% or Heer et al. (2003) with approximately 75%.

3.1. Respondents' Profile

Thirty respondents (22.6%) were bikers, the rest were hikers. Participants were 53.2% male and 46.8% female. The average age was 48.46 years, with a minimum of fourteen and a maximum of eighty-two. The most common age was 57.

The majority of respondents had completed high school (30.9%) or some college courses (40.7%). There were 22% of respondents with a university or higher degree of education. Only 5.7% of respondents had only basic school and two respondents (0.8%) were without education.

One interesting fact was that almost 16% of respondents did not mark a professional specialization. This could be due to a lack of very common divisions of specializations. From those who did mark a profession, there was predominance of technical specializations (29.5%). For more detail, see Table 1. Other professions marked the most included: an artisan (7 respondents), a pensioner (3), a student (2), and a housewife (2).

Table 1: **Professional Specialization of Respondents**

	% of all respondents in survey (n=133)	% of respondents - profession responded (n=112)
No response	15.8	X
Technical specialization	24.8	29.5
Scientific or medical specialization – excluding agriculture, food industry and forestry	8.3	9.8
Agriculture and food industry	8.3	9.8
Forestry	2.3	2.7
Economics or finance specialization	12	14.3
Humanities or law specialization	12	14.3
Other	16.5	19.6

From 123 visitors in total, there were twelve people from Vittorio Veneto, which is the nearest city, nine from Oderzo, nine from Treviso, eight from Pordenone, seven from Venezia, six from Padova, and five from Sacile. There were also four people from these destinations: Castelfranco Veneto, San Fior (the Province of Treviso) and Sarmede. Three respondents came from New Zealand. Other destinations were represented by two or fewer respondent(s). The results showed that the majority of respondents were from nearby cities and villages (around 60% of them were from the settlement less than 25km away) but there were also some visitors who came from a long distance, e.g. Monza (the Province of Milan), Novellara (the Province of Reggio Emilia) or San Miniato (the Province of Pisa). Respondents from New Zealand came a particularly long distance. For the map of places where two or more respondents were from (excluding New Zealand) see Appendix.

A noteworthy fact was that only 17.1% of respondents were enrolled in some naturalistic association.

3.2. Frequency of Forest Visits

Results showed that the majority (30.8% of respondents) go to forests from six to eleven times per year. The second most common answer was ‘less than five times per year’ (21.8%), then ‘one to three times per month’ (20.3%) and ‘one time per week’ (18.8%). The answers

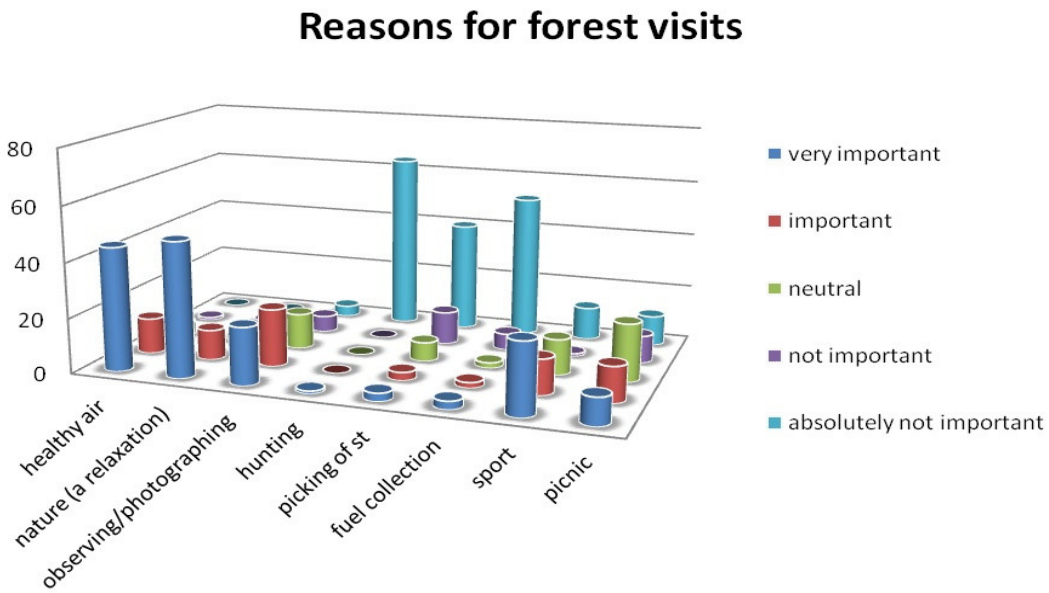
of ‘two to three times per week’ and ‘four times and more per week’ were chosen identically by only 3.8% of respondents. Only one person replied ‘never’.

Of the respondents, 53.4% were satisfied with their frequency of forest visits; for 46.6% their frequency of forest visits was marked as, ‘Inconvenient – I wish to be in the forest more often than I am’. Nobody choose, ‘Inconvenient – I am in the forest more often than I wish’. In cases where the respondent marked the answer ‘I wish to be in the forest more often than I am’, he/she was asked to indicate reasons why he/she does not go into the forest as often as he/she wishes (with a possibility to indicate more than one reason). The majority (62.2%) indicated ‘the absence of the time’ while ‘the distance between the forest and home’ (20.4%) was in second place. Other answers, e.g. ‘I don’t want to go alone’ (7.1%), ‘insufficient signposting and increased possibility of getting lost’ (5.1%), ‘another reason’ (3.1%) or ‘poor traffic accessibility’ (2%) seemed not to be as important as the first two.

3.3. Reasons for Forest Visits

The following question was focused on the importance of reasons for forest visits. Respondents were asked to determine the importance of individual reasons on a scale from one to five, one being very important and five being absolutely not important. Results showed that the most important reasons for going into the forest were ‘nature, offering pleasant relaxation’ and ‘healthy air’. Other important reasons included ‘sport’ and ‘observing and/or photographing wild animals or plants’. Conversely, ‘hunting’ and ‘wood, cone or other fuel collection’ were absolutely not important. Curiously, the answer ‘picking forest fruits, mushrooms or medicinal plant’ yielded the unexpected result of being marked mostly as absolutely not important and not important. There was a big difference among evaluations concerning the importance of ‘picnicking’. For the majority of respondents it was a neutral reason. For better comprehension see Figure 4.

Figure 4: **Reasons for Forest Visits**



3.4. Choice of the Route

A very important question for this research was: ‘Do you choose tourist routes based

on whether they go through the forest when you are planning your trip?' Results showed that 56.8% of asked people checked 'yes' while 27.3% marked 'sometimes', 11.4% answered 'I don't know / I don't care' and only less than 4.5% said 'no'.

Forest managers could be interested in answers to the question 'How does the presence of dead trees on the ground in the forest (important for biodiversity) affect your choice of the route for your walks?' The majority (48.5%) said 'positively', 38.6% of respondents were 'indifferent' and 12.9% of tourists were affected 'negatively' by the presence of dead trees on the ground in the forest.

3.5. Preferences of Forest Structure and Shape

The next question was focused on what kind of forest respondents prefer to visit the most frequently. Concerning the composition of tree species the majority (54.7%) preferred 'mixed forest', 29.7% of answers were 'I don't know / I don't care'. 'Coniferous' forests were preferred by just 9.4% and 'broad leaves'" by only 6.3% of respondents.

Concerning the ease of passage and visibility the majority (56.5%) preferred forests 'with undergrowth (herbs, brush etc.)', 33.9% answered 'I don't know / I don't care' and forest 'without undergrowth' was marked by only 9.6% of respondents.

For the question 'Would you rather go...' only 10% of respondents chose the answer 'to a forest which is almost monotonous or only slightly varied', 73% marked 'to a forest where are the areas vary from small meadows to clear cuts to glades, etc.' and 17% didn't know or didn't care.

3.6. Foreknowledge of the Level of Protection of the Area

Another necessary question concerns the foreknowledge of the study area, namely if people know the level of protection of the area. In this question respondents could mark more than one answer. The results showed that the most highly marked answer was 'Regional Park' (41.2%). Other answers were checked as follows: 'Nature Reserve' - 24.8%, 'I don't know' - 15%, 'Natura 2000 area' - 11.1%, 'National Park' - 5.2%, and 'none - this area is not protected' - 2.6%. As was written in Capture 2.2. – Study Area, the entire area of Cansiglio Forest is Natura 2000 area.

3.7. Problems with Deer

Further questions paid attention to problems with deer. The first of them was: 'Currently, around 2800-3000 red deer live in the Cansiglio area. To what extent, according to you, is this population creating problems for the conservation or regeneration of the Cansiglio forest?' Only 5.3% of respondents thought the red deer was creating 'many serious problems'. The majority (39%) chose 'some problems of medium severity', 19% marked 'some problems of minor significance', 13.6% chose 'no problem', and a high number of respondents (22.7%) did not know.

The last "closed" question was a bit complicated: 'In the Cansiglio forest various professionals are involved and the forest is visited by thousands of tourists annually. Considering deer, please evaluate whether the activity of the following figures in the territory of Cansiglio are affected by the presence of this species, and in what way?' Answers showed that respondents thought that the presence of red deer most positively affected the 'nature guide' (86.7% of answers) and the most negatively affected the 'golf player' (27.6%). For other

answers in detail see Table 2.

Table 2: **How is the Activity of the Following Figures Affected by the Presence of Red Deer?**

	Positively	Negatively	Indifferently	I don´t know
Forest owner	25.5%	22.4%	28.6%	23.5%
Tourist who comes for a picnic	67.3%	6.1%	22.4%	4.1%
Herdsmen	26.5%	24.5%	25.5%	23.5%
Golf player	15.3%	27.6%	39.8%	17.3%
Mountain bike rider	44.9%	17.3%	30.6%	7.1%
Restaurateur	74.5%	7.1%	13.3%	5.1%
Tourist who comes for a roaring of the deer	74.5%	4.1%	8.2%	13.3%
Excursionist	80.6%	2.0%	13.3%	4.1%
Nature guide	86.7%	3.1%	4.1%	6.1%
Mushroom picker	24.5%	21.4%	36.7%	17.3%

4. Discussion

The results of this survey showed that the majority of respondents (nearly 1/3) go to the forest from six to eleven times per year. More than half of them were satisfied with the frequency of their forest visits. The most important reasons for going into the forest were ‘nature, offering pleasant relaxation’ and ‘healthy air’, which is not in accordance with a study by Carvalho-Ribeiro and Lovett (2011), “In addition to being used for collection of timber and non-timber products, forests are also used as recreation sites; traditional activities in forest areas such as grazing and hunting are still important activities in some locations.” It could be explained by Herrick and Rudis (1994), who found that, “Variation existed in preferences by principal activity, user characteristics, recreation activity, and sites surveyed,” or by Šišák et al. (2003) who said, “In various areas and times, various nations and population groups have had a forest with the same technical, physical, and biological nature but varying values of utility.” Respondents in Italy seemed to be interesting about the nature and some leisure time activities, e.g. ‘sport’ and/or ‘observing and/or photographing wild animals or plants’. Price and Chambers (2000) give a nod, “Users choose activities that agree with their idea of a good time”. One of attractions in Cansiglio area is a possibility to observe the wild deer. Living Dolomiti (2011) specify, “In particular, autumn is the ideal time to listen to the roaring of the deer, which marks the deer’s season of love.” Hovardas and Poirazidis (2006) argue that the majority of eco-tourists, drawn by imagery from sources of environmental information, may be predisposed to focus their visits on featured species.

More than 1/2 of asked people chose tourist routes depending on whether they go through the forest. Fyhri et al. (2009) argue that forests have been found to be a favoured type of landscape among some holidaymakers. Font and Tribe (2000) complement that forests are the part of the countryside that visitors enjoy most. The Cansiglio area is a particular place where people come mostly to enjoy nature. Creative Commons (2011) agree, “The whole area is a natural paradise for hikers, being full of fascinating and well groomed trails. In Cansiglio you go to walk in the woods”. Forests here are extraordinary exciting and hiking through tourist trails is ranked among the best trips in Veneto region. Font and Tribe (2000) add, “Sports requiring long distances, such as horseback riding, cross-country skiing and running can be better enjoyed in partly forested landscapes”. Tragol (2011) corroborates, “There are numerous trails on foot or on horseback.”

From the study emerges that respondents prefer most frequently to visit mixed forests and forests with undergrowth. In Cansiglio Forest could be found various kinds of plants. Tragol

(2011) particularize, “The basin is the realm of the beech tree and in the undergrowth you can see all those plants that love the shade: the fern, the wood anemone and wood sorrel.” Veneto Agricoltura (2011) tries to explain nature principles by saying that the undergrowth is closely related to the amount of light that filters through the canopy.

This study also found that almost 3/4 of tourists would rather go to the forest where its areas change from small meadows to clear cuts to glades, etc. This corresponds with findings by Kalivoda et al. (2010), “In forests, heterogeneity was found to be interesting for observers.” Font and Tribe (2000) supplement, “The appeal of forests can be increased by enhancing the variety and contrast in the area with different species contrasting in colour and form, diversity in tree age and structure, smaller clearings and thinning (as opposed to large scale clearings), varying scales of stands” and other variations.

From results for the question about foreknowledge of the level of protection of the study area, it is clear that tourists in Cansigio Forest were not very well informed. Only around 1/10 of them was able to rightly identify the protection status of the area they are in. This is an interesting finding, because questionnaires were filled out in a locality where a big information board with a map of the area, and other information about the area, was placed. Management of the area (Veneto Agricoltura) tries to introduce Cansiglio as a place for relaxation and immersion in nature, but also learning and awareness, “The objective of management is to promote a conscious use of the environment through various initiatives that are organized in the area. There are many paths with signage, allowing an immersion in nature but at the same time trying to make the visitor understand the complex functioning of the surrounding ecosystem” (Veneto Agricoltura, 2011).

The fact that the population of deer is creating problems for the conservation or regeneration of the Cansiglio forest was perceived by almost 2/3 of respondents. Study by Marchiori et al. (2012) confirmed that high densities of red deer seriously impact on forage production by mountain meadows. But these studies are not very well comparable, because their study aimed at estimating the impact of red deer grazing on the productivity of meadows located in Pian Cansiglio. Marchiori et al. (2012) specify, “The study concentrated on the damages to meadows, but it is also important to stress that this problem must be addressed with an ecosystem and holistic approach.”

Another important result of this research is the finding that the majority of respondents were from nearby cities and villages; a great deal of significance have also others demographic characteristics. The importance of knowledge of the respondents’ profile for managers of the area is highlighted by many authors, e.g. Sayan and Karagüzel (2010) who stated that the demographics and perceptions of visitors (such as perceptions of crowding) at different destinations can be used for park planning and management and help to identify a range of problems and issues for outdoor recreation; or Mercado and Lassoie (2002) who aimed that it can be expected that tourists’ perceptions of sustainable development will influence tourism planners’ decisions. Carvalho-Ribeiro and Lovett (2011) conclude by saying that a review of public preferences for forests indicates that these are likely to vary with personal and socio-economic factors such as gender and landownership, professional background and type of recreational activity.

An interesting is also the fact that only less than 1/5 of respondents were enrolled in some naturalistic association. It is essential to find a way how to make the topic of nature protection and sustainable development more attractive, and attract the interest of the public. An education

and environmental teaching seem to be an important element in achieving of sustainability. Gobster (1999) explain, "Ecosystem management offers new opportunities to help expand public ideas of naturalness, and landscape management programs could incorporate ecological principles explicitly into methods and practices." Heer et al. (2003) add an example, "Former studies have shown that information on the reasons for forest management practices can lead to a higher acceptance among forest visitors. This is especially true if some activities have to be forbidden or the freedom of movement in the forest is restricted, as might be the case when protecting a part of a forest (e.g., to allow regeneration) or when actions are taken to prevent social conflicts (e.g., by directing different visitor groups onto different trails)." The importance of work with public is underlined by numerous authors, e.g. Hovardas and Poirazidis (2006) speak about the necessity of education, "The potential of environmental education calls for enhancing visitor environmental knowledge and prompting change of visitor behaviour". Šišák (2011) point out importance of communication, "It is necessary to improve communication between the forestry sector and the public, to support education and objective information about the real socio-economic conception of forest functions and their financing". Petrosillo et al. (2007) add that the positive development of tourism depends on successful strategies to limit tourist numbers, inform and educate visitors, and manage and control the area efficiently. The solutions is offered by several authors, e.g. Mercado and Lassoie (2002) suggest, "One way to work with the public may be to develop facilities in tourist areas that allow tourists to learn in a relaxing environment the importance of responsible management in order to attain sustainable development." Hovardas and Poirazidis (2006) recommend educational programs which can increase duration of stay at the study area and consequently increase levels of visitor participation in ecotourism activities.

5. Conclusion

Forest visitors' preferences were examined, many interesting information were ascertained. This case study, concerning an onsite questionnaire inquiry in Cansiglio Forest, shows the frequency of forest visits and the satisfaction of respondents with their frequency of forest visits; reasons for forest visits and their importance for respondents were explored; as well as preferences of tourists were discovered. Mercado and Lassoie (2002) clarify the importance of those data, "In the case of a tourism area, tourists' preferences drive most of the development decisions by tourism planners and managers."

The results also demonstrate tourists' ideas about regional problems in the Cansiglio forest, especially the issue of red deer. One of the most important findings of this research is created visitor's profile. It should clarify tourists' expectations and could present some proposals on how to improve conditions in order to draw more tourists. But we should not forget about the variability of visitors, "Assuming that not all visitors have the same expectations and interests, it is important to provide different recreational opportunities in an attempt to satisfy all demands" (Múgica and De Lucio, 1996). The solution seems to lie in more research and working with the public, particularly in local (or regional) level. Because the increased recreational demand for areas of high ecological value implies potential conflicts between conservation and recreational goals (Torbidoni et al., 2005), it is necessary to help to visitors to understand the importance of sustainability, as well as to teach them in which way is the nature influenced by human. Torbidoni (2011) point out that achieving and maintaining an appropriate balance between conservation and use of these areas for recreation, sport

and tourism is not an easy task. That is why all recommendations for forest managers should concern not only how to enhance recreational potential for specific areas but should also help them to find the right balance between the level of recreational use and the conservation of nature.

Future research about forest visitors and their expectations is highly recommended, this study could be used as an example for other areas with similar (natural and cultural) conditions.

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I wish to thank Prof. Paola Gatto (Padua University) for her aid with organization and for many pieces of useful advice during research in Italy.

I also thank Dr.ssa Paola Berto and Claudio Ferrazzo (Veneto Agricoltora) for their support in the Cansiglio area.

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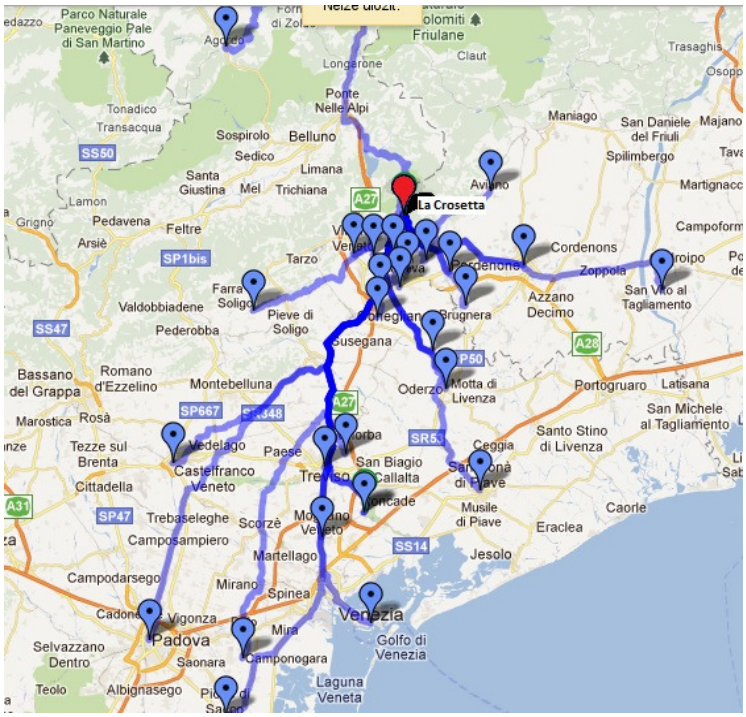
Note: All references are cited in the List of References at the end of the thesis; one exception is the reference to a literature review of the thesis published in 2011:

Drábková, A. (2011) Analysis of Public Opinion on Forest and Forestry in the Czech Republic. PhD thesis - literature review, Czech University of Life Sciences Prague, Department of Forestry Economics and Management.

Appendix

Map of Places Where Two or more Respondents Were From (Excluding New Zealand)



Created by Alena Drábková using Google – Data map (2011)

7. Discussion

The results themselves are valuable and certainly very interesting, but much better explanatory power is possible through comparison with the results of other studies.

7.1. Comparison of Results from the Czech Republic and from Italy

The author of this thesis did not focus her attention solely on conducting research inside the borders of the Czech Republic. She also carried out a research study in Italy. More about that study is recorded in chapter 6 - Survey in Italy.

Though the study carried out in Italy was based on the research already completed in the Czech Republic, and efforts were made to carry out the research in as similar a way as possible, the questionnaire was, logically, not exactly the same as the questionnaire compiled for research in PLA Blaník. In the Cansiglio area different natural conditions exist, and some local problems were noted (e.g. with deer); therefore, a new questionnaire was drawn up. "In compiling the Italian version of the questionnaire, recommendations were included from Veneto Agricoltura (the management of the Cansiglio area) to offset regional problems and issues" (Drábková, 2013a). Final versions of the questionnaire can be found in appendices. For an Italian version used during data collection, see Appendix X. For an English version – a translation created just for the thesis – see Appendix XI.

A different number of respondents were questioned in Italy than in the Czech Republic. Therefore cumulative relative frequencies of answers were used for the comparison, meaning the quantity of single answers was expressed in percentages of the total number of answers.

7.1.1. Response Rate

The first imperative for a comparison of both studies is the response rate. As was written above, in the Czech Republic the response rate was more than 90% (exactly 90.6%). Conversely, in Italy it was less than 64% (exactly 63.9%). This is a significant difference. It could be explained by several possible reasons:

1) Location: In the Czech Republic research was done at a very good strategic point, because respondents were asked approximately halfway up the trail, in a place where many of them wanted to take a break. On the other hand, in Italy the inquiry took place in a parking lot, so potential respondents were people starting or ending their trip. Interviewers pointed out that many of them refused to participate because they did not want to loose time completing a questionnaire.

2) Willingness: In CZ the majority of respondents seemed to be happy that somebody was interested in their opinion and they filled out the questionnaire, pleased that they could help with a survey. Interviewer said that a lot of people asked to complete the questionnaire even if they were not approached. Many respondents also spoke with an interviewer about the topic of research, about forests in general, and about her studies in university. By contrast, in Italy many people's reactions showed that they were disturbed by the survey; they almost seemed to be angry that somebody asked them for something. It is possible they were bored by the number of questionnaires at that time and/or in that area. One exception was a man, who started completing the questionnaire on his own during the interviewer's break.

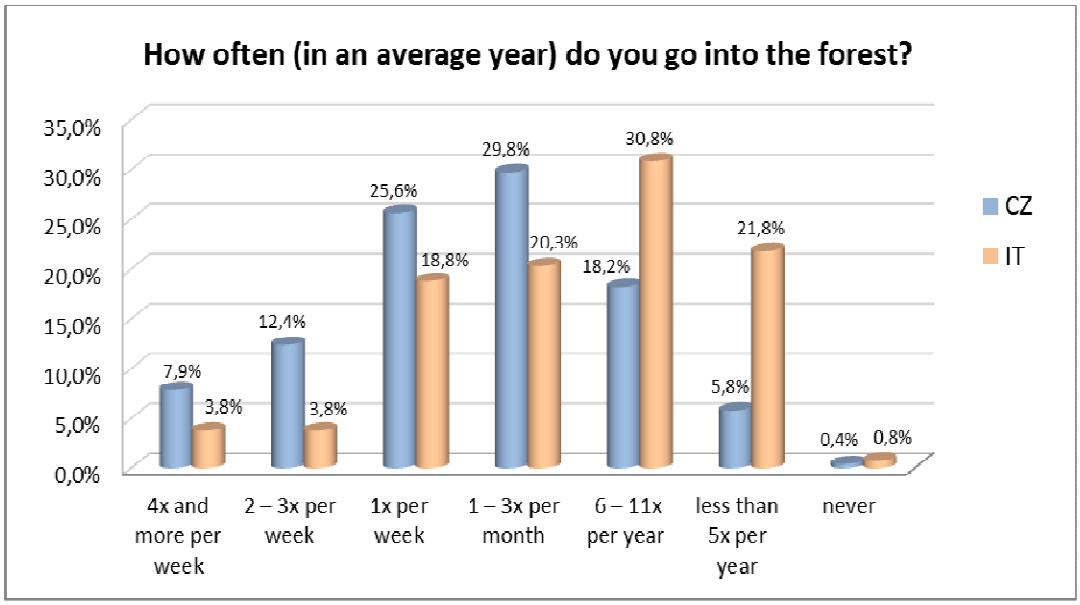
3) Nationality of the interviewer: For surverys in both countries, the interviewer was the same person, a Czech woman (author of the thesis). In CZ both the interviewer

and the respondents were the same nationality with the same native language. In Italy the interviewer had many experiences in which respondents began to speak with her without any trouble, but backed out when the research was introduced. More than half of the people who refused to participate did so with derisive comments about the inferiority of the Czech Repubic and its people, including haughty asking why the Czech student conducts a survey in Italy.

7.1.2. Frequency of Forest Visits

Figure 14 shows responses to the question, 'How often (on an average year) do you go into the forest?' At first glance, it is apparent that the answers from the Czech Republic and Italy differ considerably. There is no doubt that Czechs go into the forest more often. More than 3/4 of Czechs go into the forest at least once per month. In contrast, more than 1/5 of respondents in Italy go into the forest less than 5 times per year.

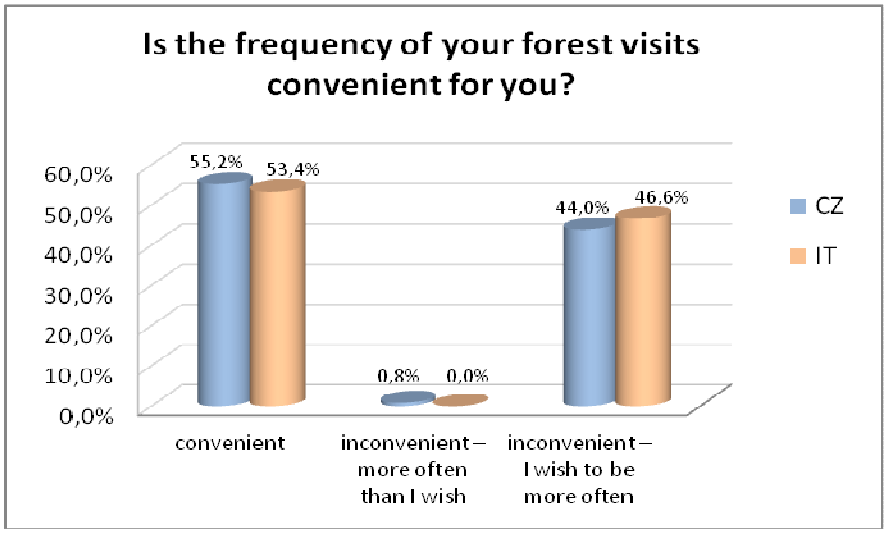
Figure 14: Frequency of Forest Visits – Comparison CZ vs. IT



It is interesting that in the answers to the question of whether the frequency of their forest visits is convenient for them, respondents from both groups made it clear that they were more or less equally satisfied and dissatisfied (see Figure 15).

The differences may be due to the different lifestyles of these two nations. Based on personal observations, this author assumes that it is not typical for Italians, just to go for a walk into the forest. This may be due to the considerable influence of the different structure of the landscape; which in Italy, forests are grown fairly in extensive forest units between nearly treeless agricultural lands, while in the Czech Republic, forests (small and large) are spread across the landscape diversely. With some exaggeration, it could be said that in CR the forest is always nearby.

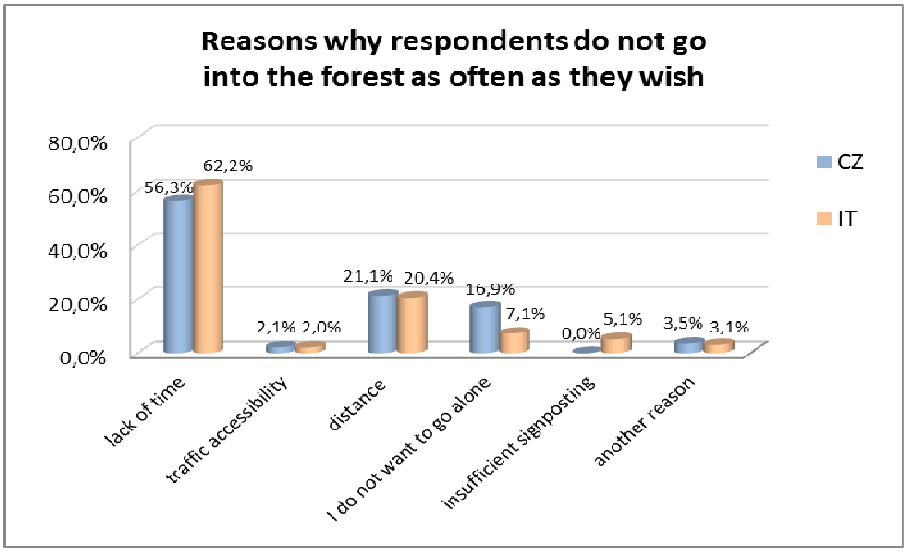
Figure 15: Convenience of the Frequency of Respondent's Forest Visits – Comparison CZ vs. IT



The reasons offered to respondents as to why they might not go into the forest as often as they wish were not the same in both questionnaires. In the Italian version one more possible answer was made available which was gratuitous in the Czech Republic – 'insufficient signposting (and thus the fear of getting lost)'. Even if the respondents could choose more than one answer, and thus there is a high probability that they selected all the reasons applicable to their situation, there is still a possibility that the percentage layout of answers could be distorted.

The responses confirmed the hypothesis that the most frequently designated reason would be 'lack of time'. This was limiting for more than half of respondents in both groups. Significantly, over 20% of all respondents marked 'distance between the forest and home'. In the case of the Czechs a substantial number (almost 17%) marked 'I do not want to go alone'. In both countries 'traffic accessibility' was limiting only for 2% of respondents. This low number is probably due to the fact that in the Czech Republic as well as in Italy, almost every family has an available car and therefore does not need to rely solely on public transport. For all responses see Figure 16.

Figure 16: Reasons Why Respondents Do Not Go Into the Forest as Often as They Wish – Comparison CZ vs. IT

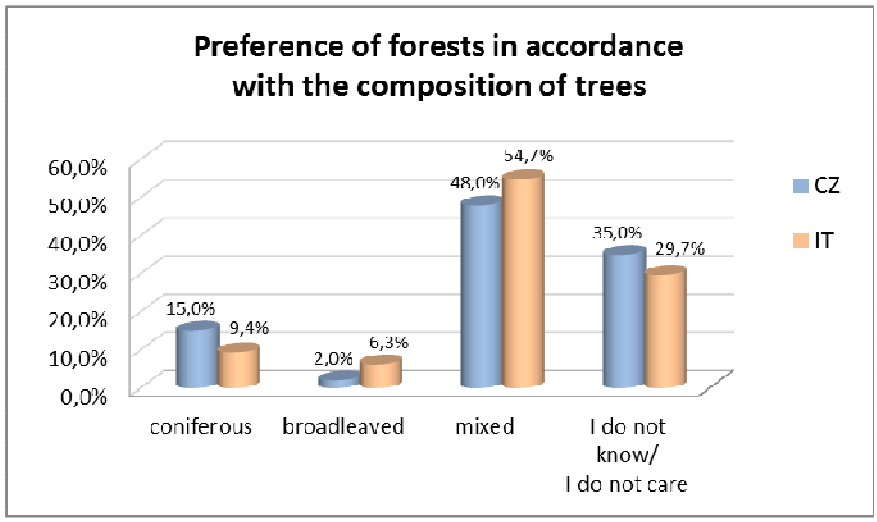


7.1.3. Preferences of Forest Structure

Another question, the answers to which were compared between Czechs and Italians, was 'What kind of forest do you seek most frequently?'

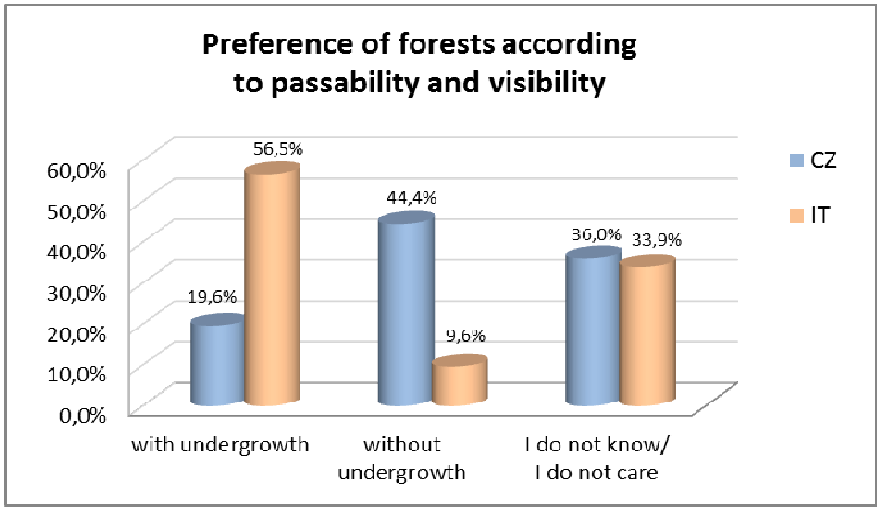
According to the composition of tree species, both groups most preferred 'mixed' forests (about 1/2 of respondents), and least preferred 'broadleaved' forests[4]. For both groups the response 'I do not know/ I do not care' was significantly present - roughly 1/3 of respondents marked this answer. A chart of all responses can be found in Figure 17.

Figure 17: Preference of Forests in Accordance with the Composition of Trees – Comparison CZ vs. IT



For questions concerning passability and visibility, the responses were very different. In Italy, more than ½ of the respondents preferred 'forest with undergrowth (herbs, shrubs, etc.)', while almost ½ of Czechs mostly seek 'forest without undergrowth'. The frequency of the response 'I do not know/ I do not care' is important. This answer was chosen in both countries by more than 1/3 of respondents. There is no known explanation for such inconsistency. For a graphical representation see Figure 18.

Figure 18: Preference of Forests According to Passability and Visibility – Comparison CZ vs. IT

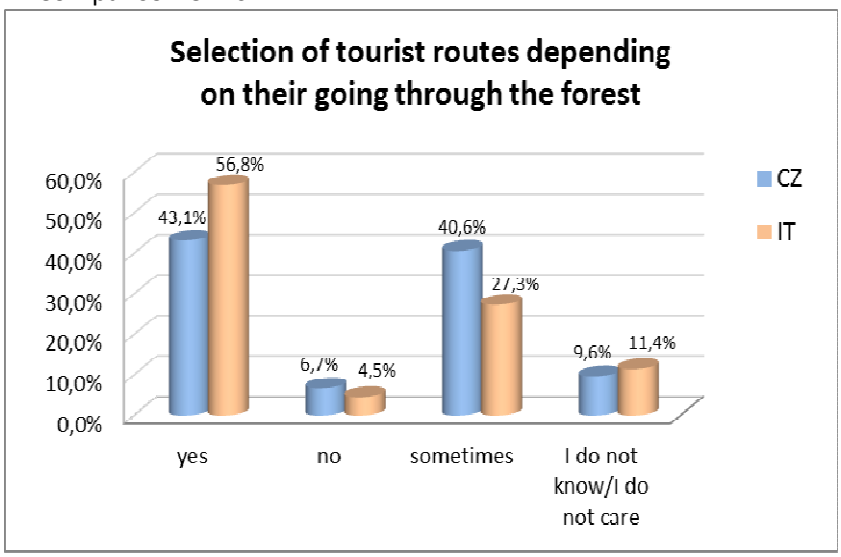


[4] Note: when introducing this research to an Italian colleague, this question was raised: "Do you really think that the Italians know the meaning of the terms 'coniferous', 'broadleaved' and 'mixed forest'?" It was advised that explanations be added into the questionnaire.

7.1.4. Selection of Tourist Routes

Answers to the question 'Do you choose tourist routes depending on whether they go through the forest when you are planning your trip?' were proportionally variable, but it can be stated that for both groups the most frequent answer was 'yes' and the second most frequent was 'sometimes'. In both countries the response 'I do not know/ I do not care' was marked by only about 10% of respondents. An accurate record of responses is graphed in Figure 19.

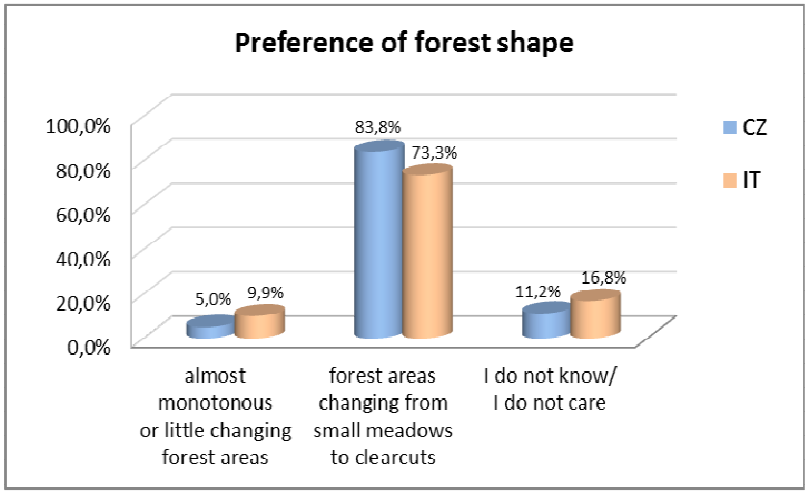
Figure 19: Selection of Tourist Routes Depending on Their Going Through the Forest – Comparison CZ vs. IT



7.1.5. Preference of Forest Shape

The last question on the survery aimed to clarify preferred forest shape. As expected, the majority (about ¾) of respondents marked that they would prefer to go into the forest where 'the forest areas vary from small meadows to clear cuts, glades etc.' Figure 20 reflects more reponses.

Figure 20: Preference of Forest Shape – Comparison CZ vs. IT



7.2. Results Emerging from Other Studies

7.2.1. Visitor's Profile

Drábková and Šišák (2013) argue, "Our research helped, among other outcomes, to create the typical visitor's profile. The data obtained show who the people coming into the study area are, as well as, when compared to data from the Czech Statistical Office, how they differ from the overall population of the Czech Republic".

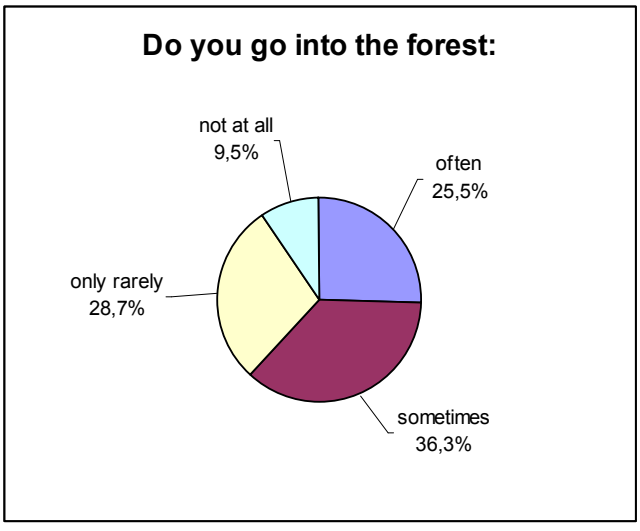
As mentioned before, the most common visitor in the PLA Blaník is female (58.3%), between 35 and 44 years of age (20.3%), a high school graduate (36.5%), working in a technical specialization (27.2%). She lives in a city with 1 million inhabitants or more (26.1%). In a study by Roovers et al. (2002) most respondents were male (73%), and the largest age group was 31-45 years (37.8%). Kořínek et al. (2005) present their results: "Among visitors the majority were younger people (70% of respondents were up to 44 years of age)". Data evaluation of Drábková's study (2012) reveals that the most frequent type of visitor in the PLA was a male (51.5%), between 25 and 34 years of age (34.5%), had finished university (41.5%), and had a professional focus not related to the protection and care of landscape and nature (62.1%). He spent most of his childhood in a city (55.3%) and now he lives in a city (69.2%).

7.2.2. Frequency of Forest Visits

The results of this survey show that the majority of respondents (nearly 1/3) go to the forest from 6 to 11 times per year. More than half of them were satisfied with the frequency of their forest visits (Drábková, 2013b). Roovers et al. (2002) state that more than 50% of visitors in their study came at least once a week to the forest complex.

TNS Factum (2001) brings other findings, "The first research question tried to determine the frequency of forest visits. The results are interesting in themselves. They show that 1/4 of people go into the forest often and more than 1/3 go at least occasionally – that means more than 1/2 come into contact with forests quite often". A graphical illustration is presented in Figure 21.

Figure 21: Frequency of Forest Visits by TNS Factum (2001)



Source: TNS Factum (2001), amended by Alena Drábková

Roček and Zich (2009), among others, questioned the relationship between the respondents and the forest and the need for a forest-like environment. They utilized a new method

of dividing respondents into groups of citizens and students in a 1997 survey, then in 1998 questioned forest owners. Results from both surveys are compared in Table 8.

Table 8: Relationship of the Respondents to the Forest and the Need for a Forest-Like Environment

	Citizens (%)	**Students** (%)	**Owners** (%)
The forest is something I can't be without	26.7	27.8	33.4
The forest is something I need sometimes	52.9	62.0	53.8
The forest is nice, but I can live without it	17.6	9.4	9.8
I am indifferent to the forest	1.4	0.7	1.6
I do not know/I have no idea	0.5	0.2	0.3

Source: Roček and Zich (2009), graphical design by Alena Drábková

eAGRI (2013) shares the results of a long term study about forest attendance, "According to the data, forest attendance in 2011 was above average– i.e. 23.1 forest visits per capita, and 98.5 visits/ha of forest land - compared to the long-term average of 20.1 visits/capita and 84.1 visits/ha of forest land for the entire reporting period". A full breakdown of data from all reporting years can be found in Table 9.

Table 9: Visits to the Forest with a Legal Right of Access*, 1994–2011

Year	**Number of visits**	
	per capita	**per 1 ha *)**
1994	25.3	105.7
1995	22.4	93.4
1996	17.3	72.0
1997	23.4	97.4
1998	19.4	80.7
1999	21.6	89.9
2000	22.6	94.1
2001	23.1	96.3
2002	19.6	81.5
2003	19.3	80.4
2004	16.2	68.0
2005	20.4	85.9
2006	18.8	79.3
2007	18.9	79.6
2008	13.5	56.9
2009	16.5	69.6
2010	20.3	85.3
2011	23.1	98.5
Average	20.1	84.1

*) forest land accessible to the public (mainly non-military forests and some other areas)

Source: eAGRI (2013), graphical design by Alena Drábková

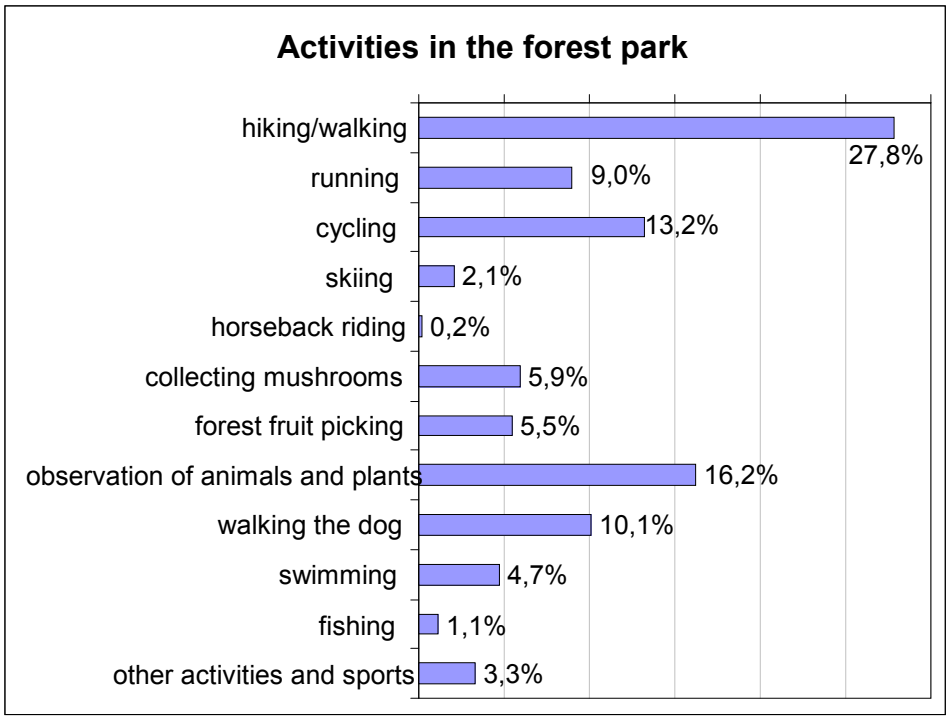
7.2.3. Reasons for Visits and Importance of Recreation

7.2.3.1. Visitors' Activities

As was supposed in the hypotheses the most common reason for staying in the forest was relaxation (especially enjoying nature). Conversely to our hypotheses, picking forest fruits, mushrooms, or medicinal plants was not a unilaterally important reason (Drábková 2013b). Roovers et al. (2002) state, "Concerning activities, most visitors (48%) came for a walk and biking was the second most practised activity (29%). Additional reasons for visiting the forest were: health reasons (64%), relaxation (47%), and enjoying nature (36%)". Kearsley (2000) adds, "Viewing or hoping to view wildlife has been ascribed 1/3 of the overall value of forest for recreation". Roček et al. (1997) argue, "It transpired that people visit the forest mainly for a sense of relaxation, comfort, and joy. The most common reason for visiting the forest is collecting mushrooms, followed by walking. Surprisingly, in the case of students, the most common reason was collecting fuel, followed by collecting mushrooms and walking".

Useful results are presented by Bartoš and Novák (2008). However, there is a question as to whether they are comparable, because their study was held in a forest park in Prague. Answers for their question 'Do you participate in any of these activities in the forest park?' showed that the most common activity for visitors in forest park Hostivař is walking, followed by observation of animals and plants, cycling, walking the dog, and running. More specifics are given in Figure 22.

Figure 22: Activities Applied in Forest Park Hostivař



Source: Bartoš and Novák (2008), graphical design by Alena Drábková

Concerning protected areas, Drábková (2012) describes some of the results of the project 'Influence of Aesthetic Values on the Tourist Trade in Protected Landscape Areas', "The results showed that the majority of tourists go on a trip with friend(s) or family and they usually spend only one day in the PLA. More than 1/2 of them use catering services, but less than 10%

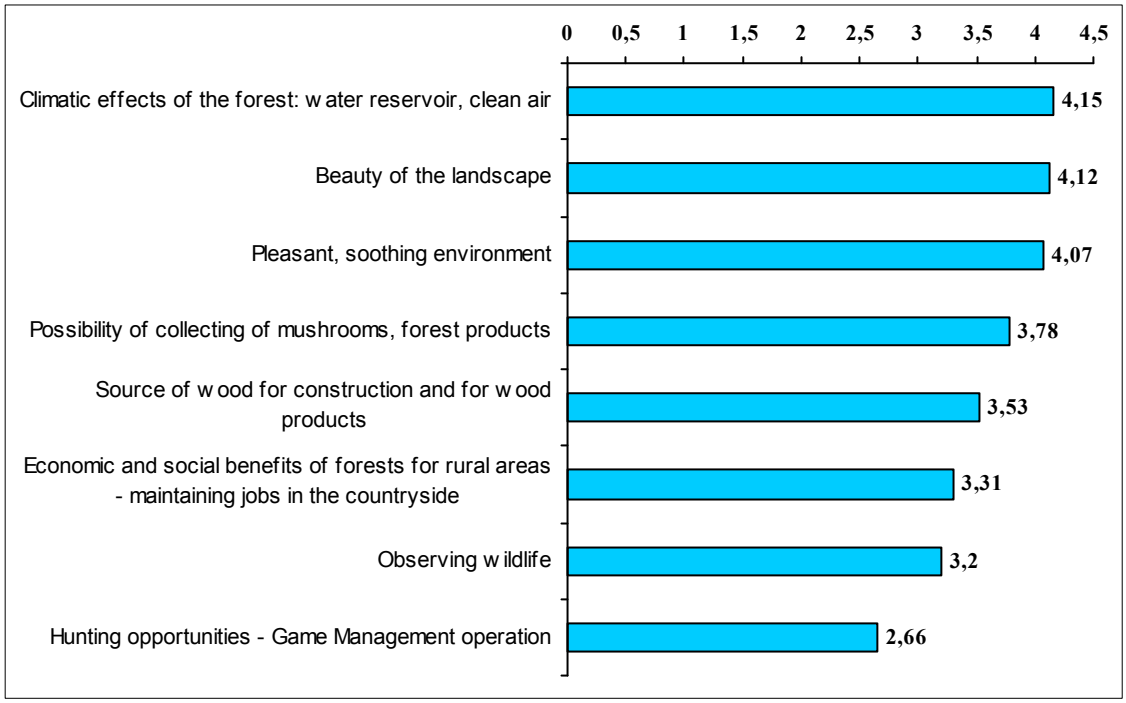
of tourists purchase locally produced goods". That study also found that the main goals of visiting the PLAs were to 'stay in nature' (for almost 45% of respondents) and to 'visit landmark(s)' (22% of respondents). Cunha (2010) adds, "Visitors hike the studied trail to enjoy nature".

Holý (2005) listed sports activities in PLA Jizerské hory without their percentage of popularity: ski-running, skiing, climbing, cycling, long distance marches and runs, orientation running, motorist sports, and other sports (e.g. dogsled races). Also Kořínek et al. (2005) offer an overview of activities, in his case in the area of PLA Český ráj: hiking (classical usage of leisure time for 70% of visitors), cycling, skiing and ski tourism, horseback riding, orientation running, climbing (7% of visitors).

7.2.3.2. Forests' Benefits

Research by TNS Factum (2001) for the state enterprise Forests of the Czech Republic found that the Czech public appreciates forests mostly for their climatic, aesthetic, and psychological value. "We can say that forests are primarily assessed in terms of their importance to the environment and for the relaxation of man. Economic values - collection of mushrooms and berries, logging and socio-economic benefits for rural areas (maintenance of employment opportunities) - are perceived less intensively. People attributed relatively small importance to the benefits associated with game in forests (observation and hunting)" (TNS Factum, 2001). The ratings of the importance of particular forest benefits are in Figure 23.

Figure 23: Assessment of Forest Benefits



Mathematical averages of each rating on a scale of 1 (not important) to 5 (very important)

Source: TNS Factum (2001) – amended by Alena Drábková

A great deal of data is available from a wide scope of studies concerning non-wood forest product collection from 1994-2006. Šišák (2009a) writes about results from 1994-1995,

"The collection of NWFP took 2nd place among the main reasons for visiting forests, with an almost 29% share (short-term relaxation took 1st place, with 42.5%)". Mushrooms were collected by 90%, bilberries by 70%, raspberries by 43%, blackberries by 35%, cowberries by 12%, and elderberries by 40% of respondent households (Šišák, 2006). Over the years the state was changed and Šišák (2009a) lists more statistics, "Mushrooms were picked by more than 70% of households, bilberries by almost 50%, raspberries by almost 30%, blackberries by more than 20%, elderberries by 15%, and cowberries by 8% of the total number of households". One interesting point made during this research is this: "It can be said that there is not a significant relationship between the amount of collected NWFP and the average income of the households" (Šišák, 2006).

According to data for the year 2011 a total of 46.24 thousand tons of forest products were collected in the Czech Republic, which is above average for the monitored period; compare that with the average of 38.4 thousand tons (eAGRI, 2013). eAGRI (2013) continues, "The collection rate per household for major forest crops rose to 11.14 kg with an average of 10.67 kg/household for the entire monitored period". eAGRI (2013) concludes, "The results confirm the fact that in collection and production of forest products there are often very strong annual differences caused by numerous factors".

7.2.3.3. Importance of Recreation in Forests

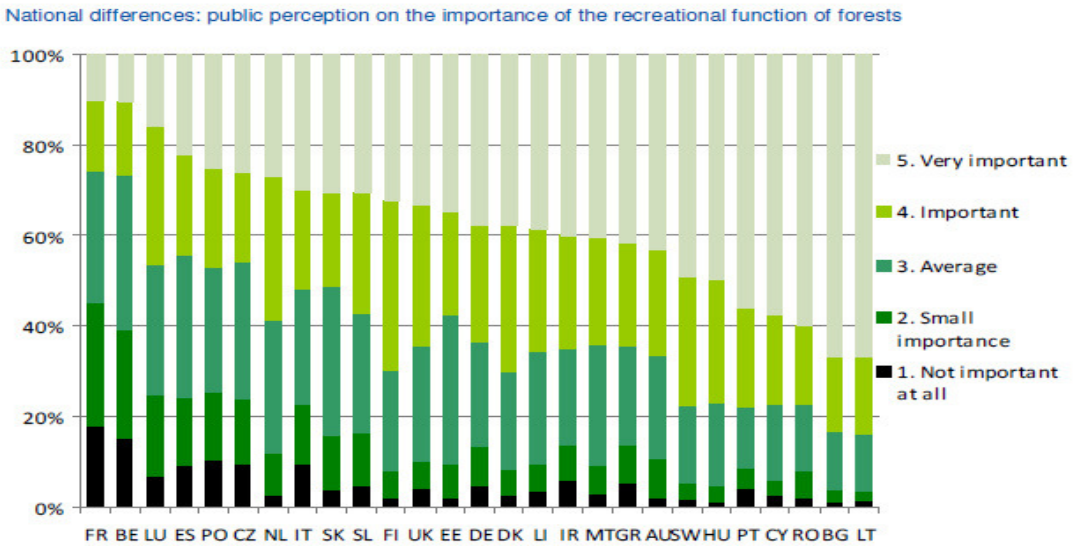
One of the questions in ECORYS's research (2009) deals with the importance of the provision of opportunities for recreation in forests. Answers with their percentages can be found in Table 10. Figure 24 is a comparison across countries.

Table 10: Public Perception on the Importance of the Recreational Function of Forests

Answer	Not at all important	Small Importance	Average	Important	Very important
Percent (%)	5.8	10.2	24.1	23.7	36.2

Source: ECORYS (2009), graphical design by Alena Drábková

Figure 24: Public Perception on the Importance of the Recreational Function of Forests – Comparison Across Countries



Source: ECORYS (2009)

ECORYS (2009) comments, “A comparison across countries shows a largely similar picture across countries, except for France and Belgium: in comparison, these two countries place a much lower emphasis on recreation (only 10.2% and 10.5% of respondents rank it as very important, respectively). The following countries also rate this function at a less than average level for the EU: Spain (55.9%), Luxemburg (53.7%), Czech Republic (54.3%), and Poland (53.1%)”.

TNS Factum (2003) highlights, “It is interesting that respondents did not mention the recreational function too much spontaneously, as if it receded into the background of the ‘more high-minded’ values of forests”.

An exceptionally useful overview of the most important studies of individual countries is presented by ECORYS (2009):

A French survey trying to depict the public’s opinion on various forest functions has identified a variety of statements. The general forest functions were grouped into four categories; a space to escape from city-life, a space for social life, a space to escape from daily life, and a space for physical performance. In more detail, 96% of the questioned French public claimed to go to the forest to enjoy the calm serenity and silence, to breathe fresh air and oxygen or to be in contact with nature; 95% claimed to go to the forest in order to relax in a natural environment; and 91% of the public went to have a nice time in the forest with family and friends (ONF, 2005).

In Germany, 77% of interviewees stated seeing the forest as a place for recreation and relaxation; 55% used the forests for recreational walks. Other activities included observing nature (42%), collecting herbs (20%), having barbeques and parties (17%), as well as jogging and ‘Nordic walking’ (17%) (Kleinhückelkotten and Wipperman, 2007).

A survey from the Czech Republic stated that the collection of non-wood forest products, such as mushrooms and different kinds of berries, had a high recreational value for people in the Czech Republic (Šišák, 2006).

The Finnish public was asked to estimate whether Finland had enough forest area for recreational use, including outdoor activities and picking mushrooms. Nine out of ten respondents evaluated that Finland has a very good or a rather good amount of forest for recreational use (Taloustutkimus Oy, 2007). When asked about the most popular activity during wintertime, approximately 1/5 of the respondents mentioned playing in the forests. In addition, during the summer, 38% of the respondents mentioned that they enjoy picking berries, 35% jog, bicycle, 24% play, and 17% collect mushrooms (Taloustutkimus Oy, 2006).

Over 95% of the surveyed Lithuanian public said that they visited forests for walks. Further important activities included mushroom picking (55%), picnicking (45%), and berry picking (45%). Of the respondents who had visited forests, 25% said that they visited at least 3-4 times per year (Mizaraite and Mizaras, 2006).

According to a survey in 2007, the most popular forest activities among Swiss citizens were recreation and various kinds of sports activities followed by the gathering of non-wood forest products (Seeland et. al, 2007).

7.2.4. Preferences of Forest Structure

In this study the majority of respondents (48%) preferred ‘mixed forest’, 35% did not know or did not care, 15% preferred ‘coniferous’ forests, and only 2% most frequently seek

'broadleaved' forests. In a study conducted by Pospíšilová (2012) respondents mostly preferred mixed forests (62%), followed by coniferous forests (24%), then broadleaved forests (6%), while the remaining portion of respondents (8%) was not decided. Roovers et al. (2002) write that 59% of respondents preferred mixed forest. Roček et al. (1997) state, that coniferous forests are the most popular, and even moreso when they are not very maintained, but rather something between wild and maintained.

Concerning the ease of passage and visibility, our respondents mostly preferred forests 'without undergrowth' (44.4%), 36% did not know or did not care, and 19.6% most enjoyed forests 'with undergrowth (herbs, brush, etc.)'. Roovers et al. (2002) report that 78.9% of their respondents preferred variation in forest layers.

More than 4/5 of our respondents would rather go 'to a forest where forest areas change from small meadows to clear cuts, glades, etc.', only 5% preferred to go 'to a forest which is almost monotonous or where there is little change in forest areas', and the rest did not know or did not care. The importance of meadows and glades is very nicely presented by aesthetician Josef Strachota (1914), "Meadows and small grassy glades significantly improve the scenic value of a forest retreat… Anybody who visits the forest for any purpose, and wanders for a long time through an almost endless portico of trees, is usually very pleasantly surprised when he accidentally finds himself on the verge of grassland. Moved as if by magic, he stays and looks along the green carpet, where here and there shine colourful flowers".

Concerning the attractiveness of different forest shapes, it could be interesting to compare the results of studies which used an assessment of photographs, e.g. Drábková (2013c) and/or Banaš and Zahradník (2012).

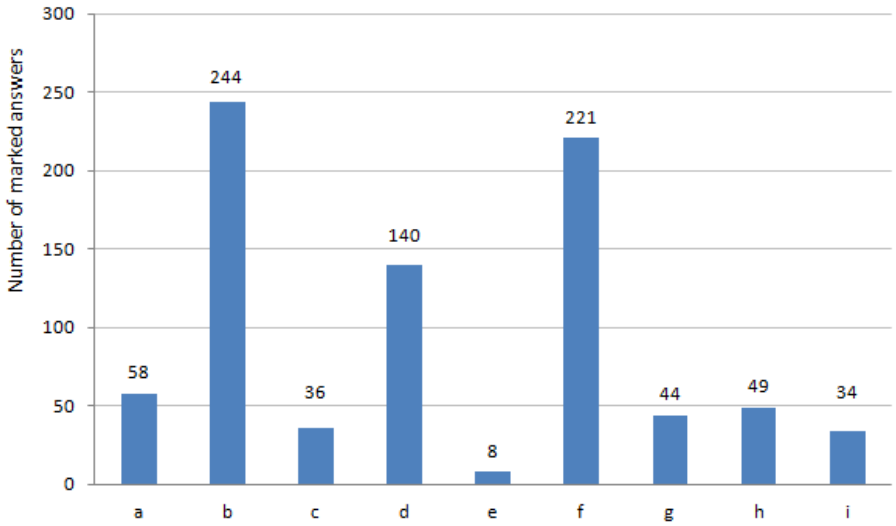
7.2.5. Tourist Trails and Preference of Facilities for Visitors

Drábková (2013b) writes that a very important result of this research is the discovery that 83.7% of respondents at least sometimes choose tourist routes depending partly on whether the route goes through the forest. Torbidoni et al. (2005) explain, "Trail choice is basically determined by the degree of accessibility and difficulty, as well as the popularity of the place, the beauty of the scenery, and recommendations by park staff".

Drábková (2012) argues, "It is interesting to find that the main reasons for choosing the route of a trip were, for the majority of respondents, 'outfit of surrounding landscape' and 'concrete targets (e.g. monuments, natural formations)'". As can be seen in Figure 25, the reason 'the track goes through a forest' also has significant importance.

Drábková (2012) adds that it follows that almost nobody (less than 1% of the total number of answers) planned a trip in accordance with 'provided services (e.g. buffets, pool)'. She speculates, "This is out of the ordinary, because answers on a consequent question implied that more than half of respondents (61%) used some 'catering establishment'. 'Accommodation' and 'tourist information centres' also seem to be quite popular services – both were used by about 22% of visitors". Torbidoni et al. (2005) supplement, "A positive relationship was observed between the difficulty of the trails and the visitors' educational level, sex, and time spent in the park; and a negative relationship between trail difficulty and the age of the visitors, conservationist perceptions, and demand for accommodation".

Figure 25: Motivations for a Decision on the Track of a Trip



Legend: a = length of the trip; b = outfit of surrounding landscape; c = outfit of settlements, folk architecture; d = the track goes through a forest; e = provided services, e.g. buffets, pool; f = concrete targets, e.g. monuments; g = situating of start and goal of the trip; h = good transport accessibility; i = others.

Source: Drábková (2012)

Drábková and Šišák (2013) continue, "Another intriguing finding of the study clarified the tourists' preferences for forest trails and visitor facilities. The preferred trail was 'a maintained trail without equipment for visitors'; the preferred facility was ´nature trail panels´. In PLA Blaník there is already a good system of tourist markings and tourist trails". Ložek et al. (2005) add, "There is a marked nature trail that leads along the tourist trail in the nature reserve". Banaš and Zahradník (2009) found in a study that visitors' answers do not differ significantly among the protected areas. "The biggest proportion of visitors to the protected areas would welcome more information panels (around 80% of respondents) and more information centres (60-70% of respondents). Significantly, over 1/2 (60-70% of respondents) would welcome new hiking tracks in the highest parts and approximately 45-55% of respondents would welcome small refreshment services in the highest parts" (Banaš and Zahradník, 2009). Findings by Roovers et al. (2002) confirm the necessity of certain infrastructure, e.g. litterbins were desired by 88% of respondents, benches by 74%, and toilettes by 38%.

Interesting information was also brought forth by an online opinion poll made by the Agency for Nature Conservation and Landscape Protection of the Czech Republic. One question asked respondents, 'Do you read the information boards on nature trails during your trips?' The negative answer was chosen by less than 1/5 of respondents (AOPK, 2012). A full breakdown of answers from this service can be found in Figure 26.

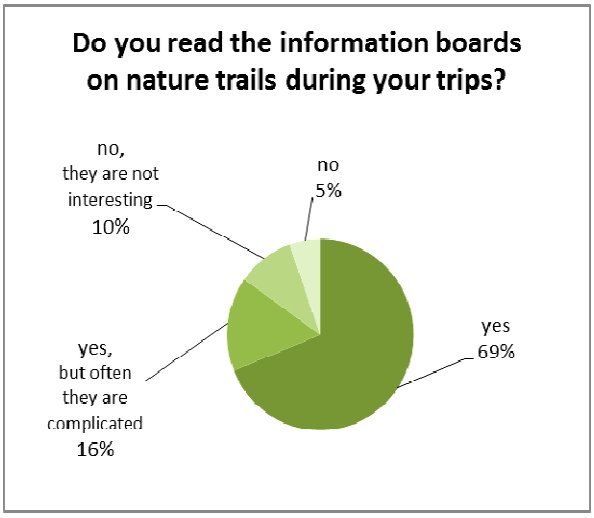
7.2.6. Protection of the Area

From the results for the question about foreknowledge of the level of protection of the study area, it is evident that people have strong knowledge about 'large areas of specially protected areas', i.e. PLAs and national parks together. Conversely, many tourists do not know

the difference between these and 'small specially protected areas'. Therefore they are not able to recognize whether they are in a small protected area or not (Drábková, 2013b).

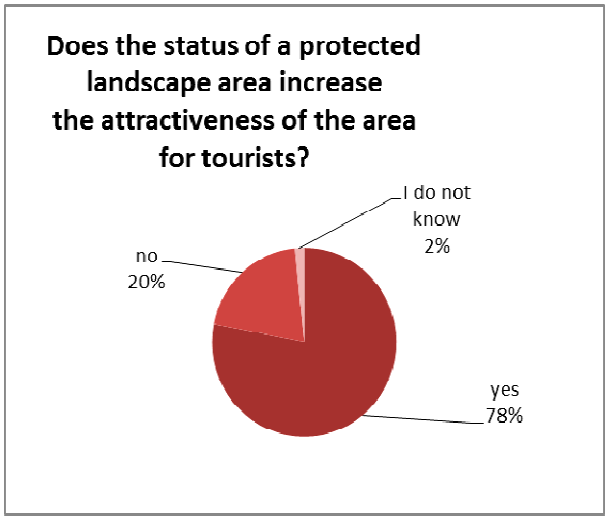
One online opinion poll by the Agency for Nature Conservation and Landscape Protection of the Czech Republic was focused on protection status, asking, 'In your opinion, does the status of a protected landscape area increase the attractiveness of the area for tourists?' More than 3/4 people clicked on 'yes' (AOPK, 2012a). For a graphical representation see Figure 27. The fact that people are influenced by the protection status of various entities is proved also by Mercado and Lassoie (2002), "In general, these results confirm that respondents expressed higher rates of interest for endangered species, trees, ponds, and fruit and vegetable gardens".

Figure 26: Graph showing how many respondents read the information boards on nature trails during their trips



Created by Alena Drábková using data by AOPK (2012)

Figure 27: Respondents' opinions about the influence of the status of the area on the area's attractiveness for tourists



Created by Alena Drábková using data by AOPK (2012a)

7.2.7. Forest Management

Considering constantly sustainable forest management, it is clear from the survey that tourists in PLA Blaník were very well informed – more than 1/2 of them answered something in accordance with the definition of *sustainable forest management* by The General Assembly of the United Nations, "Sustainable forest management as a dynamic and evolving concept aims to maintain and enhance the economic, social and environmental value of all types of forests, for the benefit of present and future generations. It is characterized by seven elements, including: (i) extent of forest resources; (ii) forest biological diversity; (iii) forest health and vitality; (iv) productive functions of forest resources; (v) protective functions of forest resources; (vi) socio-economic functions of forests; and (vii) legal, policy, and institutional framework" (Convention on Biological Diversity – hereafter referred as CBD, 2009). Answers from the questionnaires also uncovered that many respondents perceived the terms 'sustainable forest management' and 'nature oriented forestry' as synonyms (Drábková, 2013b). Petrecsu (2009) adds, "One understands 'sustainable management of forests' to mean the management and use of forest ecosystems so that their biodiversity, productivity, regeneration capacity, vitality, and health are maintained and improved. In addition to this, their capacity to fulfil multiple ecological, economic, and social functions for the present and the future should be

ensured at local, regional, and world levels, without generating prejudices toward other ecosystems".

ECORYS (2009) asked respondents, "In your opinion, SHOULD forests be much MORE actively managed or much LESS actively managed to provide opportunities for recreation in forests and for experiencing nature?" The results were enlightening. "A clear majority of EU citizens (63%) are of the opinion that forests should be much more actively managed to provide recreational opportunities. As much as 85.5% of EU citizens think that forests should be more - or much more - managed" (ECORYS, 2009). Public perception on the preferred forest management style for providing recreational opportunities is shown in Table 11. ECORYS (2009) adds that, in general, the differences across EU countries are minor.

Table 11: Public Perception on the Preferred Forest Management Style for Providing Recreational Opportunities

Answer	Much less actively managed	Less	Neither more nor less	More	Much more actively managed
Percent (%)	1.6	2.4	10.4	22.5	63.0

Source: ECORYS (2009), graphical design by Alena Drábková

7.2.8. Significance of Typical Forest

TNS Factum (2003) writes, "In the next phase, respondents had the task to imagine a typical Czech forest. Then discussants slowly transitioned from romantic fantasies to recall a forest full of tourists, garbage, and asphalt paths. This latter forest is not an oasis of tranquillity and unspoiled nature, but nature marked by civilization (the very thing they actually want to run away from...)". ECORYS (2009) speaks about different experiences with the significance of forests, "Besides the fact that information was only available from a limited number of countries, the general significance of forests in the public eye varies. In the UK, forests are increasingly linked to the issue of climate change, while the Austrian public regards forests as a national symbol of identification. The public in Finland, Norway, and Sweden are very much concerned about specific characteristics of forest stand development, while a majority of the German public claims forests increase their quality of life". TNS Factum (2003) also asked respondents about their perception of the positives and negatives of forests, "The positives are saturated with factors rational as well as emotional, in particular: the possibility of relaxation, recreation, games, fresh air, a source of wood, an overall positive effect on the functioning of the ecosystem, mushrooms and berries, smell, and landscape creation. Among the negatives, disorder figures prominently: illegal dumps, garbage, trash, 'unreasonable' felling, and and poor maintenance".

A study by Roček et al. (1997) found that 44% of citizens and 38% of students tend to have a poor assessment of the state of our forests; at the same time they are usually not able to specify which forests are in good and which are in poor condition. At the end of her study Drábková (2012) concludes, "The study denotes that a large proportion of respondents are satisfied with the present state of the overall visual aspect of the landscape, settlements, and forests in surveyed PLAs".

7.2.9. Information about Forests

Concerning how interesting particular topics of information are, TNS Factum (2001) states, "Most people are interested in two areas of forest information: tourist information and ecological information. A slightly smaller, mediocre area of interest concerns the rights and responsibilities of forest visitors and economic results". Then TNS Factum (2001) continues, "The public declares that in a case of interest, information about the forest is fairly easily obtained, with little difficulty, but general information is usually more difficult to obtain. This shows that increasing the availability of information about the forest is desirable".

In terms of credibility, the most appreciated sources of information are tourist information centres as well as tourist guides and maps. For further credible sources of information, people turn mainly to friends, relatives, and forest workers; less credible sources for information include the media and internet (TNS Factum, 2001).

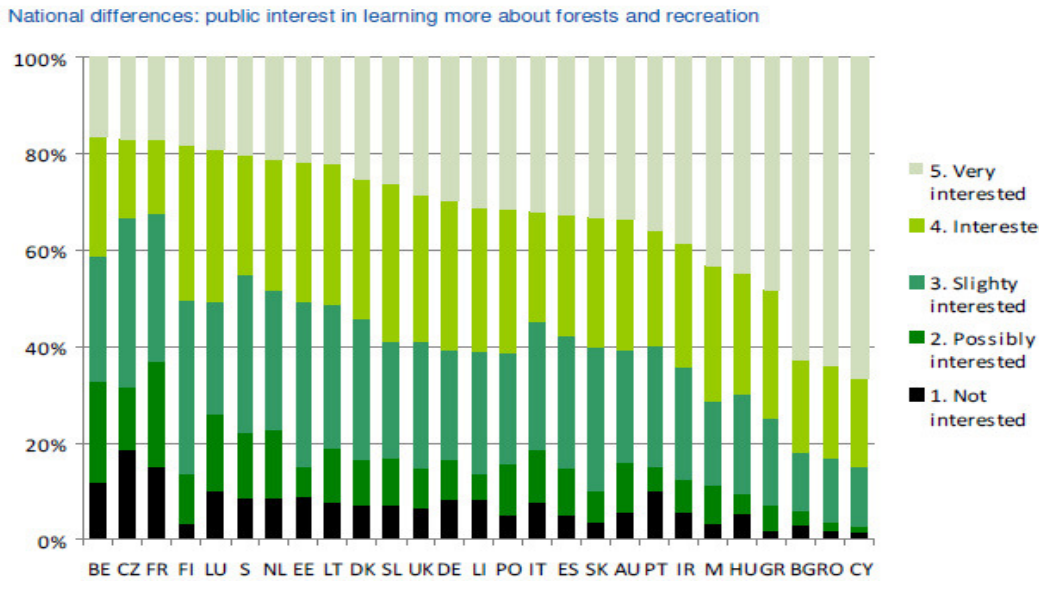
The last ECORYS (2009) question of interest to this thesis was: 'How interested are you in learning more about forests and recreation?' The results stated, "A majority of EU citizens also expressed interest in learning more about forests and recreation. A total of 58.1% state that they are interested or very interested in learning more, while only 16.9% claim to have little or no interest. Thus, information on forests and recreation is of less interest to EU citizens than either forest biodiversity or forest and climate change topics" (ECORYS, 2009). The full breakdown of answers is in Table 12; a comparison across countries can be found in Figure 28.

Table 12: Public Interest in Learning More About Forests and Recreation

Answer	Not interested	Possibly interested	Slightly interested	Interested	Very interested
Percent (%)	7.3	9.6	25.1	25.6	32.5

Source: ECORYS (2009), graphical design by Alena Drábková

Figure 28: Public Interest in Learning More About Forests and Recreation - Comparison Across Countries



Source: ECORYS (2009)

Among the findings which emerge from Figure 30, it is apparent that respondents from the Czech Republic were not very interested in learning more about forests and recreation. ECORYS (2009) considers, "At the country level, the distribution of responses in countries is, with some variation, quite similar to the responses of EU citizens as a whole. The countries where a higher percentage of respondents express no or very little interest in learning more are as follows: Germany (37.1%), Belgium (32.6%), and the Czech Republic (31.8%). On the other hand, in terms of countries where more respondents claim to be interested or very interested in learning more are again predominately south eastern European countries, such as Romania (82.9%), Greece (74.9%), Cyprus (84.9%), and also Malta (71.3%)".

ECORYS (2009) continues, "When asked what topics they would like to learn more about, the clear majority of the European public is interested or very interested in more information on balancing protection and use functions of forests (i.e. sustainable forest management). Similarly, a majority of citizens are interested in learning more about the link between forests and climate change".

As a summary ECORYS (2009) states, "The outcomes of the public survey confirmed the experts' estimation in terms of the most important concern related to forests: the large majority of Europeans chose 'conservation and protection' as their most important topic when thinking about forests". It is a remarkable and motivating study, which has uncovered many useful findings as well as recommendations for the future. For example, the Eurobarometer questions serve as an especially valuable tool for future. "Furthermore, when comparing public opinion to reality, the study has also highlighted some key areas where reliable data is currently not accessible, e.g. forest management damages or the role of forests in mitigating climate change, and thus future communication strategies could include a message on the necessity of having comprehensive and continuous forest monitoring in order to have access to more complete and reliable data in the future" ECORYS (2009).

7.3. Difficulties during Research

Gössling (2002) found some problems with respondents who had a limited knowledge of English, "Language difficulties made it sometimes necessary to conduct the interviews in French or German instead of English. A number of interviews held with Italian and Israeli tourists remained superficial in character as a result of language problems that could not be overcome". Drábková (2013a) also met with some problems due to the language of the questionnaire, "Other exceptions were respondents who did not understand because the questionnaire was in Italian. For them the questionnaire was translated into English by the interviewer". Mercado and Lassoie (2002) state that 26% of respondents who did not agree to answer the survey declined to participate because of language problems. "This means that 3% of the sample was not interviewed due to communication barriers" (Mercado and Lassoie, 2002). To prevent language barriers, the questionnaire for the survey conducted by ECORYS (2009) was translated into the 21 languages of the European Union.

Another problem could be terminology. Tahvanainen et al. (2001) warn, "When seeking attitudes toward different kinds of forest management activities verbally, the forest terminology may be unfamiliar to respondents. Therefore, the interviewer's selection of words may contribute, either consciously or unconsciously, to the attitudes of the respondents".

On the other hand, Stoklasa (1981) emphasizes the weather, "Attendance is highly influenced

by the weather, especially on Sunday when one-day visitors come from the surrounding area".

Shortly before the research started, Stoklasa (1983) did some directed interviews and found that interviews were too exacting in terms of time, capacity and technique; "Therefore, we were forced to leave the survey at the level of a public opinion poll at the last moment" (Stoklasa, 1983). Jacobsen (2007) offers advice that is particularly helpful for in situ and en route studies encompassing itinerant tourists with tight schedules, as it is crucial to limit the comprehensiveness of the enquiries, as it might be difficult to conduct personal interviews of any length both en route and at numerous destinations.

One unique reason some respondents had for not wishing to fill out a questionnaire is described by Stoklasa (1983), "Sometimes they had nowhere to put the questionnaire. This was especially true for downhill skiers waiting in queues for the lifts, because fashionable ski clothes have almost no pockets".

7.4. Possible Utilization of the Results

7.4.1. Research Methodology

Kuvan (2005) comments, "Meanwhile, managing natural resources and environmental components of the tourism product are becoming increasingly important for the protection of the natural environment and for the success of tourist destinations". Kearsley (2000) emphasizes that the traditional wildlife focus of forest management must now be joined by a much stronger social-scientific perspective, something that has not, as yet, sufficiently occurred.

Bell (1997) argues, "Much information has accumulated empirically by landscape architects in order to offer optimal planning, design, and management solutions at particular sites for specific types of outdoor recreation". Karjalainen et al. (2010) disagree, "Insufficient dialogue between different disciplines has led to the lack of multidisciplinary frameworks and methodologies. Methodologies are still under development in some fields of research, such as the restorative and therapeutic effects of forests". Figueroa and Aronson (2006) add that recent studies from natural scientists underscore the need for integrating many factors in the selection, planning, financing, and managing of parks and other protected areas. Karjalainen and Tyrväinen (2002) supplement, "Landscape designers and forest managers require knowledge about people's perceptions and interpretations of different landscapes. They need to know both what kinds of landscapes generate pleasant feelings and enhance people's well being as well as what kinds of stimuli create displeasing emotions and negative feedback". It is therefore interesting to identify the different segments and their key differentiating aspects, and above all to translate this knowledge into the planning and management of a zone or network of natural areas (Torbidoni, 2011).

Petrecsu (2009) points out that the sustainable management of forests (as with sustainable development in general) is not an option, but a necessity in the present-day world. Cunha (2010) agrees by saying that conservationists and researchers have to study the potential impacts and help managers to find the limits and alternatives for low impact, high quality recreation in protected areas, promoting the real conservation of biodiversity and ecosystems. Torbidoni et al. (2005) state, "The degree of conservation in a certain area can be conditioned by the level of recreational use, which in turn can be modified in accordance with the main characteristics of demand in that area". Torbidoni et al. (2005) higlight, "For management

purposes, it is important to know that the generic profiles of visitors and their trail preferences were not homogeneous, but could be grouped using relatively simple statistical methods".

7.4.2. Visitors' Demands

Roovers et al. (2002) state that an appreciation for visitor demands on natural resources and man-made facilities is required to identify the key issues that could be useful in decision-making and management. "As more visitors come into one certain forest, the variety of conditions for forest management grows, especially for forests fully economically exploited; that brings about the necessity of an individual approach to forest management as well as forest management planning, organisational change, and investments into forest equipment by various recreational facilities" (Mráček, 1975). Kroupová (2008) agrees, "The recreational function of forests leads to an adjustment of the forest environment, such as greater attention to the passability and visibility of forests, the maintenance and construction of targeted views in the woods, the construction of small resting areas within a radius of significant stand components, creating and maintaining aesthetic glades and corners in forests, the temporary use of forest areas, and the restoration and maintenance of tourist view-towers within forests".

Daşdemír (2005) thinks that the most appropriate recreational mix provided by a national park needs to be determined for effective planning and management and should take into consideration the demands of the user population and the resources available. Kearsley (2000) adds that control of the effects of recreation and tourism is the principal concern of native-forest managers. "However, a working knowledge of which visual landscapes are preferred by recreational visitors and the landscape elements within scenes that account for this preference is essential to managing recreational environments within governmental policies. This same information can be used to develop an empirical understanding of how recreational visitors perceive visual resources" (Hammitt et al., 1994).

Torbidoni et al. (2005) point out that not all visitors' expectations or needs can be satisfied. Assuming that not all visitors have the same expectations and interests, it is important to provide different recreational opportunities in an attempt to satisfy all demands (Múgica and De Lucio, 1996). Kearsley (2000) concludes, "Clearly, the forest recreation experience is not tolerant of a large number of other users".

7.4.3. Visitor Management

Recreation in a territory can be influenced by so-called visitor management (Bartoš and Novák, 2008). Zahradník et al. (2012) explain, "The definition of the term *visitor management* includes, in particular, communication and work with the visitors of the area and a properly selected and maintained network of hiking trails and recreational activities. This creates the sensation that the tourist is well taken care of, and ensures long-term monitoring of environmental changes, the number of visitors, their motion in time and space, and their preferences and opinions. Without long-term monitoring of tourism, quality visitor management of the protected area is practically impossible". Bartoš and Novák (2008) have their own definition of the term *visitor management*, "This is a set of management techniques and tools used by both private and public tourism bodies to regulate flow and visitors' behaviour. The procedures may be indirect (physical changes in the arrangement of the territory, education, economic instruments) or direct (less frequent enforcement and restrictive measures)".

Zahradník et al. (2012) believe that comprehensive visitor management is one of the key prerequisites for the successful and sustainable management of a natural environment and for regional development. Bartoš and Novák (2008) add that the management of recreationally used areas is responsible for protecting the site and for paying attention to the enjoyment of visitors, so as to ensure the compatibility of recreation and nature conservation. Mráček (1975) continues, "The demand for forests which are set up just for the purpose of recreation is intensely connected to the frequency of visits". Torbidoni et al. (2005) propose some possibilities, "The number of visitors should be managed either by offering additional facilities or by limiting use, with the aim of maximizing benefits while minimizing conflicts".

Cunha (2010) warns that mismanagement of tourist activities could intensify the degradation of nature in protected areas. Holý (2005) specifies, "The role of nature conservation is to guide visitors to the appropriate routes with an effort to not exceed an acceptable load on the protected area, in order to protect valuable areas. Traffic and the parking of visitors' cars create conflicts in the PLA". Kořínek et al. (2005) add that it is necessary to make a considerable effort toward quality organization of tourism with increased protection of the most affected areas. Effective planning, management, and control are preconditions for a sound relationship between protected areas and tourism (Petrosillo et al., 2007).

7.4.4. Administration and Organizational Institutions

Karjalainen et al. (2010) write, "A forest therapy base is usually managed by local governments, and some companies have started to use forest therapy for their employees' health care. Moreover, there are numerous permanent international organizations and research institutes which work with links between health and environment, e.g., several United Nations' programmes and organisations."

Rametsteiner and Weiss (2005) note, "Forest policy institutions and forest knowledge institutions have difficulties in establishing systematic and stable relationships with other sectors that in fact are closely related to existing or potential markets for forest products and services". Then they continue, "It seems recommendable to make steps to enhance policy interaction with policy actors in areas that are most important for forestry, e. g. tourism, nature conservation, etc. Workshops, regular excursions, and other forms of opportunities for interaction can begin the establishment of closer cooperation".

7.4.5. Development of Tourism

De Aranzabal et al. (2009) highlight that tourism is a driving force that is generally considered an opportunity for promoting economic and social development, as well as being a useful tool for landscape planning, management, nature conservation, and monitoring environmental quality. Nyaupane and Poudel (2011) observe, "In sites where tourism is highly developed, people receive more economic benefits, are more empowered, and take more pride in the national park than other, less developed sites". Visitor information and consideration of the recreational experience would be especially good additions for the development of improved long-term management plans (Sayan and Karagüzel, 2010). Petrosillo et al. (2007) point out that the positive development of tourism depends on successful strategies to limit tourist numbers, inform and educate visitors, and manage and control the area efficiently.

Cunha (2010) states, “Ecotourism is considered an important economic solution for the sustainable use of protected areas, and continues to grow worldwide”.

The planning and management of recreational activities in protected areas involves understanding many complex factors; instead of focusing on the quantity of users, the type of activities, and the sensitivity of habitats to different activities, the major consideration should be on the planning and management of nature-based tourism (Torbidoni, 2011; Törn et al., 2009). Hearne and Salinas (2002) suggest that protected area managers must be able to develop infrastructure, access, and use restrictions, which facilitate the dual goals of conservation and tourism development. But achieving and maintaining an appropriate balance between conservation and use of these areas for recreation, sport, and tourism is not an easy task; additionally, tourism development in protected areas provides an alternative to the exploitation of environmental resources such as agriculture, cattle farming, forestry, and mining (Nyaupane and Poudel, 2011; Torbidoni, 2011).

7.5. Implications for Future Research and Suggestions for Practise

7.5.1. Necessity of Education and Work with the Public

Hovardas and Poirazidis (2006) speak to the necessity of education, “The potential for environmental education calls for enhancing visitor environmental knowledge and prompting changes in visitor behaviour”. Rametsteiner and Weiss (2005) continue, “The so-called ‘forest pedagogies’ (German: Waldpädagogik) is one of the very rare examples of successful innovation in the service sector in forestry. Forest pedagogies mean environmental education activities where foresters share their knowledge with children or other interested persons of the public”. Šišák (2009a) supplements that the forest environment is an irreplaceable source for knowledge of nature and its evolution as well as relationships between the natural environment and society.

Holý (2005) refers to the actual state in our country, “In the Czech Republic, in December 2004, the government approved the document ‘Sustainable Development Strategy’. In this document, we read that an important element in achieving sustainability is action through education, i.e. environmental teaching and awareness, to individuals and organizations in order to change patterns of behaviour, production, and consumption to be more sustainable”.

TNS Factum (2003) offers a solution, “So it is mainly about finding a way to make this topic more attractive, and attracting the interest of the public. In terms of form it is, according to the respondents, a perfect combination of information promoted by the mass media and regional operations in the sense of education (especially children)”. Mercado and Lassoie (2002) advise that one way to work with the public may be to develop facilities in tourist areas that allow tourists to learn in a relaxing environment the importance of responsible management in order to attain sustainable development.

Concerning study areas, PLA Blaník is systematically used for environmental education and excursions for all types of schools (Hanel, 2010). “People perceive costs and benefits of protected areas in complex ways depending on their education, social background, personal experience, and specific knowledge about nature, ecology, hydrology, chemistry, psychology, etc. Thus, it is just as crucial for conservation advocates and planners to create effective links between protected areas and relevant social groups, as it is to create links between protected areas” (Figueroa and Aronson, 2006). Hanel (2012) adds that some information about this

territory published in the region has resulted in increased attendance over a specific period (e.g. published data on the abundance of mushrooms in the local forest).

7.5.2. Service

In order for tourism in the PLA Blaník to continue being developed, it is appropriate to define what tourists prefer and, based on their opinions, suggest ways to improve services (Drábková, 2010a). Banaš and Zahradník (2012) highlight, "It is necessary to add that this information is important both for the management of protected areas as well as for authorities of local and regional governments, not to mention entrepreneurs in tourism".

Rametsteiner and Weiss (2005) add that further development potential lies particularly in combined offers of accommodation with outdoor activities (hiking routes, sport activities, adventure tours, forest pedagogic offers, hunting, etc.). Hearne and Salinas (2002) continue, "In order to be most effective in providing services that facilitate these goals, decision makers and managers will need to understand and incorporate tourist preferences for nature appreciation, infrastructure, use restrictions, and other attributes of national parks and protected areas".

7.5.3. Forest Management Practices

Bostedt and Mattsson (1995) confirm that the value of forests in nature can be increased by modifying forest management practices. ECORYS (2009) adds, "In order to manage forests in light of society's needs and to implement forest policy effectively, it is important to be aware of public opinion and consider this opinion in communication strategies. The present public opinion is primarily generated from experiences in the past and media exposure". Within the further expansion of the Programme 2000[5] in relation to the development of information technologies and the progress of individual areas of recreational use in forests, we are ready to work together to further develop the know-how to contribute to the well-being of visitors to our forests, taking into account respect for the essential economic needs, the interests of environmental protection, and the legitimate interests of other groups of inhabitants (Stonawski, 2005).

Roovers et al. (2002) offer the idea that diversity and variation makes a forest acceptable for recreation. Font and Tribe (2000) have some suggestions for forest managers, "The appeal of forests can be increased by enhancing the variety and contrast in the area with different species contrasting in colour and form, diversity in tree age and structure, smaller clearings (as opposed to large scale clearings), varying scales of stands, creation of paths on the woodland edges, provision of recreational facilities at viewpoints, creation of honey pots, and quiet enjoyment zones". Törn et al. (2009) continue, "Maintenance of trails used for different activities may require different management practices. For example, the impacts of hiking on soil and vegetation could be reduced by the construction of duckboards. Rolling or grading trails might be a useful protective method especially in dry, deteriorated habitats, while building stairs is an appropriate method to protect the wear of steep hills". However, Cunha (2010) warns that managers have to keep in mind that reserves are not theme parks, and the major

[5] 'Program 2000 - ensuring the public interest objectives in Forests of the Czech Republic' is a program by LČR, used to finance the rehabilitation and maintenance of trails and hiking trails, nature trails, rest areas, natural springs, cultural monuments and many other activities in forests (Kroupová, 2008).

compromise is with nature conservation.

A study completed by Notaro et al. (2008) affirms that a change in management would greatly reduce the landscape's recreational value, since interviewees expressed their willingness to pay to avoid the clearing of forests. Evaluating environmental tolerance of different types of recreational activities as well as their magnitude and type of impact are crucial for planning and managing protected areas (Törn et al., 2009). Font and Tribe (2000) conclude, "Environmental management techniques and overall systems have been devised for this purpose, bringing together countryside, forestry, and recreational needs".

7.5.4. Future Research

Roček and Zich (2009) state, "The second half of the twentieth century and the early twenty-first century in Europe is characterized by a strong and growing change in social demand towards the forest, or the forest environment. This necessarily implies the need for new approaches to thinking about forest management issues - new aspects in forest protection - and extends to almost all traditional forestry disciplines". Figueroa and Aronson (2006) comment that politicians and decision makers should concurrently base their actions not only on social references and pressures, but also on knowledge based systems, including quantitative, ecological data and theory. Lethinen and Sarala (2006) emphasize that for planning, monitoring, and conserving nature trails, geological factors and the geological history of the area must be studied.

Törn et al. (2009) recommend, "Case-specific planning combined with monitoring and rapid responses to negative impacts are the most efficient methods for avoiding irreversible environmental damages". Kořínek et al. (2005) agree, "Parallel scientific studies of the area should be carried out at the same time; the goal is to conduct naturalistic, historical research on the PLA, including gathering enough information and systematically analyzing the data. The results should determine the limits of the carrying capacity of ecosystems as well as capacity standards for tourists (e.g. number of persons per hectare of tranquil, quiet forest)". Banaš and Zahradník (2012) bring the matter to a close, "Monitoring visitors' opinions and preferences (the well-being factor) should become an integral part of managing protected areas. This monitoring, complemented with records of the number of visitors to the protected area and their profiles (i.e. automatic or physical counting of the visitors and asking questions), should be repeated at a several-year interval".

8. Conclusion

This thesis presents an extensive overview of public opinions on forests and forestry concerning particular categories. From the literature review it emerges that tourism in protected areas, and especially in forested land, is still a developing field. There are many studies (examples are mentioned in the previous text) about visitors' perceptions and preferences, however, public opinion on forests and forestry is various and changes over time.

This is why it is significant to focus on people coming to spend their time in forest lands and to analyse their opinions. "A greater understanding of the preferences and opinions of visitors - e.g. how often they go to the forests and why, how they perceive different types of forest, and what they think about forest management - is a necessary informational tool for planning in the area. With other sources of information, this could help find an appropriate balance between conservation and reasonable development of tourism in protected areas" (Drábková, 2013b). But not all studies can be generalised. It very often happens that due to some limitations (natural, cultural, and others) the proposals proceeding from the results are not usable outside of the region or country where the study took place. Jacobsen (2007) agrees, "Furthermore, most landscape perception and assessment research has been undertaken within national cultures, thus eluding challenges that come with studies encompassing respondents from various countries/cultures". Font and Tribe (2000) confirm the point with the example that berry and mushroom picking are seen as positive in Finland, acceptable in Spain, and negative in the UK.

Therefore, particular areas were chosen - forest lands inside the limits of protected areas - to determine tourists´ preferences and analyse their opinions in the setting of the Czech Republic and of Italy. "Our research helped, among other outcomes, to create the typical visitor's profile. The data obtained show who the people coming into the study area are, as well as in what respect they differ from the overall population of the Czech Republic through comparison with data from the Czech Statistical Office" (Drábková and Šišák, 2013). Knowing what kind of visitors come to the study area, the type of forest trails and tourist facilities the visitors prefer, and what kind of activities they want to enjoy there is of paramount importance to the possibility of adjusting forest management techniques. Eagles and McCool (2002) corroborate, "In fact, understanding visitor characteristics, motivations, and expectations is a key to the development of effective management policies". Kořínek et al. (2005) want more, "At a time when more and more people have more free time and financial resources, it is necessary to count on a growing number of people interested in access to forests, and therefore a well thought-out organization of recreational use must be created".

Similarly to the ECORYS (2009) report, and combined with the findings on the topics above, the results of this analysis provide a detailed picture of current public perceptions and can thus feed into lessons learned on how to improve forest communication in the future as well as what type of information is currently missing or portrayed with a misleading emphasis. All recommendations for forest managers should concern not only how to enhance recreational potential for specific areas but should also help them to find the right balance between the level of recreational use and the conservation of nature. Drábková (2012) specifies that understanding of these data and creating proper strategies could be effectively used to develop tourism in protected landscape areas in the Czech Republic. Banaš and Zahradník (2012) confirm this by saying that this kind of data can be used successfully, e.g. when modifying public relations

or controlling the number of visitors, including possibly determining the limits for a bearable load on protected areas. “The solution seems to lie in a greater understanding of visitors’ profiles, because this could help uncover the expectations and interests of participants. Managers of the area should find a way to improve foreknowledge about levels of nature protection, e.g. thorough the education. Communication with visitors could be easier if is focused on particular groups of visitors. More research in this field is needed” (Drábková and Šišák, 2013). Furthermore, obtained data could be useful for planning in the field of tourism (Drábková, 2012).

Moreover, according to Drábková (2012) the study could be considered a reference indicator about the average tourist’s manners and perceptions, especially their satisfaction with particular items in PLAs. “This study should be followed up with further surveys to prove validity, and those surveys should continue to be taken in larger areas” (Drábková, 2013b). It could be used as an example for other areas with similar (natural and cultural) conditions. It is possible to suppose that the findings from this research in PLA Blaník might be applicable to other protected landscape areas in the Czech Republic and, thanks to additional research in Italy, even in some protected areas throughout the rest of Europe.

“The values of protected areas are predominantly determined by individual and social beliefs, perceptions, attitudes, and actions, while the fate of protected areas depends on human decisions”.

(Figueroa and Aronson, 2006)

List of Abbreviations

AOPK - Agency for Nature Conservation and Landscape Protection of the CR
CBD - Convention on Biological Diversity
CIGA - University-wide Internal Grant Agency of Czech University of Life Sciences
CR - Czech Republic
CZ - Czech Republic
CZK - Czech crown
CZSO - Czech Statistical Office
ČR - Česká republika (Czech term for CZ)
ČSOP Vlašim - Czech Union for Nature Conservation - Vlašim
eAGRI - Web Portal of the Ministry of Agriculture
EU - European Union
FAO - Food and Agriculture Organization of the United Nations
CHKO - chráněná krajinná oblast (Czech term for PLA)
LČR – Lesy České republiky, s. p.
Ltd. - Private Limited Company
MoE - Ministry of the Environment of the Czech Republic
MŽP - Ministerstvo životního prostředí (Czech term for MoE)
NAZV - National Agency for Agriculture Research
NM - Nature Monument
NNM - National Nature Monument
NNR - National Nature Reserve
NP - National Park
NR - Nature Reserve
NtP - Nature Park
NTFP - Non-Timber Forest Products (synonym to NWFP)
NWFP - Non-Wood Forest Products
PDF - Portable Document Format
PLA - Protected Landscape Area
PLAs - Protected Landscape Areas
S.E. - State Enterprise
SFM - Sustainable Forest Management
s.p. - státní podnik (Czech term for S.E.)
SPA - Specially Protected Area
SPAs - Specially Protected Areas
s.r.o. – společnost s ručením omezeným (Czech term for Ltd.)
TNS Factum - Taylor Nelson Sofres Factum, s.r.o.
ÚHUL - Forest Management Institute - Brandýs nad Labem
UK - United Kingdom
UN - United Nations
URL - Uniform Resource Locator

List of References

1. Abrudan, I. V., Marinescu, V., Ionescu, O., Ioras, F., Horodnic, S. A. & Sestras, R. (2009) Developments in the Romanian forestry and its linkages with other sectors. *Notulae Botanicae Horti Agrobotanici Cluj*, 37 (2009), 14-21
2. Alpízar, F. (2006) The pricing of protected areas in nature-based tourism: A local perspective. *Ecological Economics*, 56 (2006), 294– 307
3. Banaš, M. & Zahradník, D. (2012) Monitoring názorů návštěvníků v horských chráněných územích v České republice (KRNAP, NP a CHKO Šumava, CHKO Jeseníky, CHKO Beskydy). (Monitoring of visitors' opinions in mountain protected areas in the Czech Republic (KRNAP, NP a CHKO Šumava, CHKO Jeseníky, CHKO Beskydy). In: Fialová, J. (editor) *Recreation and landscape protection – hand in hand...* Brno (CZ): Mendel university in Brno, 7-16
4. Bartoš, L. & Novák, J. (2008) Zhodnocení návštěvnosti Lesoparku Hostivař. (Evaluation of the attendance of Forestpark Hostivař). Praha (CZ): Ústav pro ekopolitiku, p. 54
5. Bell, S. (1997) Design for outdoor recreation. London (UK): Spon Press, p. 214
6. Bell, S. (2009) Can a fresh look at the psychology of perception and the philosophy of aesthetics contribute to the better management of forest landscapes? In: Sheppard, S. R. J. & Harshaw, H. W. (editors) *Forests and Landscapes: Linking Ecology, Sustainability and Aesthetics*. Wallingford (UK): CABI Publishing, 125-148
7. Bosselman, F. P., Peterson, C.A. & McCarthy, C. (1999) Managing tourism growth: issues and applications. Washington (US): Island Press, p. 316
8. Bostedt, G. & Mattsson, L. (1995) The value of forests for tourism in Sweden. *Annals of Tourism Research*, 22(3), 671-680
9. Braithwaite, R. W. (2000) Role of tourism. In: Levin, S. A. (editor in chief) *Encyclopedia of Biodiversity*. Prinston (US-NJ): Academic Press, 667 – 679
10. Broadhurst, R. & Harrop, P. (2000) Forest tourism: Putting policy into practice in the forestry commission. In: Font, X. & Tribe, J. (editors) *Forest tourism and recreation: case studies in environmental management*. Wallingford (UK): CABI Publishing, 183-200
11. Cáder, R. (2009) Kraj Blanických rytířů. (Region of Blanik Knights). Vlašim (CZ): Český svaz ochránců přírody, p. 12
12. Carvalho-Ribeiro, S. M. & Lovett, A. (2011) Is an attractive forest also considered well managed? Public preferences for forest cover and stand structure across a rural/urban gradient in northern Portugal. *Forest Policy and Economics*, 13 (2011), 46–54
13. Cunha, A. A. (2010) Negative effects of tourism in a Brazilian Atlantic forest National Park. *Journal for Nature Conservation*, 18 (2010), 291–295
14. Daniel, T. C. (2001) Whither scenic beauty? Visual landscape quality assessment in the 21st century. *Landscape and Urban planning*, 54 (2001), 267-281
15. Daniel, T. C. & Meitner, M. M. (2001) Representational validity of landscape visualizations: the effects of graphical realism on perceived scenic beauty of forest vistas. *Journal of Environmental Psychology*, 21 (2001), 61 – 72
16. Daşdemír, Í. (2005) Improving operational planning and management of National parks in Turkey: A case study. *Environmental Management*, 35 (2005), 247–257
17. De Aranzabal, I., Aguilera, P., Schmitz, M. F. & Pineda, F. D. (2002) Spatial analysis of impacts

and potentialities for leisure activities. Base for territorial ordination of tourism uses. In: Brebbia, C. A. & Pascolo, P. (editors) *Management information systems 2002*. Southampton (UK): WIT Press, 12-24

18. De Aranzabal, I., Schmitz, M. F. & Pineda, F. D. (2009) Integrating landscape analysis and planning: A multi-scale approach for oriented management of tourist recreation. *Environmental Management*, 44 (2009), 938-951
19. De Souza, P. C. & Martos, H. L. (2008) Estudo do uso público e análise ambiental das trilhas em uma unidade de conservação de uso sustentável: Floresta nacional de Ipanema, Iperó – SP. (Public utility study and environmental analysis of tracks at a sustainable conservation unit: Ipanema national forest in Ipero -SP). *Revista Árvore, Viçosa-MG*, 1 (2008), 91-100
20. Disman, M. (2009) Jak se vyrábí sociologická znalost. (How to create sociological knowledge). Praha (CZ): Nakladatelství Karolinum, p. 372
21. Drábek, K. (2005) Naučné stezky a trasy: Praha a Středočeský kraj. (Nature trails and routes: Prague and Central Bohemian Region). Praha (CZ): Dokořán, p. 275
22. Drábková, A. (2009) Analýza právních norem upravujících chování veřejnosti v lese. (Analysis of legal norms governing the public behaviour in forest). Seminar paper. Praha (CZ): Česká zemědělská univerzita v Praze, p. 6
23. Drábková, A. (2010) Zhodnocení návštěvnosti lesa a názorů turistů na les na příkladě chráněné krajinné oblasti Blaník. (Evaluation of visit rate in forest and opinion of tourists on the forest in case of protected landscape area Blaník). In: Drobilová, L. (editor) *Venkovská krajina 2010. Sborník z 8. ročníku mezinárodní mezioborové konference konané 20.-23. května v Hostětíně, Bílé Karpaty*. Brno (CZ): Lesnická práce, 21-25
24. Drábková, A. (2010a) Analýza preferencí turistů v chráněné krajinné oblasti Blaník. (Analysis of tourists´ preferences in the protected landscape area Blaník). In: Marušák, R., Dvořák, J. & Natov, P. (editors) *COYOUS 2010 – Konference mladých vědeckých pracovníků*. Praha (CZ): Česká zemědělská univerzita v Praze, 491-498
25. Drábková, A. (2012) Tourists in protected landscape areas in the Czech Republic – a sociological survey. *Procedia Environmental Sciences*, 14 (2012), 279 – 287
26. Drábková, A. (2013) Proč je důležité zjišťovat současný stav rekreace v lesích CHKO. (Why is it important to look into current state of recreation in forests in PLA). *Lesnická práce*, 3 (2013), 37
27. Drábková, A. (2013a) Tourists in Cansiglio Forest, Italy – Case study about forests visitors and their opinions. *Human Geographies* (in press)
28. Drábková, A. (2013b) Opinions and preferences of forest visitors in protected landscape area Blaník. (Not published yet)
29. Drábková, A. (2013c) Tourists' perception of forest structure: Protected landscape areas in the Central Bohemian region and its surrounding, Czech Republic. (Not published yet)
30. Drábková, A. & Šišák, L. (2013) Forest visitors' opinion of recreational facilities and trails in forests in the protected landscape area Blaník – Case Study. *Journal of Forest Science* (in press)
31. Eagles, P. F. J. & McCool, S. F. (2002) Tourism in parks and protected areas: planning and management. Wallingford (UK): CABI Publishing, p. 320
32. Edgell, D. L. (2006) Managing sustainable tourism: a legacy for the future. Binghamton (NY): The Haworth Press Inc, p. 144
33. Ewald, K. C. (2001) The neglect of aesthetics in landscape planning in Switzerland. *Landscape*

and Urban Planning, 54 (2001), 255-266

34. FAO (2011) State of the world's forests 2011. Rome (IT): Food and Agriculture Organization of the United Nations, p. 164
35. Figueroa, E. B. & Aronson, J. (2006) New linkages for protected areas: Making them worth conserving and restoring. *Journal for Nature Conservation*, 14 (2006), 225-232
36. Font, X. & Tribe, J. (2000) Recreation, conservation and timber production: a sustainable relationship? In: Font, X. & Tribe, J. (editors) *Forest tourism and recreation: case studies in environmental management*. Wallingford (UK): CABI Publishing, 1-22
37. Fyhri, A., Jacobsen, J. K. S. & Tømmervik, H. (2009) Tourists´ landscape perceptions and preferences in a Scandinavian coastal region. *Landscape and Urban planning*, 91 (2009), 202-211
38. Giannecchini, J. (1993) Ecotourism: new partners, new relationships. *Conservation Biology*, 2 (1993), 429-432
39. Gobster, P. H. (1999) An ecological aesthetic for forest landscape management. *Landscape Journal*, 1 (1999), 54-64
40. Gössling, S. (2002) Human-environmental relations with tourism. *Annals of Tourism Research*, 29 (2002), 539–556
41. Gül, A., Örücü, M. H. & Karaca, Ö. (2006) An approach for recreation suitability analysis to recreation planning in Gölcük Nature park. *Environmental Management*, 37 (2006), 606–625
42. Hammitt, W. E., Patterson, M. E. & Noe, F. P. (1994) Identifying and predicting visual preference of southern Appalachian forest recreation vistas. *Landscape and Urban Planning*, 29 (1994), 171-183
43. Hanel, L. (2001) Pod bájným Blaníkem. (On the Mt.Blaník Foothills). *Živa*, 2 (2001), 90-91
44. Hanel, L. (2010) CHKO Blaník jako didaktický prostor. Příručka k projektu Alma Mater Studiorum. (Protected landscape area Blanik – region used in the ecological education). Praha (CZ): Univerzita Karlova Praha, p. 51
45. Hanel, L. & Klaudys, M. (2011) CHKO Blaník třicetiletá. (Protected landscape area Blaník thirty years old). *Ochrana přírody*, 2 (2011), 2-7
46. Hanel, L. (2012) Oral communication about tourism rate in PLA Blaník. Louňovice pod Blaníkem, Administration of PLA Blaník: 09-07-2012
47. Hearne, R. R. & Salinas, Z. M. (2002) The use of choice experiments in the analysis of tourist preferences for ecotourism development in Costa Rica. *Journal of Environmental Management*, 65 (2002), 153-163
48. Heer, C., Rusterholz, H. P. & Baur, B. (2003) Forest perception and knowledge of hikers and mountain bikers in two different areas in Northwestern Switzerland. *Environmental Management*, 6 (2003), 709–723
49. Henderson, J. C. (2000) The survival of a forest fragment: Bukit Timah Nature reserve, Singapore. In: Font, X. & Tribe, J. (editors) *Forest tourism and recreation: case studies in environmental management*. Wallingford (UK): CABI Publishing, 23-40
50. Herrick, T. A. & Rudis, V. A. (1994) Visitor preference for forest scenery in the Ouachita National forest. In: *Proceedings of the symposium on ecosystem management research in the Ouachita Mountains: pretreatment conditions and preliminary findings*; 1993 October 26-27. Hot Springs (AR), 212-222
51. Holý, J. (2005) Ochrana přírody a krajiny ve spojitosti se sportovními aktivitami v CHKO Jizerské

hory. (Nature and landscape protection in connection with sports activities in PLA Jizerské hory) In: *Sborník referátů Turistika a sporty v lesních majetcích a hospodaření v nich*. Kostelec nad Černými lesy (CZ): Česká lesnická společnost, 15 - 18

52. Hovardas, T. & Poirazidis, K. (2006) Evaluation of the environmentalist dimension of ecotourism at the Dadia Forest Reserve (Greece). *Environmental Management*, 38 (2006), 810–822
53. Hrib, M. (2009) Les a právo. (Forest and the law). In: Němec, J., & Hrib, M. (editors) *Lesy v České republice*. Praha (CZ): Pro Lesy ČR vydal Consult, 46-69
54. Jacobsen, J. K. S. (2007) Use of landscape perception methods in tourism studies: A review of photo-based research approaches. *Tourism Geographies*, 3 (2007), 234-253
55. Kalivoda, O., Skřivanová, Z. & Drábková, A. (2010) Aesthetical preferences of landscape in the protected area Český kras. In: Bejček, V., Fernández, E., Jílek, F., Libra, M., Marušák, R., Sedmíková, M. & Zagata, L. (editors) *UCOLIS 2010 – University Conference in Life Sciences – Proceedings*. Praha (CZ): Czech University of Life Sciences Prague, 195-202
56. Karjalainen, E. & Tyrväinen, L. (2002) Visualization in forest landscape preference research: a Finish perspective. *Landscape and Urban Planning*, 59 (2002), 13–28
57. Karjalainen, E., Sarjala, T. & Raitio, H. (2010) Promoting human health through forests: overview and major challenges. *Environmental Health and Preventive Medicine*, 15 (2010), 1–8
58. Kearsley, G. (2000) Balancing tourism and wilderness qualities in New Zealand´s Native forests. In: Font, X. & Tribe, J. (editors) *Forest tourism and recreation: case studies in environmental management*. Wallingford (UK): CABI Publishing, 75-93
59. Kellomäki, S. & Savolainen, R. (1984) The scenic value of the forest landscape as assessed in the field and the laboratory. *Landscape Planning*, 11 (1984), 97-107
60. Kleinhückelkotten, S. & Wipperman, C. (2005) Anschlussfähigkeit des Leitbilds Nachhaltige Waldwirtschaft in der Bevölkerung. (Connectivity of the model of "sustainable woodland management" in the population). In: Rehberg, K. S. (editor) *Die Natur der Gesellschaft: Verhandlungen des 33. Kongresses der Deutschen Gesellschaft für Soziologie in Kassel 2006.* Frankfurt am Main (DE): Deutsche Gesellschaft für Soziologie, 3770-3780
61. Kořínek, P., Mizera, J. & Šoltysová, L. (2005) Vliv turistiky a rekreačně sportovního využívání na lesní ekosystém v CHKO Český ráj. (Influence of turism and recreational and sportce usage on forest ecosystem in PLA Český ráj). In: *Sborník referátů Turistika a sporty v lesních majetcích a hospodaření v nich*. Kostelec nad Černými lesy (CZ): Česká lesnická společnost, 34 - 38
62. Kovařík, V., Pánek, J. & Pešout, P. (1998) Geografické vymezení Podblanicka. (Geographical delimitation of Podblanicko). *Pod Blaníkem*, 1 (1998), 1-5
63. Krečmer, V. (2005) Rekreační funkce lesa jako jev lesopolitický. (Recreational forest functions as a political and forestry phenomenon). In: *Sborník referátů Turistika a sporty v lesních majetcích a hospodaření v nich*. Kostelec nad Černými lesy (CZ): Česká lesnická společnost, 4 - 8
64. Krečmer, V. (2008) Veřejně prospěšné funkce lesa v krajině. (Public beneficial functions of forests in the landscape). In: *Fakta a mýty o českém lesním hospodářství, sborník referátů*. Praha (CZ): Sdružení vlastníků obecních a soukromých lesů v ČR, 26-30
65. Křivánek, J. (2009) Lesy Středočeského kraje. (Forests in Central Bohemian region). In: Němec, J. & Hrib, M. (editors) *Lesy v České republice*. Praha (CZ): Pro Lesy ČR vydal Consult, 324-335
66. Kuvan, Y. (2005) The use of forests for the purpose of tourism: the case of Belek Tourism Center in Turkey. *Journal of Environmental Management*, 75 (2005), 263-274

67. Lehtinen, K. & Sarala, P. (2006) Geological factors in monitoring and planning nature trails at tourist centres in northern Finland. *Geo-Environment and Landscape Evolution II* 2006; doi:10.2495/GEO060041

68. Lothian, A. (1999) Landscape and the philosophy of aesthetics: is landscape quality inherent in the landscape or in the eye of the beholder? *Landscape and Urban Planning*, 44 (1999), 177-198

69. Ložek, V., Kubíková, J., Spryňar, P. & coll. (2005) Střední Čechy. (Central Bohemia). In: Machovčin, P. & Sedláček, M. (editors) *Chráněná území ČR, svazek XIII*. Praha (CZ): Agentura ochrany přírody a krajiny ČR a EkoCentrum Brno, p. 904

70. Machar, I., Drobilová, L. & coll. (2012) Ochrana přírody a krajiny v České republice, 1. část. (Nature and countryside conservation in the Czech Republic, 1st part). Olomouc (CZ): Palackého Univerzita v Olomouci, p. 416

71. Mantau, U., Merlo, M., Sekot, W. & Welcker, B. (2001) Recreational and environmental markets for forest enterprises. Wallingford (UK): CABI Publishing, p. 541

72. Marchiori, E., Sturaro, E. & Ramanzin, M., (2012) Wild red deer (Cervus elaphus L.) grazing may seriously reduce forage productio in mountain meadows. *Italian Journal of Animal Science*, 11:e9, 47-53

73. Matějíček, J. (2003) Vymezení základních pojmů a vztahů z oblasti mimoprodukčních funkcí lesa. (Definition of fundamental concepts and relationships in the field of non-productive forest functions). Strnady (CZ): VÚLHM, p. 56

74. Maur, E. (2006) Paměť hor, Šumava – Říp – Blaník – Hostýn – Radhošť. (Memory of mountains, Šumava – Říp – Blaník – Hostýn – Radhošť). Praha (CZ): Havran, p. 375

75. Mercado, L. & Lassoie, J. P. (2002) Assessing tourist's preferences for recreational and environmental management programs central to the sustainable development of a tourism area in the Dominican Republic. *Environment, Development and Sustainability,* 4 (2002), 253–278

76. Miko, L. & Hošek, M. (editors) (2009) Příroda a krajina České republiky. Zpráva o stavu 2009. (Nature and landscape of the Czech Republic. Report about state 2009). Praha (CZ): Agentura ochrany přírody a krajiny ČR, p. 102

77. Minca, C. & Linda, M. (2000) Ecotourism on the Edge: the case of Corcovado National park, Costa Rica. In: Font, X. & Tribe, J. (editors) *Forest tourism and recreation: case studies in environmental management*. Wallingford (UK): CABI Publishing, 103-126

78. Mizaraite, D. & Mizaras, S. (2006) Public opinion survey about state and small-scale private forestry in Lithuania. Girionys (LT): Lithuanian Forest Research Institute

79. Morávek, F. (1999) Lesy na velkoplošných zvláště chráněných územích z pohledu Lesů ČR, s. p. (Forests in large area specially protected areas from the view of Forests of the Czech Republic, S.E.). In: *Lesy a velkoplošná chráněná území, sborník ze semináře v Senátu Parlamentu ČR v Praze dne 28. ledna 1999*. Praha (CZ): Národní lesnický komitét, 15-17

80. Mráček, Z. (1975) Rekreační lesy, jejich vyčleňování a funkční uspořádání. (Recreational forests and their earmarking). *Práce VÚLHM*, 47 (1975), 171–185

81. Múgica, M. & De Lucio, J. V. (1996) The role of on-site experience on landscape preferences. A case study at Doñana National park (Spain). *Journal of Environmental Management*, 47 (1996), 229–239

82. Nyaupane, G. P. & Poudel, S. (2011) Linkages among biodiversity, livelihood, and tourism. *Annals of Tourism Research*, doi:10.1016/j.annals.2011.03.006

83. Notaro, S., Paletto, A. & Raffaelli, R. (2008) The economic valuation of non-productive forest

functions as an instrument towards integrated forest management. In: Cesaro, L., Gatto, P. & Pettenella, D. (editors) *The multifunctional role of forests- Policies, Methods and case studies*. EFI Proceedings No. 55, 2008

84. Ode, Å., Fry, G., Tveit, M. S., Message, P. & Miller. D. (2009) Indicators of perceived naturalness as drivers of landscape preference. *Journal of Environmental Management*, 90 (2009), 375-383
85. ONF (2005) Les Français et la forêt. (The French and the forest). Paris (FR): Office National des Forêts
86. Ouma, O. K. & Stadel, C. (2006) Kakamega Forest, ecotourism and rural livelihoods: linkages and interactions for the Kakamega Forest region, Western Kenya. *WIT Transactions on Ecology and the Environment*, doi:10.2495/ST060141
87. Panagopoulos, T. (2009) Linking forestry, sustainability and aesthetics. *Ecological Economics*, 68 (2009), 2485-2489
88. Pearse, P. H. (1990) Introduction to forestry economics. Vancouver (CDN): University of British Colombia Press, p. 226
89. Pelc, F. (1999) Lesy v chráněných krajinných oblastech – lesy pro třetí tisíciletí. (Forests in protected landscape areas – forest for the third millennium). In: Vinš, B. & Rynda, I. (editors) *Lesy a velkoplošná chráněná území, Sborník ze semináře v Senátu Parlamentu ČR v Praze dne 28. ledna 1999*, Praha (CZ): Národní lesnický komitét, 24-28
90. Petrosillo, I., Zurlini, G., Corlianò, M. E., Zaccarelli, N. & Dadamo, M. (2007) Tourist perception of recreational environment and management in a marine protected area. *Landscape and Urban Planning*, 79 (2007), 29–37
91. Pospíšilová, V. (2012) Významnost rekreační funkce lesa na vybraných uzemích (Significance of recreation function of forest on chosen territories). [Dissertation thesis]. Praha (CZ): Česká zemědělská univerzita v Praze, p. 153
92. Price, C. & Chambers, T. W. M. (2000) Hypotheses about recreational congestion: Tests in the Forest of Dean (England) and wider management implication. In: Font, X. & Tribe, J. (editors) *Forest tourism and recreation: case studies in environmental management*. Wallingford (UK): CABI Publishing, 55-74
93. Racková, L. (2001) Krajinou kolem Blaníka. (Through the landscape around Blaník). Vlašim (CZ): Podblanické ekocentrum Českého svazu ochránců přírody; Benešov (CZ): Muzeum okresu Benešov, p. 52
94. Reinius, S. W. & Fredman, P. (2007) Protected areas as attractions. *Annals of Tourism Research*, 34 (2007), 839–854
95. Reynolds, K. M., Thomson, A. J., Köhl, M., Shannon, M. A., Ray, D. & Rennols, K. (2007) Sustainable forestry from monitoring and modelling to knowledge management & policy science. Oxfordshire (UK): CAB International, p. 576
96. Roček, I., Pátek, Z., Pulkrab, K. & Šišák, L. (1997) Zjištění postojů obyvatel České republiky k lesu a k řízení lesního hospodářství. Závěrečná zpráva výzkumného úkolu. (Determining the attitudes of Czech citizens to forests and forest management. The final report of research task). Praha (CZ): Česká zemědělská univerzita v Praze, p. 65
97. Roček, I. & Zich, F. (2009) Člověk a les ve světle sociologického výzkumu. (Man and forest in light of a sociological research). In: *Vliv vysokých rekreačních aktivit na lesy. Sborník referátů z odborného semináře 17. září 2009, Štěchovice, Brunšov*. (CZ): Česká lesnická společnost, 32 – 36
98. Roovers, P., Hermy, M. & Gulinck, H. (2002) Visitor profile, perceptions and expectations in forests

from a gradient of increasing urbanisation in central Belgium. *Landscape and Urban Planning*, 59 (2002), 129 -145

99. Roth, P. (1999) Lesy a velkoplošná zvláště chráněná území z pohledu sekce ochrany přírody a krajiny Ministerstva životního prostředí ČR. (Forests and large area specially protected areas from the view of the section for the protection of the nature and the countryside Ministry of Environment CZ). In: Vinš, B. & Rynda, I. (editors) *Lesy a velkoplošná chráněná území, Sborník ze semináře v Senátu Parlamentu ČR v Praze dne 28. ledna 1999*, Praha (CZ): Národní lesnický komitét, 11-12

100. Rubín, J. (2003) Navštivte… Národní parky a chráněné krajinné oblasti. (Visit ... National parks and protected landscape areas). Praha (CZ): Olympia. p. 208

101. Řezáč, J. (2002) Lesy a lesní hospodářství na přelomu tisíciletí. (Forests and forestry in the turning point of the millennium). Praha (CZ): Ministerstvo zemědělství a Lesnická práce, p. 104

102. Sayan, S. & Karagüzel, O. (2010) Problems of outdoor recreation: The effect of visitors' demographics on the perceptions of Termessos National Park, Turkey. *Environmental Management*, 45 (2010), 1257–1270

103. Scott, M. J. & Canter, D. V. (1997) Picture or place? A multiple sorting study of landscape. *Journal of environmental psychology*, 17 (1997), 263 – 281

104. Seeland, K., Kilchling, P. and Hansmann, R. (2007): Urban consumers' attitudes towards non-wood forest products and services in Switzerland and an assessment of their market potentia. *Small-scale Forestry*, 6 (2007), 443–452

105. Sevenant, M. & Antrop, M. (2009) Cognitive attributes and aesthetic preferences in assessment and differentiation of landscapes. *Journal of Environmental Management*, 90 (2009), 2889–2899

106. Синицын, С. Г. (1980) Лес и охрана природы. (Forest and the protection of the nature). Москва (Россия): Лесная промышленностъ. p. 288

107. Squire, S. J. (1994) Accounting for cultural meanings: the interface between geography and tourism studies re-examined. *Progress in Human Geography*, 18, 1–16

108. Stibral, K. (2005) Proč je příroda krásná? Estetické vnímání přírody v novověku. (Why is the nature beautiful? Easthetical perception of nature in modern times). Praha (CZ): Dokořán, p. 208

109. Stibral, K. (2006) K estetickému vnímání krajiny, aneb od kdy je les krásný? (To the aesthetical perception of the countryside, or from what time is a forest beautiful?) In: Klvač, P. (editor) *Člověk a les*. Brno (CZ): Masarykova univerzita, 36-42

110. Stoklasa, J. (1981) Některé předběžné výsledky orientačního průzkumu zimní návštěvnosti Špindlerova mlýna v roce 1979. (Some preliminary results of orientation winter attendance survey in Špindlerův Mlýn in 1979). *Opera Corcontica*, 18, 153-176

111. Stoklasa, J. (1983) Výsledky ankety mezi zimními návštěvníky Špindlerova mlýna v roce 1980 – Analýza I. stupně. (Results of inuiery among winter visitors in Špindlerův Mlýn in the year 1980 – Firt degree analysis). *Opera Corcontica*, 20, 153-182

112. Stonawski, J. (2005) Realizace Programu 2000 a podpora rekreačních funkcí lesa. (Programme 2000 realization and support of recreational functions of forest). In: *Sborník referátů Turistika a sporty v lesních majetcích a hospodaření v nich*. Kostelec nad Černými lesy (CZ): Česká lesnická společnost, 31 - 33

113. Strachota, J. (1914) Estetika lesa. (The aesthetic of forest). Hradec Králové (CZ). p. 166

114. Szabo´ P. (2010) Driving forces of stability and change in woodland structure: A case-study from the Czech lowlands. *Forest Ecology and Management*, 259, 650–656

115. Šišák, L., Švihla, V. & Šach, F. (2003) Oceňování společenské sociálně-ekonomické významnosti základních funkcí lesa. (Valuation of social socio-economic significance of basic functions of forests). Praha (CZ): Česká zemědělská univerzita v Praze, p. 56

116. Šišák, L. (2006) Importance of non-wood forest product collection and use for inhabitants in the Czech Republic. *Journal of Forest Science*, 52 (2006), 417-426

117. Šišák, L. & Pulkrab, K. (2008) Hodnocení společenské sociálně- ekonomické významnosti funkcí lesa. (The evaluation of socio – economic importance of forest´s functions). Praha (CZ): Česká zemědělská univerzita v Praze, p. 129

118. Šišák, L. & col. (2009) Hodnocení společenské sociálně – ekonomické významnosti rekreačních funkcí lesa na vybraných územích LČR. (System of valuation of socio-economic importance of forest services including criteria and indicators of multifunctional forest management). Výzkumná zpráva projektu GA LČR, s. p., Hradec Králové. Praha (CZ): Fakulta lesnická a dřevařská ČZU. p. 117

119. Šišák, L. (2009a) Valuation of non-wood forest products and services and their commercialization. E-learning study material for students. PDF version. Prague (CZ): University of Life Sciences Prague. p. 87

120. Šišák, L. (2011) Forest visitors´ opinions on the importance of forest operations, forest functions and sources of their financing. *Journal of Forest Science*, 57 (2011), 266-270

121. Tahvanainen, L., Tyrväinen, L., Ihalainen, M., Vuorela, N. & Kolehmainen, O. (2001) Forest management and public perceptions – visual versus verbal information. *Landscape and Urban Planning*, 53 (2001), 53–70

122. Taloustutkimus Oy (2006) Lasten ja nuorten metsäasenteet 2006. (The forest attitudes of the Finnish Children and young adults 2006). Helsinki (FI): Suomen Metsäyhdistys

123. Taloustutkimus Oy (2007) Metsä ja Puu 2007. (Forest and timber 2007). Helsinki (FI): Suomen Metsäyhdistys

124. TNS Factum (2001) Názory občanů na hospodaření s lesy v ČR. Zpráva z výzkumu veřejného mínění pro Lesy ČR, s.p. (Opinions of citizens on forest management in the CR. Report of a public opinion survey for the Forests of the CR, S.E.). Praha (CZ): Taylor Nelson Sofres Factum, p. 24

125. TNS Factum (2003) Psychologická analýza postojů veřejnosti ke dřevu a lesům. Zpráva z kvalitativního výzkumu pro společnost Lesy ČR, s.p. (Psychological analysis of public attitudes to wood and forests. Report on qualitative research for the company Forests of the CR, S.E.). Praha (CZ): Taylor Nelson Sofres Factum, p. 73

126. Torbidoni, E. I. F., Grau, H. R. & Camps, A. (2005) Trail preferences and visitor characteristics in Aigüestortes i Estany de Sant Maurici National park, Spain. *Mountain Research and Development*, 25 (2005), 51–59

127. Torbidoni, E. I. F. (2011) Managing for recreational experience opportunities: The case of hikers in protected areas in Catalonia, Spain. *Environmental Management*, 47 (2011), 482-496

128. Törn, A., Tolvanen, A., Norokorpi, Y., Tervo, R. & Siikamäki, P. (2009) Comparing the impacts of hiking, skiing and horse riding on trail and vegetation in different types of forest. *Journal of Environmental Management*, 90 (2009), 1427–1434

129. Toufar, P. (2002) Tajemnou českou krajinou – Česká Sibiř. (Through the mysterious Czech countryside – Česká Sibiř). Benešov (CZ): Start, p. 335

130. Tveit, M., S. (2009) Indicators of visual scale as predictors of landscape preference; a comparison between groups. *Journal of Environmental Management*, 90 (2009), 2882–2888

131. Vančura, K. (2009) Ochrana lesa. (Forest protection). In: Němec, J., & Hrib, M. (editors) *Lesy v České republice*. Praha (CZ): Pro Lesy ČR vydal Consult, 156-169

132. Vyskot, I. et al. (2003) Kvantifikace a hodnocení funkcí lesů České republiky. (The quantification and evaluation of functions in forests of the Czech Republic) Praha (CZ): Ministerstvo životního prostředí, p. 186

133. Zahradník, P. & Geráková, M. (2010) NATURA 2000 and its impact on forestry in the Czech Republic. *Folia Forestalia Polonica*, *series A,* 52 (2010), 131-135

134. Zahradník, D., Banaš, M. & Jirásková, E. (2012) Rub a líc monitoringu návštěvnosti – příklady vhodného i méně zdařilého monitoringu návštěvnosti v českých chráněných územích. (Back and front of visitor monitoring – examples of good and less successful visitor monitoring in the Czech protected areas). In: Fialová, J. (editor) *Recreation and landscape protection – hand in hand...* Brno (CZ): Mendel university in Brno, 177-184

135. Zatloukal, V. (2009) Co les poskytuje. (What a forest provide). In: Němec, J. & Hrib, M. (editors) *Lesy v České republice*. Praha (CZ): Pro Lesy ČR vydal Consult, 28-45

136. Zee, D. van der (1990) The complex relationship between landscape and recreation. *Landscape Ecology*, 4 (1990), 225-236

Internet Sources

1. AOPK (2007) Rozbory chráněné krajinné oblasti Blaník k 30. 5. 2007. (Analysis of Protected Landscape area Blaník, state to 30. 5. 2007). PDF file. URL: www.blanik.ochranaprirody.cz/res/data/109/014960.pdf [accessed 29-04-2010]
2. AOPK (2010) Lesy. (Forests). [online] URL: http://www.blanik.ochranaprirody.cz/index.php?cmd=page&id=1249 [accessed 07-03-2010]
3. AOPK (2010a) Naučné stezky (Nature trails) [online] URL: http://www.ochranaprirody.cz/index.php?cmd=page&id=1556 [accessed 07-03-2010]
4. AOPK (2011) CHKO Blaník třicetiletá. (PLA Blaník thirty years old). [online] URL: http://www.ochranaprirody.cz/wps/portal/cs/blanik/o-sprave-chko/!ut/p/c5/DcrbkkMwAADQb_EBnVh3j5Rali4iJXkx2I4iImhL-_XbOa8HEPDBqmfXVvduYhUFBSBa-RsmpnpSFdEzkSX6P6arpdD5MqACAkBaOtWfmWdYDo9TtJ1cWO4ol1QauCNTAx2RB6ZhFvusmJ-y1tFkWt9DQ2791ciV4dU3nhMQOldidEezvaXcYHY_DC32rD2EtEcOhSGH8b5v7mL03agXTJYe1fuinX07t_QHb_4muRrHIj6ey6JcuLSJM85Ujg5xP9YiXWqz8K306udjjWHKb5c5-l4tbpFEW0Nz1eaDrWM9SwQB8AEL_55mdiU!/ [accessed 28-06-2011]
5. AOPK (2011a) "With the knight to the Blaník hill" nature trail [online] URL: http://www.ochranaprirody.cz/wps/portal/en/blanik/o-sprave-chko/!ut/p/c5/hZDJcoJAAES_JR9AzWCYwTkSQDKg7ITlYiECsmMEUb4-mDtJ9_FVV1c3iMDiNr4XeTwUXRvXIAARPhp7i6Ad4qBCPAFSjcjYdiSWM_HCw1UOJf6ftAqivO5OS4_vJsOHeDvkMg0ut4318BHLukSFFBu2qhUl3luNEWw0zyhHjkmImQ5IflamdZDSkfSDV3DtJOq7UyfWKP-aqCOjYjrDJvFnrGcCzXp1tNySCcb3ZwMvEiuc9TJ0eEYJ_GsLaWYcw7bjyTVW71ut5-Ze1ycLV9_wDfivX1aXKA76k__-8OJwRQIE-mfXpKBvgjmt7O0P8sLl5g!!/dl3/d3/L0lDU0NTQ21tSkNncFJBISEvb0VvZ0FFSUVnZ0dNVVlna0FVNUJnT1lGSlVsQ2tBISEvNEMxYjhJa2ZpZ0dJa3lRU2lFQSEvN19PTFE5NUY1NDBHOVVBMElLOUU2UlNEMTRMMC9hb3BrX2VuJTB3Yi5jaGtvJTB3Yi5hci5jaGtvX2JsYW5payUwd2IuYXIuc3ByYXZhX2Noa28lMHdiLmFyLm5hdWNuZV9zdGV6a3klMDcwOTYzZDAwNDViZmFkNDRiYmIwZmY4ZjEwNjc3ZDNkL3Nob3dDb250ZW50L2NvbS5pYm0ud29ya3BsYWNlLndjbS5hcGkuV0NNX0NvbnRlbnQlMDcwOTYzZDAwNDViZmFkNDRiYmIwZmY4ZjEwNjc3ZDNkJTA3MDk2M2QwMDQ1YmZhZDQ0YmJiMGZmOGYxMDY3N2QzZCUwUFVCTElTSEVE/ [accessed 28-06-2011]

6. AOPK (2012) Čtete si při výletech informační tabule na naučných stezkách? (Do you read the information boards of nature trails during your trips?). [online] URL: http://www.blanik.ochranaprirody.cz/wps/portal/cs/aopkcr/aopk-cr/!ut/p/c5/hY5BcoMgAEXP0hOARZK4RI3WxFadiVXZZDAqIhGYYuu0p28yXWf6__K9xQMU3K7Yl-BsEVqxK6gB3ZyztPBwhF0YnxCGybFExC-DZ7iD4AAov-r2Zlb0snqhJjzch6P98aGh0BOtborjIR5GY7kaN1ODP5Fj-3ASNllWn3TvzKvY1E0yUKdYEndMlY7mBDas_w5qeeYyS13Xry2XaB5QXr5-5PiSm24wi5OuW6K7Iuv4PrKgutc_ro3RP9z54_DBCARvL3rugZEtFDl_-gUx6QFY/dl3/d3/L0lDU0NTQ21tSkNncFJBISEvb0VvZ0FFSUVnZ0dNVVlna0FVNUJnT1lGSlVsQ2tBISEvNEMxYjhJa2ZpZ0dJa3lRU2lFQSEvN19PTFE5NUY1NDBHVDM1MElLVTNBQlVDMjBPNS9hb3BrX2N6JTB3Yi5hb3BrX2NyJTB3Yi5hci5hb3BrX2NyJTB3Yi5hci5hbmtldHklMHN5c3RlbV9hbmtldHlfZGV0YWlsL3Nob3dDb250ZW50L2NvbS5pYm0ud29ya3BsYWNlLndjbS5hcGkuV0NNX0NvbnRlbnQlMDRkZGRjMDgwNGIxOGViNGQ4YjEyZmZiZDIyMWE1NWMyJTA0ZGRkYzA4MDRiMThlYjRkOGIxMmZmYmQyMjFhNTVjMiUwUFVCTElTEVE/ [accessed 01-11-2012]
7. AOPK (2012a) Zvyšuje podle vás atraktivitu území pro turisty status chráněné krajinné oblasti? (Does the status of protected landscape area increase the attractiveness of the area for tourists?). [online] URL: http://www.blanik.ochranaprirody.cz/wps/portal/cs/aopkcr/aopk-cr/!ut/p/c5/hY5BcoMgAEXP0hOARZK4RI3WxFadiVXZZDAqIhGYYuu0p28yXWf6__K9xQMU3K7Yl-BsEVqxK6gB3ZyztPBwhF0YnxCGybFExC-DZ7iD4AAov-r2Zlb0snqhJjzch6P98aGh0BOtborjIR5GY7kaN1ODP5Fj-3ASNllWn3TvzKvY1E0yUKdYEndMlY7mBDas_w5qeeYyS13Xry2XaB5QXr5-5PiSm24wi5OuW6K7Iuv4PrKgutc_ro3RP9z54_DBCARvL3rugZEtFDl_-gUx6QFY/dl3/d3/L0lDU0NTQ21tSkNncFJBISEvb0VvZ0FFSUVnZ0dNVVlna0FVNUJnT1lGSlVsQ2tBISEvNEMxYjhJa2ZpZ0dJa3lRU2lFQSEvN19PTFE5NUY1NDBHVDM1MElLVTNBQlVDMjBPNS9hb3BrX2N6JTB3Yi5hb3BrX2NyJTB3Yi5hci5hb3BrX2NyJTB3Yi5hci5hbmtldHklMHN5c3RlbV9hbmtldHlfZGV0YWlsL3Nob3dDb250ZW50L2NvbS5pYm0ud29ya3BsYWNlLndjbS5hcGkuV0NNX0NvbnRlbnQlMDQxYWQ5YTgwNGMyZmVkNmQ4NzhiZmZkOGZhZWU4NGEzJTA0MWFkOWE4MDRjMmZlZDZkODc4YmZmZDhmYWVlODRhMyUwUFVCTElTEVE/ [accessed 01-11-2012]
8. CBD (2009) Sustainable forest management, biodiversity and livelihoods: A good practice guide. PDF file. http://www.cbd.int/development/doc/cbd-good-practice-guide-forestry-booklet-web-en.pdf [accessed 28-12-2011]
9. Creative Commons (2011) Turismo ed escursionismo in Cansiglio. (Tourism and hiking in Cansiglio). [online] URL: http://www.cansiglio.it/turismo/turismo.htm [accessed 17-10-2011]
10. CZSO (2011) Statistická ročenka České republiky 2011. (Statistical yearbook of the Czech Republic 2011). [online] URL: http://www.czso.cz/csu/2011edicniplan.nsf/p/0001-11 [accessed 18-12-2011]
11. CZSO (2011a) Počet obyvatel v obcích k 1. 1. 2011. (Population of municipalities of the Czech Republic, 1 January 2011). [online] URL: http://www.czso.cz/csu/2011edicniplan.nsf/p/1301-11 [accessed 18-12-2011]
12. ČSOP Vlašim (2012) Welcome to traditional Czech countryside. [online] URL: http://www.blanicti-rytiri.cz/home.php?lang=en [accessed 16-01-2012]
13. eAGRI (2010) Lesnictví. (Forestry). [online] URL: http://eagri.cz/public/web/mze/lesy/lesnictvi [accessed 22-04-2011]
14. eAGRI (2011) Zpráva o stavu lesa a lesního hospodářství České republiky v roce 2009. (Report on the state of forests and forestry of the Czech Republic, state to 31.12.2009). PDF file. URL: http://eagri.cz/public/web/file/60217/Zprava_o_stavu_lesa_09.pdf [accessed 24-04-2011]
15. eAGRI (2013) Zpráva o stavu lesa a lesního hospodářství České republiky v roce 2011. (Report on the state of forests and forestry of the Czech Republic, state to 31.12.2011). PDF file. URL: http://eagri.cz/public/web/file/175948/Zprava_o_stavu_lesa_2011.pdf [accessed 05-01-2013]
16. eAGRI (2013a) Game management Act. PDF file. URL: http://eagri.cz/public/web/file/10643/game_management_act.pdf [accessed 03-01-2013]

17. ECORYS (2009) Shaping forest communication in the European Union: public perceptions of forests and forestry. PDF file. URL: http://ec.europa.eu/agriculture/fore/publi/public-perception/report_en.pdf [accessed 19-01-2013]
18. Google – Data map (2011) Cansiglio map (created by Alena Drábková). [online] URL: http://maps.google.com/maps/ms?vpsrc=1&ctz=-60&vps=5&ie=UTF8&hl=cs&oe=UTF8&msa=0&msid=215617672908737864144.0004b258486afee321acd [accessed 22-10-2011]
19. Jelínek, T. (2010) NP a CHKO. (NP and PLAs). .gif file. URL: http://82.114.195.35:90/Vyuka/Jelínek%20Tomáš/2.%20ROČNÍK/Česká%20republika/ochrana%20přírody/NP%20a%20CHKO.gif [accessed 30-06-2011]
20. Klaudys, M. (2012) E-mail communication about the questionnaire used for the research. Administration of PLA Blaník: 25-01-2012
21. Kroupová, A. (2008) Do lesa za odpočinkem. (To the forest for having rest). *Lesnická práce*, 8/2008. [online] URL: http://www.silvarium.cz/lesnicka-prace-c-8-08/do-lesa-za-odpocinkem [accessed 17 07-2012]
22. Living Dolomiti (2011) La foresta del Cansiglio. (Cansiglio forest). [online] URL: http://livingdolomiti.com/it/foresta-del-cansiglio.html [accessed 29-10-2011]
23. Lundmark, L. J. T., Fredman, P. & Sandell, K. (2010) National parks and protected areas and the role for employment in tourism and forest sectors: a Swedish case. *Ecology and Society*, 1/2010: 19. [online] URL: http://www.ecologyandsociety.org/vol15/iss1/art19/ [accessed 14-06-2011]
24. Mikeska, M. & Vacek, S. (2006) Druhová skladba a trvale udržitelné hospodaření. (Species composition and sustainable management). *Lesnická práce*, 8/2006 [online] URL: http://www.silvarium.cz/lesnicka-prace-c-08-06/druhova-skladba-a-trvale-udrzitelne-hospodareni [accessed 09-01-2013]
25. Mystika (2012) Ostatní mystická místa: Hory a kopce: Blaník (Others mystic places: Mountains and hills: Blaník). [online] URL: http://www.mystika.cz/ostatni/cech-str/ostatni-hory-blanik.htm [accessed 16-01-2012]
26. MŽP (2011) Act No. 144/1992 Coll. PDF file. URL: http://www.mzp.cz/ris/vis-legcz.nsf/429771719B38BFA7C1257463006DFC8F/$file/19920114Sb.pdf [accessed 30-06-2011]
27. MŽP (2013) Act No. 289/1995 Coll. PDF file. URL: http://www.mzp.cz/ris/vis-legcz-en.nsf/38ABA9F3CBE80D0DC125735C00438144/$file/19950289Sb.pdf [accessed 03-01-2013]
28. Pernica, M. & Markvart, K. (2006) Turistické značení. (Touristic singposting). *Lesnická práce*, 8/2008 [online] URL: http://www.silvarium.cz/lesnicka-prace-c-8-08/turisticke-znaceni [accessed 17-07-2012]
29. Petrescu, D. C. (2009) The interaction of economy and environment: Consequences, awareness, remedies. The forest. *Studia Universitatis Babes Bolyai – Negotia*, issue 3/2009, 179-193. PDF file. URL: www.ceeol.com [accessed 24-11-2010]
30. Rametsteiner, E. & Weiss, G. (2005) The role of innovation systems in non-timber forest products ans services development in central Europe. *Economic Studies*, issue 1/2005, 23-36. PDF file. URL: www.ceeol.com [accessed 14-06-2010]
31. Seznam.cz (2011) Crosetta del Cansiglio. [online] URL: http://www.mapy.cz/#x=20.143953&y=42.555145&z=4&d=ward_271649_0_1&c=14-23-27-28-29-30-31&q=crosetta%20del%20cansiglio&qp=12.214793_46.003640_12.486125_46.090292_11 [accessed 27-10-2011]
32. Seznam. cz (2013) Velký Blaník. [online] URL: http://www.mapy.cz/#x=14.879497&y=49.642334&z=13&l=16 [accessed 08-01-2013]
33. Simanov, V. (2009) Co to je lesnictví, a co se od něj očekává v tomto století? (What is forestry, and what is expected of it in this century?). *Lesnická práce*, 8/2009 [online] URL:

http://www.silvarium.cz/lesnicka-prace-c-8-09/co-to-je-lesnictvi-a-co-se-od-nej-ocekava-v-tomto-stoleti [accessed 13-07-2012]
34. Tragol (2011) La foresta del Cansiglio. (Cansiglio forest). [online] URL: http://www.tragol.it/Cansei/cansei.htm [accessed 01-11-2011]
35. ÚHUL (2011) Obce s rozšířenou působností a lesní plochy. (Municipalities with extended powers and forest areas). [online] URL: http://www.uhul.cz/prehl_map_CR/images/ORP_les%20resize1.jpg [accessed 30-06-2011]
36. Veneto Agricoltura (2011) Foresta Demaniale Regionale del Cansiglio. (The state forest Cansiglio). [online] URL: http://www.venetoagricoltura.org/basic.php?ID=598 [accessed 28-10-2012]

The text was written with using *Forestry and Forest Products Dictionary (English - Czech and Czech – English)* by Ing. Bohuslav Horák (1999) Kostelec nad Černými lesy (CZ): Lesnická práce, p. 349; as well as using on-line dictionaries by Seznam.cz (http://slovnik.seznam.cz/en-cz) and by Google.com (http://translate.google.cz/).

List of Author's Work

Peer-Reviewed Publications

Drábková, A. (2012) Tourists in Protected Landscape Areas in the Czech Republic – a Sociological Survey. *Procedia Environmental Sciences*, 14 (2012), 279 – 287

Drábková, A. (2013a) Tourists in Cansiglio Forest, Italy – Case Study about Forests Visitors and Their Opinions. Paper was accepted for publishing in *Human Geographies*.

Drábková, A. & Šišák, L. (2013) Forest Visitors' Opinion of Recreational Facilities and Trails in Forests in the Protected Landscape Area Blaník – Case Study. Paper will be published in *Journal of Forest Science*, 5 (2013).

Others Publications

Mikulec, J., Kalivoda, O., **Drábková, A**. & Skřivanová, Z. (2009) Projekt „Vliv estetických hodnot na cestovní ruch". In: Dreslerová, J. (editor) *Venkovská krajina 2009. Sborník ze 7. ročníku mezinárodní mezioborové konference konané 22. - 24. května v Hostětíně*. Brno (CZ): Česká společnost pro krajinnou ekologii, 347 - 351

Drábková, A. (2010) Zhodnocení návštěvnosti lesa a názorů turistů na les na příkladě chráněné krajinné oblasti Blaník. In: Drobilová, L. (editor) *Venkovská krajina 2010. Sborník z 8. ročníku mezinárodní mezioborové konference konané 20.-23. května v Hostětíně, Bílé Karpaty*. Brno (CZ): Lesnická práce, 21-25

Drábková, A. (2010a) Analýza preferencí turistů v chráněné krajinné oblasti Blaník. In: Marušák, R., Dvořák, J. & Natov, P. (editors) *COYOUS 2010 – Konference mladých vědeckých pracovníků*. Praha (CZ): Česká zemědělská univerzita v Praze, 491-498

Kalivoda, O., Skřivanová, Z. & **Drábková, A**. (2010) Aesthetical Preferences of Landscape in the Protected Area Český kras. In: Bejček, V., Fernández, E., Jílek, F., Libra, M., Marušák, R., Sedmíková, M. & Zagata, L. (editors) *UCOLIS 2010 – University Conference in Life Sciences – Proceedings*. Praha (CZ): Czech University of Life Sciences Prague, 195-202

Drábková, A. (2013) Proč je důležité zjišťovat současný stav rekreace v lesích CHKO. *Lesnická práce*, 3 (2013), 37

Papers Under Review

Drábková, A. (2013b) Opinions and Preferences of Forest Visitors in Protected Landscape Area Blaník. Paper is under review in *Scientia Agriculturae Bohemica*.

Drábková, A. (2013c) Tourists' Perception of Forest Structure: Protected Landscape Areas in the Central Bohemian Region and its Surrounding, Czech Republic. Paper is under review in *Journal of Sustainable Forestry*.

Appendices

Appendix I: Forest Ownership Structure in the Czech Republic 2011

Ownership		Area of forest stands	
		ha	%
State forests		1 557 321	60
of which	Forests of the Czech Republic, State Enterprise	1 307 846	50.38
	Military Forests and Farms, State Enterprise	124 399	4.79
	forests of the Ministry of the Environment (National Parks)	94 930	3.66
	regional forests (secondary schools and other)	3 793	0.15
	other	22 290	0.86
	forests of the Ministry of the Environment (AOPK)	1 196	0.05
	originally state forests	2 868	0.11
Legal persons		73 228	2.82
Municipal and town forests		431 661	16.63
Forests of church and religious entities		1 470	0.06
Forest cooperatives and associations		30 722	1.18
Forest owned by individuals		501 529	19.32
Other (not listed) forests		4	0.00
Total		**2 595 936**	**100.00**

Source: AOPK (2013), graphical desing by Alena Drábková

Appendix II: Overview of Specially Protected Areas

Category	Large area specially protected areas		Small size specially protested localities				Area outside of SPAs
	National parks	Protected landscape areas	National nature reserves	National nature monuments	Nature reserves	Nature monuments	
number of areas	4	25	110	112	804	1 255	
total area (1,000 ha)	119.5	1 086.7	28.1	4.4	38.8	23.6	
% area of the CR	1.51	13.77	0.36	0.06	0.49	0.29	
forest land (1,000 ha)	104	588.5	23.9	2.3	16.9	15.5	
forest coverage (%)	87.7	54	85	51	44	69	
area of natural forests (1,000 ha)	14.7	1.0 *)	6.9	0.3	5.4	0.3	0.6
forests area leaved in the long period to spontaneous evolution (1,000 ha) **)	6.7	0.1	2.2	0	0.7	0	0

Notes: *) area of natural forests in PLA excluding areas inside small size SPAs

**) the sum of quantities of natural forests subcategories referred to as "original forest" and "natural forest", which are used to describe of forests left to long-term spontaneous development

Source: AOPK (2013), graphical desing by Alena Drábková

Appendix III: Photographs showing Tourist Markings in the Czech Republic

All photographs are by Alena Drábková

Tourist marking showing the way to Velklý Blaník

Tourist marking showing the way to Malý Blaník

Appendix IV: Questionnaire – Original (Czech) Version Used During Data Collection in PLA Blaník

Dobrý den,

prosíme Vás o zodpovězení otázek, které pomohou lépe poznat Vaše potřeby související s návštěvami lesa a názory na les a lesní hospodářství. Výsledky budou využity v disertační práci a v návrzích na úpravu lesního prostředí. Dotazník je anonymní. Děkujeme za ochotu a pomoc ☺

Ing. Alena Drábková, studentka Fakulty lesnické a dřevařské České zemědělské univerzity v Praze, e-mail: drabkova@fld.czu.cz

Otázky, prosím, vyplňujte v tom pořadí, ve kterém jsou sestaveny.

Pokud nebude uvedeno jinak, prosím, zaškrtněte jen jednu odpověď. Děkujeme.

1. Jak často (v průměru za rok) chodíte do lesa?

a) 4x a více týdně b) 2 – 3x týdně c) 1x týdně d) 1 – 3x měsíčně

e) 6 – 11x ročně f) méně než 5x ročně g) do lesa vůbec nechodím

2. Tato frekvence návštěv lesa Vám:

a) vyhovuje

b) nevyhovuje – jsem v lese častěji, než bych si přál(a)

c) nevyhovuje – chtěl(a) bych být v lese častěji

*Pokud je Vaše odpověď **c**, označte, prosím, důvod, proč nechodíte do lesa tak často, jak byste si přáli (můžete zaškrtnout více odpovědí):*

- nedostatek času
- špatná dopravní dostupnost
- vzdálenost lesa od bydliště
- nechci jít sám (sama)
- jiný důvod (*prosím, vypište*):

……

……

3. Co Vás do lesa přivádí? *(prosím, u každé odpovědi označte dle důležitosti účel Vaší návštěvy lesa: 1 – nejvýznamnější, 5 – nejméně významný):*

1 2 3 4 5 zdravé lesní ovzduší

1 2 3 4 5 krásná příroda = příjemná relaxace

1 2 3 4 5 rád pozoruji (a) nebo fotografuji lesní zvěř či rostliny

1 2 3 4 5 myslivost

1 2 3 4 5 sběr lesních plodů, hub (a) nebo léčivých rostlin

1 2 3 4 5 sběr dříví či jiného paliva

1 2 3 4 5 jiné důvody (*prosím, vypište níže*)

……

4. Jaký typ lesa nejčastěji vyhledáváte?

<u>dle skladby dřevin</u>

a) jehličnatý b) listnatý c) smíšený d)nevím /je mi to jedno

<u>dle průchodnosti a dohlednosti</u>

a) s podrostem (byliny, křoviny apod.) b) bez podrostu c) nevím /je mi to jedno

5. Když plánujete výlet, vybíráte turistické trasy i podle toho, zda vedou lesem?

a) ano b) ne c) jak kdy d) nevím /je mi to jedno

6. Které lesní stezce byste dali přednost? (p*rosím, označte max. 2 možnosti*):

a) divoké neupravené stezce s minimem vybavení

b) upravené stezce (např. s lávkami) bez vybavení pro návštěvníky

c) upravené stezce se základním vybavením (lavičky)

d) stezce s rozšířeným vybavením pro děti (prolézačky, manipulační panely, obrázky zvířat)

e) stezce upravené pro pohyb všech kategorií návštěvníků (i pro starší osoby, osoby na vozíčku)

f) jiné (*prosím, vypište*): ……

7. Které z následujících druhů zařízení pro návštěvníky je dle Vašeho názoru vhodné umístit k lesním turistickým stezkám? (*možno zaškrtnout i více variant*):

   a) lavičky

   b) odpočinkové (svačinové) místo se stolkem

   c) krytý altán s lavicemi a stolkem

   d) dětské prolézačky

   e) místo s vybavením pro grilování

   f) panely naučné stezky

   g) místo s možností odběru vody (studánka, studna)

   h) místo kontaktu se zvířaty (obora se zvěří)

   i) botanický koutek s rostlinami

   j) místo s možností práce se dřevem (dílna v přírodě)

   k) jiné (prosím, vypište): ……

8. Šli byste raději:

   a) do lesa, který je víceméně jednotvárný, popř. málo se měnící lesní plochy

   b) do lesa, kde se střídají lesní plochy s loučkami, pasekami, mýtinami apod.

   c) nevím /je mi to jedno

9. Víte, pod jakou úroveň ochrany spadá území, kde se právě nacházíme? *(možno označit více odpovědí):*

   a) NP (= národní park)

   b) CHKO (= chráněná krajinná oblast)

   c) NPR (= národní přírodní rezervace)

   d) NPP (= národní přírodní památka)

   e) PR (= přírodní rezervace)

   f) PP (=přírodní památka)

   g) PřP (=přírodní park)

   h) toto území nespadá pod žádnou ochranu

   i) nevím /je mi to jedno

10. Les kolem rozhledny na Velkém Blaníku (tak, jak jste jej viděli) je podle Vás:

    a) lesnicky intenzivně obhospodařován

    b) probíhají zde občasné lesnické zásahy

    c) je ponechán samovolnému vývoji – lesníci zde nezasahují

    d) nevím

11. Převážně jehličnatý les, např. v okolí parkoviště (tak, jak jste jej viděli) je podle Vás:

    a) lesnicky intenzivně obhospodařován

    b) probíhají zde občasné lesnické zásahy

    c) je ponechán samovolnému vývoji – lesníci zde nezasahují

    d) nevím

12. Padlé staré tlející kmeny v lese v přírodní rezervaci jsou dle Vašeho názoru:

    a) důkazem špatné práce lesníka, který nestihl dřevo včas vytěžit

    b) důkazem přírodě blízkého hospodaření, byly zde ponechány záměrně

    c) nevím

13. Co si představíte pod pojmem „Trvale udržitelné obhospodařování lesů“?

.....

……

……

……

……

14. Máte pro nás nějaké návrhy či připomínky?

……

……

……

Na závěr dovolte pár otázek, které jsou důležité pro statistické zpracování dat:

Jste: a) žena b) muž

Váš věk: …… let

Vzdělání:

a) bez vzdělání b) základní c) SŠ bez maturity d) SŠ s maturitou e) VOŠ
f) VŠ – Bc. studium g) VŠ – magisterské studium h) VŠ – postgraduální studium

Profesní zaměření:

a) technické obory

b) přírodovědné a medicínské obory - mimo zemědělství, potravinářství a lesnictví

c) zemědělství a potravinářství

d) lesnictví

e) ekonomika a finančnictví

f) humanitní a právní obory

g) jiné (vypište, prosím): .....

Velikost místa Vašeho bydliště (dle počtu obyvatel):

a) do 500 obyvatel
b) 500 – 1999 obyvatel
c) 2000 – 4999 obyvatel
d) 5000 – 19 999 obyvatel
e) 20 000 – 99 999 obyvatel
f) 100 000 – 999 999 obyvatel
g) 1 milion obyvatel a více

DĚKUJEME ZA OCHOTU A VÁŠ ČAS!

Appendix IV: Questionnaire – English Version Used for Presentation of this Study to Foreign Colleagues

Hello,

Please answer these questions to help us better understand your needs related to forest-visits and your opinions about forests and forestry management. The results will be utilized for a doctoral thesis and to create proposals on how to modify the forest environment. The questionnaire is anonymous. Thank you for your willingness and for your help. ☺

Ing. Alena Drábková, student in the Faculty of Forestry and Wood Sciences, Czech University of Life Sciences Prague, e-mail: drabkova@fld.czu.cz

Please answer the following questions in the order in which they are presented.

Unless otherwise indicated, please, choose only one answer. Thank you.

1. How often (in an average year) do you go into the forest?

a) 4x or more per week b) 2 – 3x per week c) 1x per week d) 1 – 3x per month

e) 6 – 11x per year f) Less than 5x per year g) Never

2. You consider this frequency of forest visits:

a) Convenient

b) Inconvenient – I am in the forest more often than I wish

c) Inconvenient – I wish to be in the forest more often than I am

*If your answer is **C**, please indicate the reason you do not go into the forest as often as you wish (you can choose more than one):*

- The lack of time
- Poor traffic accessibility
- The distance between the forest and home
- I do not want to go alone
- Another reason (*please specify*):

……

……

3. Why do you go into the forest? *(For each possible reason listed, please circle the number which indicates how important that reason is for you; 1 = the most important, 5 = the least important):*

1 2 3 4 5 Healthy air

1 2 3 4 5 Beautiful nature = pleasant relaxation

1 2 3 4 5 I like to watch or to photography wild animals or plants

1 2 3 4 5 Hunting

1 2 3 4 5 Picking forest fruits, mushrooms or medicinal plants

1 2 3 4 5 Wood, cone, or other fuel collection

1 2 3 4 5 Other reason(s) (*please specify*)

……

4. What kind of forest do you seek most frequently?

<u>According to the composition of tree species</u>

a) Coniferous b) Broadleaved c) Mixed d) I do not know/I do not care

<u>According to the easy of passage and visibility</u>

a) With undergrowth (herbs, brush, etc.) b) Without undergrowth

c) I do not know/I do not care

5. Do you choose tourist routes depending on whether they go through the forest when you are planning your trip?

a) Yes b) No c) Sometimes d) I do not know/I do not care

6. Which forest trail would you prefer? (please *mark no more than two*):

a) A wild, unkempt trail with minimum of equipment

b) A maintained trail (e.g. with bridges) without any further equipment for visitors

c) A maintained trail with basic equipment (benches)

d) A trail with equipment for children (jungle gyms, manipulation panels, pictures of animals)

e) A trail modified for all visitors (including the elderly and disabled)

f) Other (*please specify*): ……

7. Which of following types of facilities for visitors is, in your opinion, appropriate to place near forest tourist routes (*you may choose more than one*)?

   a) Benches

   b) A place with a table for having a rest (and eating a snack)

   c) A covered bower with benches and tables

   d) Jungle gyms for children

   e) A place with the barbecue equipment

   f) Nature trail panels

   g) A water source (i.e. a spring or a well)

   h) A game preserve for interaction with animals

   i) A botanical nook with herbs

   j) A workshop where visitors can work with wood in the open air

   k) Other *(please specify)*: ……

8. Would you rather go:

   a) To a forest which is almost monotonous, with little change throughout forest areas

   b) To a forest with variety, such as small meadows, clear cuts, glades, etc.

   c) I do not know / I do not care

9. Do you know which level of protection covers the area we are in now *(you may choose more than one)?*

   a) NP (national park)

   b) PLA (protected landscape area)

   c) NNR (national nature reserve)

   d) NNM (national nature monument)

   e) NR (nature reserve)

   f) NM (nature monument)

   g) NtP (nature park)

   h) This area does not have any level of protection

   i) I do not know / I do not care

10. The forest around the view-tower on Velký Blaník (as you saw it):

a) Is intensively managed forest

b) Forestry interventions take place here occasionally

c) Is left to spontaneous progress – foresters do not interfere here

d) I do not know

11. As you saw it, the predominantly coniferous forest, e. g. near the parking area:

a) Is intensively managed forest

b) Forestry interventions take place here occasionally

c) Is left to spontaneous progress – foresters do not interfere here

d) I do not know

12. Old, fallen rotting trunks in the nature reserve are, in your opinion:

a) An example of the forester's bad work – he did not make a logging in time

b) An example of nature oriented forestry – they have been left here purposely

c) I do not know

13. What do you think the term "constantly sustainable forest management" means?

.....

.....

.....

.....

.....

14. Do you have any proposals or suggestions for us?

.....

.....

.....

Finally, please allow us to ask you a few questions, important for statistical data processing:

You are: a) female b) male

Your age: …… years

What is your level of education?

a) None b) Elementary c) Some high school d) High school graduate

e) Some college f) University – bachelor's degree

g) University – master's degree h) University – postgraduate studies

What is your profession?

a) Technical specialization

b) Scientific or medical specialization – not including agriculture, food industry, or forestry

c) Agriculture or food industry

d) Forestry

e) Economics or financial specialization

f) Humanities or law specialization

g) Other *(please specify)*: .....

How many inhabitants live in the city where you live?

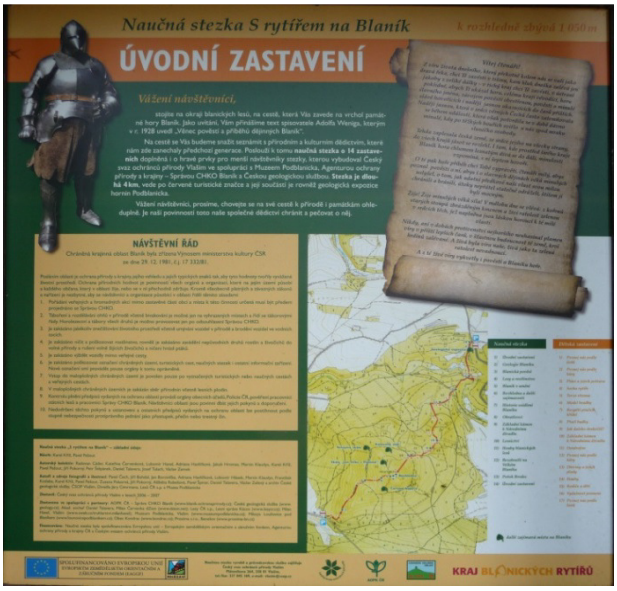
a) Less than 500 inhabitants
b) 500 – 1,999 inhabitants
c) 2,000 – 4,999 inhabitants
d) 5,000 – 19,999 inhabitants
e) 20,000 – 99,999 inhabitants
f) 100,000 – 999,999 inhabitants
g) 1 million inhabitants or more

THANK YOU FOR YOUR WILLINGNESS AND FOR YOUR TIME!

Appendix VI: Photographs from the Study Area Blaník

All photographs by Alena Drábková

First Panel of Nature Trail ‘S rytířem na Blaník’ (‘With the Knight to the Blaník hill’)



Wooden Xylophone (Dendrophone)

Geological Exposition

Appendix VIII: Photographs of Respondents Filling out the Questionnaires

All photographs by Alena Drábková

Respondents filling out the questionnaires in PLA Blaník during the first survey day – 28.10.2009

Respondents filling out the questionnaires in PLA Blaník during the last survey day – 28.10.2010

Respondents filling out the questionnaires in Cansiglio Forest during the last survey day – 26.6.2011

Appendix IX: Photographs of Signboards Confirming Protection Status

All photographs by Alena Drábková

Signboard welcoming visitors to Protected Landscape Area Blaník

Signboard informing visitors that they have arrived at a nature reserve

Appendix X: Questionnaire – Original (Italian) Version Used During Data Collection in Cansiglio Forest

Buongiorno,

sono Alena Drábková, una studentessa della Facoltà di Scienze Forestali dell'Università di Praga. Sto conducendo un'indagine presso la Foresta del Cansiglio per conoscere le ragioni della Sua visita in bosco e per raccogliere Suoi eventuali suggerimenti.

Può rispondere a qualche breve domanda? I risultati saranno utilizzati per la mia tesi di dottorato, ma anche per proporre miglioramenti sulla fruibilità della foresta.

Il questionario è assolutamente anonimo e la sua compilazione richiede solo pochi minuti.

La ringrazio per il Suo aiuto e la Sua disponibilità ☺

Ing. Alena Drábková, Facoltà di Scienze Forestali dell'Università di Praga
e-mail: drabkova@fld.czu.cz

La prego di compilare le domande secondo l'ordine in cui sono formulate. Se non è indicato diversamente, dia solo una risposta.

1. Quante volte va nel bosco in un anno, in media?

a) 4 volte o più la settimana b) 2 - 3 volte la settimana c) 1 volte la settimana
d) 1 - 3 volte al mese e) 6 – 11 volte all´anno
f) inferiore a 5 volte all'anno g) mai

2. La frequenza delle visite al bosco è per Lei:

a) soddisfacente

b) non soddisfacente - vado nel bosco più di quanto vorrei

c) non soddisfacente – vorrei andare nel bosco più spesso

*Se la sua risposta è **c**, indichi il motivo, perchè non va nel bosco tutte le volte che vuole (è possibile indicare più di una risposta):*

- mancanza di tempo

- difficile accessibilità dei luoghi

- distanza del bosco dal luogo di residenza

- non voglio andare solo

- segnaletica insufficiente (e quindi la paura di smarrirsi)

- altro motivo (specifichi, per favore):

…….....
.....……..…….....……

3. Indichi quanto ciascuna delle seguenti ragioni influisce nella sua scelta di visitare un bosco :

1 = molto importante; 5 = assolutamente non importante

	1	2	3	4	5
l'aria buona	□	□	□	□	□
la natura, che offre un piacevole rilassamento	□	□	□	□	□
l'osservazione e la fotografia di animali e piante	□	□	□	□	□
la caccia	□	□	□	□	□
la raccolta di frutti di bosco, funghi e piante medicinali	□	□	□	□	□
la raccolta di legna, di pigne e di altri combustibili	□	□	□	□	□
lo sport	□	□	□	□	□
il pic nic	□	□	□	□	□
altri motivi (specifichi, per favore)	□	□	□	□	□

4. Che tipo di bosco preferisce per la sua visita ?

Nei riguardi delle specie arboree presenti:

a) di conifer b) di latifoglie c) misto d) non so/è indifferente

Nei riguardi dell'accessibilità e dell'impatto visivo

a) con sottobosco (erbe, arbusti, ecc) b) senza sottobosco
c) non so / è indifferente

5. Quando sceglie gli itinerari per le sue passeggiate, tiene conto anche del fatto che passino o meno attraverso un bosco?

a) sì b) no c) a volte d) non so/è indifferente

6. Dove preferisce andare?

a) nei boschi in cui ci sono poche interruzioni nella copertura forestale

b) nei boschi dove le zone boschive si alternano con prati e radure

c) non so/è indifferente

7. **Come influisce la presenza di piante morte a terra nel bosco (importanti per la biodiversità), sulla sua scelta dell'itinerario per le sue passeggiate ?**

a) positivamente
b) negativamente
c) è indifferente

8. **Sa qual è il livello di tutela di questa area adesso? (possibili più risposte)**

a) Parco Nazionale

b) Parco Regionale

c) Riserva Naturale

d) Area Natura 2000

e) nessuno - questa area non è protetta

f) non so

9. **Nella foresta del Cansiglio vivono attualmente circa 2800-3000 cervi. In che misura, secondo lei, questa popolazione sta creando problemi alla conservazione/rinnovazione della foresta del Cansiglio?**

a) molti gravi problemi

b) alcuni problemi, di media gravità

c) alcuni problemi di scarsa importanza

d) nessun problema

e) non so

10. **Nella foresta del Cansiglio operano diverse figure professionali e la foresta viene visitata annualmente da migliaia di turisti. Pensando sempre al <u>cervo</u>, Le chiedo di valutare se ritiene che l'attività delle seguenti figure presenti nel territorio del Cansiglio sia influenzata dalla presenza di questa specie, e in che modo?**

positivamente = ne traggono dei benefici;
negativamente = ne traggono dei danni;
indifferente = la loro attività non viene per nulla influenzata dalla presenza dei cervi

	Positivamente	Negativamente	Indifferente	Non so
Proprietario del bosco	□	□	□	□
Turistica che viene per il pic-nic	□	□	□	□
Malghese	□	□	□	□
Giocatore di golf	□	□	□	□
Ciclista di mountain-bike	□	□	□	□
Ristoratore	□	□	□	□
Turista che viene per il bramito	□	□	□	□
Escursionista	□	□	□	□
Guida naturalistica	□	□	□	□
Fungaiolo	□	□	□	□
Altro	□	□	□	□

11. Ha qualche suggerimento o commento?

.....
.....
.....
.....
.....
.....

Caratteristiche demografiche del rispondente

1. Sesso: a) maschio
b) femmina

2. Età (*anni compiuti*): |__|__|

3. Titolo di studio:
a) nessuno
b) licenza elementare
c) licenza media
d) licenza media superiore
e) laurea o superiore

4. La sua formazione professionale è orientata al settore:
a) tecnico
b) scientifico o medico, escluso l'agricoltura, alimentare e forestale
c) agricolo o alimentare
d) forestale
e) economico o finanziario
f) umanistico o giuridico
g) altro (specificare):

……

5. Comune di residenza:

.....……..……....

6. E' iscritto a qualche associazione naturalistica?
a) si
b) no

GRAZIE MILLE PER LA SUA COLLABORAZIONE!

Appendix XI: Questionnaire – English Version of Questionnaire Used in Cansiglio Forest – Translated for the Thesis

Good morning,

I am Alena Drábková, student in the Faculty of Forestry and Wood Sciences, Czech University of Life Sciences in Prague. I am conducting a survey of the Cansiglio Forest to discover the reasons for your visit to the forest and to gather your suggestions.

Can you respond a few brief questions? The results will be utilized for my doctoral thesis, but also to suggest improvements on the usability of the forest.

The questionnaire is completely anonymous and its completion takes only a few minutes.

Thank you for your help and for your willingness. ☺

Ing. Alena Drábková, student in Faculty of Forestry and Wood Sciences, Czech university of Life Sciences Prague, e-mail: drabkova@fld.czu.cz

Please, fill questions in the order in which they are arranged. Unless otherwise indicated, please, choose only one answer.

1. **How often (in an average year) do you go into the forest?**

a) 4x and more per week b) 2 – 3x per week c) 1x per week

d) 1 – 3x per month e) 6 – 11x per year

f) Less than 5x per year g) Never

2. **You consider this frequency of forest visits:**

a) Convenient

b) Inconvenient – I am in the forest more often than I wish

c) Inconvenient – I wish to be in the forest more often than I am

*If your answer is **c**, indicate the reason you do not go into the forest as often as you wish (you can choose more than one):*

- The lack of time
- Poor traffic accessibility
- The distance between the forest and home
- I do not want to go alone
- Insufficient signposting (and thus the fear of getting lost)
- Another reason (please specify):

.....

……..

Please indicate how each of the following reasons influence your choice of visiting forest:

1 = very important; 5 = absolutly not important

	1	2	3	4	5
Heathy air	□	□	□	□	□
Nature, offering pleasant relaxation	□	□	□	□	□
Observing and/or photographying wild animals or plants	□	□	□	□	□
Hunting	□	□	□	□	□
Picking forest fruits, mushrooms or medicinal plants	□	□	□	□	□
Wood, cone or other fuel collection	□	□	□	□	□
Sport	□	□	□	□	□
Picnicking	□	□	□	□	□
Other reasons (please specify).....	□	□	□	□	□

3. **What kind of forest do you prefer to visit?**

Concerning the composition of tree species:

a) Coniferous b) Broadleaved c) Mixed d) I do not know/I do not care

Concerning the easy of passage and visibility

a) With undergrowth (herbs, brush etc.) b) Without undergrowth

c) I do not know/I do not care

4. **Do you choose tourist routes depending on whether they go through the forest when you are planning your trip?**

a) Yes b) No c) Sometimes d) I do not know/I do not care

5. **Where do you prefer to go?**

a) To a forests which is almost monotonous, or only slightly varied

b) To a forests with variety, such as small meadows, and glades

c) I do not know/I do not care

6. **How does the presence of dead trees on the ground in the forest (important for biodiversity) affect your choice of the route for your walks?**

a) Positively
b) Negatively
c) Indifferent

7. **Do you know which level of protection covers the area we are in now? (possible more answers)**

a) National Park
b) Regional park
c) Nature Reserve
d) Natura 2000 area
e) None - this area is not protected
f) I do not know

8. **Currently, around 2800-3000 red deer live in the Cansiglio area. To what extent, according to you, is this population creating problems for the conservation or regeneration of the Cansiglio forest?**

a) Many serious problems
b) Some problems of medium severity
c) Some problems of minor significance
d) No problem
e) I do not know

9. **In the Cansiglio forest various professionals are involved and the forest is visited by thousands of tourists annually. Considering deer, please evaluate whether the activity of the following figures in the territory of Cansiglio are affected by the presence of this species, and in what way?**

Positively = they have benefits;
Negatively = they have damages;
Indifferently = their activity is in no way affected by the presence of deer

	Positively	Negatively	Indifferently	I do not know
Forest owner	□	□	□	□
Tourist who comes for a picnic	□	□	□	□
Herdsmen	□	□	□	□
Golf player	□	□	□	□
Mountain bike rider	□	□	□	□
Restaurateur	□	□	□	□
Tourist who comes for a roaring of the deer	□	□	□	□
Excursionist	□	□	□	□
Nature guide	□	□	□	□
Mushroom picker	□	□	□	□
Other	□	□	□	□

10. Have you got any suggestion or comment?

……
……
……
……
……
…….....

Demographic characteristics of the respondent

1. Gender: a) male
b) female

2. Age (*completed years*): |__|__|

3. Education:
a) None
b) Elementary
c) High school
d) College courses
e) University or higher degree of education

4. Your profession is oriented in sector:
a) Tecnical specialization
b) Scientific or medical specialization, excluding agriculture, food industry and forestry
c) Agriculture or food industry
d) Forestry
e) Economics and finance specialization
f) Humanities and law specialization
g) Other (specify):

……

5. Municipality of residence:

.....……...

6. Are you enrolled any naturalistic association in?
a) Yes
b) No

THANK YOU VERY MUCH FOR YOUR COLLABORATION!