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LOCAL PEOPLE AND NATIONAL PARKS: ŠUMAVA AND PELISTER IN COMPARATIVE PERSPECTIVE

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I, Saška Petrova, declare that this PhD thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. The thesis is entirely my own work.

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ABSTRACT

People's views towards national parks have been reshaped since the designation of Yellowstone, the first national park in the world. Faced with the necessity to protect nature, on the one hand, and the lack of financial and human resources, on the other, national park administrations are forced to find creative ways to improve local resident participation in park management. Thus, determining the factors responsible for the changes in people's perceptions and attitudes has become one of the priority activities in the creation and implementation of the management strategies in national parks.

This research investigates the local residents' perception of, and attitudes towards, nature protection and local development in two national parks: Pelister National Park in Macedonia and Šumava National Park in the Czech Republic. It analyses the significance of the residents' place attacment as a factor in creation of their attitudes and perceptions. The study supplements previous similar research carried on in these two parks and as such explores potential trends and changes in their management practices, especially the issues related to residents' involvement. Data are collected with the aid of a standardised questionnaire undertaken in two years in each park.

The strength of people's connections to, or sensitivity about, a particular area might influence their way of behaviour in and attitudes towards it. The relationships between humans and space is defined in many ways, including 'place attachment', 'place sensitivity', and 'topophilia'. In this study, I use the term place attachment.

The overall results from the statistical analysis of data have indicated that, despite socio-demographic differences, respondents have a significant place attachment to both national parks Šumava and Pelister. This is evidenced by the high number of respondents who state that they feel at home in Šumava and Pelister and by their wish not to move somewhere else. Moreover, it has transpired that ancestral links to the area have a significant influence on the intensity of place attachment, as well as on the evaluation of the management of both national parks.

The other overarching finding emerging from my two case studies is that local residents maintain a strong place attachment to the protected areas in which they live, regardless of the strictness and quality of the environmental management regime in them.

Key words: national parks, nature protection, place attachment, tourism, Central and Eastern Europe, Macedonia, Czech Republic

ABSTRAKT

Percepce a postoje místních obyvatel k národním parkům se stále měnily a preformovaly od doby prohlášení prvního národního parku Yellowstone. Správy mnoha národních parků se musejí každodenně vyrovnávat s výzvou jak zabezpečit účinnou ochranu přírody s nedostatečnými finančními a lidskými zdroji. Tato situace jasně ukazuje, že zapojení místních obyvatel do managementu parků je nutnost. Navíc determinace hlavních faktorů způsobujících změny v postojích a percepcích místních obyvatelů se stává prioritní aktivitou k tvorbě a realizaci managmentových strategií v národních parcích.

Chování a postoje místních obyvatel v určité oblasti by mohla být ovlivněna jednak jejím stupněm vázanosti nebo také senzibilitou. Vazby lidé-prostor jsou definovány jako: prostorová vázanost, prostorová senzibilita a topofilia. V této studii byl použit termín prostorová vázanost.

Tento výzkum zkoumá percepce a postoje místních obyvatel k ochraně přírody a místnímu rozvoji ve dvou národních parcích: Národní park Pelister v Makedonii a Národní park Šumava v České Republice. Analýza stupně důležitosti vázanosti místních obyvatel na park ve vytváření jejich percepcí a postojů je také částí výzkumu. Tato studie navazuje a doplňuje výzkům realizován v Národním parku Šumava v roku 2003 a na výzkum realizován v roku 2006 v Národním parku Pelister a jako takový se zabývá případnými trendy a změnami vybraných indikatorů ochrany přírody, místního rozvoje a turismu v těchto dvou parcich. Do výzkumu jsou zapojeny i analýzy způsobů a intenzity účasti místního obyvatelstva v managementu parků. Sbírání dat je realizováno pomocí standardizovaného dotazníku a řízenými rozhovory provedené v periodu 2008-2009.

Výsledky ze statistických analýz dat ukázaly že navzdory socio-demografickým rozdílům, respondenti si především vnímali Šumavu respektivě Pelister jako své bydliště. Většina z respondentů z obou parků se vyjádřilo, že by se nepřestěchovali

kdesi jinde i když by měli takovou možnost. Navíc, respondenti, kteří měli předkové z regionu Šumavy či Pelister měli silnější vazbu k těmto obastem.

Ukázalo se také, že přísnost či mírnost režimu ochrany přírody a hospodaření parků nemají vliv na hodnocení parků respondenty jako jejich místo bydlení a na jejich rozhodnutí odstěchovat se z nich.

Klíčová slova: národní park, ochrana přírody, vztah k místu, turismus, Centrální a Východní Evropa, Makedonie, Česká republika

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Saška Petrova

LIST OF ACRONYMS

ANCOVA: Analysis of Covariance

ANOVA: Analysis of Variance

CBNRM: Community-Based Natural Resource Management

CCAs: Community Conservation Areas

ECE: Eastern and Central Europe

EEC: European Economic Community

EU: European Union

GLM: Generalised Linear Model

IDCP: Integrated Conservation and Development Project

IUCN: International Union for the Conservation of Nature

MANCOVA: Multivariate Analysis of Covariance

MANOVA: Multivariate Analysis of Variance

PASW: Predictive Analytics Software

SEE: Southeastern Europe

UNESCO: United Nations Educational, Scientific and Cultural Organisation

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CHAPTER 1:

INTRODUCTION

The establishment of national parks across the world dates back to the nineteenth century. The first national parks were established in order to protect pristine natural sites and to preserve part of the wild character of natural phenomena. Although their meanings and purposes have evolved over time and space, national parks are still an important method of nature protection. According to the IUCN (International Union for Conservation of Nature), they are defined as:

> 'A natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible' (IUCN 2010).

However, this definition is not applicable to all national parks around the world, as the category 'national park' is defined differently in different countries. As a consequence, there is no unified management system for these protected areas.

Traditionally, conservationists (for example see Terborgh et al. 199**)** have stressed that people cause a serious threat to the biological integrity of national parks, as they may exploit the natural resources of such areas in order to sustain their livelihoods. Management policies that involve the displacement of local populations and limitations of economic activities have been widely critiqued in the literature. Primbert and Pretty (1995) argue that despite their theoretical appeal, national park management models can be problematic. This is because, in many cases, the emphasis is placed on the conservation of biological diversity, often ignoring the needs and interests of local people living in and around these areas. It has been argued that the exclusion of local communities has led to local opposition and the obstruction of conservation objectives in protected areas (Duffy 2010).

The controversies related to national park protection and management are exemplified by the rise and fall of the so-called 'Yellowstone model'. This model is based on the management approach adopted in creating and governing the Yellowstone National Park – the first such area in the world, designated as early as 1872. For a long time, Yellowstone was used as a blueprint for national park planning and management across the world (Stevens 1997). It entailed a biocentric conventional management approach towards nature conservation, including the displacement and exclusion of local communities from designated national park areas. 'Yellowstone' has been held to account for the high costs of park protection, unsuccessful nature conservation and negligence of local people's needs and interests (Brockington and Igoe 2006).

In response to the failure of the Yellowstone model, there has been a polarised debate regarding local communities and national park management. The relationship between protected areas and local population has been of central importance in this context. New approaches to biodiversity conservation are generally known as co-management models (Stevens 1997). For example, Community-Based Natural Resource Management (CBNRM) is one approach that has been comprehensively promoted in recent years as an effective method for the realisation of nature conservation and socioeconomic objectives (Kellert et al. 2000, Dressler et al. 2010). But the involvement of local residents and their active participation in the management of protected areas has increased the complexity of the tasks faced by protected area management offices (Petrova et al. 2009).

Socio-economic status, cultural and relatives' ties also influence the manner in which people perceive nature conservation and park authorities as well as their interest in getting involved in the processes of planning and management (Stevens 1986). But relatively little data exists regarding the implementation of the co-management models, particularly with respect to the reconciliation of social and environmental goals (Kellert et al. 2000). Although the theoretical knowledge regarding national park co-management systems has been enriched during the last twenty years, there is a substantial lack of empirical data (Adams 2005).

It remains unclear how the behaviour of local residents towards national parks affects

the management of the parks themselves. In addition, there is a need to examine whether nature protection is an obstacle for local economic growth in national parks, or whether the designation of a protected area – more specifically a national park – can be seen as an opportunity for the development of local communities, and a source of financial capital for the protection of the parks themselves.

This is especially true in the countries of Eastern and Central Europe[1] (ECE) and Southeastern Europe[2] (SEE), which have underwent major economic, social and political changes over the last 18 years. The management of protected areas in Central and Southeastern Europe has reflected wider socio-economic and political changes in the region. For example, after becoming a European Union member, the Czech Republic managed to transpose the *acquis communitaire* into its national legislation. By adapting itself to the relevant legal sources of the EU, the Czech Republic has made the necessary efforts to be a full member of the Union as far as environmental and nature protection issues are concerned (e.g. Natura 2000). This policy effort has been followed by academic research relating to the nature–society relationship and/or tourism development in protected areas (Hall 2000, Kušová et al. 2002, 2005, 2008, Čihař et al. 2000, 2001, Cihar and Stankova 2006, Furlong, 2006). However, while all of this work contributes to the general knowledge about local residents, nature protection and national park management in the Czech Republic, what is usually missing is the comparison and interpolation of existing information with data from similar analyses in Central and Southeastern Europe.

A similar situation can be found in the Republic of Macedonia, further south. Thanks to its aspirations for EU membership, this country also made a number of steps in order to harmonise its current legislation – including nature protection regulation – with that of the EU. But the issues regarding nature protection, and especially protected area management, are still insufficiently researched (despite work in similar contexts, e.g. see Hall 2000, Staddon 2009). There is a substantial gap in the scientific

[1] A region commonly understood to comprise all European post-communist states minus Russia.
[2] This region includes Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Serbia, Kosovo, Macedonia, Greece, Bulgaria, Romania and Turkey.

knowledge about the local residents – nature protection – national park management triangle in the Republic of Macedonia.

In the thesis that follows, I aim to address these gaps by investigating local people's perceptions of, and attitudes towards, a range of national park operation and goverrnance aspects. This is done through a comparative study between Pelister National Park in Macedonia and Šumava National Park in the Czech Republic.

CHAPTER 2:

LITERATURE REVIEW AND RESEARCH AIMS

Local populations play an important role in allowing protected areas to be managed in an effective and durable manner. Protected areas can thus be 'be considered as a landscape where trade-offs between nature protection and [the] socio-economic aspirations of local communities are expected to be well balanced' (Kušová et al. 2008: 38). The active participation of local residents in the regulation of protected areas has increased the complexity of tasks faced by their management offices, considering that the manner in which people perceive environmental quality and sustainability is influenced by, *inter alia*, socio-economic status, family ties and cultural affiliations (Petrosillo et al. 2007). In part, this is because the cultural, social and demographic structure of local communities may affect the acceptance of management strategies in a particular protected area including the development of sustainable tourism and organic agriculture (for a further discussion see for example Verbole 1995, Trakolis 2001).

Despite the fact that recent years have seen the publication of a significant body of academic and policy-orientated research aimed at unravelling the multiple political and social aspects of local community participation in protected area governance (see for example Pimbert and Pretty 1995, Mehta and Kellert 1998, Kapoor 2001, Fraser et al. 2006) the role of national parks in this regard has received comparatively less attention. In particular, the manner in which different nature protection regimes have shaped the local populations' perceptions of national parks is still insufficiently known, as it remains unclear how residents' attitudes towards nature protection policies in such areas affect the management of the parks themselves (Kusumanto 2001). Much of the literature tends to conceptualise local populations and communities as obstacles towards the sustainable management of national parks, as a result of their purportedly entrenched negative attitude towards nature conservation and protection (Terborgh and van Shaik 2002).

In response to the social and environmental injustices that arose as a result of the policies stemming from this approach, a discourse of local populations as 'victims' has appeared in the relevant scholarship on the topic (see Brockington et al. 2006a, 2006b, 2008). It often mythologises the residents of protected areas, by focusing on their ancestral ties to the land and the alleged possession of traditional knowledge. Still, later attempts to move beyond the victim-obstacle binary have often subjected local populations to further marginalisation by framing them within top-down co-management dynamics, in order to meet bureaucratic goals and organisational aims (Baird 1999, 2000).

2.1 National park management: a brief history and visitor-related challenges

The importance of protected areas as 'sanctuaries', for urban dwellers has always been a topical issue within academic literature. Many authors – including psychologists and natural scientists – believe that national parks, with their natural beauty and 'peacefulness' have made a significant contribution to urban dwellers' social and psycho-physical needs (see Hartig 1993, Obua and Harding 1996, Chiesura 2004, Sanesi et al. 2006, Matsuoka and Kaplan 2008, Suckall et al. 2009).

However, there is still an empirical divide regarding local people's and external visitors' perceptions of, and attitudes towards, national park management and protection: their motivations for 'consuming' such areas remain unclear and inadequately connected to contemporary social science research regarding the relationship between nature conservation and tourism. There is also a need for additional inquiry into the social influence of the parks themselves, as well as their interaction with local communities (Trakolis 2001).

Political ecologists and economic historians have located the emergence of protected areas within a romantic strive to 'modernise' cities during the industrial revolutions which engulfed Western Europe in the nineteenth century. They have focused their attention on the aesthetics of the natural world, transforming places that had once been seen as 'valueless' into 'picturesque and sublime' natural refuges (Suckall et al.

2009). But their findings signal an important, albeit subtle shift in the social role of protected areas: they have gradually moved from acting as the providers of a romantic 'escape' from the contamination of the city, to active players in the formation of the identities and lifestyles of their visitors.

According to Obua and Harding (1996), people are generally more attracted to a particular area if they know that it has been designated for protection, since this affects the perception of its attributes and natural beauty. The increasing interest in nature-based tourism within protected areas, especially those located in developing countries, is also magnifying and diversifying its implications for the development of local communities (Goodwin 1996, Lindberg and Johnson 1997). This means that the impacts of tourism activities in this domain extend beyond the natural environment (Goodwin 1996), since they also affect the socio-economic processes and municipal governance.

It should be pointed out that there isn't a single, linear relationship between visitors and local communities. In that sense, according to Eagles and McCool (2002), interactions between visitors and local communities can include cultural (exchange of folkloric and traditional habits, customs and beliefs), economic (investment, a boost to the local economy, changing labour markets), demographic (changes in population structures, migration processes), environmental (pollution, destruction of natural sites, natural habitat disturbances) and political (changing laws, designation of more protected areas as a result of increased awareness and appreciation for parks) dimensions. That is one of the main reasons why Mehta and Kellert (1997) argue in favour of an integrated and simultaneous planning of local development, including tourism and nature protection.

2.2 Governing protected area residents, place attachment and public participation

Effective and durable nature protection cannot take place without the balancing of conservation objectives with the socio-economic aspirations of local communities (Ghimire and Pimbert 1997, Myers 2002, Brown 2003, Brockington et al. 2006a,

2006b, Hewett and Fletcher 2009). The active participation of local residents in the regulation of protected areas has increased the complexity of tasks faced by their management organisations, considering that the manner in which people perceive environmental quality and sustainability is influenced by, *inter alia*, socio-economic status, family ties and cultural affiliations (Wallner et al. 2007, Petrosillo et al. 2007). In part, this is because the socio-demographic structure of local communities may affect the acceptance of management strategies in a particular protected area, including the development of sustainable tourism and organic agriculture (for a further discussion, see, for example, Verbole 1995, Trakolis 2001).

This may be due to the fact that place attachment, which can be defined as the 'affective link that people establish with specific settings, where they tend to remain and where they feel comfortable and safe' (Proshansky et al. 1983, Hidalgo and Hernández 2001, Hernandez et al. 2007) is closely associated with perceptions of home and belonging: 'people's senses of themselves are related to and produced through lived and imaginative experiences of home' (Blunt and Dowling 2006: 24). It thus follows that local understandings of the spatialities of the nature protection process and the character of protected areas themselves play a central role in the functioning of environmental management strategies.

In this context, it is worth mentioning the complex and rich literature on place attachment and home, which has elaborated a wide array of inter-related concepts, including, *inter alia*, 'community attachment', 'sense of community', 'place dependency' and 'place identity' (Kasarda and Janowitz 1974, Sarason 1974, Stokols and Shumaker 1981, Shumaker and Taylor 1983, Proshansky 1983, de Sans 2004). It has often explored the extent to which attitudes towards place, space and the management of national parks vary among different groups of residents and areas, in order to ascertain the claim that local populations cannot be treated as uniform and monolithic with respect to nature protection.

However, academic and policy-based scholarship has tended to conceptualise nature protection regimes as belonging to either a classical nature-orientated, a neo-populist human-centred, or a neoliberal, market-focused approach (Blaikie and Jeanrenaud 1997). Much has been written about the ways in which these three paradigms relate to

wider political, social and spatial dynamics, as well as their embeddedness in particular historical paths and spatial circumstances. Researchers have paid comparatively less attention, however, to the underlying ideologies and policies that have guided the processes through which local people and communities are implicated in these modes of nature conservation. Instead, simplistic views that see local populations in a highly instrumentalised and reductionist manner are common in the literature on environmental politics and management (for a discussion, also see Spinage 1998, Castro and Nielson 2004). The extent to which the different ways of governing protected nature have been connected in time and space, as well as the role of local people in this process, have been marginalised in the theoretical corpus of relevant academic disciplines.

2.3 Local people as 'obstacles' towards nature protection

The Yellowstone model - widely known as 'fortress conservation' has been frequently discussed by, and criticised from, human rights and environmental justice standpoints; numerous activists and scholars have pointed to its detrimental consequences on the welfare of local populations (Colchester 1997, Ghimire and Pimbert 1997, Adams 2003). Still, some scientists continue to support the implementation of this framework:

> 'No apology should be required for adhering to the expected definition of a (national) park as a haven for nature where people, expect for visitors, staff, and concessionaires, are excluded. To advocate anything else for developing countries, simply because they are poor (one hopes, a temporary condition) is to advocate a double standard, something we find deplorable' (Terborgh and van Shaik 2002:6)

Thinking along similar lines, Miranda and LaPalme (1997: 134) emphasise that user rights exercised by local people can sometimes have devastating effects on local ecosystems.

The view of local people as obstacles towards effective nature protection is also common in theorisations of management and policy issues. A large part of the literature in this vein has insisted that 'sustainable development other than ecotourism is incompatible with nature conservation', since 'humans and animals do not mix well' (Terborgh et al. 2002: 6). As far as management approaches are concerned, Wells and Brandon (1992, 1993) insist that integrated projects with combined conservation and economic development objectives may fail to guarantee biodiversity. O'Riordan (2002) suggests that core protected zones with no consumptive use of biological resources should still be central to protected area management.

Advocates of the 'local people as obstacles towards nature protection' view have often focused on the dynamics of knowledge and the flow of information in the governance of nature conservation, pointing out that the involvement of the residents of protected areas in their management is problematic, as a result of the lack of knowledge about the workings of participatory democracy and the functioning of ecosystems (O'Riordan 2002). Thus, Terborgh (2004) emphasises that only science and institutions in the traditional sense can 'save nature'. Scientists and practitioners working within this vein this vein tend to view Integrated Conservation and Development Projects (IDCPs) – which are aimed at, *inter alia*, improving the co-operation process between people and protected area authorities – as 'rural development programmes that confer only incidental benefits for nature conservation' (van Shaik and Rijksen 2002:18).

2.4 Locating the human 'victims' of protected nature

The emergence of a wide range of co-management and participatory practices in recent years – including the ICDPs mentioned above – stems from the rise of political and scholarly attempts to alleviate and prevent the marginalisation of indigenous and traditional peoples resulting from the Yellowstone model. Blaikie and Jeanrenaud (1997) place these initiatives under the aegis of a 'neo-populist approach' whose main emphasis is on questions of environmental and social justice. Colchester (1997, 2004)

argues that protected areas have imposed elite visions of land use, resulting in the alienation of common lands.

Many research and policy contributions within this vein are motivated by broader theoretical thinking which challenges the distinctiveness of nature and culture (see, for example, Goldman 1998). Thus, Cronon (2007) criticises the 'Western myth of wilderness', which is predicated upon the claim that nature can somehow be left untouched by human presence.

Duffy (2010) argues that local people continue to be seen as a nuisance in protected areas, suffering restrictions on their way of life in the name of nature conservation. Systematic and detailed evidence about the consequences of limited opportunities for the use of natural resources – including impoverishment and political exclusion – has now been gathered and interrogated for a wide variety of geographical contexts and cases (Ghimire and Pimbert 1997, Hulme and Murphree 2001, McLean and Straede 2003, Rao et al. 2002).

Dowie's (2009) investigation of the reasons for the economic marginalisation of the resident populations of protected areas emphasises that this dynamic is rooted in the fact that 'indigenous people are moved into the lowest end of the money economy, where they tend to be permanently indentured as park rangers (never wardens), porters, waiters, harvesters, or, if they manage to learn a European language, eco tour guides' (xxvi). The implication of such processes, he argues, is that 'conservation', becomes 'development', resulting in the assimilation of 'native communities' into 'national cultures' (ibid).

Moreover, it appears that not only traditional conservationists are against joint conservation and development projects, since some political advocates of local communities' rights to use and manage of natural resources have also been unsatisfied by co-management practices . Criticism of top-down management approaches has also been voiced from a theoretical perspective: in putting forward the idea of resilient ecosystem governance, Folke et al. (2002) underline that rigid environmental governance can erode resilience and promote the collapse of ecological-social systems.

Conservation models based on the neo-populist approach place a major emphasis on the involvement of 'indigenous' people with their 'traditional' knowledge in the management of protected areas (Blaikie and Jeanrenaud 1997). However, part of the literature on this topic argues that the restrictions that are supposed to keep such populations 'traditional' represent a 'naïve view' that does not provide an effective policy for the conservation of biodiversity. It is claimed that labelling certain populations as 'traditional' inherently carries with it the danger of commodifying their customs and practices for tourist consumption, while symbolically undermining their role in contemporary political processes (Anderson 1983, Billig 1995, de Castro et al 2006).

2.5 Turning protected area inhabitants into 'opportunists' and 'natives'

Despite its beneficial effect on human welfare, numerous experts have insisted that community-based conservation has been unable to provide an effective framework for the management of social and economic pressures on protected areas (van Shaik and Rijksen 2002). The 'neo-populist' approach that encompasses this policy has been critiqued for its inability to protect biodiversity, physical landscapes and 'wilderness' in nature reserves. Its failure has often been attributed to the fact that some local people are uninterested, unwilling or unable to participate in nature conservation.

The combined consequence of such perspectives and broader socio-economic developments in the 1980s and 1990s has been the advent of a neo-liberal approach towards nature protection. Its central tenet is a staunch reliance on the powers of free market allocation, embodied in the suggestion that natural resource management should be taken away from the hands of state. At the same time, the advocates of this paradigm recommend removing the incentives that encourage the non-sustainable use of resources, while stimulating the 'internalization of environmental costs' (Blaikie and Jeanrenaud 1997: 64). Even though the neoliberal view neither criticises nor romanticises local people – unlike, repectively, the classic and neo-populist approaches described above – it has nevertheless played an important role in the re-

distribution of power and resources, often resulting in the further impoverishment of marginalised groups (Dey 1997).

Management tools developed under the aegis of this perspective attempt to provide economic motives for the sustainable management of nature reserves and parks. However, there has been a lot of controversy over the question of who should benefit from natural resource use incentives in protected areas. The idea that the focus of such policies should be on 'indigenous' or 'native' people has frequently come under fire, since

> … 'it is rarely known how long a group of people have inhabited an area (or indeed weather they were the first to do so), and partly because the term *indigenous* often conveys the idea of a harmonious relationship between the human community and the environment, a view that is open to question' (Borgerhoff Mulder et al. 2005)

The environmental governance implications of the 'indigenous' vs. 'non-indigenous' binary have been explored across a number of scholarly contributions. Special attention has been paid to the controversies related to the recognition of Maasai rights over Tanzania's natural resources in the 1990s (Hodgson 2002, Borgerhoff Mulder et al. 2005, Igoe 2010). Even though the Maasai are relative newcomers to the area, this development was followed by the establishment of 'indigenous' Maasai areas centering on claims of identity based on ethnicity. While democratisation has provided the necessary political space for the articulation of such declarations, the wealth of economic opportunities – development funds, workshops, overseas tours, and so on – offered by international donors has led to bitter competition among them. Hodgson (2002) cites the example of a workshop participant who stated that 'Some people just put red clothes and call themselves pastoralists' when referring to the Maa-speaking Arusha people who have recently reclaimed their Maasai heritage in order to accommodate donor preferences to help the 'Maasai'.

European protected areas are not immune to such situations. The vast region of Lapland in Northern Scandinavia – including several national parks and bioological reserves – has been plagued with a range of conflicts relating to nature protection.

They involve the ‘indigenous’ Sami people, who have been granted greater rights in using natural resources, versus the non-Sami population which is considered ‘less’ local –and therefore entitled to lower levels of resource use (Swedish Institute 1996, UNESCO 2006). Southern European national parks are often enveloped in problems relating to the construction of tourism-related facilities, whose owners sometimes buy and build on agricultural land without planning permission. In turn, this creates infrastructural difficulties and pollution which disproportionately affect the residential populations of protected areas (Petrova et al. 2009).

More recent and promising perspectives have started to incorporate elements of adaptive co-management, new partnership models with stakeholders, and the vertical integration of site-level work with policy initiatives and institutional development. For example, Hackel (2001) stresses that there is enough evidence to promote the idea of Community Conservation Areas (CCAs) as a useful nature protection tool (also see Barrow and Murphee 2001). These authors outline some of the advantages of ‘sacred groves’ in Africa, ‘tapu’ areas in the South Pacific, ‘hemas’ reserves in pastoral communities of west Asia, ‘indigenous protected areas’ in Australia and ‘regional natural parks’ in France. It should be emphasised that all space of this kind are classified as ‘protected landscapes or seascapes’ (category V) by the IUCN, and as such are more socially inclusive and sensitive to local needs.

2.6 Hybrid landscapes of local participation

The previous three sections have highlighted the different broad-level conceptualisations of the relationship between local people and nature protection, which emerged successively during the twentieth century. Although the three perspectives that I identified correspond with the principles of fortress conservation, ‘neo-populism’ and neoliberalism, they have not been explicitly theorised as such in the relevant academic and policy literatures, where the focus has mainly been on the ideologies and politics that drive environmental governance in protected areas, rather than the different ways in which nature protection regimes have been implicated in shaping the livelihoods and everyday activities of local people (McShane and Wells 2004, Bajracharya and Dahal 2008).

At the moment, the various policy embodiments of all three perspectives – including the Yellowstone model, CCAs and CBNRM – exist simultaneously across different parts of the world. This can be partly attributed to the lack of a consensus about their environmental effectiveness and social justice implications: each view has its critics and discontents. For example, the conceptualisation of local people as 'victims' emerged largely as a reaction to the failures of state-run exclusionary conservation. The policy embodiment of the 'victims' perspective has attempted to develop governance practices that are more inclusive and sensitive to the needs of the inhabitants of protected areas. But although Blaikie and Jeanrenaud's (1997) point out that very few conservationists would dare to voice the 'fortress mentality' today, the views of many of its adherents are still widely respected. This cacophony of voices, I would argue, has created a hybrid landscape of nature protection regimes with respect to the rights and roles of local people.

The question as to whether it is possible to move beyond the obstacles / victims / opportunists tryptich, however, remains open. Although the importance of local community engagement in protected area management has been widely recognised and analyzed in the academic literature – having been followed by a rising involvement of local populations in rural development decisions – there is limited empirical evidence that 'community participation has become widespread practice or been effective in influencing the nature and scale of development' (Goodall and Stabler 2000: 63). As pointed out by Pimbert et al. (1995) 'the professional challenge for protected area management is to replace the top-down, standardised, simplified, rigid and short-term with local-level diversified, complicating, flexible, unregulated and long-term natural resource management practices' (page 34). This is because, in its entirety, community participation opens the opportunity for the incorporation of 'widely different levels and qualities of involvement at the local level' (Pretty 1995: 4). Such arguments have been further supported by Defries et al. (2007), who emphasise that the extent and magnitude of human resource use in a protected area management system is related to its achievement of an effective balance between human needs and ecological functions.

2.7 Research aims and questions

In light of the gaps identified above, this thesis aims to determine local residents[3], perceptions of place attachment, the state of the environment, nature protection, environmental management, job opportunities and tourism in national parks. By investigating how the residents' attachment to the places in which they live relate to their appraisal of the national parks' existence, as well as the quality of nature protection and the management institutions of these areas, the thesis seeks to determine whether and how local people may develop an antagonistic and negative or positive attitude towards national parks. In the thesis, I identify some of the key nuances in local residents' views, while exploring the operation of two different park management approaches in ECE – one in a developing country in SEE, and another in a developed, EU-member Central European country – in terms of the relationship between nature protection and local community participation.

More specifically, the thesis scrutinises the local residents' perceptions of, and attitudes towards, Šumava National Park in the Czech Republic and Pelister National Park in Macedonia (see Figure 1). It relies on evidence drawn from questionnaire surveys to examine:

1. The views of local people with respect to the state of the environment, existence and management of the national parks, as well as job opportunities and tourism;
2. Examine changes in a number of indicators that were tested in 2003 and 2008 in Šumava, as well as 2006 and 2009 in Pelister, regarding the residents' perspectives on the state of the environment, existence and management of the national parks, job opportunities and tourism.

In a broader sense, the thesis uses these aims to explore the question whether nature protection is an obstacle for local economic growth in national parks, or whether the

[3] In light of the numerous controversies surrounding the delineation of nativity and local residence (Borgerhoff Mulder and Coppolillo 2005) I equate the syntagm 'local people' with the standard definition of the term 'local resident' provided by the Oxford English dictionary: 'a person who lives somewhere permanently or on a long-term basis'.

designation of a national park can be seen as an opportunity for the development of local communities, and a source of financial capital for the protection of the parks themselves.

In order to address the aims, I asks the following research questions when interrogating the empirical evidence:

- How is nature protection governed in the two countries (Republic of Macedonia and the Czech Republic) and in the two national parks?
- What are the perceptions, opinions, attitudes and behaviours of the two national parks' residents towards national park management, nature protection, local development, employment opportunities and tourism?
- Does the degree of place attachment have an influence on people's perception of and attitudes towards the parks?

The answers to these questions are explored comparatively for both parks, and between the two study years in each one of them.

CHAPTER 3:

CASE STUDY AREAS

The choice of the two case study countries and national parks stemmed from their divergent situations with respect to the post-communist transition and EU integration processes. Macedonia and the Czech Republic are at different stages of development and consequently face different socio-economic challenges: while the former is still a developing EU-accession state, the latter is a full EU member and has achieved levels of development that are almost on par with its Western European neighbours (Tickle 2000). They have both faced difficult economic transformations and socio-political changes. These transformations created a unique set of circumstances in which the internal workings of space, society and nature become exposed and easily available to scholarly scrutiny (Tickle 2000, Bartoš et al. 2008, Lawrence 2008, Kluvánková-Oravská et al. 2009).

Figure 1.1: Locations of the Šumava and Pelister National Parks in the Czech Republic and the Republic of Macedonia**.**

3.1 Nature protection in the Republic of Macedonia

Nature protection started to be considered as an important issue in Macedonia shortly after the second world war. The adoption of the Act on Hunting in 1947 was a first step towards the protection of fauna species by regulating their hunting. Further legislation flora and fauna protection was enforced many years later by the adoption of the Law on Fishing in 1993 and Law on Plant Protection in 1998 (GRM 1993, 1996, 2000a, 2000b, 2004a, 2004b, 2004c).

Territorial protection in Macedonia didn't start like other European countries or the Czech Republic, with the establishment of smaller nature reserves. Rather, it commenced with the designation of national parks, from Pelister National Park in 1948, to Mavrovo National Park in 1949 and Galichica National Park in 1958. However, it has to be emphasiSed that these national parks were established primarily to provide fuelwood and in that sense were managed as forest enterprises. The trend of designating new protected areas continued during the 1950s and 1960s (EAR 2003, Nastov and Micevski 1994, European Commission 1996, Nastov 1995, 2000).

Nevertheless, the most significant attempt to provide an integrated protection for endangered species and unique landscape was made by the adoption of the Law on the Protection of Natural Rarities in 1973. More strictly regimes of nature protection were implemented in the management of the strict nature reserves, which started to be established in the late 1990s (Nastov 2000).

Since gaining independence in 1991, and as a result of its aspirations to become a EU member, the Republic of Macedonia has continuously worked on the harmonisation of its internal legal framework with EU legislation (European Commission 1996, 2005).

An important step towards the improvement of this situation was made in 2004, which saw the adoption of a new Act on Nature Protection. All the internationally recognised and ratified conventions in the nature protection domain as well as the two

key European directives regarding nature protection: the Council Directive 79/409/EEC on the Conservation of wild birds and Directive 92/43 EEC on the Conservation of natural habitats of wild fauna and flora were incorporated in the Act (GRM 2004).

The Act defines six categories of protection: (i) strict nature reserve, (ii) national park, (iii) natural monument, (iv) nature park, (v) protected landscape and (vi) multipurpose area. It stipulates that each protected area may contain a zone of: (i) strict protection, (ii) active management, (iii) sustainable use and (iv) buffering. management plans, among other tasks, are supposed to provide opportunities for the efficient involvement of local communities in nature protection and management. However, the absence of a National Red List of Fauna, insufficient vegetation maps, pedologic maps, maps of ecosystems and habitat distribution as well as the lack of professionals in the field of biodiversity are among the main obstacles towards more efficient nature protection in the country. Currently, about 6.7 per cent of the territory of Macedonia has been protected with an ambition to increase the percentage of protected areas up to 11.5 per cent until 2024 (EAR 2003, Nastov and Micevski 1994, European Commission 1996, Nastov 1995, 2000).

Thus, it can be concluded that that as a result of its growing aspirations for EU membership, the Republic of Macedonia has made a number of policy steps aimed at harmonising its nature protection regulation with that of the EU. However, policy understandings of nature protection – especially with regard to protected area management – are still insufficiently developed. Moreover, there is an almost complete lack of scientific work about the relationship between local residents, nature protection and protected area management.

3.2 Pelister National Park

Pelister is the first national park in the Republic of Macedonia and one of the oldest such protected areas in the Balkans, having been founded as early as 1948. It is situated in the southwestern part of the country, adjacent to the border with Greece and less than 15 kilometres from Bitola, Macedonia’s second largest city

(approaching 100,000 inhabitants), which lies to the northeast. To the west of national park one finds the town of Resen, with an approximate population of 20,000 people. Pelister encompasses the north parts of the Baba mountain massif, extending between altitudes of 891 and 2601 metres above sea level (see Figure 3.1). Thanks to the expansion of its boundaries in 2007, the park now covers a total area of 14 300 hectares (Petrova et al. 2009).

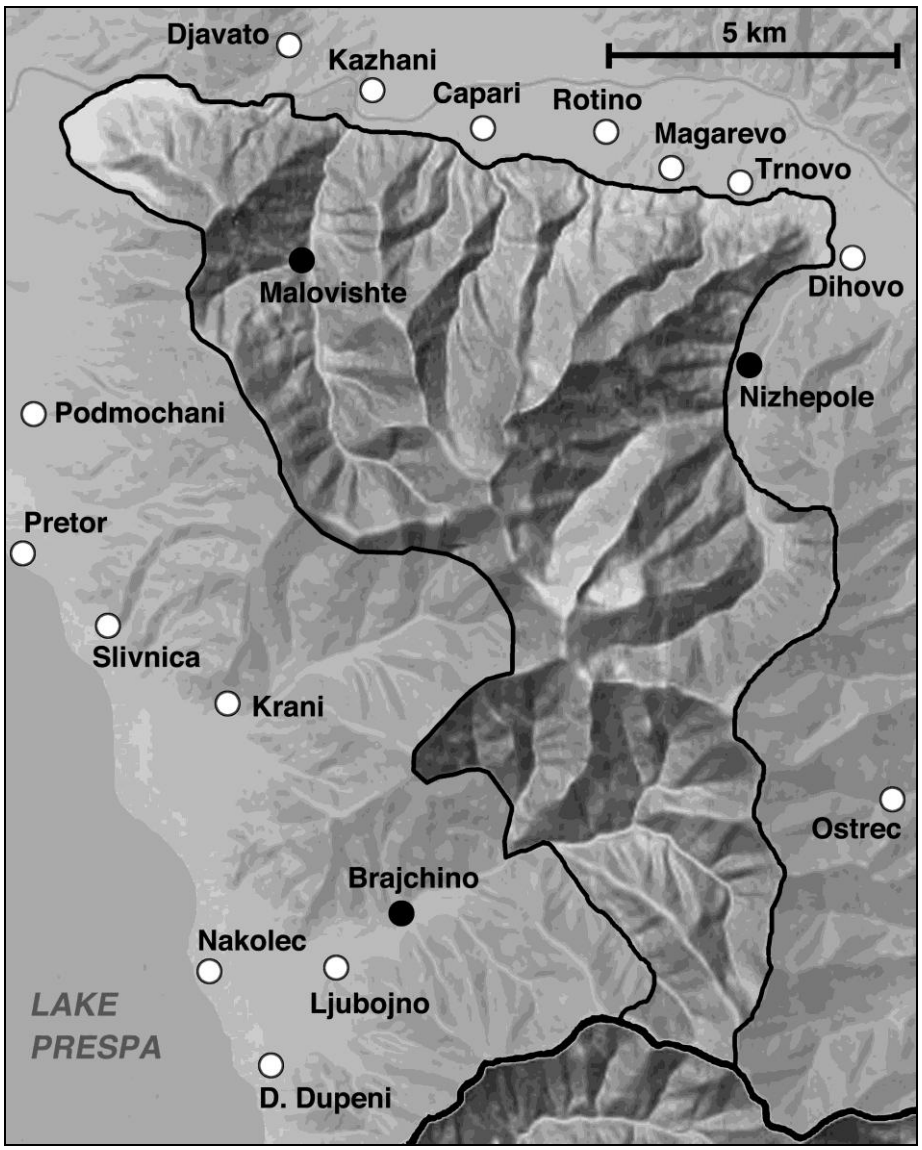


Figure 3.1: Salient geographical features of Pelister National Park (case study villages highlighted with black dots).

Pelister's geological base is characterised by a unique combination of rocks from different eras, ranging from the Palaeozoic and Mesozoic all the way to the Quaternary. The heavily alkaline 'Pelister Granite', contained in a massive dome formation dating from the Ordovician, dominates most of the park and forms one of its key distinguishing features. This structure is embedded within a series of older, Palaeozoic green shales – another typical characteristic of Pelister's geological base. In addition, the park also contains Palaeozoic quartz- and quartz-sericite schists, as well as Mesozoic gabbro, dolerite veins, diabase and mermekitic granite. Glacial and periglacial landforms are among the main geomorphological attributes of the park, including a wide variety of relatively unusual – for this latitude at least – landforms such as cirques, moraines, granite block streams and fields, alongside nivation hollows, garlands, solifluction lobes, and ploughing blocks (Pelister National Park Authority 2006). Two of the cirques host tarns, which are well known throughout the country and represent a major tourist attraction (see Figure 3.2).

Thanks to its varied geological systems, diverse physical landscapes and pronounced mountain climate, Pelister has provided an optimal environment for the development of a wide variety of biotopes, including forests, dry grassland, mountain and freshwater ecosystems. As such, they comprise a diverse array of vegetation types, ranging from heath and scrubs to broadleaved deciduous (oak and beech) and coniferous (Macedonian pine) forests. The park's numerous rivers, tarns and other aquatic habitats support a wide range of riparian communities, while areas above 2000 m host alpine and sub-alpine grassland. While nine out of Pelister's thirty-two different natural habitat types (nine forest and sixteen grass communities) are protected by the Bern Convention as habitats that require special conservation measures – two of them are locally endemic communities (Pelister National Park Authority 2006). According to the Management Plan, the national park's key protection targets in this domain include:

- Species protected globally or in Europe: *Canis lupus*, *Felis silvestris*, *Lutra lutra*, *Myotis capaccinii* (mammals); *Rhinolophus blasii*, *Rhinolophus ferrumequinum*, *Rhinolophus hipposideros*, *Alauda arvensis*, *Alectoris graeca*, *Coturnix coturnix*, *Emberiza cia*, *Falco biarmicus*, *Lullulaarborea*, *Gypaetus*

barbatus, *Perdix perdix*, *Pyrrhocorax pyrrhocorax* (birds); *Salmo pelagonicus* (fish); *Boletus regius* (mushrooms);

- Species that are rare and protected in Macedonia: *Andreaea rupestris*, *Buxbaumia viridis* (mosses); *Crocus pelistericus*, *Gentiana lutea*, *Gentiana punctata*, *Sempervium octopodes*, *Sempervium marmoreum*, *Knautia magnifica*, *Viola parvula* (plants); *Achnanthidium kryophila*, *Luticola undulata*, *Navicula roteana*, *Pinnularia appendiculata* (algae); *Chroogomphus helveticus*, *Suillus sibiricus ssp. Helvetica* (mushrooms); *Parmelia exasperatula*, *Parmelia sorediata*, *Ramalina carpatica* (lichens);

- Endemic species: *Alchemila peristerica*, *Dianthus myrtinerviu* (plants); *Niphargus pancici pancici*, *Eucypris kurtdiebeli* (animals); *Duvalius macedonicus*, *Duvalius peristericus*, *Tapinopterus comita*, *Nebria aetolica macedonica*, *Tapinopterus monastirensis monastirensis* and *Trechus goebli goebli* (insects) (Pelister National Park Authority 2006).

Among the key distinguishing features of Pelister National Park are the substantial Macedonian pine (*Pinus Peuce*) forests – locally known as 'molika' (Nastov 1994, 2000). Covering a relatively large share of the park's northern slopes, Pelister's pine forests are among the Balkans' best-developed and most extensive ecosystems formed by this otherwise extremely rare and endemic pine. The 'molika' forms two different types of vegetation communities on the territory of the park: mountainous woodland (*Digitali viridiflorae – Pinetum peuces*) found at altitudes ranging from 900 and 1600 metres above sea level; and sub-alpine woodland (*Gentiano luteae – Pinetum peuces*), usually present between 1500 and 2100 or more metres (GRM 1996, Pelister National Park Authority 2006).

Pelister's territory only includes one rural settlement – the village of Malovishta – within its boundaries, since the park extends mainly across the upper parts of the mountain. However, a number of villages that are well known for their cultural and architectural heritage line the boundaries of the park. They include, inter alia, Brajchino, Kazhani, Rotino, Capari, Magarevo, Trnovo and Dihovo (see Figure 3.3).

Although the economies of all of these settlements are mainly based on agriculture and tourism, their general model of development and everyday life is profoundly affected by the policy decisions made by the park management authority (EAR 2003).

The Pelister National Park Authority is the main site-based state institution entrusted with the management of the park. It is entirely controlled by the central government, with a manager appointed directly by the Minister for Environment. The authority has traditionally been – and to a large extent still is – organised along the lines of a forest enterprise, as its activities have historically been concentrated on forest management and timber trade. There has been a movement away from the exclusive focus on such operations during the past decade, however, mainly thanks to the formulation of a comprehensive management plan – the only such document in Macedonia to date. The country's inflexible legislative framework and its rigid legal management structure for nature protection have forced the national park authority to develop and implement several alternative modes for effective local participation in the management and protection of the park (Petrova et al. 2009), even though the lack of personnel and finances have presented a continuous challenge towards the development of an effective nature protection framework.

Although the Pelister region traditionally had an extensive agricultural economy – mainly based on sheep husbandry – many families from the region emigrated to Canada, USA, Australia, and the Scandinavian countries by the middle of the twentieth century, leaving the area sparsely populated. During socialism, the economy of all rural settlements in the region hinged on the development of food-processing, textile and manufacturing industries in the nearby cities of Bitola and Resen, although agricultural activities continued to be present as well. Following the collapse of the socialist system in the 1990s, nearly all industrial plants in the two cities were closed or privatised, which forced local people to turn towards alternative economic practices (EAR 2003).

Figure 3.2: The central part of Pelister National Park, with its largest glacial lake in the foreground (‘Golemo Ezero’)

Figure 3.3: The village of Malovishta is the only permanent settlement inside Pelister National Park.

3.3 Nature protection in the Czech Republic

The beginnings of nature protection in the Czech Republic can be traced back to the first half of the nineteenth century. In 1838, the first nature reserves – Žofin and Hojná Voda Forests – were designated for romantic, aesthetic and ethical reasons. In 1858, the Boubín Forest nature reserve was designated for scientific purposes in the Šumava Region. Following that, many new nature reserves were designated during the twentieth century. The first Protected Landscape Area, a category equivalent to the international IUCN Category V was established in 1955, followed by the adoption of the first Act on nature protection in 1956. Krkonoše National Park (V IUCN category) became the first Czech national park, with its designation in 1963. The protection of plant and fauna species was significantly intensified during the 1970s and 1980s, and as a result the first Czech Red Lists of threatened species was published (Plesnik and Roudná 2000).

After the 'velvet divorce' of Czechoslovakia in the 1990s, the Czech Republic posed EU accession as an overarching policy goal. This was followed by the harmonisation of the Czech national legislation with the one of the EU in all fields of society, including the nature protection as well. As a result, Act No. 114/1992 Sb. on the Protection of Nature and the Landscape was adopted. Currently, this is the most important instrument regarding nature and landscape protection in the Czech Republic (ibid, Furlong 2006).

The Act provides a general and special territorial and species protection. Regarding the general species protection, this Act ensures a legal protection of all flora and fauna, including the protection of wild birds and species of trees growing outside forests. It protects them from activities, which might endanger their existence or cause their degeneration, disrupt the reproductive ability, and bring about the species' population extinction or the ecosystem destruction. General territorial protection pertains to the entire territory of the Czech Republic, including the defined territorial systems of ecological stability, important landscape features, character of landscape, natural parks, and provisionally protected areas.

Species that are under a special protection by the Act on the Protection of Nature and the Landscape are categorized in three groups in accordance of the threat level for their extinction: critically endangered, highly endangered and endangered species. In addition, the specially protected fauna and flora species are specified in Annex II (plants) and Annex III (animals) in the Decree No. 395/1992 Coll.

According to the Act, special territorial protection is provided for the most unique areas in the Czech Republic from aspect of geology, biodiversity, or culture. It specifies six categories of Specially Protected Areas, including: national parks, protected landscape areas, national nature reserves, nature reserves, national nature monuments and nature monuments.

The Bird and Habitat directives (79/409/EEC and 92/43/EEC respectively) were transposed into the Act on the Protection of Nature and the Landscape due to the Czech accession to EU. Thus the Special Protection Areas and the Sites of Community Importance were established as additional types of protected areas in the Czech Republic upon the EU Natura 2000 network of protected areas.

Currently, there are 29 large protected areas in the Czech Republic, including 4 national parks and 25 protected landscape areas. The estimated percentage of all protected areas, including the Natura 2000 areas is approximately 18 per cent of the territory.

3.4 Šumava National Park

Having been founded in 1991, Šumava National Park is the biggest national park in the Czech Republic with a total area of 69 030 hectares. Just like Pelister, Šumava is also a II category IUCN protected area. The park encompasses a large part of the Šumava mountain region and is situated along the southwest border with Germany and Austria, at altitudes between 600 to 1378 metres above sea level (see Figure 3.4). At the outskirts of the park one finds the Šumava protected landscape area, which partly serves as an outer buffer zone. In 1990, the total area of Šumava protected

landscape area and national park was designated as UNESCO Biosphere Reserve, thus forming a continuous whole with the Bayerischer Wald Biosphere Reserve in Germany. Together, the two reserves create the most extensive intact forest in Central Europe (Vacek and Mayova 2000). Thanks to its natural features, the region has received wider international recognition, becoming a part of the European network Natura 2000 in 2004. The Šumava Peat Bogs have been declared a Ramsar site, while the area's geomorphological features – primarily glacial relics – are listed in the IUCN Red Book of ecosystems (Plesnik and Roudná 2000, see Figure 3.5).

The Šumava region is part of the Central European mountain forest biome, with dominant *Picea abies* and *Fagus sylvatica* forests. Although not in such abundance, the region also harbors communities of *Abies alba,* intermixed with the *Acer pseudoplatanus* and *Ulmus glabra* (Jelínek 1985).

The list of key fauna species in Šumava National Park includes: *Lynx lynx, Lutra lutra, Tetrao urogallus, Lyrurus tetrix, Tetrastes bonasia, Dendrocopos leucotos, Strix uralensis* and *Crex crex.*

Among other typical species are: *Cervus elaphus, Eliomys Quercinus, Sicista betulina, Eptesicus nilssoni, Sorex alpinus, Ciconia nigra, Picoides tridactylus, Turdus torquatus, Aegolius funereus, Glaucidium passerinum* (ibid).

From a phytogeographical aspect, the Šumava region is defined as a province of the Central European temperate floristic zone (Vacek and Mayova 2000). Due to the high proportion of rare and endangered vegetation Šumava National Park includes several 'Important Plant Areas', such as: the mires of Modrava (7.893 ha), the Kremelna river basin (1.236 ha), alluvial floodplain of the Upper Vltava/Moldau River (2.432 ha) and Plesne Lake (82 ha) (see Vacek and Podrázský 2003, Národní park Šumava 2010).

In that regard, Šumava National Park contains 69 species that are specially protected in the Czech Republic. Among the most important endangered species are: Heart-leaved twayblade (*Listera cordata*), nutgrass (*Scheuchzeria palustris*), Great sundew (*Drosera anglica*), Bohemian Gentian (*Gentianella bohemica*), Pannonic or Brown Gentian (*Gentiana pannonica*), Hairy stonecrop (*Sedum villosum*), Yellow bog

sedge (*Carex dioica*), Yellowishwhite bladderwort (*Utricularia ochroleuca*), Yellow pond-lilly (*Nuphar pumila*), Mud sedge (*Carex limosa*), Creeping sedge (*C. chorrdorrhiza*), Boreal bog sedge (*C. magellanica*), Slender cottongrass (*Eriophorum gracile*), Burnt orchid (*Orchis ustulata*), Southern adderstongue (*Ophioglossum vulgatum*), Early or Yellow coralroot (*Corallorhiza trifida*), Frog orchid (*Coeloglossum viride*), and Alpine cottongrass (*Trichophorum alpinum*) (Národní park Šumava 2010).

The wider region that hosts the national park is one of the most sparsely settled in the Czech Republic, with a population density of only 1.3 inhabitants per square kilometre. A total of 22 settlements are partially or fully located within or around the boundaries of park, although six villages – Borová Lada, Kvilda, Horská Kvilda, Srní, Prašily and Modrava – lie in the immediate proximity of many of its tourist attractions (see Figure 3.6). The low population density of the area is mainly a result of the dramatic economic and social changes that it witnessed throughout the twentieth century. These transformations were associated with the gradual displacement and selective re-colonisation of local populations, thanks to which the area shifted from an agricultural and forestry-based economy in the first half of the twentieth century, into a remote, resourced-based region with a military training area in its second half (Tickle 2000). The establishment of the Iron Curtain made the region almost inaccessible for 50 years. However, thanks to its natural beauty, historical heritage and possibilities for nature-aware tourism, Šumava is currently faced with new demographic and economic challenges, considerably affected by the policy of the park's authorities.

A single authority is in charge of managing both the national park and protected landscape area. It possesses a multilayered top-down structure with a director appointed by the central Government. In 2006, following the broader efforts of the Czech Republic to adapt its legal acts in line with relevant EU standards (Cihar et al. 2000, 2001, Cihar and Stankova 2006, Furlong 2006, Kušová et al. 2002, 2005, 2008) the authority underwent a major process of organisational reform, which resulted in the establishment of six departments in place of the previous ten forest administrations. The restructuring was aimed at transforming the authority from a forest enterprise into an organisation that will take responsibility not only for forest

management but will also spawn the integrated nature conservation and sustainable local development of the park. The authority was also equipped with public relations and marketing departments in order to improve its communication and co-operation with local stakeholders0. Despite these changes, however, the management of the park is still mired in conflicts with its resident population.

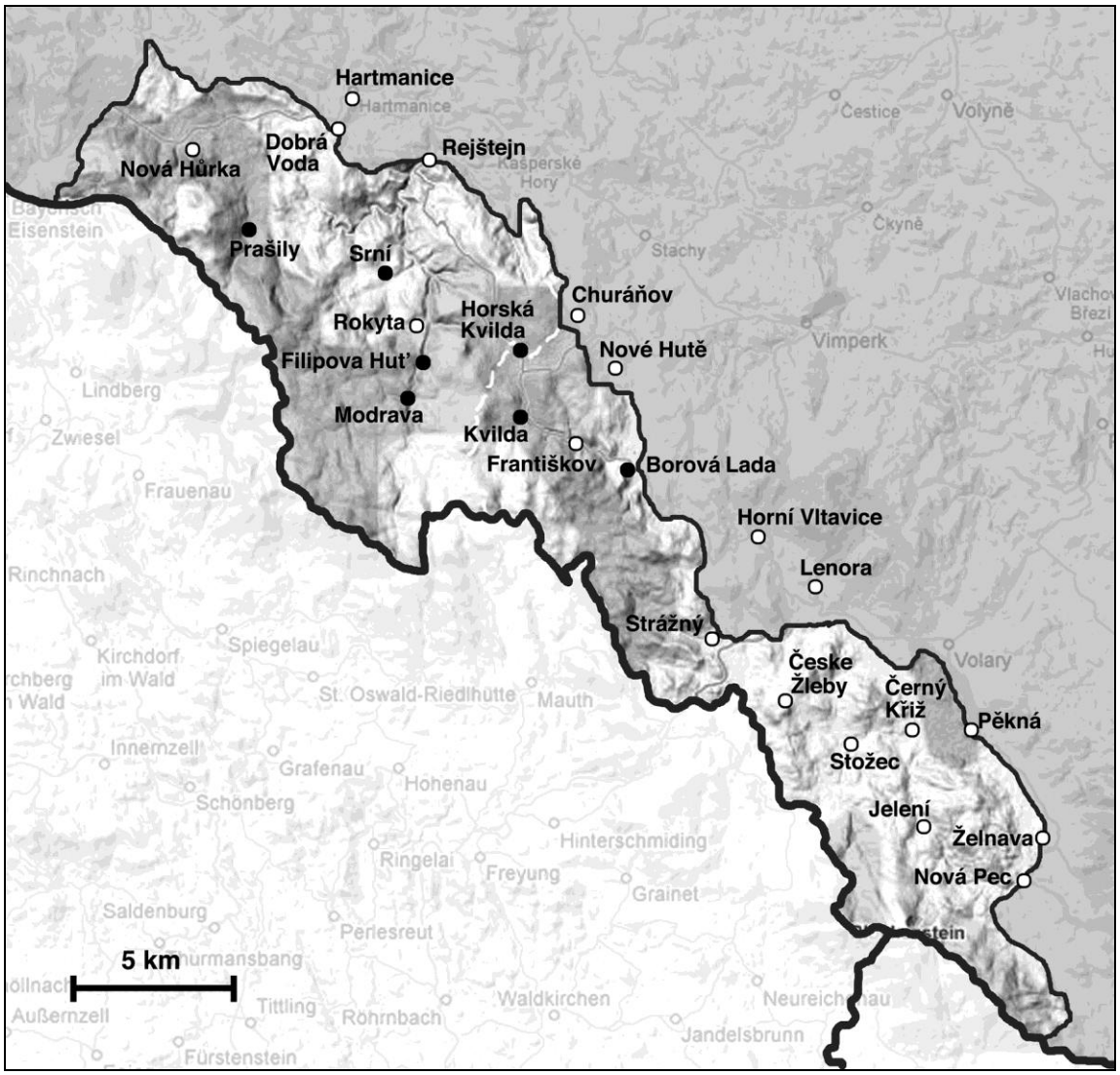


Figure 3.4: Salient features of Šumava National Park (case study villages indicated with black dots).

Figure 3.5: Prašilské jezero is an important tourist spot in Šumava.

Figure 3.6: The village of Borová Lada lies at the boundaries of the Šumava National Park.

CHAPTER 4:

METHODS

As was pointed out in the literature review, the second half of the twentieth century has seen the recognition of local communities as a key and unseparable factor of durable and cost-effective nature protection (Hockings 2001). This means that range of methods have been developed with the aim of evaluating the effectiveness of different management and nature protection models in protected areas. Various quantitative and qualitative techniques have been in order to investigate residents' opinions about, attitudes towards, and perceptions of, protected area management. These range from purely anthropocentric socio-psychological approaches (for more details see Stoll-Kleeman 2001) to environmental interdisciplinary models (Lane 2001, Sheldon and Abenoya 2001, Stoeckl et al. 2006, Dougil et al. 2006), and focused biocentric approaches (Terborgh 1999, Terborgh et al. 2002). Out of the wide array of available methods, questionnaire surveys and semi-structured interviews are among the most frequently used tools for the collection of primary data relevant to the relationships between protected areas, local residents and nature protection (Korca 1996, Čihař et al. 2000, Kušova et al. 2002, 2005, 2008).

My field research was focused on data gathering aimed for the purposes of quantitative analyses. Data was gathered in a total of six (in the case of Šumava) and three (in Pelister) villages located in or around the parks (see Figures 3.1 and 3.6). As a result of the specific nature of Pelister National Park – its boundaries mainly skirt the edges of inhabited areas without encompassing them – two of the case study villages are located 1 km outside the borders of the park, although forest and agricultural land belonging to its residents lies within it. In the case of Šumava, which covers a much larger area (69,030 hectares), I selected six villages from the central part of the park.

4.1 Data collection

Flowerdew and Martin (1997) stress the importance of a well organised and properly implemented data collection processes, with the aim of providing results applicable to real world. They point out that the collection process must be seen as one element of a wider integrated process, which begins with the setting of basic research questions, defined as the result of an analysis of previous work. My research was situated in the framework of longitudinal studies, with the aid of standardised questionnaire surveys.

Questionnaire surveys are an important means of eliciting different sorts of data from a target population (Disman 1993, de Vaus 2001).

Two questionnaires (one per park) were designed for the purposes of the research. They both contained questions that referred to local conditions and problems. The questionnaires used in the two parks were identical to each other, except for three questions that referred to local issues. Each questionnaire consisted of three blocks of questions, the first of which dealt with the socio-demographic characteristics of the respondents. At the same time, the second part of the questionnaire focused on 'Environment and nature in the national park' while the third one was related to tourism and sustainable development in the parks.

The questionnaire structure and sampling approach utilised by the survey was based upon the methodology that has been developed and implemented in the Czech Republic for approximately 10 years (see Cihar and Stankova 2006). By using this approach I hoped to provide for a greater degree of comparability between my study and similar work undertaken in the Czech Republic and elsewhere in Central Europe (see Petrova et al 2009).

The questionnaire survey relied on simple random sampling in smaller villages, and equal probability systematic sampling in the larger ones. In the latter method, there is a danger of order bias, which means that every single or every third sampling unit was selected. As such, the surveys were implemented in accordance with the nature of the target population, including its geographical and temporal boundaries (Oppenheim

1992). One of the basic sampling errors that I anticipated was the level of representativeness of the targeted population (de Vaus 1991). In order to avoid this error, the obtained data from the sample was compared with available statistical data from the two targeted areas (see Table 4.1). This indicated that the survey sample included a large part of the local populations of the surveyed villages.

In the three Pelister villages, it was hard to determine who is a full-time resident rather than a second home-owner, since the number of people who are registered as locals is not the same as the figure of inhabitants who live in the area throughout the year. Some of the registered residents live in the area only one or two seasons, most often during the summer. There are also a number of people who are currently not registered as local residents (having been mostly listed as permanent residents of the city of Bitola) but decided to move to the Pelister villages after retirement. Thus, the survey sample also included second home owners and locally-born villagers whose official place of residence may have been elsewhere, but nevertheless possessed a home in the park and were present at the time of the survey.

Both surveys were interviewer-administrated by both the author of the thesis, and a number of trained interviewers. Each interviewer was provided with a cover letter explaining the nature of the research. Several errors were anticipated to occur during the surveys, including the ‘expectational error', which means that the interview can be biased in situations when the respondent is vague or ambiguous in a response (de Vaus 1991). The possibility of this error occurring will be addressed in the interviews.

From every sample unit (home), only one person was interviewed – usually the one who answered the door. Filing out the questionnaires lasted between 15 and 20 minutes, and would take place inside the respondents’ homes.

The survey was executed during the summer of 2009 in the case of the Pelister, and 2008 in the case of Šumava. The response rate in Pelister was 97 per cent, mainly thanks to the fact that the surveys took place during summer village festivities when local customs stipulate that the door of the house must be open to any visitor. In Šumava, the response rate was 86 per cent. This resulted in a sample size of 131 and 182 households in Pelister and Šumava, respectively.

	Village	Number of households	Number of residents	Number of respondents in total	Local respondents	Second home owner respondents
Pelister*	Nizhepole	25	87	54	22	32
	Brajchino	61	134	44	31	13
	Malovishta	38	98	33	23	10
Total		**124**	**319**	**131**	**76**	**55**
Šumava **	Borová Lada	54	276	29	27	2
	Srní	128	343	52	39	13
	Horská Kvilda	15	73	15	11	4
	Prašily	47	153	31	27	4
	Modrava	21	52	17	12	5
	Kvilda	54	175	39	30	9
Total		**319**	**1072**	**183**	**146**	**37**

Table 4.1: Comparison between the numbers of survey respondents and the populations of the local villages.
* source: State Statistical Office of the Republic of Macedonia, Census 2002
** source: Czech Statistical Office, Census 2001

4.2 Data analysis

The completed questionnaires were coded and entered into database files employing MS Access and Excel. The basic graphic analyses and tabulations were made in Excel. The statistical analyses were processed in the SPSS Software package (PASW 18.00).

In order to uncover the dependence among socio-demographic features and variables regarding the perception, attitudes and opinions of local residents towards the parks and their management, the categorical variables were analysed in contingent matrices and the degree of association between the two variables was assessed by different measurements in consideration with their nature. For some of the variables that can be treated as intervals, descriptive statistics were prepared. For nominal variables I used Pearson's χ^2 test , Cramer's V test and φ measurement was investigated as well. Ordinal variables were analysed with the aid of a non-parametric Spearman correlation, a technique for determining the correlation between two ordinal variables,

two-tailed level of significance for Spearman's ρ and Kendall's τ. In some cases additional variables as control factors were included in the analysis as well.

The consistency of the respondents' perceptions, opinions and attitudes was interrogated through the analyses of their answers in correlation tables. This was supplemented by statistical analyses were executed for the comparison of the data from both parks, including data from research in Šumava during 2003, and Pelister in 2006. Primary data for Šumava 2003 were taken from Čihař et al. (2003a) and in the further comparisons we used the analysis of Najmanova (2004) and Stankova (2004). Primary data for Pelister 2006 were taken from Petrova (2007). Changes in a selected set of variables – corresponding to the research aims listed above – were then compared between 2003 and 2008 for Šumava, and 2006 and 2009 for Pelister.

Considering that one of the main aims of my research – as outlined in the introduction above – was to connect notions of place attachment with the local residents' understandings and experiences of nature protection in the two parks, I then set out to explore the different ways in which the surveyed residents' perceptions of the multiple dimensions of national park governance related to their residential attachment to the area in which they live. First, three same variables from the questionnaires were chosen as a proxy for place attachment: ancestry in the area of the park, identification of the park as home, and presence of a 'latent' migration potential. The effect of the chosen variables ('ancestors','home' and 'migration') on the evaluation of the National Park Authority's role as a nature protection organisation was tested with the aid of the Generalised Linear Model (GLM). Basically, the analysis of the dependent variable (in my case the national park authority's work as a nature protection organisation, based on the aims of the study as outlined above) is based on the investigation of the effects of the chosen categorical variables-factors ('ancestors', 'home' and 'migration' in this case). (see Table 4.2).

Model Information

Dependent Variable	Authority as nature protection institution[a]
Probability Distribution	Multinomial
Link Function	Cumulative probit

a. The procedure applies the cumulative link function to the dependent variable values in ascending order.

Table 4.2: Information about the GLM taken from PASW.

This model is the generalization of certain general linear models including ANOVA, ANCOVA, MANOVA, MANCOVA as well as the regression models. However, hypothesis tests applied to the GLM do not require normality of the response variable, nor do they require homogeneity of variances. Hence, it can be applied to variables that do not follow normal distribution, and when variances are not constant.
The main outputs of the computed modelling are presented in tables (see Chapter 5). The **Model information** table provides basic information for the dependent variable and the chosen factors. The **Goodness of fit statistics** table presents the deviance and scaled deviance and either Pearson chi-square and scaled Pearson chi-square or the log-likelihood. Afterwards, the likelihood-ratio statistics for the model fit omnibus test and statistics for the Type III contrasts for each effect are displayed in the **Tests of model effects** table. Finally, additional information about the dependent variable and the factors including the corresponding test statistics and confidence intervals is given in the **Parameter estimates** table.

In order to compare place attachment and management issues both on time and place scale the GLM was applied to all four samples (Pelister 2006 and 2009 and Šumava 2003 and 2008).

CHAPTER 5:

RESULTS

The aim of a significant part of the questionnaire survey was to scrutinise the similarities or differences between the residents' perceptions of the national parks as places to live, as well as their reactions and attitudes towards the authorities of the national parks in terms of their management practices. Respondents' opinions and attitudes towards local development, involving nature-aware tourism issues were targeted as well. The following two sub-sections of the thesis overview the statistically significant results of the data analyses undertaken in this respect.

5.1 Socio-demographic characteristics of the respondents

Thanks to the questionnaire survey, we demonstrated that the socio-demographic features of the interviewed local residents are relatively diverse within the parks and divergent between them, except in the case of the gender structure which is almost identical in both areas (Table 5.1).

In general, the population of Pelister was found to be significantly older, less educated, and with a higher unemployment rate. The survey also revealed that over one third of the respondents in Šumava are employed in the secondary or tertiary sector, while 17 per cent of them are retired (Figure 5.1). The employment structure may be connected to the development of tourism in the area.

	Gender [%]		Age [%]					Education [%]				
	Male	Female	15-17	18-24	25-39	40-59	over 60	Primary	Vocational	Secondary	Intermediate higher (2 years of University)	Higher
Pelister	56	44	5	4	13	37	41	37	5	40	4	15
Šumava	54	46	0	9	31	38	22	7	28	45	4	16

Table 5.1: Selected socio-demographic characteristics of the survey respondents.

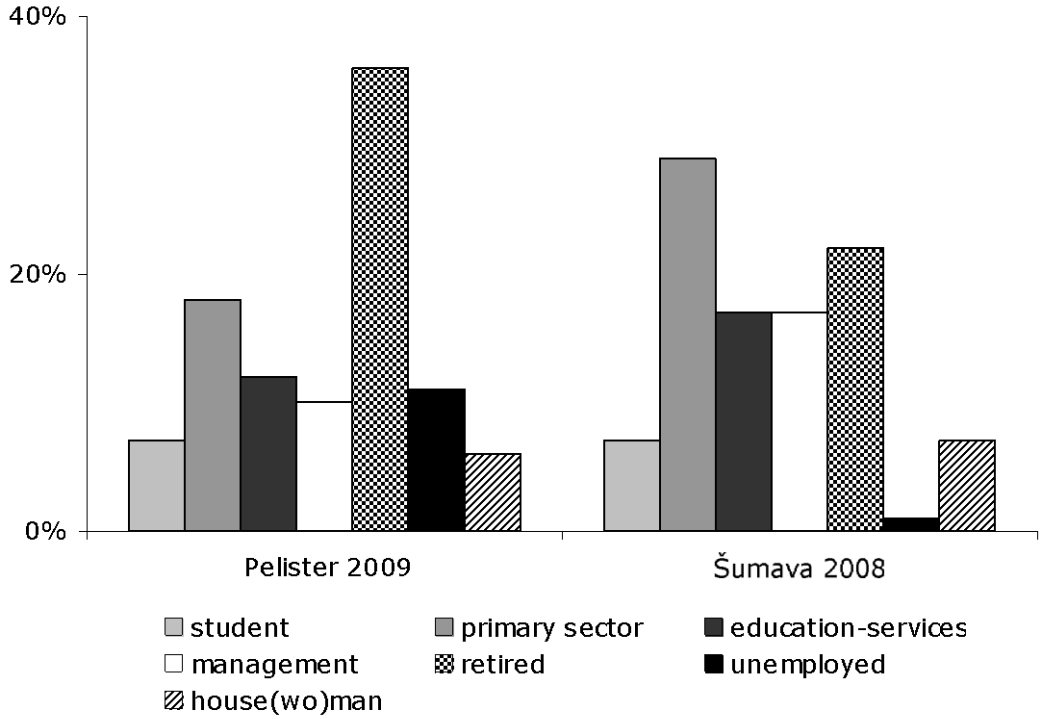


Figure 5.1: Occupational structure of the survey samples (N=131 for Pelister National Park, N=183 for Šumava National Park)

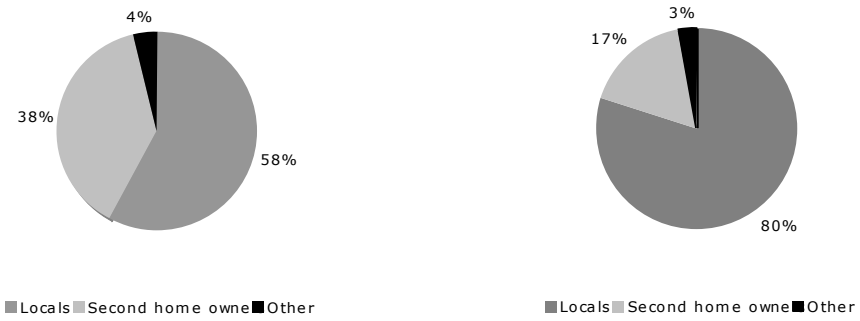
5.2 Description of responses according to survey questions

The answers of the respondents in this regard can be grouped into four sections, focusing on place attachment, the state of environment and nature in national parks, the management of national parks; (4) Tourism and job opportunities.

5.2.1 Place attachment

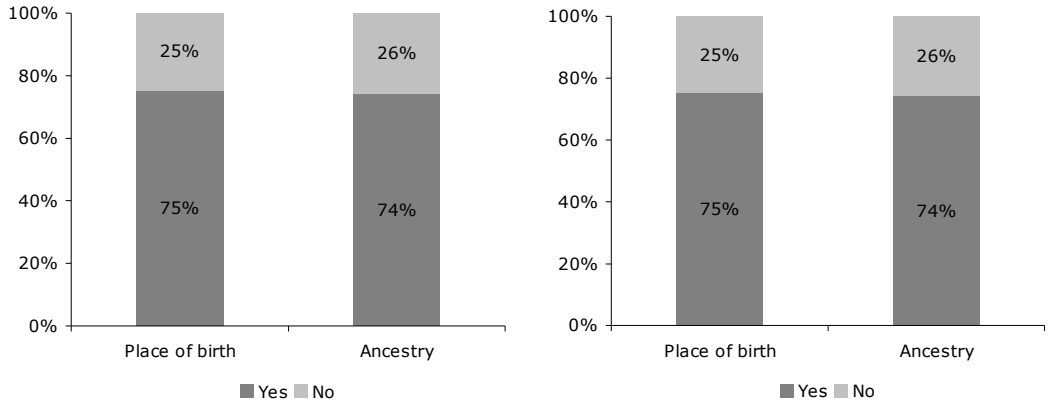
Six questions from each questionnaire were included in the section 'place attachment'. They included queries regarding the permanency of residence, the park as place of birth, ancestral links to the area, the parks importance as a residential pull factor, the park's role as home, and aspiration to emigrate from the park's region (also called 'latent mobility').

From all the respondents in the survey in Pelister, 58 per cent were local residents, 38 per cent second home owners and 4 per cent others. The last category involved guests or other short term visitors, who do not own the place of their stay (Figure 5.2). In Šumava, around 50 per cent of the respondents in the park were local residents, 40 per cent were second home owners and fewer than 10 per cent were in the category 'others' (Figure 5.3).



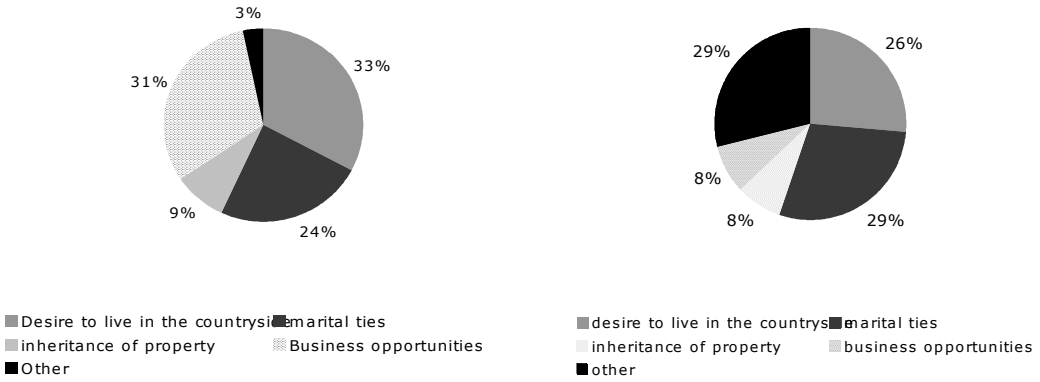
Figures 5.2 and 5.3 (Pelister left, Šumava right): Answers to the question: 'What is your residential status in the National Park?' (N=131 for Pelister, and N=183 for Šumava)

Ancestral links played an important role in the residential mobility of Pelister's population, as 74 per cent had an ancestral connection to the region and two thirds of them were born there as well (Figure 5.4). Approximately one-half of the respondents in Šumava had an ancestral connection to the region and 68 per cent of them were born there as well (Figure 5.8).



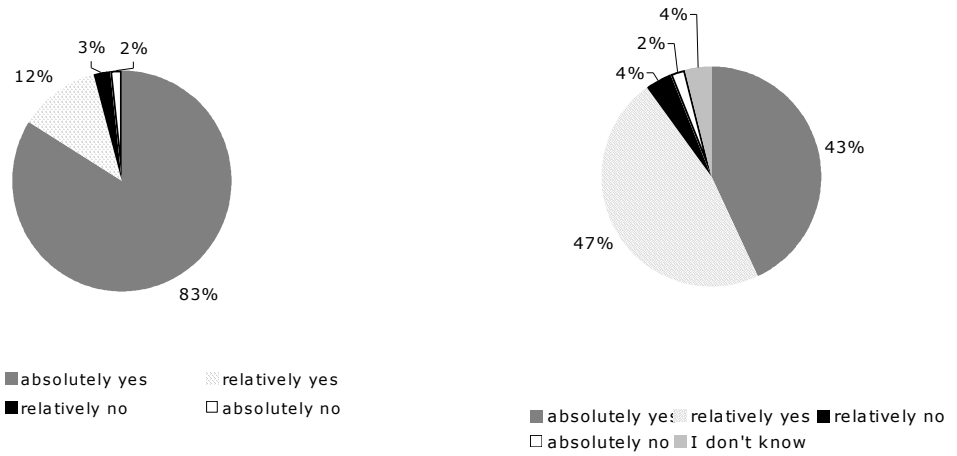
Figures 5.4 and 5.5 (Pelister left, Šumava right). Genealogical ties to the National Park region among the survey respondents (N=129 for place of birth and N=112 for ancestry in Pelister; N=146 for place of birth and N=181 in Šumava)

The desire to live in the countryside was the main reason why 33 per cent of my respondents in Pelister had decided to stay in the park, as opposed to marital ties (24 per cent) and the inheritance of property in the park region (9 per cent). The nature of respondents' employment was the second most important residential pull factor for the Pelister respondents (Figure 5.6). However, nearly a third of the respondents in Šumava (32 per cent) stressed that the main reasons why they like living in the park stems from the nature of their job. Marital ties and the amenities offered by life in countryside also played an important role in Šumava's residential attractiveness, with, respectively, 24 and 23 per cent of respondents identifying them as primary reasons for their continued habitation in it Figure 5.7)

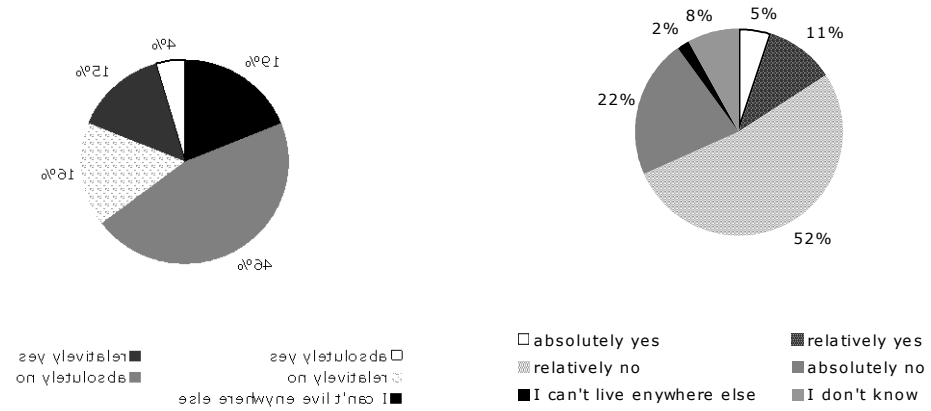


Figures 5.6 and **5.7** (Pelister left, Šumava right): Answers to the question 'What attracted you to the Park?' (N=58 for Pelister and N=44 for Šumava)

In this context, it should be emphasised that around 90 per cent of the respondents in Pelister perceived the area as 'home' (Figure 5.8) and around 80 per cent of them would not emigrate even if they had an opportunity for it. Still, around 20 per cent of the respondents expressed their readiness to emigrate if some chances appeared (Figure 5.10). Approximately 90 per cent of respondents in Šumava still broadly identified with the park as 'home' (Figure 5.9) and for two thirds of them emigration from the park was not an option, even if they had some opportunities for it. Only 16 per cent of them said that they would be prepared to move elsewhere (Figure 5.11).



Figures 5.8 and **5.9** (from left to right): Answers to the question 'Do you feel at home in the park region?' (N=117 for Pelister, N=175 for Šumava)

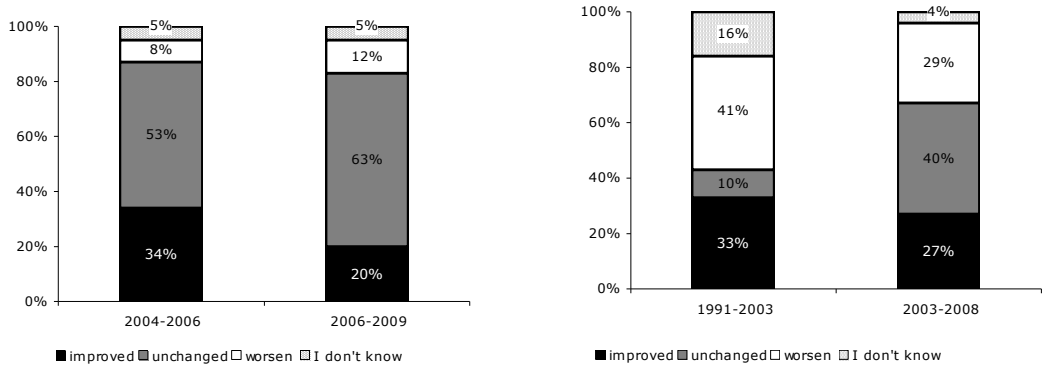


Figures 5.10 and **5.11** (Pelister left, Šumava right): Answers to the question 'Would you move elsewhere if a chance appeared?' (N=116 for Pelister National Park, and for N=167 for Šumava National Park)

5.2.2 The state of the environment and nature in national parks

I now present the analysis of respondents' answers to the questions regarding the state of environment, environmental problems and the nature protection regime in the parks.

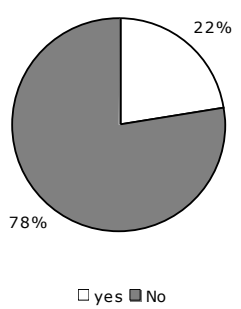
In Pelister, the state of the environment was evaluated for two periods: 2004-2006 and 2006-2009. Most of the respondents (77 per cent) thought that the state of the environment had not be changed between the 2004 and 2006. According to more than a half (64 per cent) of the respondents the state of the environment also had not changed in the period of 2006-2009 (Figure 5.12). In Šumava, around 40 per cent of the respondents thought that the state of the environment deteriorated between 1991 and 2003, while a third of them stated the opposite (Figure 5.13). According to 40 per cent of the respondents in Šumava, the state of environment had remained unchanged in between 2003 and 2008, while 29 and 27 per cent thought that it had deteriorated or improved, respectively.

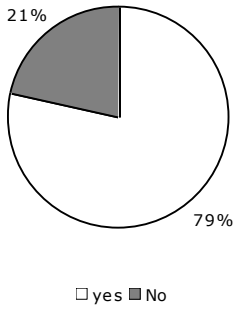


Figures 5.12 and **5.13** (Pelister left, Šumava right): Evaluation of the state of the environment in Pelister National Park between 2004-2006 (N=125) and 2006-2009 (N=129); in Šumava National Park between 1991-2003 (N=183) and 2003-2008 (N=183)

The surveyed residents identified solid waste management and disposal, and the improperly developed and adequately functioning municipal infrastructure as the primary environmental problems. In terms of nature protection, almost two thirds of the Pelister respondents did not think that the park faced any major nature

conservation problems (Figure 5.14). According to the respondents in Šumava, the most serious problems relating to the protection of the environment stem from automobile traffic. The excessive intensity – partly as a result of tourism growth – of car and bicycle transport in Šumava might have contributed to the residents' opinions in this regard, especially in light of the fact that our respondents identified cycling as the main environmental problem in the park. The disposal and management of solid waste was also seen as a major issue. As far as nature conservation is concerned, more than two thirds of the surveyed residents were aware of at least one problem related to nature protection in Šumava (Figure 5.15) and the main issue in this respect was the quality of forests as a result of the bark beetle 'calamity'.





Figures 5.14 and **5.15** (Pelister left, Šumava right): Answers to the question 'Are you aware of any nature conservation problems in the park?' (N=103 for Pelister National Park and N=182 for Šumava National Park)

Additionally, 81 and 65 per cent of respondents in, respectively, Pelister and Šumava saw the initial designation and the current existence of the park in a favourable light (Figures 5.16 and Figure 5.17).

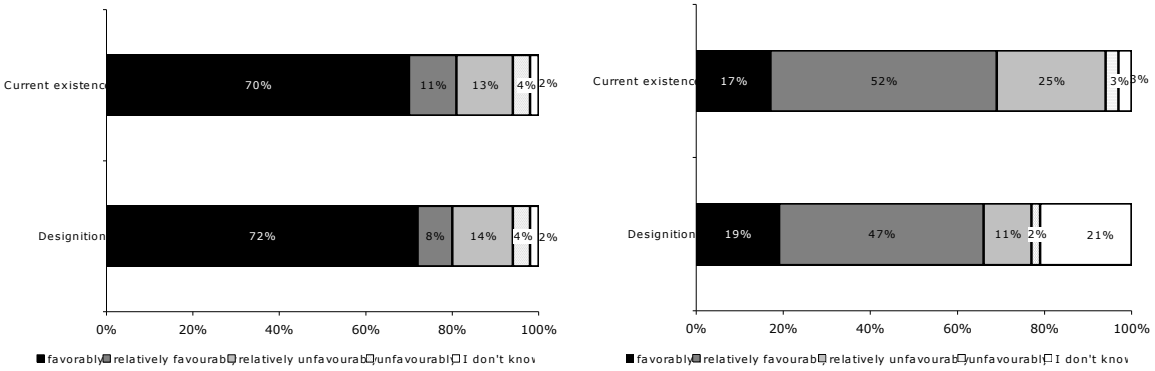
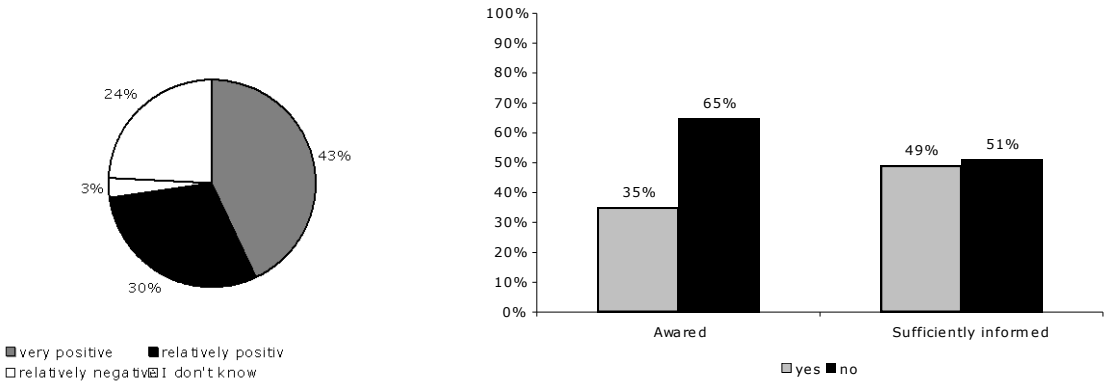


Figure 5.16 and **5.17** (Pelister left, Šumava right): Evaluation of the designation (N=130) and the current existence (N=131) of Pelister National Park and Šumava National Park (N=182 for both)

The Pelister questionnaire also included a question about the new enlargement of the Park. The results from the survey indicated that only two thirds of our respondents had evaluated the expansion of the Park (Figure 5.18). Šumava National Park is included in the Czech national network of Natura 2000, but unfortunately more than a half of the respondents (64 per cent) didn't know about the existence of the network. From those 34 per cent that were familiar with Natura 2000, almost half stated that they had been well informed about it (Figure 5.19).

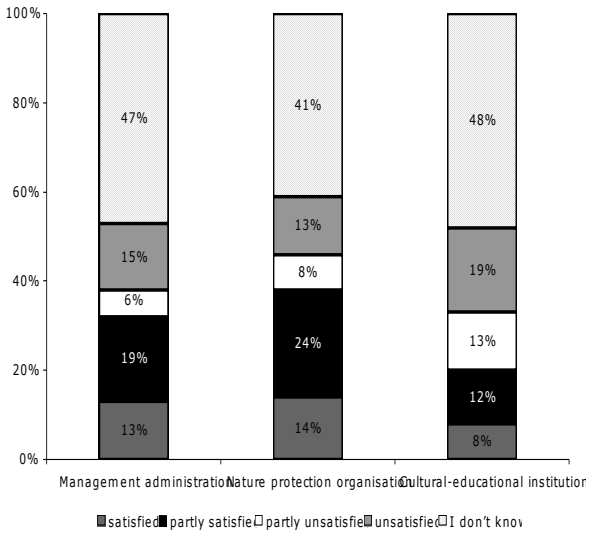


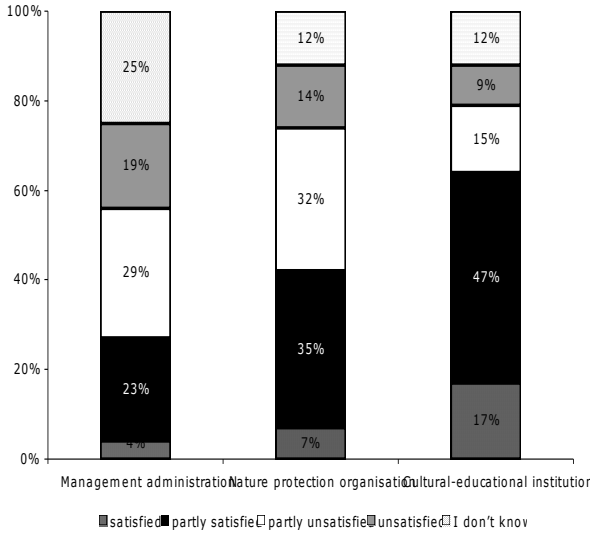
Figures 5.18 and **1.19** (Pelister left, Šumava right)**:** Evaluation of Pelister National Park's expansion (N=107) and Šumava National Park residents' responses to the questions: 'Are you aware of the existence of Natura 2000?' (N=179) and 'Are you sufficiently informed about Natura 2000?' (N=63)

5.2.3 The management of national parks

This section of the questionnaire consisted of queries that were related to the regime of nature protection in the parks, regulation of access to the core zone of the parks – both for visitors and local residents – the work of the park's authorities, and the communication between the municipalities from the region and the park's administration.

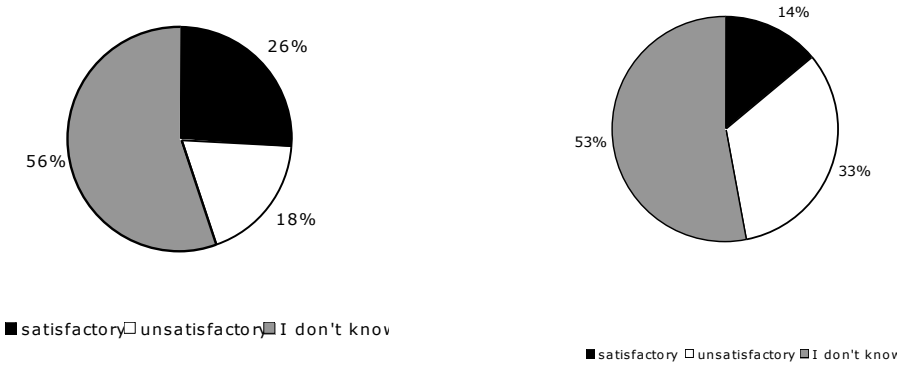
In Pelister, approximately one third of the surveyed people were satisfied by the work of the National Park Authority as a nature protection organisation and a management administration – at, respectively 38 and 32 per cent of all respondents – although only 20 per cent felt the same when it came to its role as a cultural and educational organisation. Yet the analysis of survey questionnaires indicated that that most local residents were largely apathetic towards, or unaware of, the role of the national park in providing local service management, cultural and educational functions, and nature protection (Figure 5.20). In Šumava. almost half of the respondents (42 per cent) were satisfied by the National Park Authority's work as a nature protection organisation, although only 27 per cent thought the same when it came to its management role. However, the work of the Authority as a cultural and educational organisation was evaluated favourably by 64 per cent of the respondents (Figure 5.21).





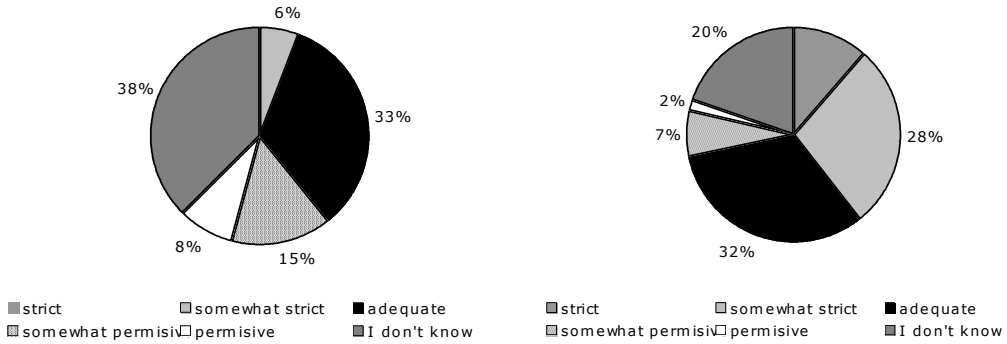
Figures 5.20 and **5.21** (Pelister left, Šumava right): Evaluation of Pelister National Park Authority's work as management administration (N=113), nature protection institution (N=120) and cultural and educational institution (N=111) and Šumava National Park Authority's work as management administration (N=183), nature protection institution (N=182) and cultural and educational institution (N=182)

Furthermore, many respondents in Pelister were indifferent in the evaluation of the communication between their municipality and the National Park Authority (55 per cent). Around one third of them thought that the communication is satisfying and the rest 18 per cent stated the opposite (Figure 5.22). In Šumava, only 14 per cent of the respondents were satisfied by the communication between their municipalities and the Authority (Figure 5.23).



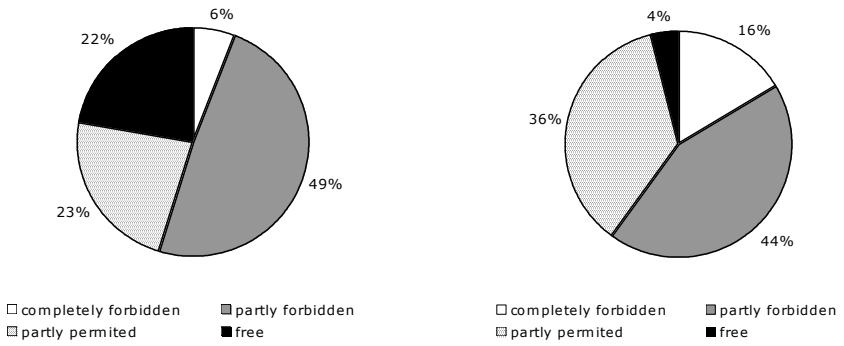
Figures 5.22 and **5.23** (Pelister left, Šumava right): Evaluation of the communication between the municipalities and the National Park Authority in Pelister National Park (N=103) and Šumava National Park (N=182)

As far as the local residents' attitudes towards the austerity of the regime of nature protection in the national parks were concerned, approximately one third (33 per cent) of the respondents in Pelister assessed the regime as 'adequate', while most of the remainder could not provide an evaluation (38 per cent) (Figure 5.24). Around 40 per cent of the surveyed individuals assessed the regime of nature protection in Šumava as 'strict', while 30 per cent thought it was 'appropriate' and only 9 per cent found it 'relaxed'(Figure 5.25).



Figures 5.24 and **5.25** (Pelister left , Šumava right): Evaluation of the regime of nature protection in Pelister National Park (N=120) and Šumava National Park (N=182)

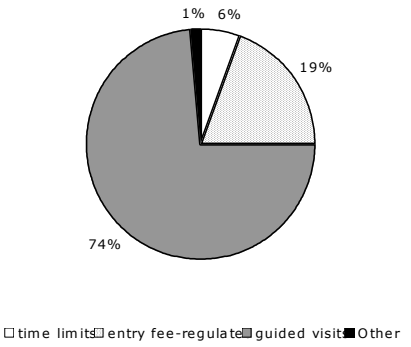
One half of the respondents from Pelister stated that tourist access to most endangered parts-the core zone of the park should be relatively forbidden and 22 per cent thought that it should be relatively permitted. Mere 6 per cent of them said that it should be completely free (Figure 5.26). In Šumava National Park, 60 per cent of my respondents stated that access to the core zone of the Park should be forbidden, while the remaining 40 per cent thought the opposite (Figure 5.27).

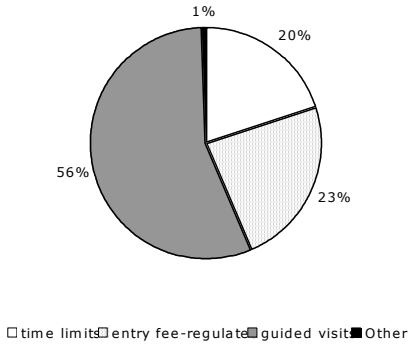


Figures 5.26 and **5.27** (Pelister left, Šumava right): Respondents' attitudes about tourist access to the core of Pelister National Park (N=104) and Šumava National Park (N=183)

In addition, two thirds (73 per cent) of the respondents in Pelister thought that possible future access to these areas should be 'with a professional guide only'. The other options chosen by the respondents were 'time-limited access' and 'charging an

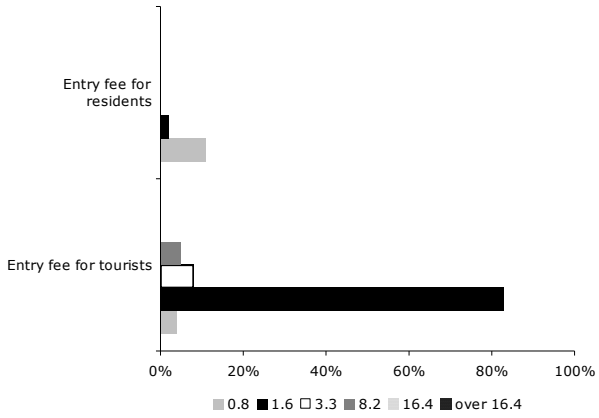
entrance fee' (Figure 5.28). It is also worth noting that 54 per cent of the respondents from Šumava thought that possible future access to these areas should be 'with a professional guide only'. Other possibilities, like in Pelister, included 'time-limited access' and 'charging an entrance fee' (Figure 5.29).

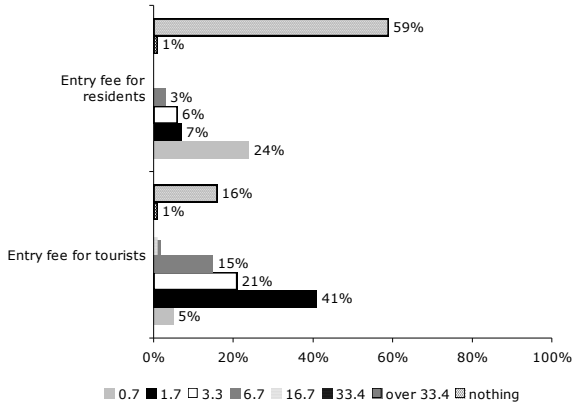




Figures 5.28 and **5.29** (Pelister left, Šumava right): Respondents' attitudes about possible access options to the core of Pelister National Park (N=72) and Šumava National Park (N=179)

The majority of the respondents in Pelister (83 per cent) stated that the possible entry fee for the visitors should be around 1.5 euros (Figure 5.30). Regarding the possible price that the residents should pay as an entry fee to the core zone of Pelister, about two thirds of the respondents (77 per cent) thought that they should pay nothing and only 17 per cent said that the possible entry fee should be no more than 1 euro (Figure 5.30). Almost half of the respondents in Šumava priced the eventual entry fee at about 2 euros. According to the 59 per cent of the respondents stated that the entrance to the park's core zone should be free for the local residents and 23 per cent of them thought that should be less then 1 euro (Figure 5.31).





Figures 5.30 and 5.31 (Pelister left, Šumava right): Respondents' opinion about the possible entry fee for tourists (N=76) and residents (N=131) in Pelister National Park and for tourists (N=180) and residents (N=180) in Šumava National Park

In Šumava, the evaluation of the visitors' code was baffling as more than half of the respondents weren't familiar with it (Figure 5.32).

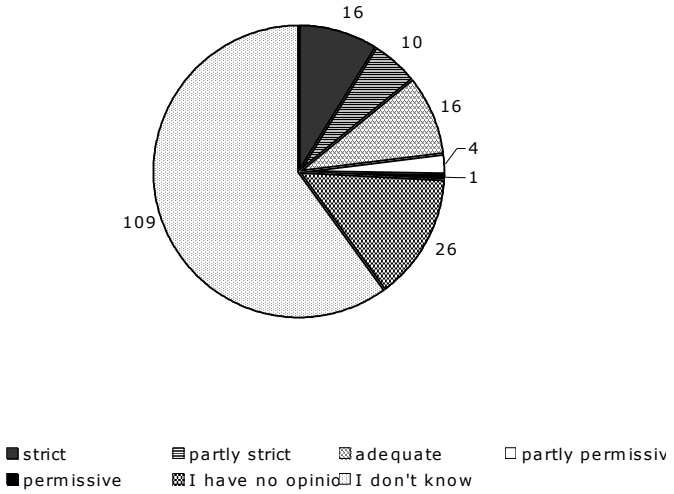
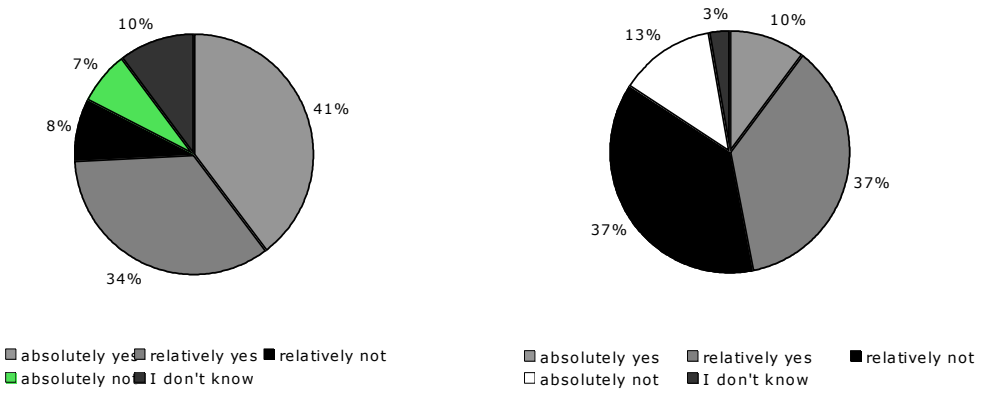


Figure 5.32: Evaluation of the visitors' code in Šumava National Park (N=180)

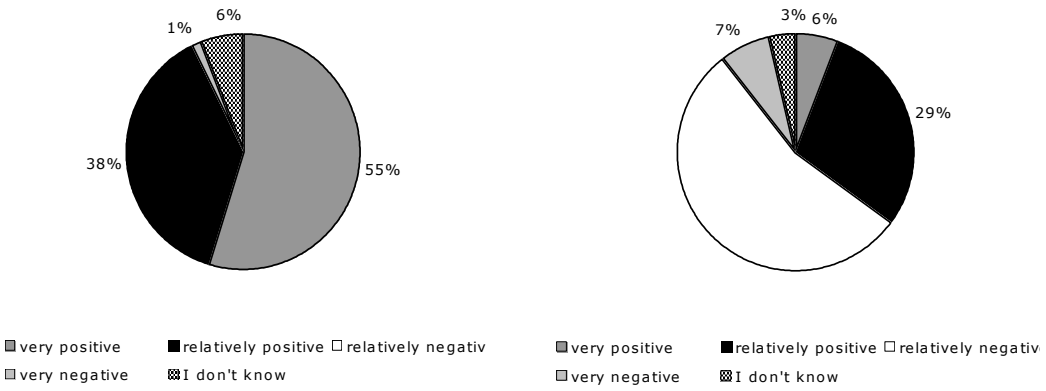
5.2.4 Tourism and job opportunities

Respondents' answers to questions regarding financial and business opportunities as well as tourism related issues are included in this section. Around two thirds (75 per cent) of the surveyed inhabitants of Pelister had an affirmative opinion about the

influence of the national park on their everyday lives and almost all of them (93 per cent) evaluated that influence as positive (Figure 5.33 and 5.35). They felt that the park's role in their day-to-day existence could be felt in its ability to provide a clean environment, free fuel wood for heating during the winter, opportunities for tourism development and economic investment. The surveyed inhabitants of Šumava were split along equal lines in their opinions about the influence of the national park on their everyday lives. The share of surveyed residents who positively evaluated Šumava's influence in this regard was 35 per cent The respondents who evaluated the influence of the park negatively (62 per cent), pointed to the limited freedom of movement and use of the natural resources, as well as strict building regulations, as the main reasons for their attitudes (Figure 5.34 and 5.36).

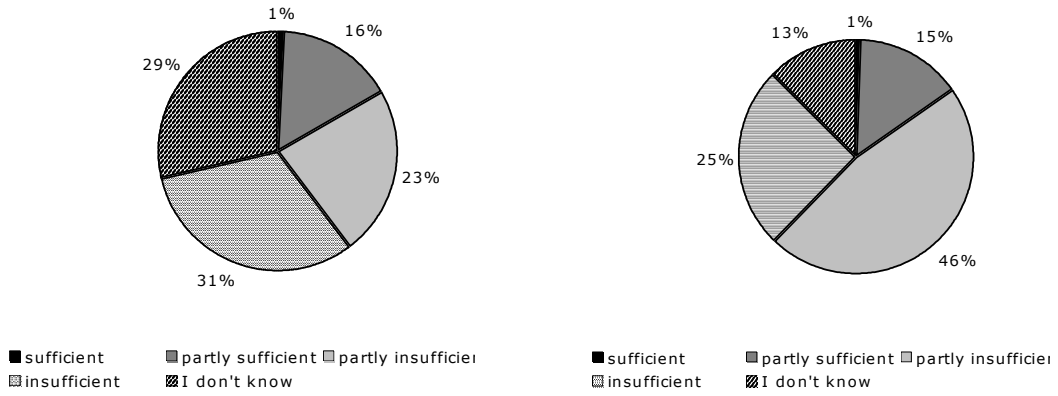


Figures 5.33 and 5.34 (Pelister left, Šumava right): Answers to the question 'Does the National Park have an influence on your everyday life?' in Pelister National Park (N=108) and in Šumava National Park (N=183)



Figures 5.35 and 5.36 (Pelister left, Šumava right): Respondents' evaluation of the National Park's influence on their everyday lives in Pelister National Park (N=84) and in Šumava National Park (N=183)

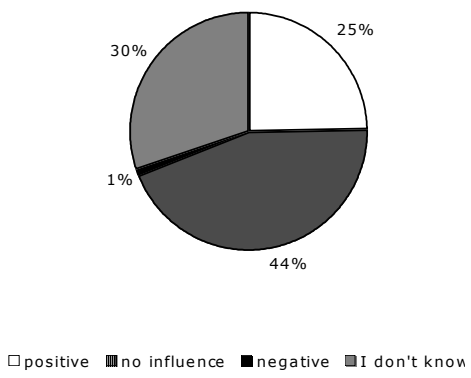
Poor employment opportunities were a major issue identified by the respondents: in around 50 per cent of the respondents were negative and only 17 per cent of them were positive in this regard (Figure 5.37). Around 70 per cent of the respondents stated that there is a shortage of jobs in Šumava; only 16 per cent had the opposite opinion (Figure 5.38).

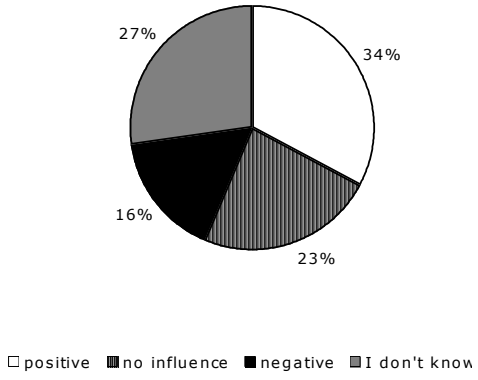


Figures 5.37 and 5.38 (Pelister left, Šumava right): Answers to the question 'How would you evaluate the job opportunities in the National Park?' in Pelister National Park (N=108) and in Šumava National Park (N=183)

The distribution of answers regarding the role of the national park in this regard was relatively uneven, as 25 per cent of the respondents said that the establishment of the

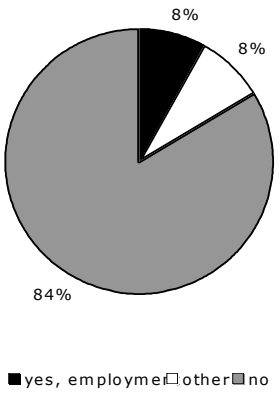
park had increased job opportunities in the area, while 1 per cent thought the opposite and the most of them (44 per cent) stated that it had no influence on the creation of new jobs (Figure 5.39). Around one third of the respondents (34 per cent) thought that the establishment of the Šumava national park had increased the number of job opportunities, while 16 percent didn't agree with this statement. A further 23 per cent, however, felt that the founding of the park had no influence on employment chances, although nearly a third could not answer the question (Figure 5.40).

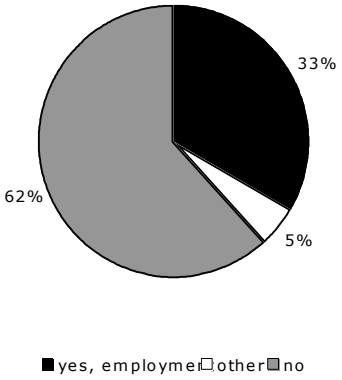




Figures 5.39 and **5.40** (Pelister left, Šumava right): Evaluation of the influence of the National Park on job opportunities in Pelister National Park (N=109) and in Šumava National Park (N=183)

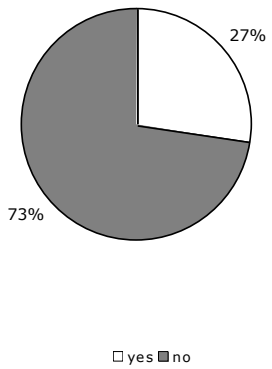
Most of the surveyed residents (84 per cent) stated that they had no economic profit from tourism in the park. However, 16 per cent of the local interviewed people did enjoy direct or indirect economic benefits from the tourism sector, partly through jobs that were dependent on, or related to, such services in different ways (Figure 5.41). in Šumava, more than a half of the respondents (62 per cent) stated that they had no economic profit from tourism in the park, even though one third (38 per cent) had some direct or indirect economic benefits from the tourism sector (mainly jobs connected to tourism services) (Figure 5.42).

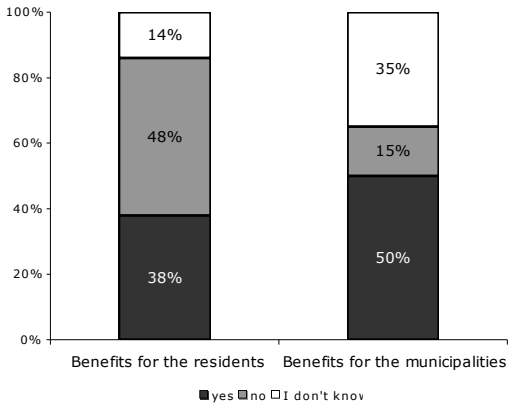




Figures 5.41 and **5.42** (Pelister left, Šumava right): Respondents' answers to the question 'Do you have any financial benefits from tourism in the area?' in Pelister (N=110) and in Šumava (N=183)

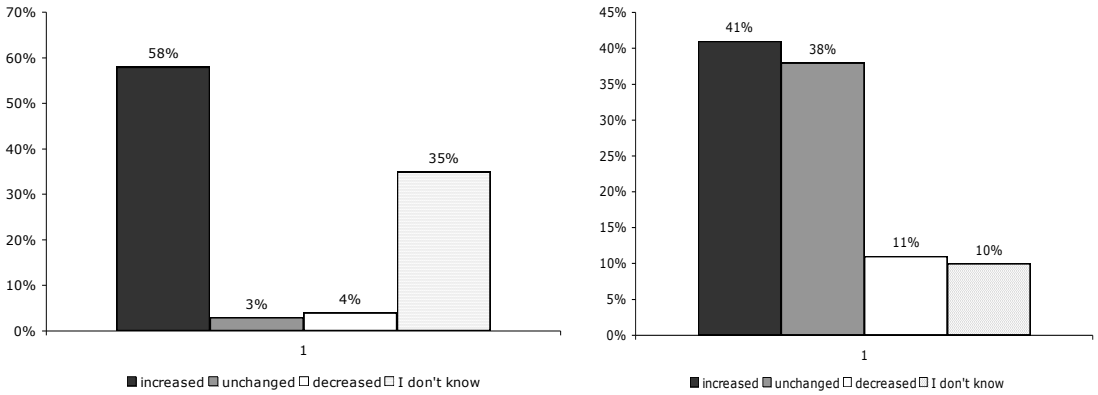
Besides, two thirds of the respondents in Šumava were not aware about the available direct grant programmes for support of local people in the park's area (Figure 5.43). Although a third of the respondents thought that they hadn't obtained any personal benefits from the park's existence, half of them nevertheless stated that National Park provided opportunities for sustainable local development, especially nature-aware tourism (Figure 5.44).





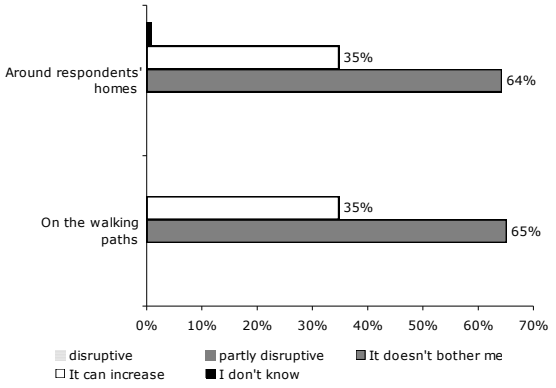
Figures 5.43 and **5.44**: Respondents' answers to the question: 'Are you aware of any direct funds for support of local residents in the Šumava National Park area?' (N=182) and respondents' opinions about the benefits to residents and municipalities from Šumava National Park existence (N=167 and N=165, respectively)

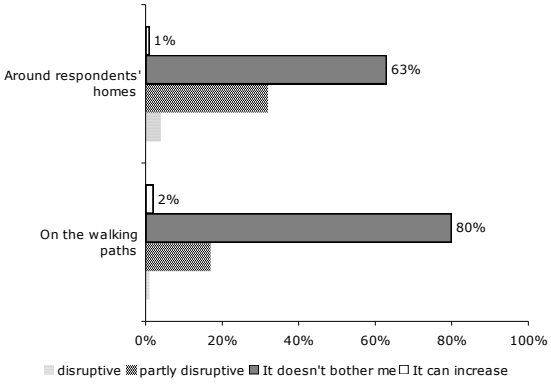
Around 60 per cent of my respondents thought that tourist and visitor numbers had been increasing in Pelister, even though all of the respondents stated that tourism is not leading to a rise in their day-to-day living costs (Figure 5.45). In Šumava, approximately 40 per cent were convinced that tourist and visitor numbers had been increasing in recent years, with an overwhelming majority (93 per cent) stating that tourism is leading to a rise in living costs in the park (Figure 5.46).



Figures 5.45 and **5.46** (Pelister left, Šumava right): Evaluation of the number of tourists in the last three years in Pelister National Park (N=112) and Šumava National Park (N=182)

Most of the respondents (65 per cent and 64 per cent respectively) stated they do not mind the number of tourists on the walking paths and around their homes. Further 35 per cent of them thought that it would be even favourable if the number of tourists increases in the future (Figure 5.47). Around 80 per cent of the respondents in Šumava had no objections to the intensity of tourist flows on the footpaths in the park. Approximately 2 per cent of them would have no objections to a further increase in tourist and visitor numbers (Figure 5.48).





Figures 5.47 and **5.48** (Pelister left, Šumava right): Opinions about the intensity of tourist footfall at different sites in Pelister National Park (N=112 for both parts of the graph); and in Šumava National Park (N=183 and N=182 for the lower and upper part of the graph, respectively)

While nearly all the respondents in Pelister (N=111) stated that tourism has no influence on the living costs in the park, an overwhelming majority of the respondents in Šumava (93 per cent) said that tourism is leading to a rise in living costs in the park (Figure 5.49)

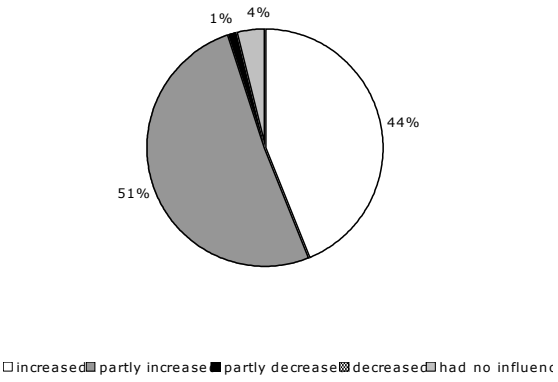


Figure 5.49: Respondents' opinions about influence of tourism on the local prices in Šumava National Park (N=179)

5.3 Statistical analysis: significant correlations

In addition to describing the distribution of answers in the survey, I also undertook a number of statistical analyses that connected the social, demographic and spatial

characteristics of the respondents with their attitudes towards place attachment and the state of the environment of the park, as well as environmental management and tourism issues. Instances where the results of these associations were significant are discussed here.

5.3.1 Socio-demographic factors and place attachment

The results from the statistical analysis of all socio-demographic and place attachment variables form the questionnaire in Pelister 2009 didn't indicate statistical significance in any of the examined cases. However, the cross-analysis of the same variables for Šumava revealed statistical significance in a few cases. Firstly, the analysis shown that the respondents from different villages gave contrasting answers to the question about their readiness to emigrate from Šumava. Basically, latent migration was the most pronounced in Borová Lada and least in Srní (see Figure 5.50, where Pearson's χ^2 test value=0.017, φ=0.503, Cramer's V=0.225). Furthermore, the results demonstrated that older respondents are more attached to Šumava and less ready to move elsewhere, while latent migration was mostly present among the respondents from the 18-24 year old age group (see Figure 5.51, where Pearson's χ^2 test value=0.007, φ=0.608, Cramer's V=0.272).

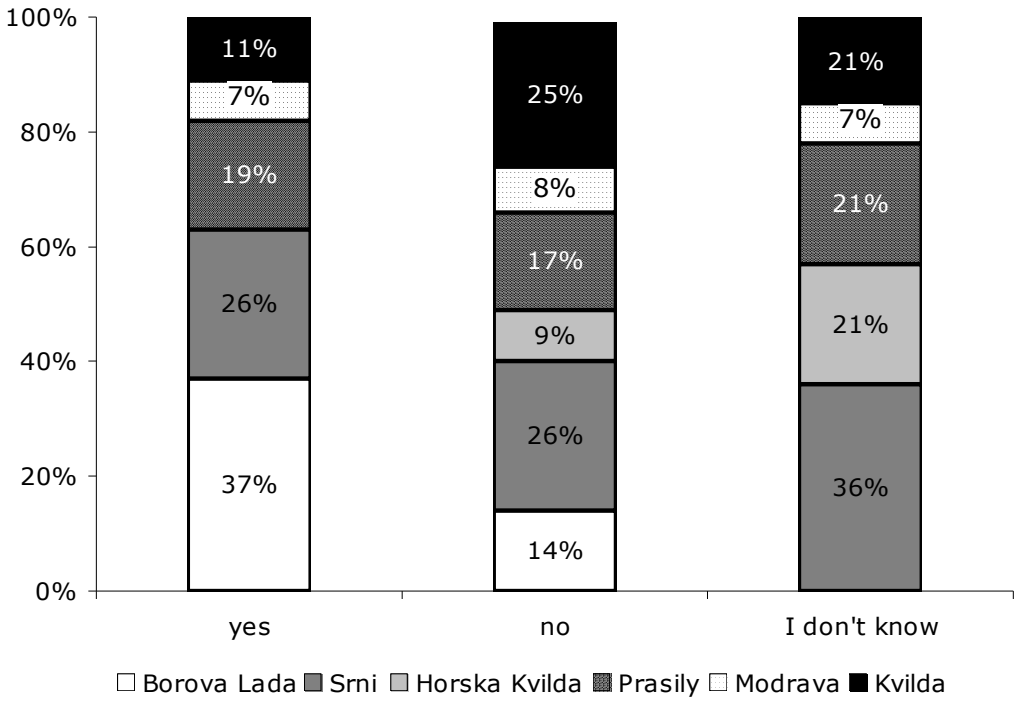


Figure 5.50: Cross-tabulation of the variables 'village' and 'latent migration' in Šumava National Park (N=167)

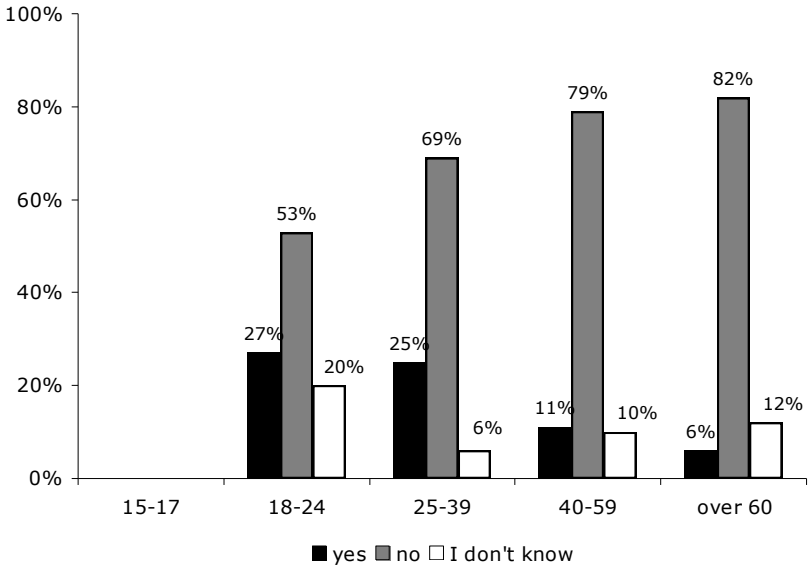


Figure 5.51: Cross-tabulation of the variables 'age' and 'latent migration' in Šumava National Park (N=167)

Further statistical significance regarding latent mobility was shown in the answers of the respondents with different occupations. It was found out that retired respondents and those with private businesses were least ready to emigrate, as opposed to students and respondents who were employed in the primary sector (see Figure 5.52, where Pearson's χ^2 test value=0.001, φ=0.608, Cramer's V=0.272).

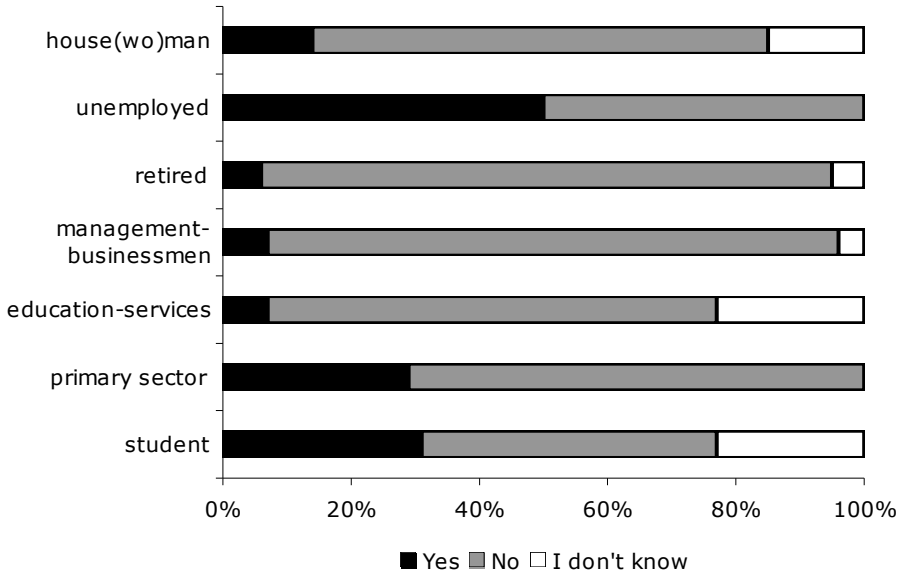


Figure 5.52: Analysis of latent mobility among respondents with different occupations in Šumava National Park (N=164).

5.3.2 The state of the environment and nature in the national parks

The results of the statistical analysis showed that respondents from the three villages in Pelister had evaluated the state of the environment differently. In Nizhepole, more of the respondents evaluated the state of the environment as worsened (31 per cent) than in the other two villages – Brajchino and Malovishta (see Figure 5.53, where Pearson's χ^2 test value=0.000, φ=0.619, Cramer's V=0.437).

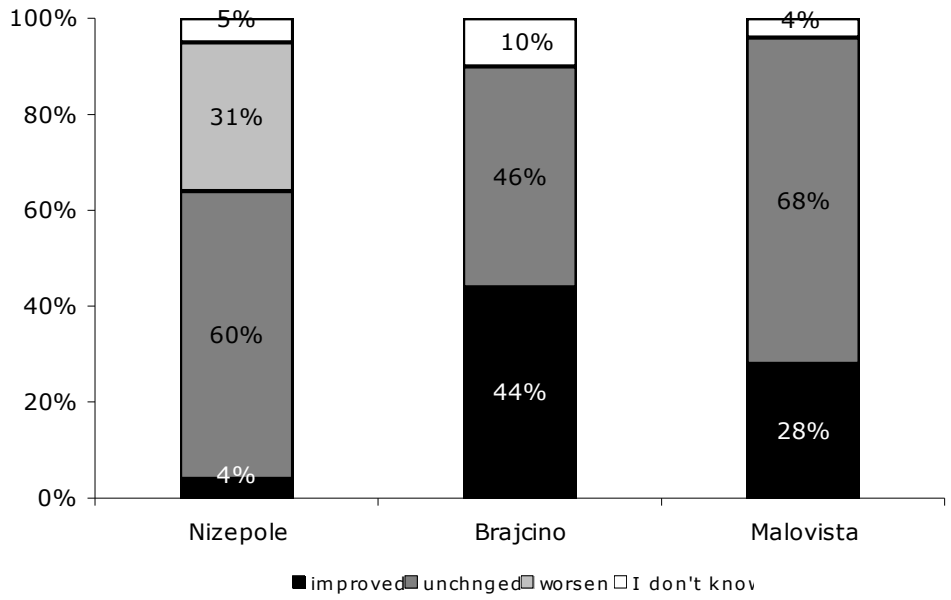


Figure 5.53: Cross-tabulation of the variables 'village' and 'evaluation of the state of the environment 2006-2009' in Pelister National Park (N=112)

The variables 'village' and 'evaluation of the state of the environment 2006-2009' were analysed in cross tables with additional socio-demographic control variables. The results revealed statistical significance in the case of 'respondent's highest achieved education level', 'gender', 'age' and 'locals'. More specifically, the male respondents with accomplished high-school belonging to the 45-59 age group from Nizhepole were more negative in their evaluation in comparison with the same group of respondents in the other two villages, Brajchino and Malovishta (see Figure 5.54, where Pearson's χ^2 test value=0.027, φ=0.590, Cramer's V=0.417; and Figure 5.55, where Pearson's χ^2 test value=0.000, φ=0.658, Cramer's V=0.465)

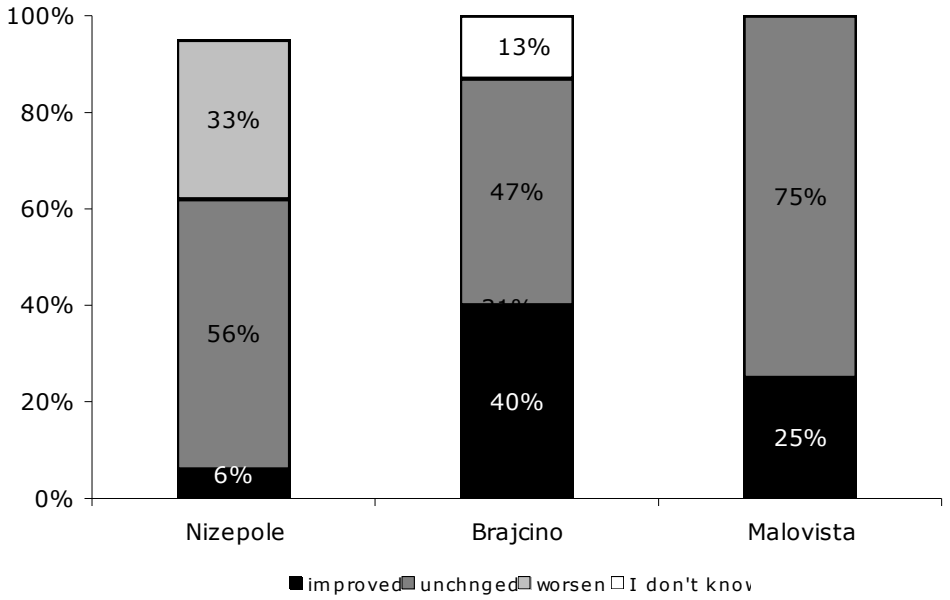


Figure 5.54: Evaluation of changes in the state of the environment between 2006 and 2009 among respondents with a secondary education in Nizhepole, Brajchino and Malovishta (N=111)

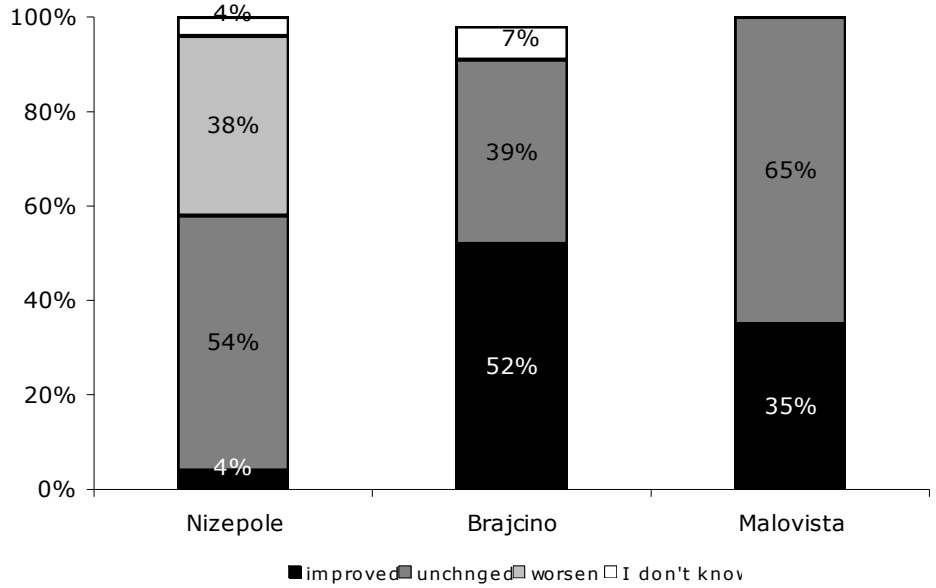


Figure 5.55: Evaluation of changes in the state of the environment between 2006 and 2009 among males in Nizhepole, Brajchino and Malovishta Nizhepole, Brajchino and Malovishta (N=112)

The statistical analysis of the socio-demographic and the variables regarding nature protection issues did not indicate any statistical significance in either national park. Nevertheless, the analysis revealed many significant results regarding nature protection questions in Šumava. First, most of the respondents who thought that there were some nature protection problems in Šumava were from Prašily and Kvilda (see Figure 5.56, where Pearson's χ^2 test value=0.000, φ=0.355, Cramer's V=0.355).

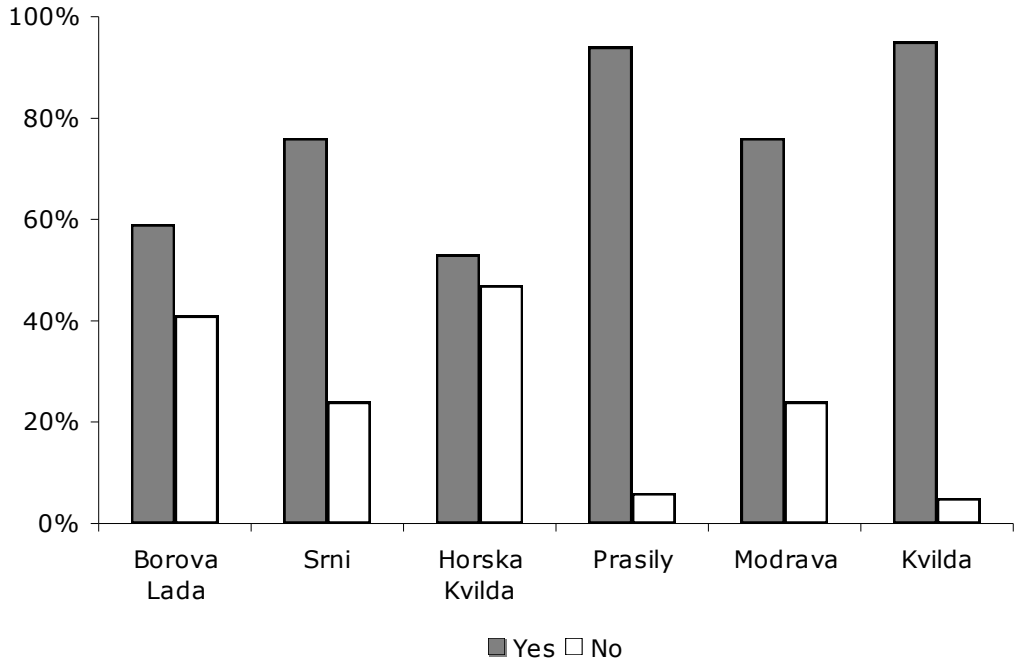


Figure 5.56: Recognition of nature protection problems in Šumava National Park in relation to respondents' place of residence (N=182)

Furthermore, the results showed that respondents from Borová Lada, Horská Kvilda and Prašily were more favourable towards the designation of the National Park than the respondents from the other villages (see Figure 5.57, where Pearson's χ^2 test value=0.013, φ=0.449, Cramer's V=0.224). However, retired respondents and those employed in the primary sector were more negative in their evaluation of the existence of the National Park (see Figure 5.58, where Pearson's χ^2 test value=0.025, φ=0.469, Cramer's V=0.234). Also, respondents who were not living in Šumava were more positive towards the existence of the National Park than local respondents (see Figure 5.59, where Pearson's χ^2 test value=0.000, φ=0.493, Cramer's V=0.349).

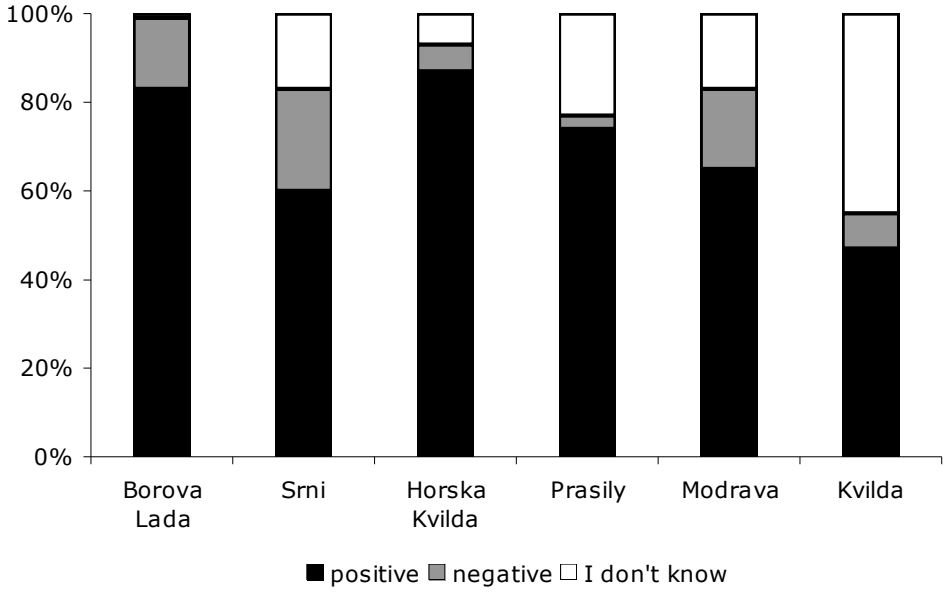


Figure 5.57: Evaluation of the designation of Šumava National Park (N=182)

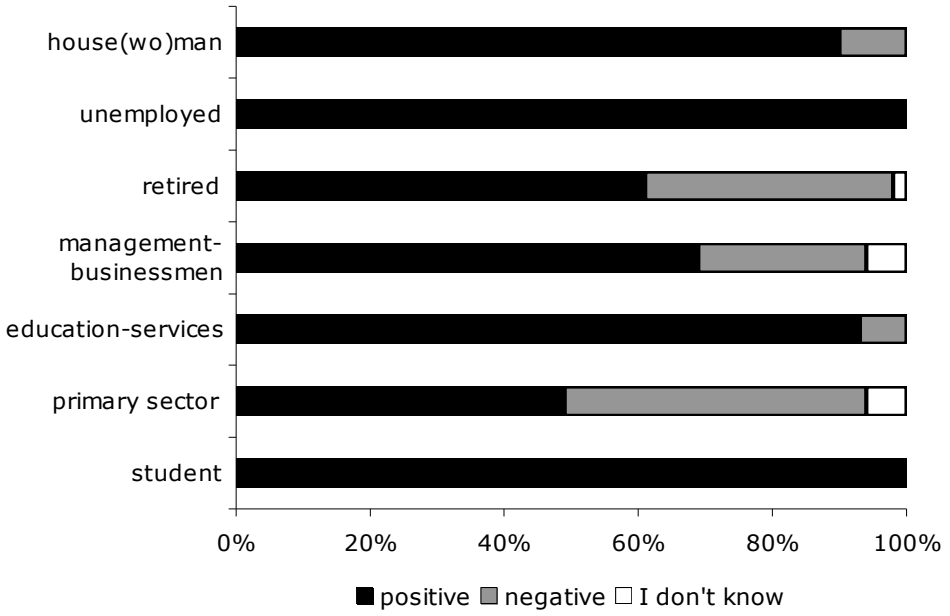


Figure 5.58: Evaluation of the existence of Šumava National Park in relation to the respondents' occupation (N=179)

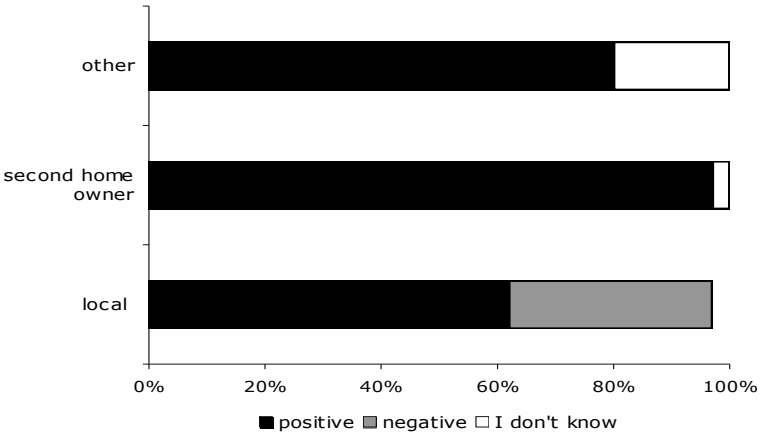


Figure 5.59: Evaluation of the Šumava National Park existence in relation to respondents' residential status (N=182)

Awareness about Natura 2000 was highest among the respondents with university diplomas, employed in service sector, belonging to the '25-39 years old' age group (Figure 5.60). For education, Pearson's χ^2 test value=0.014, φ=0.263, Cramer's V=0.263; for occupation, Pearson's χ^2 test value=0.000, φ=0.391, Cramer's V=0.391; and for age, Pearson's χ^2 test value=0.001, φ=0.299, Cramer's V=0.299.

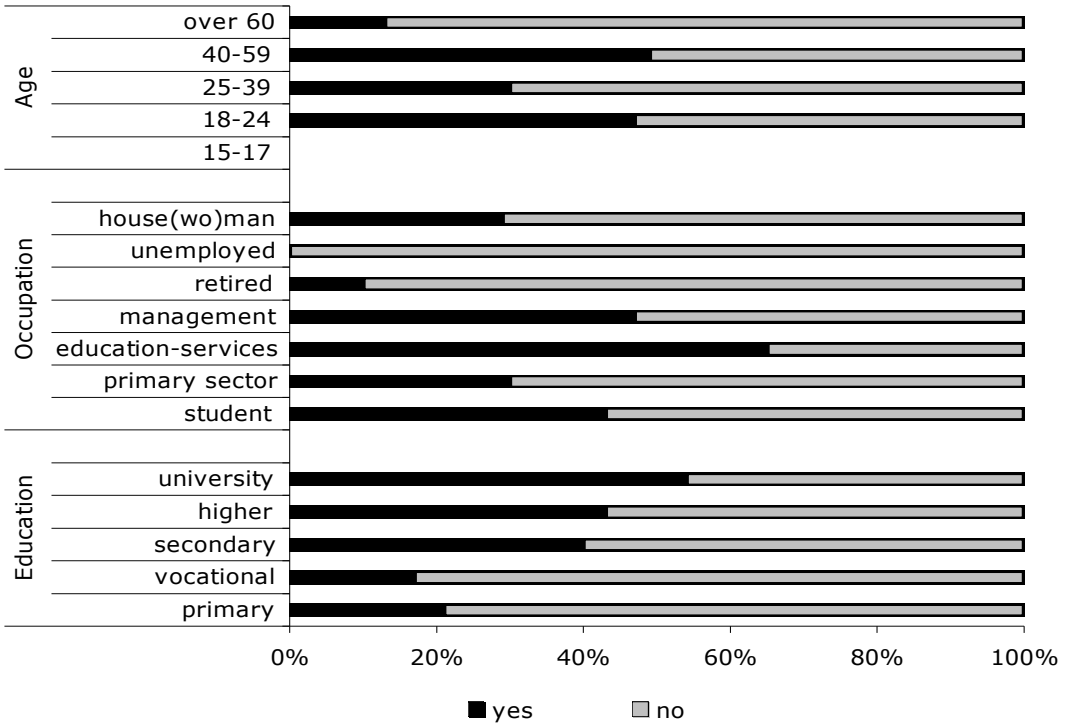


Figure 5.60: Awareness about Natura 2000 in relation to respondents' education, occupation and age (N=179)

5.3.3 The management of national parks

The analysis of the work of the Pelister National Park Authority as a management administration and nature protection organisation indicated that most of the unsatisfied respondents were from Nizhepole, as opposed to Malovishta which had the majority of satisfied respondents (see Figure 5.61). For the role of management administration, Pearson's χ^2 test value=0.000, φ=0.608, Cramer's V=0.430; for the role of nature protection organisation, Pearson's χ^2 test value=0.000, φ=0.602, Cramer's V=0.426, and for the role of cultural-educational institution, Pearson's χ^2 test value=0.000, φ=0.554, Cramer's V=0.392.

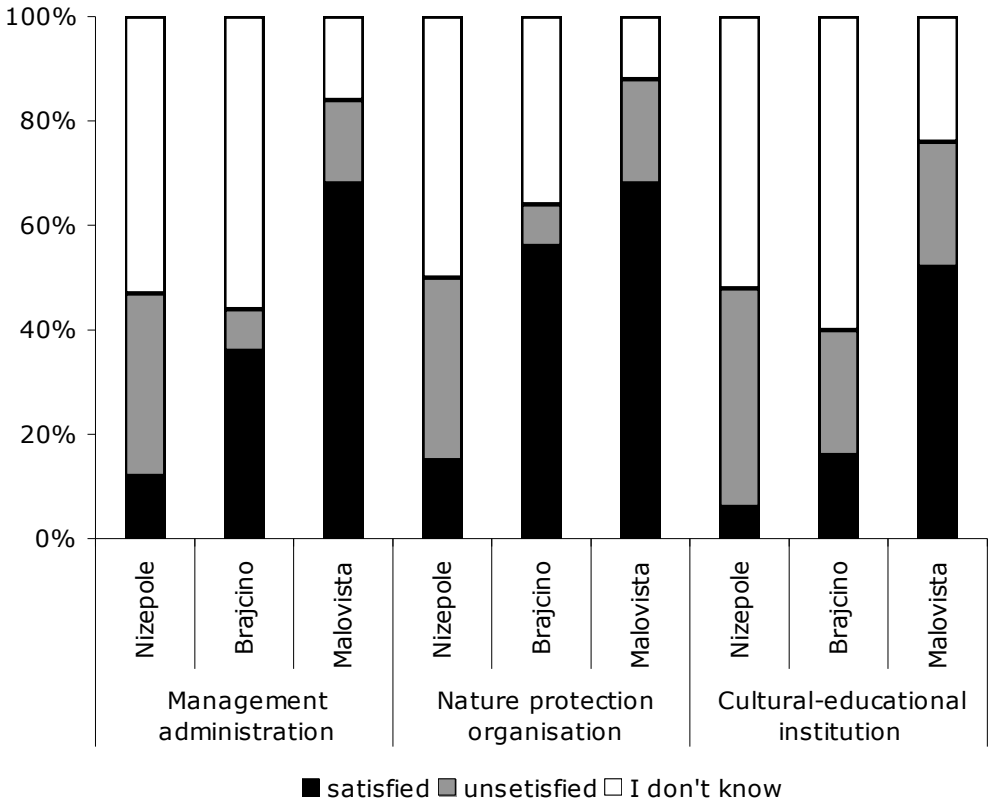


Figure 5.61: Respondents' evaluation of different aspects of the Pelister National Park Authority's work (from left to right: N=113, N=112, N=111)

Furthermore, the respondents employed in the primary sector and the unemployed ones were more satisfied by the work of the National Park Authority as an administration management and a cultural-educational institution. Respondents

employed in educational institutions and those from the services sector were the most unsatisfied with the work of the Authority as a cultural-educational institution (Figure 5.62). For the role of management administration, Pearson's χ^2 test value=0.005, φ=0.641, Cramer's V=0.321; and for the role of cultural-educational institution, Pearson's χ^2 test value=0.001, φ=0.692, Cramer's V=0.346.

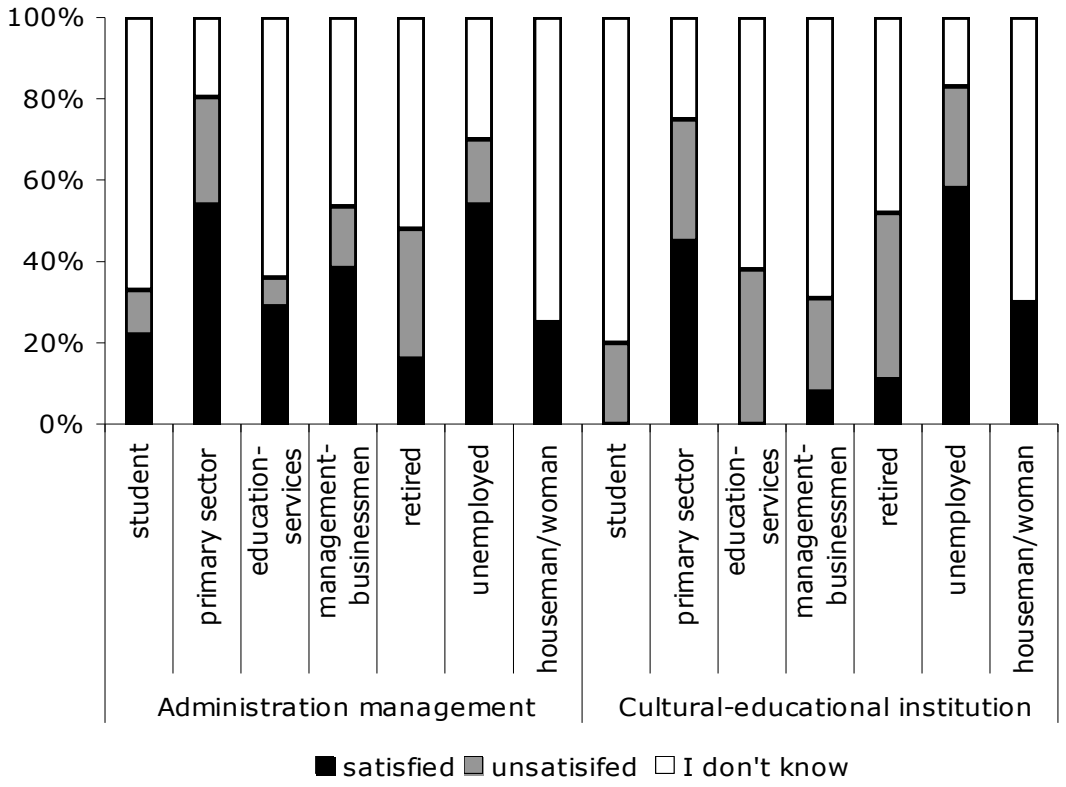


Figure 5.62: Respondents' evaluation of the National Park Authority's work (N=110 for administration management; N=108 for cultural-educational institution).

Moreover, statistical significance was revealed in the evaluation of the National Park Authority's work as management administration and nature protection organisation from gender perspective. Basically, the analysis indicated that the male respondents were more critical than the female respondents (Figure 5.63). For the role of administration management, Pearson's χ^2 test value=0.004, φ=0.445, Cramer's V=0.315; and for nature protection, Pearson's χ^2 test value=0.029, φ=0.391, and Cramer's V=0.276.

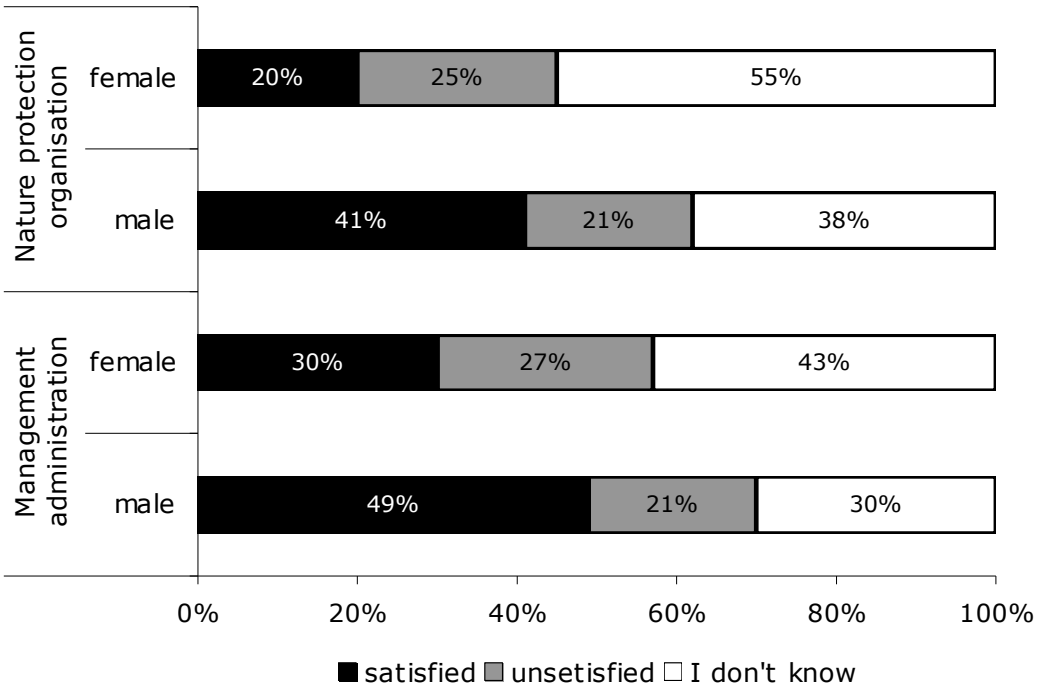


Figure 5.63: Respondents' evaluation of the National Park Authority's work (as administration management: N=113; as a nature protection organisation: N=112).

It should be pointed out that respondents who only had a primary school education, together with the ones with vocational and secondary school training, were more unsatisfied by the work of the Authority as management administration and nature protection organisation (Figure 5.64). In the case of administration management, the analysis resulted in a Pearson's χ^2 test value=0.011, φ=0.540, Cramer's V=0.270; while as far as the role of nature protection organisation was concerned, Pearson's χ^2 test value=0.011, φ=0.5431, Cramer's V=0.273.

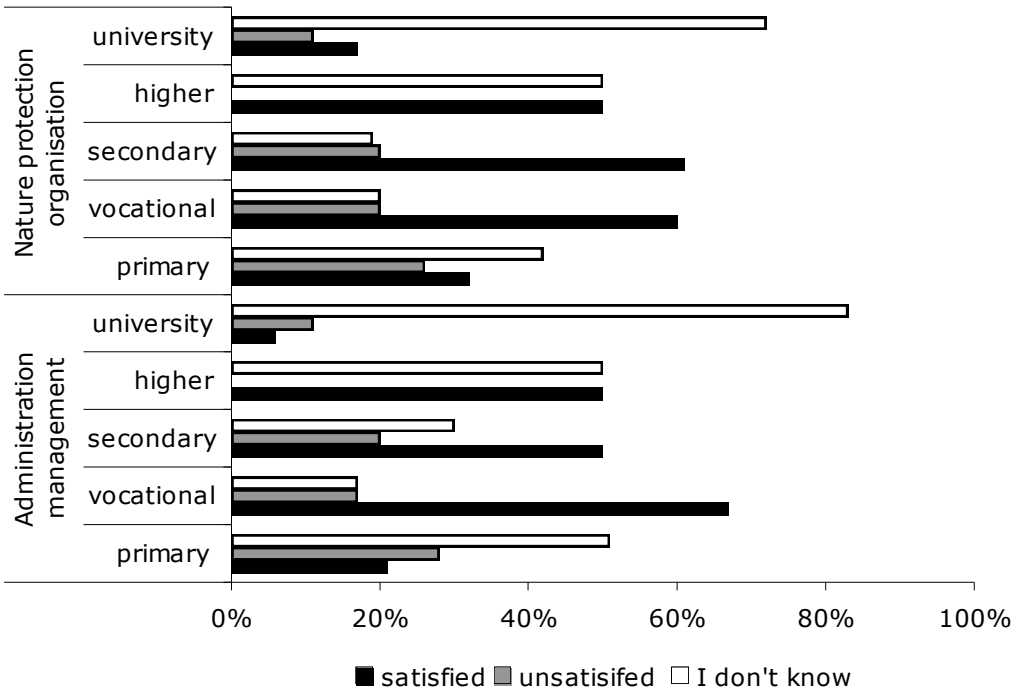


Figure 5.64: Respondents' evaluation of the National Park Authority's work according to educational status (as administration management: N=108; as a nature protection organisation N=107).

Overall, the respondents did not distinguish among the different roles of the Authority, as indicated by high correlation coefficients for both Kendall's τ_B and Spearman's ρ (Table 5.2)

Correlations

			Authority as management administration	Authority as nature protection organisation	Authority as cultural educational institution
Kendall's tau_b	Authority as management administration	Correlation Coefficient	1.000	.767**	.657**
		Sig. (2-tailed)	.	.000	.000
		N	113	112	111
	Authority as nature protection organisation	Correlation Coefficient	.767**	1.000	.659**
		Sig. (2-tailed)	.000	.	.000
		N	112	112	110
	Authority as cultural educational institution	Correlation Coefficient	.657**	.659**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	111	110	111
Spearman's rho	Authority as management administration	Correlation Coefficient	1.000	.789**	.703**
		Sig. (2-tailed)	.	.000	.000
		N	113	112	111
	Authority as nature protection organisation	Correlation Coefficient	.789**	1.000	.698**
		Sig. (2-tailed)	.000	.	.000
		N	112	112	110
	Authority as cultural educational institution	Correlation Coefficient	.703**	.698**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	111	110	111

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5.2: Values of Kendall's τ_B and Spearman's ρ for the respondents' perceptions of the different roles of the Pelister National Park Authority.

The nature protection regime in Pelister was the first variable that was analyzed from a perspective of all socio-demographic and place-attachment variables. However, a statistical significance was indicated only in one case. Basically, the respondents from different villages gave a contrasting evaluation of the nature protection regime in Pelister. Most of the respondents who couldn't evaluate the regime were from Nizhepole and most of the respondents from Brajchino and Malovishta thought that the regime is adequate (see Figure 5.65 where Pearson's χ^2 test value=0.001, φ=0.500, Cramer's V=0.354).

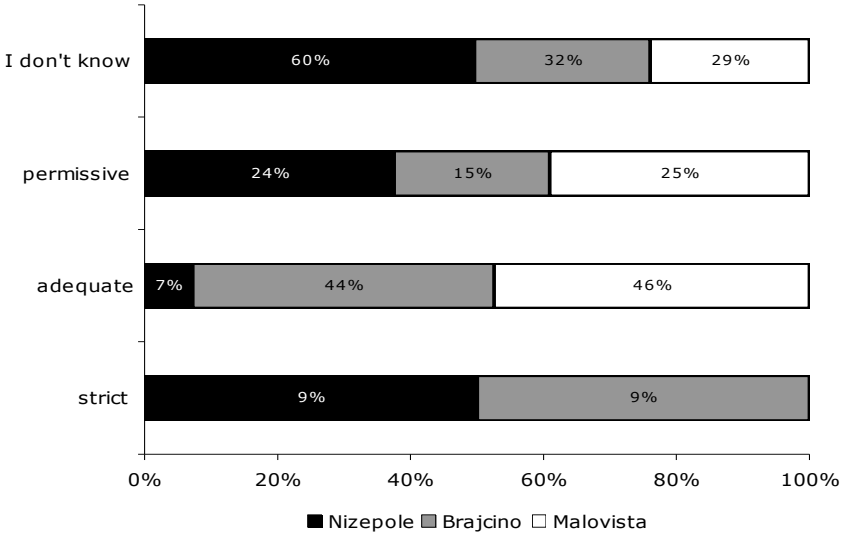


Figure 5.65: Respondents' evaluation of the regime of nature protection in the Pelister National Park (N=103).

The involvement of the variable 'gender' in the analysis of the nature protection regime as a controlling one, indicated that women, especially those from Nizhepole were the most undecided ones in the evaluation of the nature protection regime. The analysis showed that men were more critical in their evaluation of the regime, particularly those from Brajchino and Malovishta (Figure 5.66, where in the case of males Pearson's χ^2 test value=0.013, φ=0.560, Cramer's V=0.489; and in the case of female: Pearson's χ^2 test value=0.050, φ=0.622, Cramer's V=0.440).

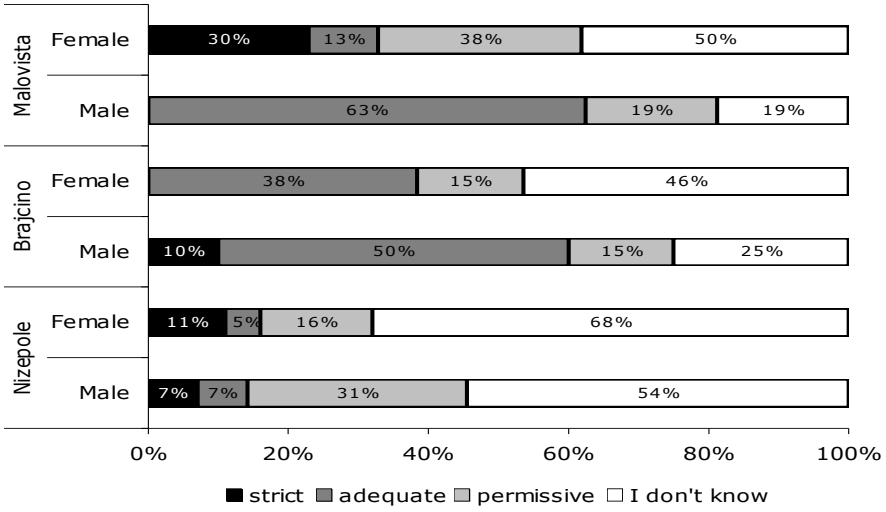


Figure 5.66: Respondents' evaluation of the nature protection regime in Pelister National Park with the variable 'gender' taken into consideration (N=103).

Further statistical significance in the case of Pelister was found to exist in the evaluation of the communication between the Authority and local municipalities. In this sense, most of the respondents who evaluated the communication as insufficient were from Nizhepole. Additionally, the communication was more favourably evaluated by the respondents from Malovishta (see Figure 5.67, where Pearson's χ^2 test value=0.000, φ=0.590, Cramer's V=0.417).

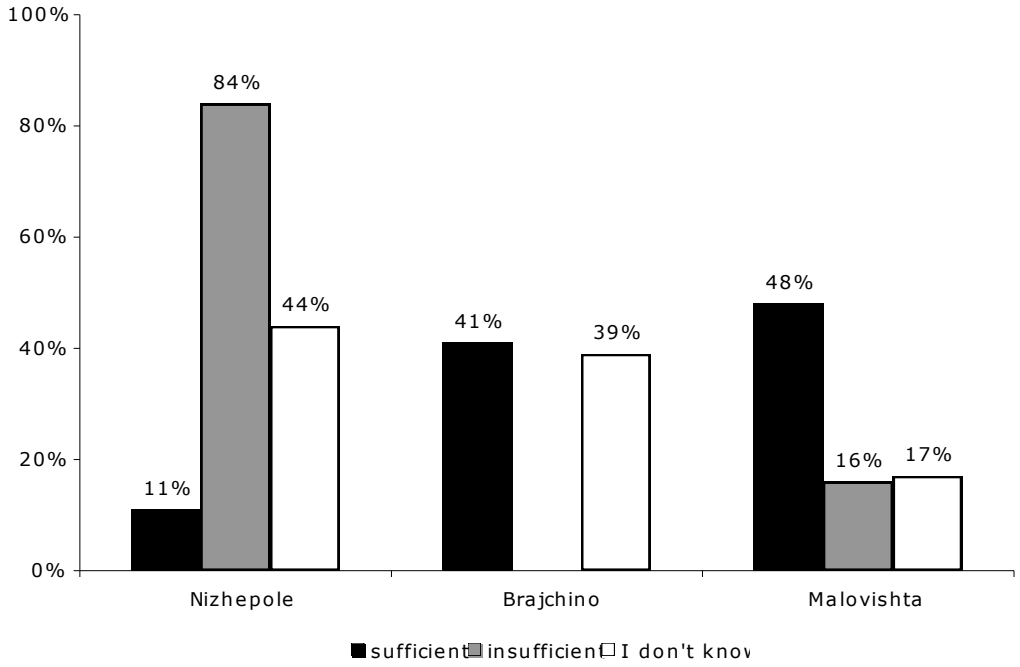


Figure 5.67: Respondents' evaluation of the communication between the Pelister National Park Authority and local municipalities (N=107).

Šumava National Park Authority's work as a management administration was very favourably evaluated by the respondents from Borová Lada while those from Srní were more negative in their evaluation (Figure 5.68). For management administration Pearson's χ^2 test =0.049, φ=0.379, Cramer's V=0.190. In the case of nature protection organisation, Pearson's χ^2 test value=0.016, φ=0.409, Cramer's V=0.205.

In addition, respondents with an a completed post-secondary level of education were more satisfied by the Authority's work, both as a management administration and a

nature protection organisation, compared to those with a vocational and secondary level of education (Figure 5.69). In the case of management administration, Pearson's χ^2 test value=0.015, φ=0.444, Cramer's V=0.222, and in the case of cultural-educational institution Pearson's χ^2 test value=0.010, φ=0.454, Cramer's V=0.227).

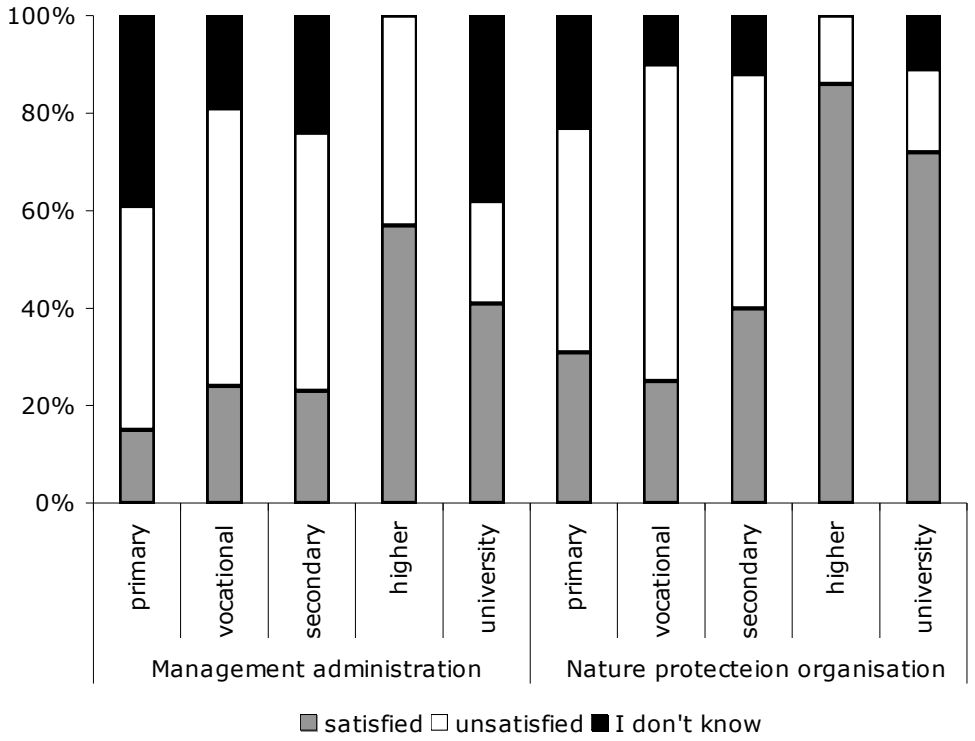


Figure 5.68: Evaluation of Šumava National Park Authority's work in relation to the respondents' level of education (N=183 and N=182 in the left and right columns, respectively)

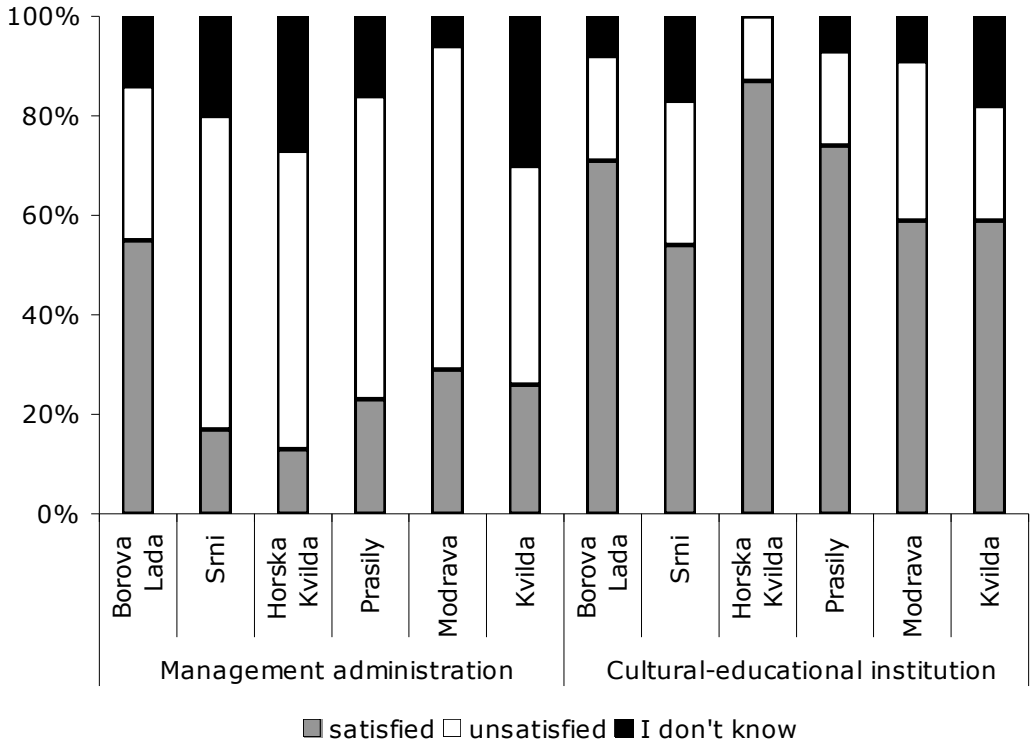


Figure 5.69: Evaluation of Šumava National Park Authority's work relation to the respondents' place of residence (N=182)

The results of the non-parametric correlation indicated that the respondents did not distinguish among the role of the Authority as a management administration and nature protection organisation, since Kendall's τ_B=504, and Spearman's ρ=513. However, they did recognise the difference between the Authority as management administration and cultural educational institution, as Kendall's τ_B=309, Spearman's ρ=330 (Table 5.3).

Correlations

			Authority as management administration	Authority as nature protection organisation	Authority as cultural educational institution
Kendall's tau_b	Authority as management administration	Correlation Coefficient	1.000	.504**	.309**
		Sig. (2-tailed)	.	.000	.000
		N	183	182	182
	Authority as nature protection organisation	Correlation Coefficient	.504**	1.000	.626**
		Sig. (2-tailed)	.000	.	.000
		N	182	182	182
	Authority as cultural educational institution	Correlation Coefficient	.309**	.626**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	182	182	182
Spearman's rho	Authority as management administration	Correlation Coefficient	1.000	.513**	.330**
		Sig. (2-tailed)	.	.000	.000
		N	183	182	182
	Authority as nature protection organisation	Correlation Coefficient	.513**	1.000	.669**
		Sig. (2-tailed)	.000	.	.000
		N	182	182	182
	Authority as cultural educational institution	Correlation Coefficient	.330**	.669**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	182	182	182

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5.3: Values of Kendall's τ_B and Spearman's ρ for the respondents' perceptions of the different roles of the Šumava National Park Authority.

The communication between the Authority and local municipalities was more favourably evaluated by the respondents from Borová Lada in comparison with those form Horská Kvilda, Prašily and Kvilda (see Figure 5.70, where Pearson's χ^2 test value=0.004, φ=0.378, Cramer's V=0.267).

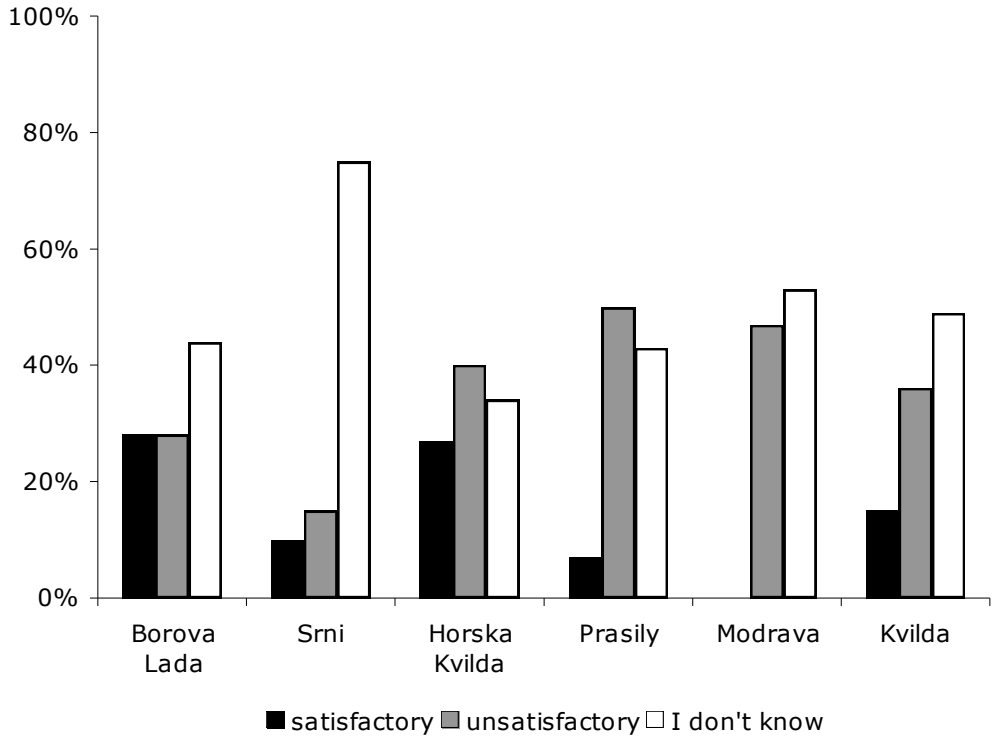


Figure 5.70: Evaluation of the communication between the Šumava National Park Authority and local municipalities in relation to the respondents' place of residence (N=182)

Furthermore, the results revealed that more respondents from Srní and Prašily thought that the nature protection regime is strict in Šumava, while the distribution of answers was even in Borová Lada (see Figure 5.71, where Pearson's χ^2 test value=0.004, φ=0.548, Cramer's V=0.245). Additionally, the majority of respondents who evaluated the regime as 'strict' were in the 25-39 and 40-59 age groups. Most of those who could not evaluate the regime where in the over-60 age group (see Figure 5.72, where Pearson's χ^2 test value=0.014, φ=0.429, Cramer's V=0.247).

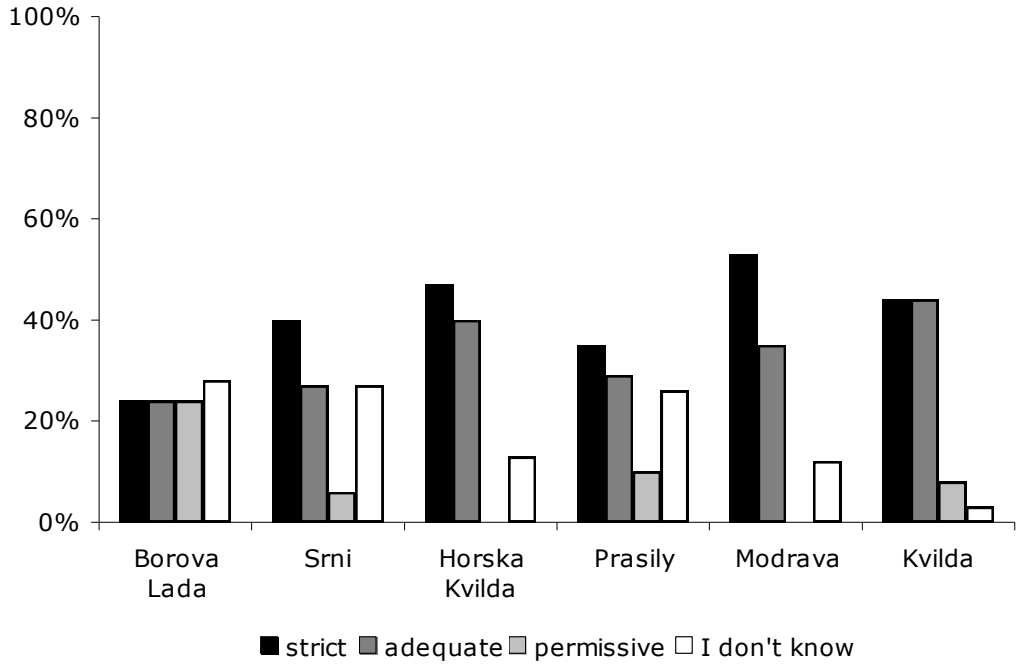


Figure 5.71: Evaluation of the nature protection regime in Šumava National Park in relation to the respondents' place of residence (N=183)

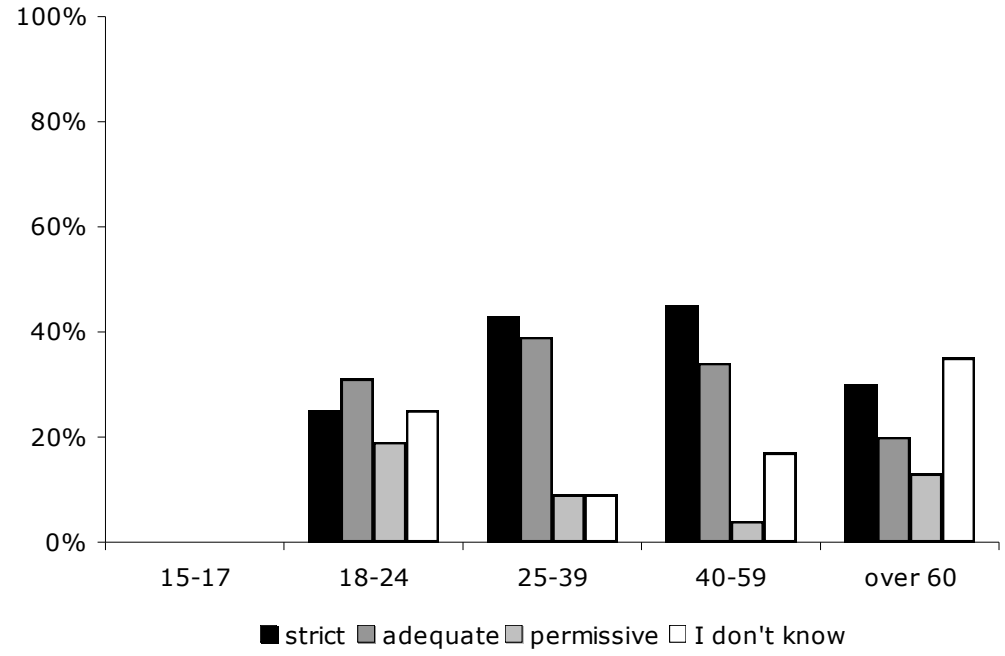


Figure 5.72: Evaluation of the nature protection regime in Šumava National Park existence in relation to the respondents' age group (N=183)

The respondents from Prašily and Modrava thought that the visitor code in the National Park is strict, while more respondents from Horská Kvilda were undecided. Moreover, respondents with completed university education thought that the visitor code is adequate, while more of those with primary school stated that the code is strict. Most of the respondents with a secondary level of education were undecided. (see Figure 5.73, where Pearson's χ^2 test value=0.008, φ=0.534, Cramer's V=0.239 for place of residence; and Pearson's χ^2 test value=0.031, φ=0.460, Cramer's V=0.230 for education).

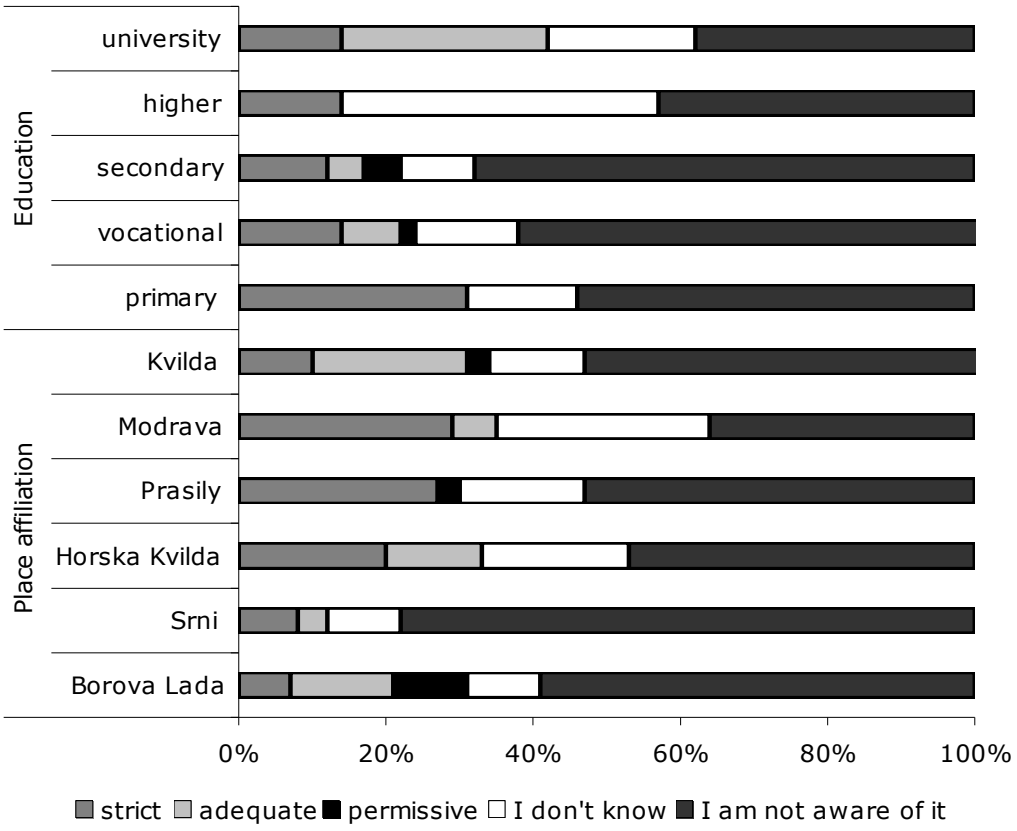


Figure 5.73: Evaluation of the visitor code in Šumava National Park in relation to the respondents' place of residence (N=182).

5.3.4 Tourism and job opportunities

In Pelister, the results from the analysis of all socio-demographic, place attachment and tourism and job opportunities indicated a statistical significance only in two cases. In the first case, the analysis pointed out that respondents with higher level of

education evaluated the job opportunities in Pelister more negatively (see Figure 5.74, where Pearson's χ^2 test value=0.004, φ=0.575, Cramer's V=0.288) and in the second one, it was shown that tourism provides most benefits for the respondents employed in educational institutions and service sector, as well as those with managerial jobs or private businesses (see Figure 5.75, where Pearson's χ^2 test value=0.004, φ=0.518, Cramer's V=0.366).

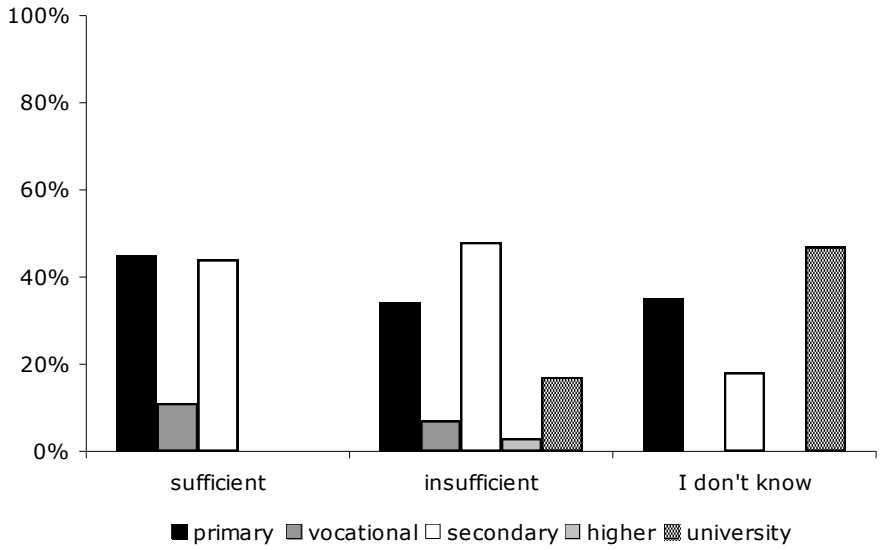


Figure 5.74: Respondents' evaluation of job opportunities in Pelister National Park (N=105)

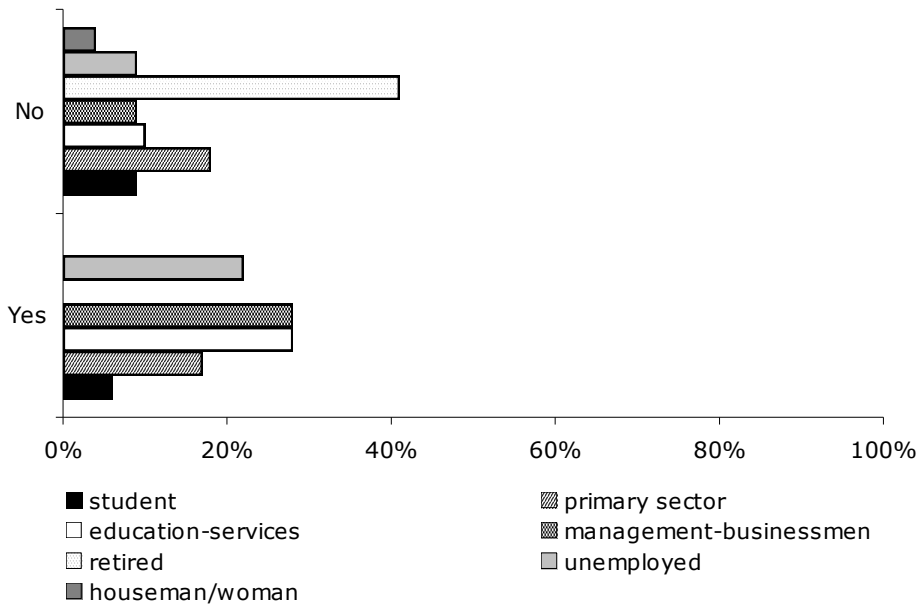


Figure 5.75: Respondents' evaluation of benefits from tourism in Pelister National Park (N=108)

Students, respondents with managerial jobs and those with private businesses were more positive in the evaluation of the job opportunities in Šumava than the unemployed ones. Nevertheless, respondents from Srní evaluated the job opportunities more negatively than those from Modrava (see Figure 5.76, where Pearson's χ^2 test value=0.009, φ=0.445, Cramer's V=0.228 for place affiliation, and Pearson's χ^2 test value=0.001, φ=0.535, Cramer's V=0.268 for occupation)

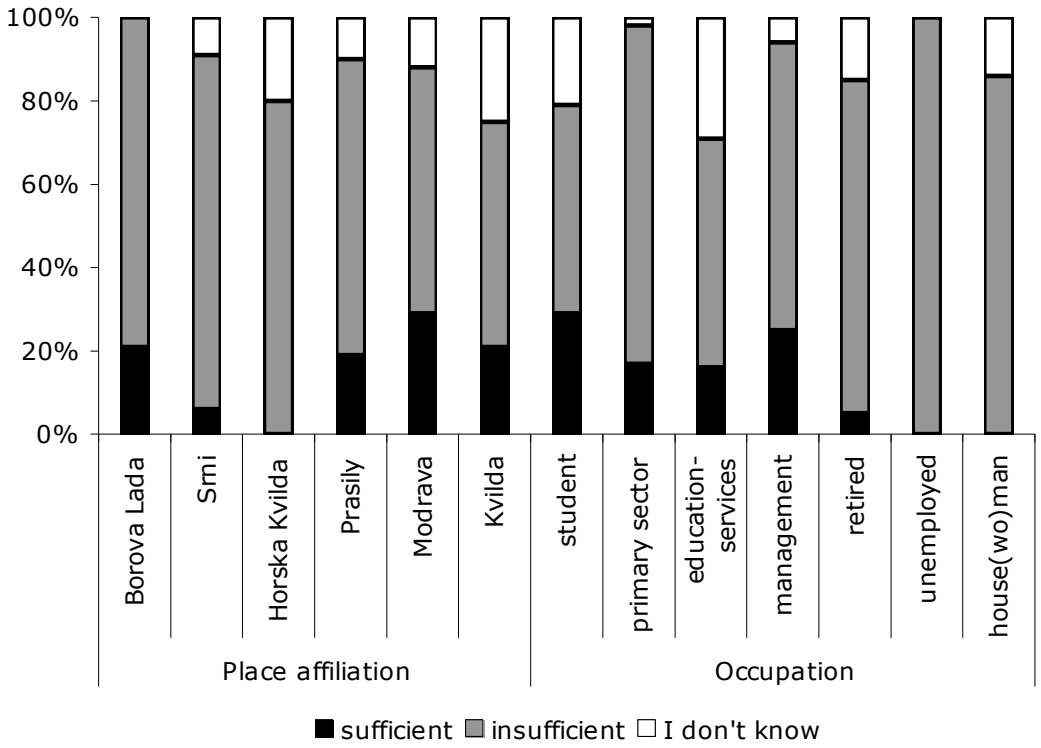


Figure 5.76: Evaluation of job opportunities in Šumava National Park in relation to the respondents' place of residence (N=183) and occupation (N=180)

In addition, students were mostly positive towards the National Park's influence on the job opportunities, majority of the unemployed respondents thought that the National Park has no influence and the retired ones were mostly undecided (se Figure 5.77, where Pearson's χ^2 test value=0.004, φ=0.458, Cramer's V=0.264).

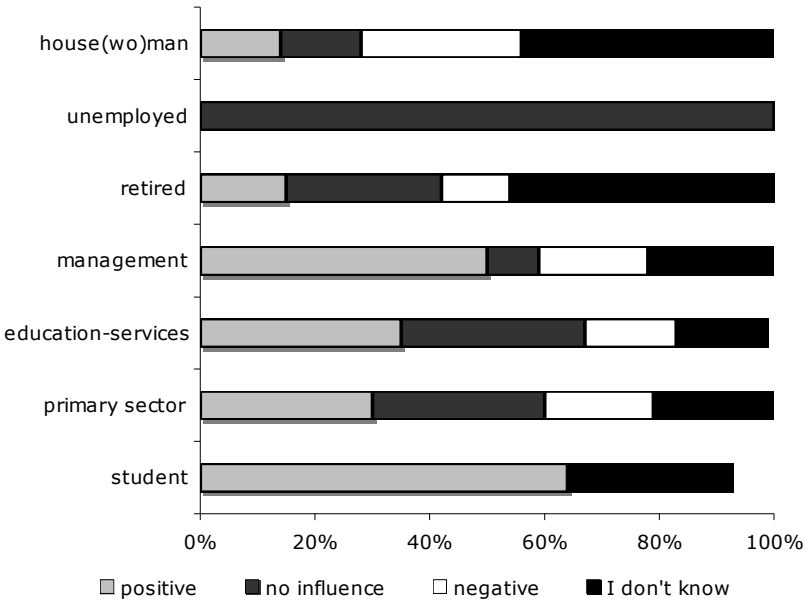


Figure 5.77: Evaluation of the National Park's influence on job opportunities in Šumava in relation to the respondents' occupation (N=180)

It should be noted that he respondents with university and higher school diplomas were most aware about the availability of grants for sustainable local development (see Figure 5.78, where Pearson's χ^2 test value=0.004, φ=0.290, Cramer's V=0.290)

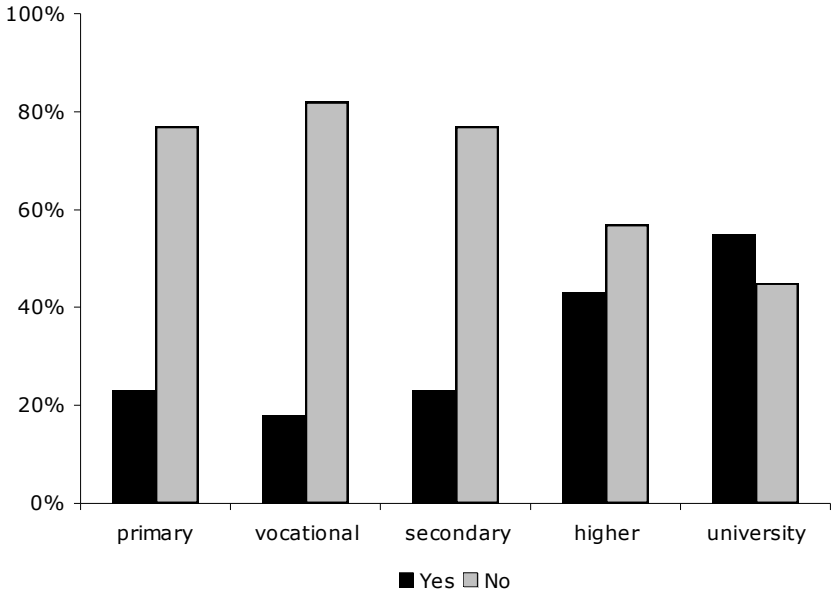


Figure 5.78: Respondents' awareness of the available grants for local development in Šumava (N=182)

The results also indicated that respondents from Prašily, Modrava and Horská Kvilda felt that they were benefiting from tourism in Šumava more than the respondents from other villages involved in the survey. According to the analysis, tourism was the least beneficial for the respondents from Srní. In addition, the results pointed out that the respondents with managerial jobs and those employed in the service sector felt that they were profiting fore from tourism (Figure 5.79, where Pearson's χ^2 test value=0.011, φ=0.354, Cramer's V=0.251 for place of residence; and Pearson's χ^2 test value=0.000, φ=0.580, Cramer's V=0.410 for occupation).

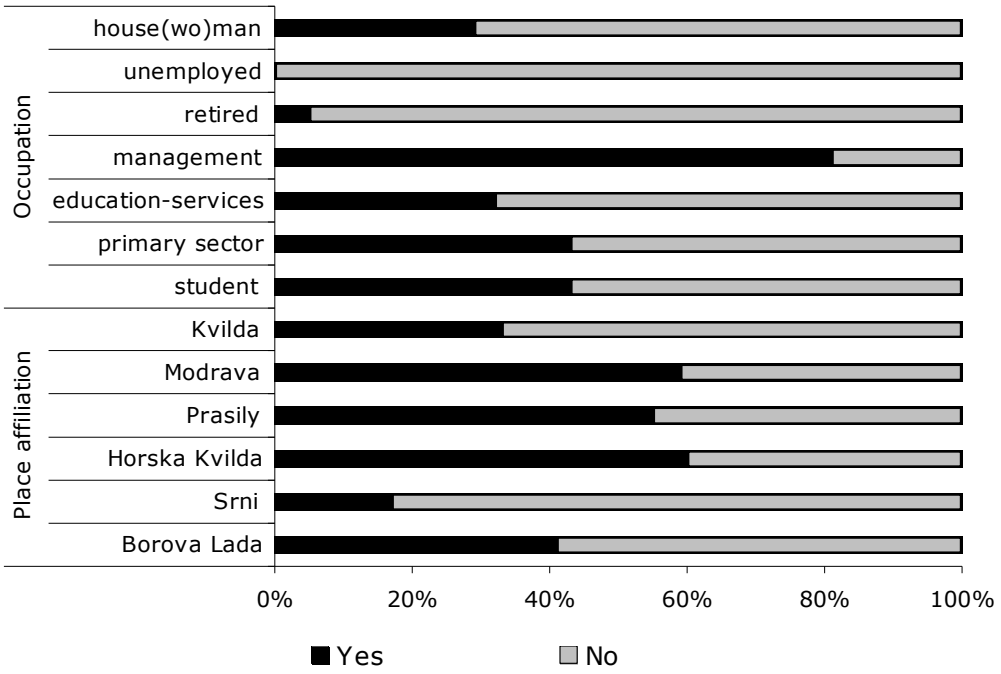


Figure 5.79: Respondents' answers to the question 'Do you have any benefits from tourism related activities in Šumava?' in relation to their occupation (N=183) and place of residence (N=180).

5.4 Comparison between two different years

Comparing of the respondents' answers in Pelister in 2006 and 2009 revealed that there is only a change in one variable from the three within the 'place attachment' category. Basically, the percentage of the respondents who were ready to emigrate from the Pelister National Park decreased from 28 per cent in 2006 to 19 per cent in 2008 (see Table 5.4).

Regarding the nature protection regime and management of the park, the percentage of the respondents, who evaluated the regime of nature protection as relaxed increased from 9 per cent in 2006 to 23 per cent in 2009. Moreover, the percentage of the respondents who were unsatisfied by the overall work of the National Park Authority increased from 2006 to 2009 (see Table 5.4).

According to the results from the comparison, the percentage of the respondents who evaluated the job opportunities as sufficient, decreased from 26 per cent in 2006 to 17 per cent in 2009. Additionally, the influence of the National Park on employment opportunities was evaluated as positive by more respondents in 2006 (33 per cent) than in 2009 (25 per cent). The percentage of the respondents who were getting financial benefits from tourism decreased from 28 per cent in 2006 to 16 per cent in 2009 (see Table 5.4).

As far as Šumava National Park is concerned, comparing the respondents' answers given in 2003 and 2008 in the 'place attachment' category of variables showed that more of the respondents were ready to emigrate in 2003 (23 per cent) than in 2008 (16 per cent) and that the share of respondents with ancestral ties was bigger in 2003 (82 per cent) than in 2008 (74 per cent) (see Table 5.4).

	Variable	Pelister 2006 [%]				Pelister 2009 [%]			
Place attachment	The NP as home	yes		no		yes		no	
		93		7		95		5	
	Latent mobility	yes	no	no **	undecided	yes	no	no *	undecided
		28	48	24	0	19	62	19	0
	Ancestry	yes		no		yes		no	
		74		26		74		26	
Management	Nature protection regime	strict	adequate	relaxed	undecided	strict	adequate	relaxed	undecided
		1	45	9	44	6	33	23	38
	NP Authority's work as management administration	satisfied		unsatisfied	undecided	satisfied		unsatisfied	undecided
		47		6	47	32		21	46
	NP Authority's work as nature protection organisation	satisfied		unsatisfied	undecided	satisfied		unsatisfied	undecided
		55		8	37	38		21	41
	NP Authority's work as cultural-educational institution	satisfied		unsatisfied	undecided	satisfied		unsatisfied	undecided
		38		26	36	20		32	48
Job opportunities	Job opportunities	sufficient		insufficient	undecided	sufficient		insufficient	undecided
		26		63	11	17		54	29
	Benefits from tourism	employment		other	no	employment		other	no
		7		21	71	8		8	84
	NP influence on the job opportunities	positive	neutral	negative	undecided	positive	neutral	negative	undecided
		33	39	28	0	25	44	1	30

Table 5.4: Comparison between residents' views of Pelister national park in two different years (* 'I can't live anywhere else')

Furthermore, the results indicated that respondents were more favourably inclined towards the overall work of the National Park Authority in 2003 than in 2008 (see Table 5.5). In addition to this, more respondents (32 per cent) evaluated the regime of nature protection in the park as relaxed in 2003 against the evaluation in 2008, when only 9 per cent of them thought that the regime is relaxed, compared to 2003 (see Table 5.5).

Overall, the evaluation of the employment opportunities in Šumava was more positive in 2008 compared to 2003. From 2003 to 2008, the number of respondents who

thought that there are sufficient job opportunities increased from 11 per cent to 16 per cent. Furthermore, the percentage of respondents who stated that the establishment of the National Park has an positive influence on the overall job opportunities went up from 19 per cent in 2003 to 34 per cent in 2008. Also, the percentage of respondents who were receiving some financial benefits from tourism increased from 30 per cent in 2003 to 38 per cent in 2008 (see Table 5.5).

	Variable	Šumava 2003 [%]				Šumava 2008 [%]			
Place attachment	The NP as home	yes		No		yes		no	
		95		5		95		5	
	Latent mobility	yes	no	no *	undecided	yes	no	no *	undecided
		23	56	16	5	16	74	2	8
	Ancestry	yes		No		yes		no	
		82		18		74		26	
Management	Nature protection regime	strict	adequate	Relaxed	undecided	strict	adequate	relaxed	undecided
		27	35	32	6	39	32	9	20
	NP Authority's work as management administration	satisfied		unsatisfied	undecided	satisfied		unsatisfied	undecided
		37		33	30	27		48	25
	NP Authority's work as nature protection organisation	satisfied		unsatisfied	undecided	satisfied		unsatisfied	undecided
		49		35	16	42		46	12
	NP Authority's work as cultural-educational institution	satisfied		unsatisfied	undecided	satisfied		unsatisfied	undecided
		71		19	10	64		24	12
Job opportunities	Job opportunities	sufficient		insufficient	undecided	sufficient		insufficient	undecided
		11		82	7	16		71	13
	Benefits from tourism	employment		Other	no	employment		other	no
		24		6	70	33		5	62
	NP's influence on the job opportunities	positive	neutral	negative	undecided	positive	neutral	negative	undecided
		19	28	46	7	34	23	16	27

Table 5.5: Comparison between residents' views of Šumava national park in two different years (* 'I can't live anywhere else')

5.5 Results of the Generalised Linear Model (GLM)

In the following sections, I outline the results of the multivariate modelling of the relationship between three factors of place attachment – ancestry in the area of the park, identification of the park as home, and presence of a latent migration potential – as independent categorical variables, on the one hand, and the evaluation of the National Park Authority's work as a nature protection organisation as an independent variable, on the other. Separate results of the GLM are presented for the surveys undertaken in Pelister National Park in 2009 and Šumava National Park in 2008.

5.5.1 Pelister National Park 2009

The parameters taken into consideration for the GLM, as well as the goodness of fit statistics, indicated that the model can be reasonable, as the significance value is greater than 0.05 (Tables 5.6 and 5.7).

Categorical Variable Information

			N	Percent
Dependent Variable	Authority as nature protection institution	1	38	44.2%
		2	21	24.4%
		3	27	31.4%
		Total	86	100.0%
Factor	ancestories	1	62	72.1%
		2	24	27.9%
		Total	86	100.0%
	Pelister as home	1	83	96.5%
		2	3	3.5%
		Total	86	100.0%
	Emigration	1	9	10.5%
		2	77	89.5%
		Total	86	100.0%

Table 5.6: Information about the variables analysed in the Pelister 2009 GLM

Goodness of Fit[b]

	Value	df	Value/df
Deviance	10.987	9	1.221
Scaled Deviance	10.987	9	
Pearson Chi-Square	9.733	9	1.081
Scaled Pearson Chi-Square	9.733	9	
Log Likelihood[a]	-14.627		
Akaike's Information Criterion (AIC)	39.254		
Finite Sample Corrected AIC (AICC)	40.004		
Bayesian Information Criterion (BIC)	51.526		
Consistent AIC (CAIC)	56.526		

Dependent Variable: Authority as nature protection institution
Model: (Threshold), ancestories, Pelisterashome, Emigration

a. The full log likelihood function is displayed and used in computing information criteria.

b. Information criteria are in small-is-better form.

Table 5.7: Goodness of fit statistics for the Pelister 2009 GLM

The GLM also included an omnibus test, which is a likelihood ratio chi-square test of the current model versus the null model. The significance value of 0.029, which is less than 0.05, indicated that the current model outperforms the null model (Table 5.8).

Omnibus Test[a]

Likelihood Ratio Chi-Square	df	Sig.
9.001	3	.029

Dependent Variable: Authority as nature protection institution
Model: (Threshold), ancestories, Pelisterashome, Emigration

a. Compares the fitted model against the thresholds-only model.

Table 5.8: Results from the Pelister 2009 omnibus test

It transpired that only the ‘ancestor‘ factor had a significant effect on the model, with a significance value of 0.25 (Table 5.9). Parameter estimates (Table 5.10) indicated

that having ancestors form the national park region affects the evaluation of the park's Authority as a nature protection organisation.

Tests of Model Effects

Source	Type III		
	Likelihood Ratio Chi-Square	df	Sig.
ancestories	5.045	1	.025
Pelisterashome	2.394	1	.122
Emigration	1.033	1	.309

Dependent Variable: Authority as nature protection institution
Model: (Threshold), ancestories, Pelisterashome, Emigration

Table 5.9: Tests of model effects for the Pelister 2009 GLM

Parameter Estimates

Parameter		B	Std. Error	95% Profile Likelihood Confidence Interval		Hypothesis Test		
				Lower	Upper	Wald Chi-Square	df	Sig.
Threshold	[Authorityasnatureprotectioninstitution=1]	-1.653	.7989	-3.351	-.176	4.282	1	.039
	[Authorityasnatureprotectioninstitution=2]	-.977	.7905	-2.660	.483	1.526	1	.217
[ancestories=1]		-.621	.2776	-1.167	-.079	5.005	1	.025
[ancestories=2]		0[a]	.	.	.	.	.	.
[Pelisterashome=1]		-1.128	.7664	-2.764	.286	2.168	1	.141
[Pelisterashome=2]		0[a]	.	.	.	.	.	.
[Emigration=1]		.435	.4296	-.403	1.287	1.026	1	.311
[Emigration=2]		0[a]	.	.	.	.	.	.
(Scale)		1[b]						

Dependent Variable: Authority as nature protection institution
Model: (Threshold), ancestories, Pelisterashome, Emigration

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

Table 5.10: Parameter estimates for the Pelister 2009 GLM

5.5.2 Šumava Natonal Park 2008

An analogous analysis was undertaken for the questionnaire survey that was executed in this park in 2008. The parameters taken into consideration, as well as the goodness of fit statistics, indicated that the model can be reasonable, as the significance value was greater than 0.05. The significance value of 0.029 in the Omnibus test, which was less than 0.05, demonstrated that the current model outperforms the null model (Tables 5.11, 5.12 and 5.13).

Categorical Variable Information

			N	Percent
Dependent Variable	Authority as nature protection organisation	1	63	38.4%
		2	82	50.0%
		3	19	11.6%
		Total	164	100.0%
Factor	Ancestors	2	64	39.0%
		3	86	52.4%
		4	10	6.1%
		5	4	2.4%
		Total	164	100.0%
	Sumava as home	1	148	90.2%
		2	8	4.9%
		3	8	4.9%
		Total	164	100.0%
	Latent migration	1	25	15.2%
		2	125	76.2%
		3	14	8.5%
		Total	164	100.0%

Table 5.11: Information about the variables analysed in the Šumava 2008 GLM

Goodness of Fit[b]

	Value	df	Value/df
Deviance	33.514	19	1.764
Scaled Deviance	33.514	19	
Pearson Chi-Square	36.710	19	1.932
Scaled Pearson Chi-Square	36.710	19	
Log Likelihood[a]	-30.979		
Akaike's Information Criterion (AIC)	79.958		
Finite Sample Corrected AIC (AICC)	81.127		
Bayesian Information Criterion (BIC)	107.857		
Consistent AIC (CAIC)	116.857		

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Sumavaashome, Latentmigration

a. The full log likelihood function is displayed and used in computing information criteria.

b. Information criteria are in small-is-better form.

Table 5.12: Goodness of fit statistics for the Šumava 2008 GLM

Omnibus Test[a]

Likelihood Ratio Chi-Square	df	Sig.
25.553	7	.001

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Sumavaashome, Latentmigration

a. Compares the fitted model against the thresholds-only model.

Table 5.13: Results from the Šumava 2008 omnibus test

As in Pelister, only the ‘ancestor‘ factor had a significant effect on the model, with a significance value of 0.07 (Table 5.14). Parameter estimates (Table 5.15) indicated that having ancestors form the national park region affects the evaluation of the park’s Authority as a nature protection organisation.

Tests of Model Effects

Source	Type III		
	Likelihood Ratio Chi-Square	df	Sig.
Ancestors	12.150	3	.007
Sumavaashome	1.566	2	.457
Latentmigration	4.747	2	.093

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Sumavaashome, Latentmigration

Table 5.14: Tests of model effects for the Šumava 2008 GLM

Parameter Estimates

Parameter		B	Std. Error	95% Profile Likelihood Confidence Interval		Hypothesis Test		
				Lower	Upper	Wald Chi-Square	df	Sig.
Threshold	[Authorityasnatureprotectionorganisation=1]	7.352	6748.3323	-13220.193	13.672	.000	1	.999
	[Authorityasnatureprotectionorganisation=2]	8.947	6748.3323	-13218.603	13236.915	.000	1	.999
[Ancestors=2]		6.591	6748.3323	-13220.514	13234.011	.000	1	.999
[Ancestors=3]		6.886	6748.3323	-13220.183	13234.270	.000	1	.999
[Ancestors=4]		7.189	6748.3323	.[a]	.[a]	.000	1	.999
[Ancestors=5]		0[b]	.	.	.	.	.	.
[Sumavaashome=1]		-.223	.7857	-1.838	1.309	.080	1	.777
[Sumavaashome=2]		-.776	.9108	-2.619	.996	.726	1	.394
[Sumavaashome=3]		0[b]	.	.	.	.	.	.
[Latentmigration=1]		1.192	.6761	-.057	2.645	3.110	1	.078
[Latentmigration=2]		1.259	.6287	.115	2.637	4.011	1	.045
[Latentmigration=3]		0[b]	.	.	.	.	.	.
(Scale)		1[c]						

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Sumavaashome, Latentmigration

a. Unable to compute because some convergence criteria were not satisfied.

b. Set to zero because this parameter is redundant.

c. Fixed at the displayed value.

Table 5.15: Parameter estimates for the Šumava 2008 GLM.

5.5.3 Pelister National Park 2006

Considering that the questionnaire surveys used the same instrument and sampling methodology were also undertaken in Pelister and Šumava in 2006 and 2003, respectively, it was possible to apply the GLM to their data in order to see whether the relationship between the three factors of place attachment and the evaluation of the National Park Authority's work as a nature protection organisation has changed over time.

The parameters taken into consideration for the GLM of the Pelister survey, as well as the goodness of fit statistics, indicated that the model can be reasonable, as the significance value was greater than 0.05. However, the significance value of 0.147 in the Omnibus test, which was more than 0.05, demonstrated that the current model did not outperform the null model. Likelihood ratio chi-square tests indicated that none of the involved factors had a significant effect on the model (Tables 5.16 – 5.21).

Categorical Variable Information

			N	Percent
Dependent Variable	Authority as nature protection organisation	satisfaied	43	48.9%
		unsatisfied	8	9.1%
		I don't know	37	42.0%
		Total	88	100.0%
Factor	Ancestors	yes	21	23.9%
		yes	46	52.3%
		no	21	23.9%
		Total	88	100.0%
	Pelister as home	yes	86	97.7%
		no	2	2.3%
		Total	88	100.0%
	Latent mobility	yes	27	30.7%
		no	15	17.0%
		I don't know	46	52.3%
		Total	88	100.0%

Table 5.16: Information about the variables analysed in the Pelister 2006 GLM.

Goodness of Fit[b]

	Value	df	Value/df
Deviance	9.581	13	.737
Scaled Deviance	9.581	13	
Pearson Chi-Square	8.510	13	.655
Scaled Pearson Chi-Square	8.510	13	
Log Likelihood[a]	-20.435		
Akaike's Information Criterion (AIC)	54.871		
Finite Sample Corrected AIC (AICC)	56.271		
Bayesian Information Criterion (BIC)	72.212		
Consistent AIC (CAIC)	79.212		

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Likehome, Movingaway

a. The full log likelihood function is displayed and used in computing information criteria.

b. Information criteria are in small-is-better form.

Table 5.17: Goodness of fit statistics for the Pelister 2006 GLM.

Omnibus Test[a]

Likelihood Ratio Chi-Square	df	Sig.
8.167	5	.147

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Likehome, Movingaway

a. Compares the fitted model against the thresholds-only model.

Table 5.18: Results from the Pelister 2006 omnibus test.

Tests of Model Effects

Source	Type III		
	Likelihood Ratio Chi-Square	df	Sig.
Ancestors	1.361	2	.506
Likehome	2.909	1	.088
Movingaway	4.585	2	.101

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Likehome, Movingaway

Table 5.19: Tests of model effects for the Pelister 2006 GLM.

Parameter Estimates

Parameter		B	Std. Error	95% Profile Likelihood Confidence Interval		Hypothesis Test		
				Lower	Upper	Wald Chi-Square	df	Sig.
Threshold	[ManagementasNatural Protection=1]	6.359	10441.9792	-20459.943	11.919	.000	1	1.000
	[ManagementasNatural Protection=2]	6.604	10441.9792	-20459.699	20473.224	.000	1	.999
[Ancestors=1]		.429	.3996	-.352	1.216	1.152	1	.283
[Ancestors=2]		.107	.3374	-.554	.770	.100	1	.752
[Ancestors=5]		0[a]	.	.	.	.	.	.
[Likehome=1]		6.469	10441.9792	.[b]	.[b]	.000	1	1.000
[Likehome=2]		0[a]	.	.	.	.	.	.
[Movingaway=1]		-.217	.3022	-.811	.374	.516	1	.473
[Movingaway=2]		-.828	.3930	-1.614	-.069	4.433	1	.035
[Movingaway=3]		0[a]	.	.	.	.	.	.
(Scale)		1[c]						

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Likehome, Movingaway

a. Set to zero because this parameter is redundant.

b. Unable to compute because some convergence criteria were not satisfied.

c. Fixed at the displayed value.

Table 5.20: Parameter estimates for the Pelister 2006 GLM.

A non-parametric correlation was undertaken as part of this test. It indicated that, overall, the respondents did not distinguish among the different roles of the National Park Authority in their evaluation.

Correlations

			Authority as management administration	Authority as nature protection organisation	Authority as cultural educational institution
Kendall's tau_b	Authority as management administration	Correlation Coefficient	1.000	.964**	.754**
		Sig. (2-tailed)	.	.000	.000
		N	140	135	140
	Authority as nature protection organisation	Correlation Coefficient	.964**	1.000	.757**
		Sig. (2-tailed)	.000	.	.000
		N	135	135	135
	Authority as cultural educational institution	Correlation Coefficient	.754**	.757**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	140	135	140
Spearman's rho	Authority as management administration	Correlation Coefficient	1.000	.973**	.762**
		Sig. (2-tailed)	.	.000	.000
		N	140	135	140
	Authority as nature protection organisation	Correlation Coefficient	.973**	1.000	.764**
		Sig. (2-tailed)	.000	.	.000
		N	135	135	135
	Authority as cultural educational institution	Correlation Coefficient	.762**	.764**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	140	135	140

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5.21: Values of Kendall's τ_B and Spearman's ρ for the respondents' perceptions of the different roles of the Pelister National Park Authority in 2006.

5.5.4 Šumava National Park 2003

The parameters taken into consideration for the GLM of this survey, as well as the goodness of fit statistics, indicated that the model can be reasonable, as the significance value was greater than 0.05. However, the significance value of 0.816 in the Omnibus test, which was more than 0.05, demonstrated that the current model did not outperform the null model. The non-parametric correlation indicated that, overall, the respondents were able to distinguish among the different roles of the National Park Authority in their evaluation, although the three selected factors of place attachment did not affect the evaluation of its work as a nature protection organisation (Tables 5.22 – 5.27).

Categorical Variable Information

			N	Percent
Dependent Variable	Authority as nature protection organisation	yes	79	47.0%
		no	62	36.9%
		I don't know	27	16.1%
		Total	168	100.0%
Factor	Ancestors	yes	138	82.1%
		no	30	17.9%
		Total	168	100.0%
	Sumava as home	1	126	75.0%
		2	35	20.8%
		3	2	1.2%
		4	3	1.8%
		5	2	1.2%
		Total	168	100.0%
	Latent mobility	0	1	.6%
		1	15	8.9%
		2	22	13.1%
		3	34	20.2%
		4	59	35.1%
		5	31	18.5%
		6	6	3.6%
		Total	168	100.0%

Table 5.22: Information about the variables analysed in the Šumava 2003 GLM.

Goodness of Fit[b]

	Value	df	Value/df
Deviance	37.667	39	.966
Scaled Deviance	37.667	39	
Pearson Chi-Square	35.894	39	.920
Scaled Pearson Chi-Square	35.894	39	
Log Likelihood[a]	-47.583		
Akaike's Information Criterion (AIC)	121.167		
Finite Sample Corrected AIC (AICC)	123.530		
Bayesian Information Criterion (BIC)	161.778		
Consistent AIC (CAIC)	174.778		

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, umavaashome, Latentmobility

a. The full log likelihood function is displayed and used in computing information criteria.

b. Information criteria are in small-is-better form.

Table 5.23: Goodness of fit statistics for the Šumava 2008 GLM.

Omnibus Test[a]

Likelihood Ratio Chi-Square	df	Sig.
6.790	11	.816

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, umavaashome, Latentmobility

a. Compares the fitted model against the thresholds-only model.

Table 5.24: Results from the Šumava 2003 omnibus test.

Tests of Model Effects

Source	Type III		
	Likelihood Ratio Chi-Square	df	Sig.
Ancestors	1.361	2	.506
Likehome	2.909	1	.088
Movingaway	4.585	2	.101

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Likehome, Movingaway

Table 5.25: Tests of model effects for the Šumava 2003 GLM.

Correlations

			Authority as management administration	Authority as nature protection organisation	Authority as cultural educational institution
Kendall's tau_b	Authority as management administration	Correlation Coefficient	1.000	.273**	.167*
		Sig. (2-tailed)	.	.000	.010
		N	199	199	198
	Authority as nature protection organisation	Correlation Coefficient	.273**	1.000	.239**
		Sig. (2-tailed)	.000	.	.000
		N	199	199	198
	Authority as cultural educational institution	Correlation Coefficient	.167*	.239**	1.000
		Sig. (2-tailed)	.010	.000	.
		N	198	198	198
Spearman's rho	Authority as management administration	Correlation Coefficient	1.000	.292**	.177*
		Sig. (2-tailed)	.	.000	.013
		N	199	199	198
	Authority as nature protection organisation	Correlation Coefficient	.292**	1.000	.253**
		Sig. (2-tailed)	.000	.	.000
		N	199	199	198
	Authority as cultural educational institution	Correlation Coefficient	.177*	.253**	1.000
		Sig. (2-tailed)	.013	.000	.
		N	198	198	198

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 5.26: Values of Kendall's τ_B and Spearman's ρ for the respondents' perceptions of the different roles of the Šumava National Park Authority in 2003

Parameter Estimates

Parameter		B	Std. Error	95% Profile Likelihood Confidence Interval		Hypothesis Test		
				Lower	Upper	Wald Chi-Square	df	Sig.
Threshold	[ManagementasNaturalProtection=1]	6.359	10441.9792	-20459.943	11.919	.000	1	1.000
	[ManagementasNaturalProtection=2]	6.604	10441.9792	-20459.699	20473.224	.000	1	.999
[Ancestors=1]		.429	.3996	-.352	1.216	1.152	1	.283
[Ancestors=2]		.107	.3374	-.554	.770	.100	1	.752
[Ancestors=5]		0[a]	.	.	.	.	.	.
[Likehome=1]		6.469	10441.9792	.[b]	.[b]	.000	1	1.000
[Likehome=2]		0[a]	.	.	.	.	.	.
[Movingaway=1]		-.217	.3022	-.811	.374	.516	1	.473
[Movingaway=2]		-.828	.3930	-1.614	-.069	4.433	1	.035
[Movingaway=3]		0[a]	.	.	.	.	.	.
(Scale)		1[c]						

Dependent Variable: Authority as nature protection organisation
Model: (Threshold), Ancestors, Likehome, Movingaway

a. Set to zero because this parameter is redundant.

b. Unable to compute because some convergence criteria were not satisfied.

c. Fixed at the displayed value.

Table 5.27: Parameter estimates for the Šumava 2003 GLM

CHAPTER 6:

DISCUSSION

Before summarising the main underpinnings of the diverse relationships between local populations and national park protection, it is worth stressing that the survey sample uncovered a significant demographic difference among the residents of the two areas: basically, it transpired that Pelister's population is generally much more homogeneous, older, and less educated than that of Šumava. In light of the social make-up of Pelister's respondents, then, it came as little surprise that most of them were either retired or homemakers (26 and 28 per cent respectively). This was very much unlike Šumava, where residents employed in forestry, industry or services dominated the survey sample. The findings about socio-demographic characteristics of the respondents in Pelister are similar to the findings from other protected areas in the Balkans such as Serbia, Bulgaria and Greece (see Trakolis 2001, Cellarius 2004, Pavlikakis and Tsihrintzis 2006, Staddon 2009) while the results from Šumava were more comparable to those from the Central-European protected areas such those in Austria, Slovenia, Slovakia, Romania and Poland (Kaczensky et al. 2004, Zurc 2008, Stringer et al. 2006, Kluvánková-Oravská 2009).

6.1 Local people's perceptions and attitudes

The results of the survey indicated that the residents' opinions about, and attitudes towards, the protection, management and impacts of the two national parks were highly diverse and variegated. One of the main aims of starting this thesis in the first place – as outlined in the introduction and literature review above – was to provide a more nuanced view of the local population's understandings and experiences of environmental management and nature protection in the two parks. Therefore, I can conclude that the results of my research in Šumava and Pelister contest the widespread theoretical understanding of local communities in national parks a resistant and passive obstacle in the process of nature protection.

6.1.1 Place attachment

My decision to use the concept of 'ancestors', 'home' and 'migration' as proxies for place attachment was based on discussions in the relevant literature on the subject, where a number of authors have argued that populations with a stronger connection to protected areas that are perceived as 'home' are more likely to be critical about, and interested in nature protection and local developments (see Kaltenborn 1998, Kaltenborn et al. 1999, Manzo and Perkins 2006). In a broader sense, these findings corroborate the validity of Vorkinn and Riese's (2001) work, since they show that place attachment is a key determining variable in an individual's perception of a nature protection. The respondents' answers to the questions regarding 'ancestors', 'home' and 'migration' indicated a strong place attachment in both park as around 90 per cent of them perceived the area as 'home' and around 80 per cent of them would not emigrate even if they had an opportunity for it. Also, ancestral links played an important role in the residential mobility of the parks' population, as 74 per cent had an ancestral connection to Pelister and two thirds of them were born there. Almost 50 per cent of the respondents in Šumava had an ancestral connection to the region and 68 per cent of them were born there. The findings of Kušová et al (2008) also demonstrated that the most of the respondents from the Šumava would not emigrate elsewhere. In that respect, it is worth pointing out Tomićić et al.'s work (2008) regarding the strong place attachment of local people to Tara National Park in Serbia. Contraray to these findings, Adams (2005) stresses that despite legally acknowledged rights to use the natural resources in the national parks, many Sámi people would like to live in the urban areas in Sweden.

In addition, numerous studies demonstrate that the individuals and local communities that have developed closer socio-economic and cultural bonds to an area display a higher degree of sensitivity to site management and impacts (Stokols and Shumaker 1981, Shumaker and Taylor 1983, Williams and Roggenbuck 1990, Williams et al. 1992, Vorkinn and Riese 2001). In this regard, this study showed that there is a strong relation between another proxy of place attachment – ancestral links – and perceptions of the national park as a nature protection organisation. The demography of the population was reflected in the driving forces of the residential attractiveness of the two parks: while Pelister residents cited the desire to live in the countryside as the

main reason for staying there, it was the nature of employment that provided the key residential pull factor for Šumava.

Furthermore, my findings counter some of the place attachment and nature protection literature (see, for example, Davenport and Anderson 2005), which argues that local residents can distinguish among specific types of action to manage environmental issues *vis-à-vis* variations in place attachment. The lack of a correlation between the local population's perceptions of Šumava National Park as home and an institution responsible for nature protection – coupled with their relatively negative appraisal of its nature protection regime – might stem from the specific combination of historical developments and current circumstances in the region. Šumava National Park Authority has struggled to develop a successful co-operation dynamic with the local population. The nature protection and governance challenges in the park are significantly more difficult and on a much larger scale compared to Pelister.

Moreover, it is important to mention that place affiliation of the repondents was identified as the key factor for both areas in 2009 and 2008, which is in contrast to the results from the analysis of the data from Pelister 2006 and Šumava 2003.

6.1.2 The state of environment and nature in national parks

Local people may have negative attitudes toward protected areas and perceive them as a loss of freedom or as an obstacle to local development (Carrus et al. 2005). However, this research demonstrated that the respondents from Šumava and Pelister were generally positively inclined towards both the designation and the existence of the national parks in which they live. Many of them see Šumava and Pelister as institutions that give them the opportunity to live in an unpolluted, scenic and protected area, while opening up possibilities for economic investment and job creation. In wider European context, similar findings were were published for example by Pavlikakis and Tsihrintzis (2006), Stringer et al. (2006), and Brandon and Moldovan (2008).

According to Petrosillo et al. (2007) the manner in which people perceive environmental quality and sustainability is influenced by, *inter alia*, their socio-economic status, family ties and cultural affiliations. This note was supported by

many other authors including Tomićević et al. (2005), Adams (2005) and Caruus (2005). The respondents' level of education as well as their occupation and age were revealed as influential factors in the creation of local opinions and attitudes both in Pelister and Šumava. Also, Brandon and Moldovan (2008) reported that local people's attitudes towards the Măcin Mountains National Park in Romania were mostly influenced by respondents' level of education as well.

It is important to be mentioned that 65 per cent of the repondents' in Šumava didn't know about Natura 2000 and half from those who were familiar with this network stated they they are nor enough informed about it. In that sense, Papageorgiou and Vogiatzakis (2006) point out that the superimposition of Natura 2000 upon the existing system of protected areas in Greece resulted in the duplication of administrative efforts and related legislation, making the overall management of protected areas 'complex, confusing and fragmented' which further complicates the communication with the local people and the participative management practices (page 476).

6.1.3 The management of national parks

Goodall and Stabler (1997) and Goodall (1995) stress that a single model for managing nature protection challenges does not exist. However, Neumann (1992) and Brockington et al. (2006) argue that a more relaxed regime of nature protection makes locale people to have more positive attitudes towards the national park. Still, Salafsky and Wallenberg (2000) believe that the core zones of the national parks need to stay with no consumptive use of biological resources.

In the case of Pelister, approximately one third of the surveyed people were satisfied by the work of the National Park Authority and just as many believed that the nature protection regime in the Park is adequate. Many respondents were not able to evaluate either the work of the Authority nor the nature protection regime in the Park. Similar situation was evidenced by Brandon and Moldovan (2008) in the Măcin Mountains National Park in Romania. They argued that this kind of situationas are mainly due to lack of interaction between the local people and the Park. The findings from Pelister support this evidence as approximately one half of the respondents couldn't even

evaluate the level of communication with the Park's Authority. The findings from Pelister pointed out that the male respondents were more positive in the evaluation of the Authority's work contrarary to the findings from Tara National Park, where female respondents were more positive (Tomićić et al. 2005).

In Šumava, half of the respondents were satisfied with the National Park Authority's work as an nature protection organisation, and 30 per cent of them were satisfied by its work as a management institution. Regarding the nature protection regime in the park, around 40 per cent of the respondents evaluated it as 'strict'. Moreover, only mere 15 per cent of the respondents in Šumava were satisfied by the communication between the park's authority and their municipality and half didn't know the visitos' code. In this regard, Young et al. (2007) stress that stakeholder participation in Central and Eastern Europe has also been rather limited to date. Stringer et al. (2006) point out that in order to keep the local people informed about the Neusiedler See-Seewinkel National Park in Austria, they thought that sending a magazine to every household in the area would be sufficient.

Although the combination of simultaneous biodiversity conservation and local development seems very complicated (van Shaik and Rijksen 2002), Agrawal and Redford (2009) have come across systematic evidence favouring the mutual synchronisation of these two objectives.

6.1.4 Tourism and job opportunities

In Pelister, insufficient employment opportunities were a major issue identified by the respondents and around 50 per cent of them stated that the designation of the National Park has no influence on the creation of new jobs. These results indicate the general socio-economic situation in Macedonia. It is interesting that respondents with an accomplished higher level of education were more negative in the evaluation of job opportunities. Tomićić et al. (2005) stress that the findings from their study in Tara National Park in Serbia regarding the job opportunities in the region, were also a reflection of the overall situation in the country. It is interesting that although 70 per cent of the respondents in Šumava emphasised the lack of job opportunities in the Park, one third of the respondents thought that the establishment of the park had

increased the number of job opportunities. Blavascunas (2006) has pointed out that local residents in Bialowieza National Park also believed that except the tourism opportunities there are no othe employment options in the region.

Matsuoka and Kaplan (2008) have undertaken a comprehensive analysis of 58 volumes of the journal *Landscape and Urban Planning*, discovering that much of the surveyed work addresses nature as a place that can help improve the quality of life and provide a brief sanctuary from 'urban problems'. Many authors argue (see Reynolds and Elson 1996, Cope et al. 1999, Beunen et al. 2008) that nature protection management should be aimed at preserving the balance between nature and recreation.

In Pelister, tourism is still not highly developed in the region and the pressure on nature protection and living costs is insignificant. Pelister's inhabitants were, in the most, positively inclined towards the increase of tourist and visitor flows in the park, despite having the impression that this has already been happening in recent years. Conversely, the intense pace of tourism growth and economic development in Šumava National Park has resulted in traffic problems and other forms of disturbance that are visibly perceived by the locals. According to Librová (1987), the Czech context is well known for experiencing conditions in which people seek unspoilt natural settings. Šumava is clearly a well-developed tourist destination, as evidenced by the great number of respondents who pointed out that the amount of tourists in this park is increasing, and the not so favourable attitude of the local population towards further growth in this sector. In this regard, Cihar and Stankova (2006) have noted that the number of visitors with a university degree has been on the rise since the 1990s in Šumava.

6.2 Validity of study methods

Questionnaire surveys and semi-structured interviews are broadly used for the collection of primary data regarding the relationships among national parks, local residents and local development (Čihař et al. 2000, de Vaus 2001, Ormsby and Kaplin 2005, Kušova et al. 1999, 2002, 2008). Considering that field research was executed in Šumava and Pelister (2003 in Šumava and 2006 in Pelister), several years ago

using the same methods at the same locations (Najmanova 2004, Petrova 2007), there was a good chance that many of the respondents would be targeted again (some of the villages are with a very small population, especially the ones in Pelister). In light of these factors, the research can be considered as part of a wider longitudinal framework.

The GLM is widely applicable both in natural (Leyk and Zimmermann 2004) and social sciences (Schluchter 2008). Moreover, the model is also appropriate for investigation of people's attitudes and opinions regarding the use of natural resources (Ericsson and Heberlein 2002).

CHAPTER 7:

CONCLUSION

7.1 Summary of key findings

Using evidence drawn from in-depth interviews and standardised questionnaire surveys undertaken in Pelister National Park (Macedonia) and Šumava National Park (Czech Republic) between 2009 and 2008, this thesis has connected the attitudes of local residents towards the two national parks as geographical settings for the conduct of everyday life, on the one hand, with the broader issues of public participation and environmental management in the two areas, on the other. Its results have pointed to some of the key factors that shape the local residents' attitudes and opinions with respect to different national park management systems in terms of nature protection, local economic opportunities and tourism.

The literature review that I undertook at the beginning of the research found that the conventional management system for protected areas – also known as the 'Yellowstone' model has led to the displacement of local populations from protected areas, while putting unreasonable limitations on the use of natural resources in the name of nature protection. As a result, the involvement of local people in protected area management is being increasingly recognised as a key necessity for the sustainable and efficient protection of wildlife, and as an economically preferable approach for the effective everyday care and protection of the environment. The recognition of local participation in protected area management had led to the creation of new roles for conservation professionals and protected area authorities, requiring a fundamental re-framing of existing co-management schemes and inter-institutional arrangements.

However, I also discovered that the multiple social and political aspects of local community participation in the governance of national parks remain insufficiently

investigated in the relevant theoretical and policy literature. This is particularly true in the context of ECE, where protected areas in ECE has been forced to deal with the deep socio-economic and political restructuring recently experienced by the region. Very few studies have taken national parks into account when considering the reconfiguration of environmental governance and nature protection in such countries.

The thesis then zoomed onto the context of Pelister and Šumava. Both parks are mountainous, forest areas, situated on the border with Greece in the case of former and Germany and Austria in the case of the latter. As such, they lie adjacent to similar protected areas in neighbouring countries. Both of them have been designated at the state level and are managed by hierarchically organised and rigidly-structured authorities, strictly controlled by the respective central governments. Pelister and Šumava alike are second category protected areas according to International Union for the Conservation of Nature's classification, and as such are meant to contain – formally at least – similar zoning patterns and management practices. However, the parks differ in terms of their socio-economic history, land-use practices and natural features.

The overall results from the statistical analysis of data indicated that despite the socio-demographic differences respondents had a significant place attachment to both national parks. This was evidenced by the high number of the respondents who stated that they feel at home in Šumava and Pelister and by their wish not to move somewhere else. Moreover it was indicated that ancestral links to the area have a significant influence on the intensity of place attachment, as well as on the evaluation of the management in both national parks.

Furthermore, it transpired that respondents from Šumava were more aware of the environmental and nature protection issues than the respondents in Pelister. The results from the statistical analysis revealed that the place of residence of the respondents is one of the factors with a key impact on the creation of the attitudes and opinions towards nature protection, management and tourism development issues. Other factors that had a significant statistical effect on these relations were the respondents' social status and their level of education. Generally, in both parks respondents with a higher level of education and with better social statues were more

critical and opinionated. Also this group of respondents had more benefits from tourism in both parks.

Although Pelister's residents were strongly attached to the park as their home, they were largely unfamiliar with, or uninterested in, the authority's overall work. In Šumava, local residents were significantly more dissatisfied with the work of the national park authority.

Overall, the reviewed evidence challenges the view that local populations and communities are obstacles towards the sustainable management of national parks, as a result of their allegedly negative attitude towards nature conservation and protection. The local populations included in this study maintained a positive attitude towards the establishment of national parks, while possessing a diverse set of views about the different aspects of their operation. The main reason for such opinions is the local residents' belief that protected areas provide opportunities for bigger investment and tourist development. However, the evaluation of the national park's existence on employment opportunities and benefits from tourism in Šumava was more positive between the two study years, while in Pelister the evaluation of the national park's existence on job opportunities and benefits from tourism became more negative.

Local populations, therefore, cannot be treated as a monolith in terms of their views of national park management, which are not necessarily correlated to perceptions of place attachment. This is evidenced by the fact that some participants in the survey were clearly able to distinguish between the different nature protection functions of national parks and their governance, while providing answers that varied significantly according to education and social status.

7.2 Limitations

Taking into consideration that this study was part of a wider research project, it should noted that the structure and most of the questions of the questionnaire used in the survey had to be very similar to the ones used in the project, in order to allow for cross-comparisons. The efficacy of the data gathering process was also hampered by

the fact that the questionnaire is rather long and time consuming, due to it belonging to the wider project.

The language barrier could have been among the limitations during the survey in Šumava, as I am not a native Czech speaker. However, thorough preparations and the help of my Czech colleagues allowed this obstacle to be surpassed, achieving a satisfactory response rate. There could also have been issues around the representativeness of the sample, although this was already defined and verified thanks to the wider research project.

Finally, it should be pointed out that national parks are complex ecological-social systems that require investigations from a range of different perspectives. Due to time and resource limitations, this study was mostly focused on local residents' views, and less on the people from the management authorities (even though representatives from the latter were informally involved in, and informed about, the research). Also, Šumava National Park is a large area with a dispersed distribution of people, which meant that the research was undertaken only in the central part of the park. The specific geographical focus of the study can also be attributed to the fact that the same area was part of previous research, and as such provided an easier time frame for comparison.

The GLM itself has limitations: while it was chosen for its wide applicability and ability to utilise variables that do not follow a normal distribution and variances that are not constant, the model is known to be robust; additional, more detailed research would be required to investigate the fine grain of causal relations included in it.

7.3 Recommendations

The main policy implication of the results obtained from this study revolve around the need for improved education and employment opportunities, as key ways of towards achieving improved national park management. Also, there is a need to support national institutions towards developing more effective governance. This might be achieved via:

- Involving people in biodiversity monitoring, and dissemination of information to stakeholders;
- Increased education and awareness-raising programmes, with a substantial input from the scientific community;
- The establishment of state-private partnerships for biodiversity protection and improvement (such as in the UK);
- Involvement of tourists in the monitoring of species (e.g. bird watching), and obtaining tourist donations or support for nature and cultural heritage projects;
- Development of effective compensation mechanisms in Macedonia, in cases where protected wildlife has damaged the property or livelihoods of local residents;
- Educational courses for training national park residents to make use of local economic opportunities.

Future research endeavours in this field could take upon the task of further exploring socio-spatial differences in the perception of home, belonging and place within protected areas, while establishing the role of different participation models in creating such differences. With its ability to provide a comprehensive conceptual and epistemological framework involving sophisticated theorisations of place, nature and human behaviour, I would argue, environmental science and policy is in an ideal position to play a central role in this undertaking.

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APPENDIX 1: SURVEY QUESTIONNAIRE

1. Survey questionnaire in Czech
2. Survey questionnaire in Macedonian

APPENDIX 2: LIST OF PUBLICATIONS

Petrova et al. Local nuances in the perception of nature protection and place attachment: a tale of two parks, Area (IF=1.528) under revision

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