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## Attitudes and Perceptions of Local Residents and Tourists Toward the Protected Area of Retezat National Park, Romania

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ATTITUDES AND PERCEPTIONS OF LOCAL RESIDENTS AND TOURISTS  
TOWARD THE PROTECTED AREA OF RETEZAT NATIONAL PARK,  
ROMANIA

by

Andrea Blanka Szell

A Thesis  
Submitted to the  
Faculty of The Graduate College  
in partial fulfillment of the  
requirements for the  
Degree of Master of Arts  
Department of Geography  
Advisor: Lucius Hallett, IV, Ph.D.

Western Michigan University  
Kalamazoo, Michigan  
April 2012

# ATTITUDES AND PERCEPTIONS OF LOCAL RESIDENTS AND TOURISTS TOWARD THE PROTECTED AREA OF RETEZAT NATIONAL PARK, ROMANIA

Andrea Blanka Szell, M.A.

Western Michigan University, 2012

Despite the fact that there has been a significant increase in interest in the sustainable management of protected areas (PAs), many of them still fail to meet conservation goals. Considering that the availability of financial resources and the general public's interest toward environmental conservation play such an important role in the successful performance of PAs, it is of great importance to investigate local residents' and visitors' attitudes and perceptions regarding PAs. This will help gain knowledge of the level of financial and social support they would be willing to give to environmental conservation in PAs. To elicit attitudes and perceptions, as well as their willingness to pay (WTP) for conservation, a survey was carried out in and near Retezat National Park, Romania. Results indicated that tourists have higher awareness of the importance of the PA, exhibit greater appreciation of its existence and are willing to pay higher entrance fees to support conservation efforts when compared to local residents. Although considerable differences do exist between local residents and tourists, a more successful functioning and management of PAs can be achieved by understanding both tourists' and local residents' attitudes and perceptions of nature conservation and by integrating them into future conservation policies.

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During the two years I have spent in the Geography program at Western Michigan University, I evolved from not knowing whether the “deforestation, tropical forests” idea could turn into a “good thesis” and “finished thesis” at the same time, to be as certain about this research to travel to a different continent and camp in the mountains “just to ask people how they feel”. Thankfully, there were a number of people who provided me guidance and support along this eventful journey. I would like to offer my gratitude to my committee chair, Dr. Lucius Hallett IV, for his never ending enthusiasm and for always telling me “Blanka, don’t say *we’ll see if it will*, because *it will*”. I would also like to thank the remaining members of my committee, Dr. Lisa DeChano and Dr. Li Yang for their insightful suggestions and for sacrificing such unusually warm and beautiful spring days with their little ones for additional office time and reading this thesis. Although the help and support of my committee members has been critical for my successful and timely completion of this program, there are several other faculty members who have considerably shaped my understanding of geography and helped me succeed. I would like to thank Dr. Benjamin Ofori-Amoah for having his door open at all times, for listening and providing guidance. Dr. Gregory Veeck has been truly inspiring and I am extremely grateful for the imaginary funnel he gave me and thought me how to use during my first semester in the program. Also, Drs. Charles Jay Emerson, Chansheng He and Kathleen Baker, I truly valued being held to high standards and I am thankful for the valuable skills I gained from being in your classes.

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# CHAPTER I

## INTRODUCTION

### Background

Forest protection and environmental conservation in developing countries in South-Central and Eastern Europe has recently become a critical issue. The conservation of relatively undisturbed, virgin, European forests in these areas has been gaining interest in the past two decades because extensive deforestation and other types of destructive economic activities have significantly decreased the spatial extent of these valuable forests (Veen et al., 2010). Thus, awareness of the unfavorable effects of anthropogenic activities on the environment has increased and interest has been manifested toward nature protection policy on forests as important ecosystem indicators (Miles et al., 2006; Illukpitiya and Yanagida, 2008).

As more emphasis is being placed on the effectiveness of protected areas in conserving valuable forest and non-forest ecosystems and awareness of potential human impact on protected areas is increasing, more research has been focused on exploring conservation and management strategies involving human perceptions. In this thesis, the term human perceptions will refer to the views of these from local communities and tourists. The perceptions of these two categories are the ones least reflected by current conservation policies.

Considering the inherent differences between the two major categories, those of the local residents and those of tourists' interest, it is not unusual to find that the

literature is also divided in two categories. These differences stem from the relationships people develop with protected areas based on their own particular location. First, there is the literature focused on exploring local residents' perceptions (Dimitrakopoulos et al., 2010; Liu, Ouyang & Miao, 2010; Ozturk, Saglam & Barli, 2010; Vodouhe et al., 2010) and, second, the literature investigating tourist perceptions (Suckall et al., 2009; Jones et al., 2011). Similarly, economic valuations of protected areas, based on welfare measures such as the willingness to pay (WTP), explore potential human support of conservation from either a tourist (Togridou, Hovardas & Pantis, 2006) or a local resident (Hadker et al., 1997) viewpoint. There is little, if any, previous research exploring perceptions and WTP of both local residents and tourists. The failure to include both local residents and tourists in future protected area management and conservation policies contributes to limited conservation benefits and furthers conflict between people and protected areas. This thesis seeks to help fill in the gaps in the existing literature by exploring and contrasting perceptions and WTP, as well as conservation attitudes for both groups for a protected area in terms of both local residents and tourists, as well as the conservation attitudes of both groups.

In addition to furthering the overall understanding of human conservation attitudes toward protected areas, this research will have a significant contribution to building the foundations of perception studies in Romania. Although Romania has a long tradition in conservation, it is an Eastern European country relatively recently liberated from communistic dominance (since 1989). Thus, until recently,

communistic views prevailed in the field of conservation (Soran, Biro & Moldovan, 2000). These communistic views were manifested through the higher value placed on benefits from exploiting natural resources than on conservation. Conservation measures were often disregarded and the country's protected areas were doomed by their "paper" (Ioja et al., 2010) existence, without having any considerable "real world" impact.

As communistic ideas are gradually being replaced by Western ones, and modern views are being implemented in the field of conservation, it is important that all potential alternatives are explored prior to defining the country's approach to conservation. Although considerable research has been focused on the successfulness of protected areas and the effectiveness of various conservation measures, the relationship between people and protected areas has been rarely addressed. This research is, at present, one of the few existing studies investigating attitudes, perceptions and the WTP of local residents and tourists toward a Romanian protected area, Retezat National Park. In this case the aims of this study, conducted in Retezat National Park, are to: (1) investigate existing local resident and tourist attitudes, perceptions, and WTP opinions; (2) identify factors that influence local residents and tourists in their perceptions; and (3) explore the potential benefits from implementing conservation and management policies integrating these perceptions in future conservation policies.

## Problem Statement

Natural forest ecosystems of the Carpathian Mountains in Central and Eastern Europe are regarded as some of the most pristine and richest in terms of both resources and species. The relatively large portion of the Carpathians located in Romania is considered to possess the largest quantity of relatively undisturbed forests in Europe. This has a significant contribution to these areas' high environmental value (Stanciu, 2003; Oszlanyi et al., 2004).

The most widely used measures in the conservation planning and sustainable management of these valuable forest lands are protected areas. Protected areas have been established primarily to conserve relatively intact ecosystems and endangered species (Margules and Pressey, 2000).

The World Conservation Union asserts (National Forestry Authority, 2005):

“Protected areas bring a major contribution to the planet’s natural and culture resources conservation, by preserving typical samples from regions with a higher biological diversity, thus contributing to the environmental steady state. Besides that, protected areas promote a sound use of land, able to support sustainable rural development along with education on nature protection, ecological monitoring, Leisure and tourism”.

Romanian protected areas have been classified into six categories according to existent environmental protection regulations: national parks, natural parks, natural reserves of special values, scientific reserves, landscape reserves and nature monuments (Oszlanyi et al., 2004). These areas are established primarily in order to ensure the protection and conservation of Eastern Europe’s last remaining virgin

forests and the rich biodiversity within them. The number of forested areas included in the protected areas network has increased significantly over the past 20 years, evolving from “paper parks” before 1990 to scarcely funded parks between 1990 and 2006. Currently there are 18 national parks, natural parks and biosphere reserves, and more than 800 regional and local protected areas (Stanciu, 2003).

Despite the fact that the number and the size of protected areas has increased since the 1990s and that Romania has a long tradition in environmental protection and biodiversity conservation, some of the protected areas frequently fail to accomplish the intended conservation objectives. As Romania is one of the European Unions’ poorest countries, some of its protected areas are under-funded, especially nature parks, national parks and reserves. This makes it difficult for authorities to implement conservation measures effectively. The case of Retezat National Park is no exception. Here, conservation professionals must cope with scarce funding resources and a lack of interest in conservation by local authorities, local residents and tourists. Although Retezat National Park is a publicly funded Romanian protected area, all indicators point to a decrease in public funding resources due to the exacerbating effects of the global economic downturn on the economies of developing countries. This makes self-sufficiency an essential component in the sustainability of the protected area. Due to budget constraints, the majority of the park personnel lacks necessary education, training and field experience in conservation practices (Ioja et al., 2010). Moreover, responses to public violations of park rules are inadequate, delayed or non-existent because of insufficient personnel. The combined effect of all the above-mentioned



factors is the poor realization of protection and conservation objectives.

Although many issues faced by protected areas are the direct result of inadequate funding resources, unfavorable human impact is another major cause of concern for conservationists. Previous research conducted on understanding the relationship between people and protected areas identified inadequate management strategies as a major cause of negative anthropogenic impact on protected areas. Previous park management strategies have not involved any potential human support and have often focused on imposing strict rules regarding access to the protected area and the use of natural resources from the protected areas' territory. As a result, local residents and tourists developed negative perceptions of conservation efforts within the protected area (Weladji, Moe & Vedeld, 2003; Vodouhe et al., 2010).

Considering that both local resident and tourist compliance and support is crucial for a favorable outcome of conservation efforts, understanding their perceptions of the importance of protected areas and knowing how much support they would be willing to offer for nature conservation, is critical for an improved protected area-people relationship (Weladji, Moe & Vedeld, 2003). It is important that, alongside professionals in nature conservation and government agency personnel, both tourists and local residents are well aware of the importance of nature protection and biodiversity conservation in order to increase their understanding of and contribution towards the preservation of the protected area. Given that unsubstantial economic and social support are the most often cited causes of the malfunctioning of protected areas, especially in developing countries, it is critical that greater efforts are

made to raise awareness about biodiversity conservation and towards finding the adequate amount of financial resources to efficiently carry out conservation tasks.

### Research Questions

The proposed research project aims to: (1) investigate local communities and tourists attitudes and perceptions regarding nature conservation in Retezat National Park; (2) identify factors that influence peoples' attitudes towards protected areas; (3) estimate the willingness to pay (WTP) to support preservation in Retezat National Park; and (4) explore benefits from the implementation of new strategies that include attitudes, perceptions and WTPs.

More specifically, the research questions can be organized according to the following three major categories:

*a. Knowledge and awareness:*

- How concerned are people - local residents and tourists - with environmental issues in general?
- How aware are people of the importance of the protected area?
- How well do people comply with park regulations?

*b. Attitudes and perceptions:*

- What are local residents' perceptions of the local tourism and the management of the protected area?
- What are local residents' attitudes toward current conservation and protected area management?

- What are tourists' perceptions of local residents and the management of the protected area?
  - How do tourists view conservation efforts within the protected area?
  - What are some of the major factors that influence awareness, attitudes and perceptions?
    - Local residents: access to natural resources inside the boundaries of the protected area; benefits from tourism related activities; involvement in park related activities
    - Tourists: length of visit, level of satisfaction, interaction with local residents
    - Both groups: proximity to the protected area, education level, income
- c. *WTP* (willingness to pay higher park entrance fees in order to support conservation efforts within the protected area):
- Are people willing to pay higher entrance fees in order to support conservation efforts within the protected area?
  - How much more would people be willing to pay than the existing entrance fee?
  - What are the factors that influence either positive or negative decisions when asked for individual WTPs?

## Underlying Assumptions

Local residents of three rural areas (Carnic, Nucsoara and Salasu de Sus) along the northern access road to Retezat National Park (RNP) still rely to some extent on natural resources located on park territory. Thus, people often view the high biodiversity of the park as a rich source of timber and non-timber forest products, as well as a highly suitable environment for hunting and livestock grazing activities. Recently a shift in the priorities of the management of the protected area has emerged and increased emphasis was placed on biodiversity conservation. Local residents' habitual use of park resources has been significantly affected by the implementation of modern conservation policies. When engaging in resource extraction activities on the park's territory, locals are faced with restrictions regarding the location and the amount of resources available for use. As a result, these new conservation strategies contributed to negative conservation attitudes among local residents toward the protected area. Similarly, the results of the present study are expected to show that local residents have low levels of awareness and concern, and hold negative perceptions of conservation within RNP due to restrictions imposed on access to natural resources. The results will prove that local residents' low level of awareness and their limited knowledge of the importance of the protected area negatively influence perceptions. Moreover, these results will support the findings of previous studies regarding strategies for improving people-protected areas relationship. The most efficient strategy for generating positive attitudes toward conservation being if people were given the possibility to benefit from the existence of the protected area in

such a way, that their benefits would outweigh their losses.

Although local residents are strongly impacted by conservation practices enforced by RNP authorities, their situation is not unique in terms of people whose benefits have been considerably reduced over the years. Tourists are also impacted by reforms in conservation policies. These policies imposed additional restrictions on tourist activities within the protected area. While in the past simple activities such as camping, building a campfire, and hiking could have been carried out without any restrictions, such activities can now only be practiced by following the rules imposed by the management of the protected area. Although negative attitudes on the part of tourists are expected to result from the previously mentioned restrictions, considering the different background of tourists, it is anticipated that they will prove more environmentally aware and will favor conservation to a higher degree than local residents.

To summarize, the following hypothesis can be stated:

- Although local residents living in the proximity of RNP have a closer relationship with the protected area and their familiarity of the park's physical features exceeds that of tourists', local residents' environmental awareness and concern with environmental issues is considerably lower than that of tourists', contributing to their less positive attitudes toward RNP.
- Due to the fact that local residents used to benefit differently from the natural values of the protected area than tourists, they place a different value on park

resources and manifest lower support for conservation within RNP than tourists.

- There are considerable differences between the attitudes, perceptions and WTPs of local residents and tourists, but protected areas would still benefit from their inclusion in future protected area management plans and conservation policies.

### Significance of Research

Increasing anthropogenic pressure, due to continuously expanding human developments and increasing demands for timber and non-timber forest products, is the main reason why relatively large forested areas have been subjected to over-exploitation, degradation and destruction. Often, conservationists are faced with finding solutions that cater to the conflicting demands of today's society: conserve natural resources for future generations while allowing current generations to benefit from the use of natural resources.

In order to develop future conservation strategies with the potential of being successfully implemented and which would cater to a wide variety of human needs, it is important that human perceptions are investigated. Failing to account for the effect of future conservation strategies on people who interact with the protected area increases people's potential for developing negative attitudes. Newly enforced conservation measures could generate additional restrictions regarding the use of natural resources within the protected area. Thus, these strategies could potentially

enforce unruliness or resistance as a general human attitude toward conservation within the protected area. Instead, cooperation is more easily attained by gaining a deeper understanding of people's views and increasing their acceptance of new strategies by including them in future conservation policies.

This research provides useful information for developing future conservation policies that cater to and benefit from not only a segment of the population, but to everyone that relies to some extent on the protected areas' natural resources. While reforms introduced in conservation policies inevitably affect the lives of people who interact with the protected area, no assumption should be made about the sameness of the outcomes in the case of the two major actors. The majority of previous perception analyses and economic valuations of environmental goods have focused on investigating either local communities or tourists' attitudes and perception of protected areas. By doing so, these studies failed to recognize the differences between the interactions of the two groups of people with the protected area. As a result, recommendations for future improvements of conservation efforts will not only favor one group of people over the other, but benefits in terms of increased social support will also be reduced to a single source.

This research has a significant contribution to the field of conservation by generating useful information not only for conservation policy makers but also for individuals involved in the management of protected areas. A better understanding of human attitudes, perceptions and WTPs, and their successful and timely incorporation into future conservation policies, will contribute to generating positive conservation

outcomes. Furthermore, newly developed conservation and protected area management strategies will favor the sustainable management of protected area by effectively conserving natural resources and contributing to improved human livelihoods.

### Summary of Thesis

The study is structured in five major chapters. Each of these explores and presents a different aspect of the research investigating the attitudes and perceptions of local residents and tourist toward a Romanian protected area, Retezat National Park.

Chapter 1 – Introduction – provides an overview of the thesis research. First, it provides general information regarding the importance of protected areas, the interaction between humans and protected areas. Next, the general framework for this research is presented and the aims of the research are established which would be attained by finding answers to some key questions posed in the study. Finally, in the concluding sections of this chapter the major hypotheses of this research are formulated and the important contributions of the study to the field of conservation are underlined.

Chapter 2 – Literature Review – contains a thorough examination of previous research relevant to this study. Previous literature is examined as it pertains to the history of protected areas in Romania, conservation issues faced by Romanian protected areas, attitudes and perceptions of either local residents or tourist toward



protected areas, and economic valuations of environmental goods, more specifically WTP studies. In this chapter I am looking to provide the background of the *How* (How did the current network of protected areas develop in Romania?), *Which* (Which are some of the major issues currently faced by protected areas in Romania?), *What* (What are the attitudes and perceptions of local residents and tourists toward conservation?) and *Why* (Why are perception studies and economic valuations important for the future of protected areas?) questions.

Chapter 3 – Methodology – provides a general overview of Retezat National Park and the three rural areas, as well as a better understanding of the research methodologies used to fulfill the purpose of this study. Research methodologies refer to strategies used in designing and carrying out this research, such strategies as the ones used in identifying the research areas and the population of interest, designing tools for gathering all necessary information and the implementation of data collection methods. Furthermore, this chapter also provides a thorough description of the statistical analysis techniques used for processing quantitative data collected via a self-administered questionnaire and providing a clearer view of these data through statistical outputs.

Chapter 4 – Results and Discussions – presents and discusses the results of the assessment undertaken in Retezat National Park and in three adjacent rural areas (Carnic, Nucsoara and Salasù de Sus) in August 2011. The results of the analysis and their discussions are summarized according to four major categories: demographic characteristics, knowledge and awareness, attitudes and perceptions and individual

sample group profiles.

Finally, Chapter 5 – Conclusions – provides a summary of the study by presenting the final conclusions drawn from this research. Also, based on weaknesses of this study important recommendations for future research are discussed in this concluding section.

## CHAPTER II

### LITERATURE REVIEW

#### Introduction

In this chapter I examine the literature as it pertains to the thesis and I outline the theoretical framework for understanding the intricate relationship between local residents, tourists and protected areas. I begin by examining the literature that focuses on the gradual development of conservation in Romania in order to provide a chronological account of the major turning points in Romanian conservation history. Following that, I examine the literature on prevailing issues in Romanian environmental conservation. This section is meant to provide the basis of this research by highlighting the main reasons why protected areas often fail to accomplish conservation goals and underlining the importance of human perceptions in increasing the successfulness of conservation efforts. The following two sections focus on exploring previous perception studies, either from local residents or tourist viewpoint. The purpose is to show that, although the literature dealing local residents and tourists separately is abundant, there is little, if any, research investigating and comparing both groups' perceptions. Finally, in the concluding part of this chapter I analyze the existing literature on economic valuations of protected areas. Through this concluding section I seek to demonstrate the usefulness of economic valuations in gaining insight to ways in which additional benefits for conservation may be generated by involving local residents' and tourists' potential support.

## Protected Areas

### A Short History of Protected Areas in Romania

Romania has a long tradition of nature conservation. The first protected areas were established during the time of Stephen the Great (1457-1504). He created natural reserves encompassing low density forests with abundant grasslands where timber extraction and hunting was prohibited (Soran, Biro & Moldovan, 2000). Throughout this early period and up until the mid-to-late nineteenth century, the general view in Europe was that, by prohibiting all types of human interaction, these valuable virgin forests would be preserved. This concept was prevalent in Romania and, as a result, many of the undisturbed, wild forests have been preserved in a relatively natural state, almost entirely devoid of human interference (Veen et al., 2010).

Despite the fact that conservation areas were established prior to the nineteenth century, the first Nature Protection Act was only passed in 1930. This was soon followed by the establishment of the first forest reservation, Domogled - Baile Herculane in 1932, and 36 other scientific reserves. During this time Retezat National Park was also founded. By 1943, due to the increasing interest of numerous Romanian scientists in nature conservation, a total of 48 natural monuments and 55 nature reserves were officially recognized. The basic principle in conservation during these times was attributable to Emil Racovita, who stated in Marinescu's (1993) Environmental Law: "...all natural monuments, places, living creatures and ancient monuments, because of their scientific, landscape and historic importance, deserve to

be protected for the public use in present and future times.” (as cited in Ioras, 2003, p. 12).

Between 1948 and 1989, Romania faced drastic changes at the political level. This inevitably had a great impact on the administration of existing forests. First, the communist government was committed to creating an exhaustive inventory of Romania’s forests in order to establish the basis for a more efficient administration. Forests, regarded as a shared good of the Romanian people, were appropriated from previous owners and incorporated by the state (Stancioiu, Abrudan & Dutca, 2010). The entire forest estate was organized into small production units. Each of these units was mapped and had its own record containing information on the species composition and classification according to production potential (Turnock, 1988). Second, higher education was reorganized and considerable effort invested in training foresters and advancing research in the field of forestry. These changes resulted in an increase in the number and the size of protected areas. By 1970 the number of protected areas reached 130 and their total area grew to approximately 75,000 ha. Following the collapse of Communism, after 1990, a major part of these appropriated forests was returned to their initial individual owners (Stancioiu, Abrudan & Dutca, 2010) and the remaining virgin forests became the focus of Romanian nature conservation policy (Veen et al., 2010).

Since the beginning of the twentieth century, in order to conserve the rich biodiversity of relatively small forest remnants in Romania, many types of protected areas were established through local management plans and through the decisions of

local authorities. At present, there are 448 protected areas in Romania covering 19.29% of the country's territory (Figure 1). This is considerably larger than the 4.1% before 1989 (Ioja et al., 2010). According to the Environmental Protection Administration of Romania, these protected areas have been classified as national parks, natural parks, natural reserves of special values, scientific reserves, landscape reserves and nature monuments (Soran, Biro & Moldovan, 2000; Oszlanyi et al., 2003) with the largest number and most well preserved natural areas situated in forested areas (Pușcariu et al., 1973).

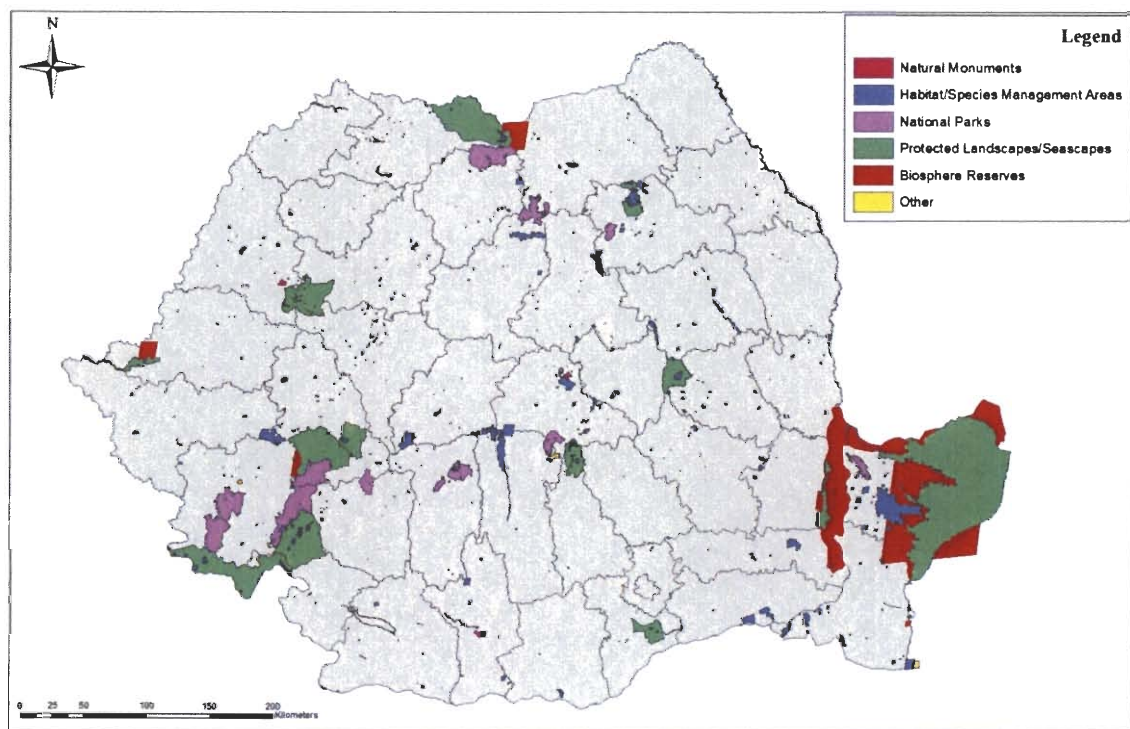


Figure 1. Protected Areas in Romania.

Following accession into the European Union (EU), Romanian conservation planning was introduced to a series of new challenges that came with the EU's accession requirements (Stringer, Scrieciu & Reed, 2009). The most significant challenges were caused by the implementation of the Natura 2000 ecological network. The network, which encompassed 18% of the country's territory, was founded according to the principle of maintaining species and habitats of community interest in a state of well-being (Stancioiu, Abrudan & Dutca, 2010). Already existing and newly formed sites were included in the network without the appropriate field analysis (Stancioiu, Abrudan & Dutca, 2010) which led to confusion regarding the protected areas status (Ioja et al., 2010). Furthermore, due to a lack of appropriate and timely communication, stakeholders were informed of their inclusion in the network after protected areas had already been established (Ioja et al., 2010) and there was no financial compensation following their inclusion in the network (Stancioiu, Abrudan & Dutca, 2010). As a result, this is the state of the new social tensions that my thesis examines.

#### Issues in Romanian Environmental Conservation

Despite the considerable increase in number and size of protected areas, the extent of forested areas kept diminishing. As summarized by Soran, Biro & Moldovan (2000, p. 1190), "...throughout history changes in outlook have been a very slow process. This is why many communist ideas, even in the field of nature and environmental protection, are still alive in Romania." When faced with their potential

economic benefits, protected areas have most often been sacrificed. Large forested areas have been transformed under direct human impact in mountainous and hilly areas. Conversion of forests into agricultural lands by deforestation (Ioras, 2001), significant reduction of wildlife in general and of endangered species specifically due to poaching, significantly reduced the biological diversity of forest ecosystems. The area covered by forests in Romania dropped from approximately 80% of the country's total area (Biris et. al, 2006) to approximately 28.6 % in 2010.

Given the fact that Romania was one of the first countries to use scientific actions for the protection on its natural forests, the status of nature conservation and protection is not suitable to meet present needs (Oszlanyi et al. 2004). The most frequently cited reasons following overall evaluations of the protected areas were the strategies employed in the establishment and administration of protected areas. A majority of conservationists advocated the principle that small size protected areas is the best approach to biodiversity conservation. As a result, over half of the Romanian protected areas included in the first category of the International Union for Conservation of Nature (IUCN) classification have areas between 1-5ha (Soran, Biro & Moldovan, 2000). The small size protected area approach actually proved to be ineffective when conservationists realized that by establishing small size protected areas, a discontinuity was created in these natural habitats. Thus, as the effects of habitat fragmentation became more and more pronounced on the diversity of species, biodiversity reduction became one of the most serious issues faced by many Romanian protected areas (Ioras, 2003).



Despite the fact that forest conservation has long been a concern in Romania and many attempts have been recorded throughout history to limit access to natural resources and reduce natural resource exploitation to sustainable levels, a functional system of administering protected areas is missing from Romanian forest conservation management (Ioras, 2003). Some of the existing protected areas lack an appropriate administrative institution and the majority do not have conservation management at all. Protected areas found in forested areas lacking an appropriate managing body are administered by the Forestry Council. Most often these protected areas fail to meet conservation goals because the main focus of the Forestry Council is wood production not forest conservation (Ioras, 2003). Thus, methods employed in the establishment and administration of protected areas oftentimes proved to be inappropriate, as they fail to meet initially established goals. As a result, Romanian protected areas, which encompass many valuable features besides natural forests, are exposed to severe deforestation, poaching, grazing and other destructive anthropogenic activities (Soran, Biro & Moldovan, 2000).

In addition to improper establishment and administration, a large number of protected areas are faced with another critical issue: self-sufficiency or otherwise stated financial sustainability. Financial sustainability is defined as “the ability to secure sufficient, stable and long term financial resources, and to allocate them in a timely manner and in appropriate form, to cover the full costs of protected areas’ to ensure that protected areas are managed effectively and efficiently with respect to conservation and other objectives” (Emmertson, Bishop & Thomas, 2006, p. 15). This

means that, due to scarce funding resources, protected areas often fail to meet either conservation or developmental purposes. The scarcity of funds endangers conservation in forested areas of high biodiversity by restraining the managing bodies in successfully carrying out conservation related tasks. Such tasks generally include establishing the size and boundary of the protected area, enforcing conservation policies, raising awareness through public education programs regarding the importance of nature protection and biodiversity conservation (Baral, Stern & Bhattarai 2008).

Although some fraction of the unsuccessfulness of protected areas is attributable to financial difficulties faced by administration and managing institutions, another critical aspect that deserves careful consideration is the social aspect of the area. To ensure the success of forest conservation and management programs it is crucial to understand the interaction between humans and the natural environment. Considering individual preferences when designing protected area management programs and policies has been proven to be of critical importance in increasing public acceptance for conservation programs (Barrio and Loureiro, 2010).

Previous park management strategies failed to recognize the importance of peoples' potential support in the conservation planning and management process. Strategies, which involved the enforcement of strict rules regarding access and natural resource use, have focused on keeping tourists as well as local residents from being involved. As a result, these strategies usually led people to hold negative perceptions concerning conservation within the boundaries of the protected area (Weladji, Moe &

Vedeld, 2003; Vodouhe et al., 2010).

### Attitudes, Perceptions and Willingness to Pay

Once the importance of peoples' understanding and support became obvious for a favorable outcome of conservation efforts, more and more studies focused on understanding attitudes and perceptions of protected areas. As Weladji, Moe & Vedeld (2003) found, if conservation efforts are to be effective, understanding people's perceptions of the protected areas and knowing how much support they would be willing to offer for nature protection and biodiversity conservation, is critical for an improved protected area – people relationship.

In many Eastern European countries major changes regarding environmental conservation started occurring only a few years ago. Most of the existing research was conducted from a ecological viewpoint (Dumitras, Arion & Merce, 2011) and considerably less research is focused on the economic aspects as well as the human conditions.

### Local Communities' Attitudes and Perceptions

Perception studies among communities in neighboring protected areas are valuable due to their ability to disclose awareness regarding conservation and existing attitudes toward conservation efforts. Gaining a better understanding of human behaviors manifested toward the protected area and properly incorporating them in future management could increase conservation effectiveness (Dimitrakopoulos et al., 2010; Ozturuk et al., 2010; Vodouhe et al., 2010).

Establishing protected areas near local communities has frequently been viewed as impossible due to conflicting expectations of the institutions involved in the planning process and the local communities themselves (Ioras, 2003). Oftentimes, when local communities outside the boundaries of protected areas are not included in the conservation planning process, conflicts between conservation goals and community wants and needs arise (Dimitrakopoulos et al. 2010). These incompatibilities should serve as motivating factors in investigating and understanding the mutual relationship between the two entities (Ioras, 2003). Most often, conflicts result from constraints imposed by the protected area management on land use and natural resource extraction. Restrictions regarding access to the protected area, agricultural activities, timber extraction, hunting or other such activities, are just some of the most frequent sources of protected area-local communities conflicts in the existing literature (Weladji, 1998; Brandon et al., 2005; Jones & Burgess, 2005). This ultimately causes people to hold negative perceptions toward the protected area (Hulme and Murphree, 2001).

In many developing countries, although forests are state owned, people who live in and around them “take advantage of forests freely and give damage insensibly” (Ozturk et al., 2010, p. 1399). Most often damages result from rural population pressure and the financial inadequacy to maintain proper protection of these natural areas. In addition, Ozturk et al. (2010) argue that damaging effects of local rural population pressure are exacerbated by the fact that most of these people are generally the poorest section of the rural population and the common belief is that

natural forest resources are free to the benefit of everyone. Although attempts have been made to alleviate poverty levels, such as privilege to low-cost wood and priority in forest related employment (Tolunay and Alkan, 2008), revenues from protected areas have not been invested in local development (Vodouhe et al., 2010). Thus the poverty issue is still present in many of these rural areas (Ozturk et al., 2010).

New strategies have been developed in response to the general belief of many conservationists that protected areas are condemned to failure unless local communities are to some extent involved in conservation efforts (Hulme and Murphree, 2001; Yeo-Chang, 2009). These strategies are referred to as “community conservation” (Infield and Namara, 2001; McClanahan, Davies & Maina, 2005) or “participatory management” (Dimitrakopoulos et al., 2010). According to Vodouhe et al. (2010), this approach strives to reconcile differences between local residents and protected area needs, to advance their participation in resource management, and to improve their level of economic comfort.

The importance of perception studies in terms of developing more successful conservation management plans has been unequivocally emphasized in the scientific literature (Weladji, Moe & Vedeld, 2003; Dimitrakopoulos et al., 2010; Vodouhe et al., 2010;). Dimitrakopoulos et al. (2010) reasons that by knowing the extent to which the social component influences protected areas and being aware of the importance of advancing participatory management, attitudes and perceptions of local rural residents should be investigated. Moreover, as little attention has been focused on local perceptions of protected areas, knowledge in the field is limited.

Consequently, investigating local perceptions and identifying factors that positively influence attitudes toward protected areas will provide the starting point to understanding the fundamentals of successful conservation management from a local viewpoint (Vodouhe et al., 2010).

### Tourists' Attitudes and Perceptions

As many areas of high biodiversity are currently under increasing pressure from tourism (Pickering, 2010) and are frequently exposed to increasing negative ecological footprints (Wackernagel and Ress, 1996), it is critical that visitors' perceptions as well as factors influencing existing perceptions of protected areas are investigated and included in future management plans to achieve conservation improvements (Jones et al., 2011). Often, due to the dual nature of conservation, protected areas management is faced with challenges that arise from meeting both conservation requirements and visitors' expectations (Suckall et al., 2009). Existing conservation management instruments can be optimized by understanding the multiple differences among attitudes and perceptions (Jones et al., 2011) of a heterogeneous tourist population and investigating their long term impact on conservation management (Suckall et al., 2009).

Arabatzis and Grigoroudis (2010) investigated visitors' perceptions of Dadia-Leftkimi-Souflion National Park in Greece in terms of their satisfaction with the protected area. Visitors' satisfaction level was viewed as an important component of conservation, which could be used to improve protected area management in order to

increase conservation efficiency. A questionnaire-based investigation evaluated visitors' satisfaction from two main aspects: (1) natural characteristics of the area; and (2) accommodation and recreation related services and facilities. Results supported the view that visitors' perceptions may be better understood by assessing needs and expectations and through evaluating the quality of services.

Other studies evaluated visitors' perceptions from different viewpoints to identify factors which significantly influence existing perceptions. Awareness levels regarding environmental issues and the protected areas' importance in biodiversity conservation with proximity to the protected area (Petrosillo et al., 2007), social class and ethnicity (Suckall et al., 2009), social and institutional trust (Jones et al., 2011) as well as various other social and economic factors have been identified as important factors which shape individual perceptions of environmental goods. Perception studies conducted by Petrosillo et al. (2007), Suckall et al. (2009) and Jones et al. (2011), although they are from different viewpoints, share similarities in their findings. Their results enforce previous findings in that they identify a positive relationship between the above-mentioned variables. The higher visitors' levels of awareness, satisfaction, social and institutional trust, social class as well as many economic variables, the higher the perception indicator will move on the positive side of the spectrum.

The value of perception studies is not only justified in the literature in order to identify factors that influence attitudes and behaviors, but is oftentimes closely connected to economic valuations, such as willingness to pay (Baral, Stern, &

Bhattarai, 2008; Togridou, Hovardas & Pantis, 2006; Baranzini, Faust & Huberman, 2010). The understanding of various economic instruments is often viewed as essential in order to develop management policies which would secure more funding and would help the protected area in achieving financial sustainability (Jones et al., 2011). Togridou, Hovardas & Pantis (2006), following an analysis of various characteristics of visitors and visits to a marine national park in Greece, found that accurate estimations of individuals' willingness to pay cannot be made based on the two mentioned types of characteristics due to their low significance as predictors. Although the results of their study were not in line with many other perception and willingness to pay studies regarding significant predictors of WTP (Kontogianni et al., 2003; Baral, Stern & Bhattarai, 2008), the findings concerning the significance of income and distance as WTP predictors were consistent with the majority of past research (Pate and Loomis, 1997; Kontogianni et al., 2003; Baral, Stern & Bhattarai, 2008; Baranzini, Faust & Huberman, 2010).

### Willingness to Pay

Due to the fact that both the funding of environmental protection programs and the general public's interest in conservation are the most common issues faced by policy makers in planning environmental protection, understanding public attitudes and perceptions and investigating individuals willingness to financially support protected areas has become an increasingly critical component of the planning process (Blaine et al., 2005). Although many natural resources are valued on the



market, resources supplied by environmental goods (such as forests) do not usually have an actual monetary value because of the difficulty in evaluating them. But since they do provide a certain utility to individuals, an economic value can and should be attributed to them (Loomis et al., 2000; Baranzini, Faust & Huberman, 2010).

The literature provides many non-market evaluation techniques and the most frequently used measures in valuing natural areas are welfare measures, such as the individuals' willingness-to-pay (WTP), the consumer surplus per visit (Travel Cost Method) and the Choice Experiments Method used to determine preferences towards the use of natural areas (Dumitras, Arion & Merce, 2011). Although there are various other valuation measures, individuals' willingness-to-pay through the use of a contingent valuation method has been preferred in economic valuations of non-market environmental goods over other valuation techniques (Loomis et al., 2000; Baranzini, Faust & Huberman, 2010).

The contingent valuation method uses a questionnaire to create a hypothetical market but in as realistic terms as possible, where individuals are given the opportunity to express their WTP to support the conservation of environmental goods (Mitchell and Carson, 1989). Although this method is not without controversy, it is still applied in many studies regarding demand for non-market environmental goods (Baranzini, Faust & Huberman 2010). A literature analysis by Carson (1996) finds that the majority of WTP estimates pass the test of validity, a test which involves the comparison of WTP values with values deduced from actual behavior methods, such as travel cost and recreation demands.

Recently, non-market valuations of natural areas have become popular due to their high applicability in the real world. Most scientific research focuses on welfare measures such as the WTP (Dumitras, Arion & Merce, 2011). Most often studies that involve economic valuations estimate individual WTP from the entrance fee viewpoint. Individuals are asked to either state or choose an existing value for the entrance fee they would be willing to pay in order to support conservation within the protected area. The general view is that adjusting entrance fees to a reasonable level results in maximizing revenue and producing much needed funds for the financial sustainability of the protected areas (Baral, Stern & Bhattarai, 2008). The research conducted by Baral, Stern & Bhattarai (2008) in order to determine WTP for higher entrance fees for visitors to The Annapurna conservation area in Nepal, provided support for such views. The results indicate that higher entry fees are likely to provide significant resources for nature protection and biodiversity conservation.

Unfortunately, non-market valuations of natural areas in Romania, like in many other Eastern European countries, are not common. This is mainly due to the fact that most scientific research has been focused on ecological rather than economic aspects of natural areas (Dumitras, Arion & Merce, 2011). As a result, many protected areas have not optimized their revenue from direct park use because they lack economic analyses (Baral, Stern & Bhattarai, 2008), thus further decreasing the probability of becoming financially self-sufficient.

Dumitras et al. (2011) conducted the first economic valuation of a small number of Romanian natural and national parks in order to provide a better

understanding of various welfare measures, such as the WTP, and emphasize their potential implications in the field of environmental conservation in Romania.

Although the result revealed useful information for park managers by providing a first insight into the economic values of Romanian protected areas, further research is strongly recommended in order to build a comprehensive database for park managers and policy makers.

## CHAPTER III

### METHODOLOGY

#### Study Area

Romania, located in the southeastern part of Central Europe, is a former Soviet Republic. On January 1, 2007, it became a member of the European Union. The country occupies a land area of 239,398 km<sup>2</sup> and its physical characteristics are dominated by three major features: the Danube River and the Danube Delta, the Black Sea and the Carpathian Mountains. Of the country's total surface, mountains represent 28%, plains 30%, hills 40% (Ioras, 2003) and a relatively large proportion, approximately 27% of its territory, is covered by forests (Borlea, Radu & Stana 2006). Due to lower rates of anthropogenic influence than those of more developed areas of Europe, Romania's natural ecosystems still have high levels of biodiversity (Ioras, 2003). This makes conservation a high priority.

#### The Protected Area

Retezat National Park is one of Romania's oldest national parks, legally established in 1935. The protected area is located in the western part of the Southern Carpathians between 650 and 2509 meters (Figure 2). Initially the park covered a forested area of 10,000 ha, but it was reestablished in 2000 and its area expanded to 38,048 ha ([www.pronatura.ro](http://www.pronatura.ro), 2010). Forest expansion occurred again in 2006 when the national park area was increased to its current 38,138 ha. Of the 38,138ha occupied by the protected area, 1800ha are a strictly protected area. The sole purpose

of “Gemenele Scientific Research Area” is for scientific research and is currently under the administration of the Romanian Academy (Stanciu, 2003).

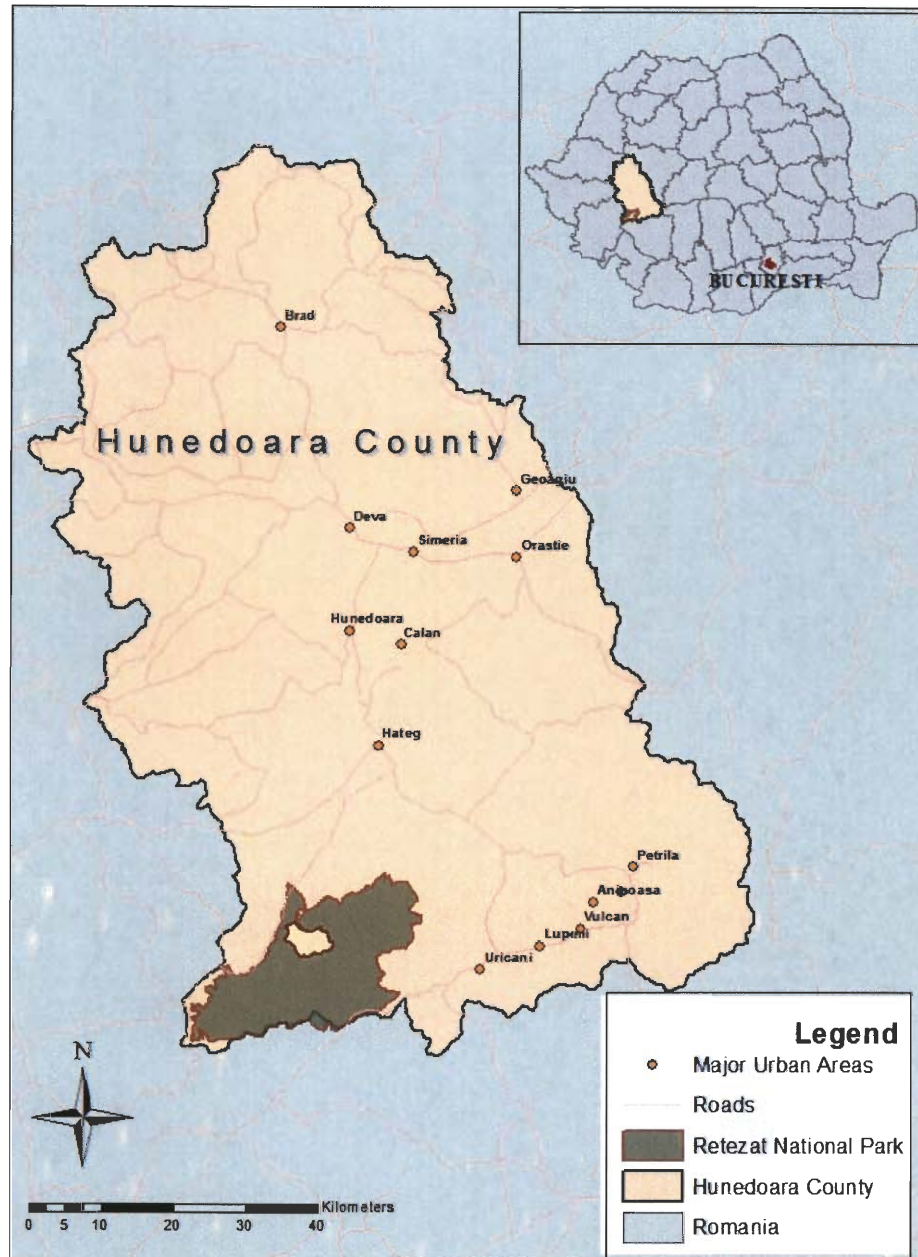


Figure 2. Location of Retezat Nation Park in Hunedoara County.

Due to its high environmental value, the park has been included in the international network of Biosphere Reserves by The Man and Biodiversity Program, of the United Nations Education, Scientific and Cultural Organization (UNESCO) (Cogalniceanu et al., 2004) and in the ecological network of protected areas in the European Union territory by the Natura 2000. The great diversity and ecological uniqueness of Retezat National Park is indicated by the variety of physical features that can be found here: high mountains (more than 20 peaks over 2000m, highest peak Peleaga 2509m), valleys with narrow gorge sections and blind karst valleys, caves, small depressions in glacial valleys, basins and a total of 80 glacial lakes. The largest and deepest glacial lakes in Romania (Bucura - 8.8 ha and Zanoaga - 29 meters) are located within park territory ([www.retezat.ro](http://www.retezat.ro)).

The unique vegetation of Retezat National Park is represented by coniferous, broad-leaved and mixed forests, alpine and subalpine pastures with dwarf pines (Polce, 2004). The richness of flora within the park is represented by the approximately 1600 species of plants, out of which 130 have been declared endangered or vulnerable. The floral abundance and environmental value are increased by inclusion in the park of the largest single area of mixed virgin forest in Europe. This covers part of the scientific reserve/strictly protected area of Gemenele ([www.pronatura.ro](http://www.pronatura.ro), 2010). The high number of legally established species of plants and wildlife and the presence of the single mixed virgin forest made this area of the Romanian Carpathian Mountains worthy of protection (Stanciu, 2003) and led to the establishment of Retezat National Park.

According to Romania's National Forestry Administration, tourism has been continuously increasing over the past few years. A peak of tourist activity was recorded in 2007, when the number of tourists doubled in comparison with the previous year. Currently the number of tourists is approximately 17,000 per year ([www.panparks.org](http://www.panparks.org)). Park visitation is highest in the summer season, due to difficult access to the protected area during the winter, when the area receives large amounts of snow.

### Rural Areas

In this research, three rural areas located outside the northern boundary of the protected area have also been included as part of the study area. The three villages, part of commune (lowest administration level in Romania) Salasu de Sus, from north to south along the main access road leading to the national park are Salasu de Sus, Nucsoara and Carnic (Figure 3). These areas were selected as being part of the research area based on the spatial (in the proximity of the protected area) and relational (local residents are involved in tourism activities, rely to some extent on natural resources or have ownership of land included in the protected area's territory) characteristics of the villages.

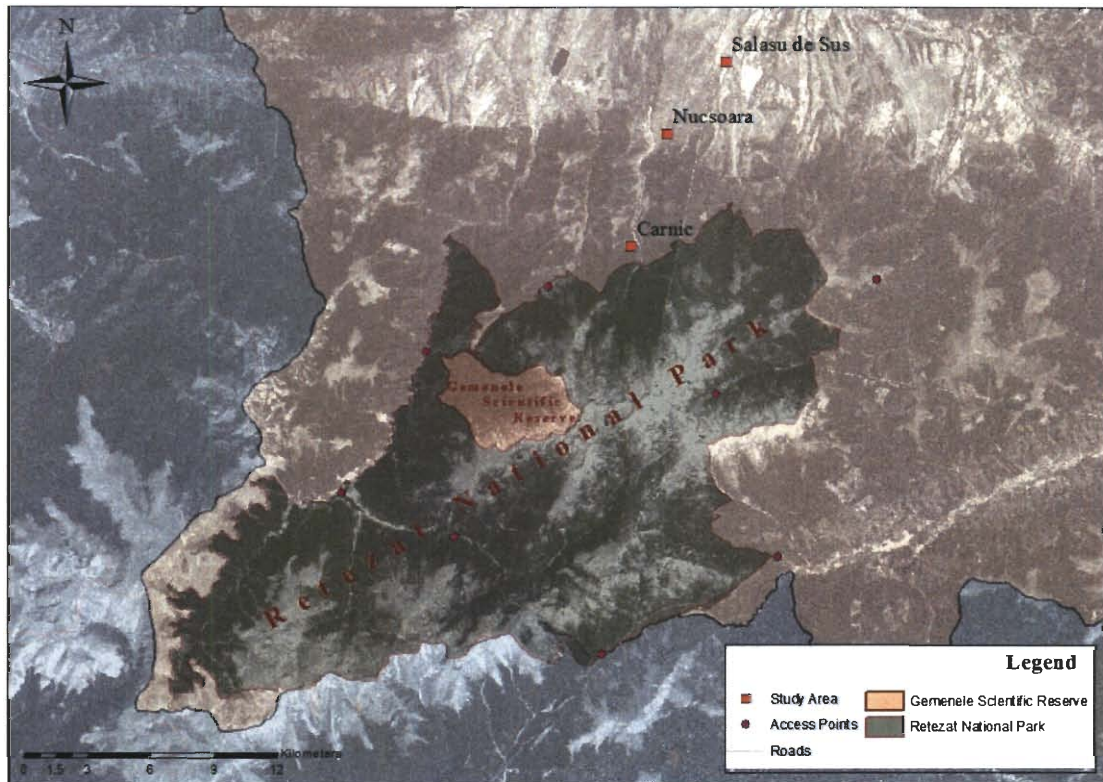


Figure 3. Main Access Points to Retezat National Park and the Three Rural Areas.

Local residents from these three rural areas, as well as other communities located outside the Retezat National Park boundaries, rely to a varying degree on resources located in park territory. Many of the people who live on the edges of the park preserve the traditional lifestyle of the area and practice traditional agricultural activities adding substantial value to the landscape and biodiversity of the area (Stanciu, 2003). However, some of these activities represent major threats to the park. Traditional activities practiced by local communities, such as livestock grazing, timber harvesting, hunting and fishing have the potential to degrade the park's



environmental value.

Carnic is a temporary rural establishment, most of its residents being present during the summer season, when park visitation is highest. Nucsoara with 420 and Salasu de Sus with 689 permanent residents, are two rural areas where participation in economic activities is relatively low. A majority of the residents of the two rural areas are involved in small scale agricultural activities, commute to nearby urban areas for work or migrate to western Europe in the search of better paying jobs.

### Data Collection

To gain a better understanding of attitudes and perceptions of local residents and tourists, quantitative and qualitative data collection was conducted in Retezat National Park and three neighboring rural areas. Data collection was accomplished with the implementation of a self-designed questionnaire. In addition to the survey method, individual and group discussions were conducted with local residents. During the first three weeks of August, 2011, residents of Carnic, Nucsoara and Salasu de Sus, and tourists in Retezat National Park were approached and asked to participate in a Western Michigan University Human Subjects Institutional Review Board approved (Appendix A) questionnaire.

### Quantitative Data

#### Questionnaire Design

Two questionnaires (Appendices B & C) were designed to collect information regarding attitudes, perceptions and WTP of local residents and tourists respectively.

Due to the differences between local residents and tourists, in terms of their relationship with the protected area, two versions of the questionnaire were developed to best fit the research purpose of this study. Although the two versions contain some identical questions, some questions were designed for the sample groups. The purpose of these questions was to capture the inherent differences between the two groups and ensure a more appropriate basis for the comparison between local residents and tourists.

Identical questions of the two versions of the questionnaire pertain to knowledge and awareness levels, attitudes and perceptions, WTP and demographic characteristics. *Knowledge and awareness* questions explored participant's general knowledge of the protected area and awareness regarding the importance of the park. Respondents were asked to state the main purpose of Retezat National Park ("Tourism"; "Nature protection/Biodiversity conservation"; "Other" and "Don't know"), and rate their awareness level of the importance of the protected area and concern level regarding environmental issues in general (1= "Low" and 5="High"). In addition, individuals were asked to state their opinion on the issue of access to Gemenele Scientific Reserve (whether they would restrict or allow access to the reserve, and what terms of access would they establish). These major questions were meant to evaluate individuals' knowledge and awareness at three different levels, by shifting from stated (Do respondents know why the protected area is important?) to self-perceived (how much do respondents believe they know of the importance of the protected area) and finally, to demonstrated views (what would be respondent's

decision if they were to determine the terms of access to the scientific reserve, currently under very strict visitation rules).

*Attitudes and perception* questions focused on various issues related to individual attitudes and perceptions. In terms of attitudes, respondents were asked to state their overall view of the protected area by associating different satisfaction levels with the existence of Retezat National Park. The remaining questions in the attitudes and perceptions category explored views on benefits from the local tourism (whether local residents take full advantage of the protected area's economic potential related to tourism) and the potential negative impact of tourism on the local economy (perceptions of the fairness of the price levels to provided infrastructure and services, such as transportation, food, store prices, etc.).

Information regarding individual *willingness-to-pay* (WTP) was obtained with the use of a dichotomous payment principle question, which asked respondents to state whether they would be willing to pay higher park entry fees to support conservation within RNP. Respondents with a positive answer to the payment principle question were first asked to state the amount of money they would be willing to pay. Next, respondents were provided with a set of statements which had to be rated on a five point scale, in terms of the statement's importance in giving a positive answer to the WTP question. Reasons for positive answers to the WTP question included "To support nature conservation"; "To enhance recreational activities"; "To endow future generations"; and "I was very satisfied by the visit". Respondents with a negative answer were offered a different set of statements, using

a similar 5 point Likert style scale for ranking. Examples of reasons for a negative decision include statements regarding affordability (“I can’t afford to pay”); responsibility (“I do not feel I should contribute to nature conservation”; “Others, such as NGOs and the state should pay”); and satisfaction level (“The overall visit was not satisfactory”).

The last set of identical questions in both versions of the questionnaire, were the ones pertaining to the respondent’s socio-economic and demographic characteristics. Multiple choice and short answer questions asked individuals to provide information regarding their age, gender, education level, occupation, income and area of residence. The overall purpose of these questions was to gather information needed to construct two separate profiles, which characterize of the dominant types of respondents from the two categories. These profiles not only provided a solid basis for comparison between local residents and tourists, but also served as “tools” for linking the two major types of respondents to their characteristic attitudes, perceptions and WTPs.

Although the majority of the questions were identical in both versions of the questionnaire, certain questions were designed to be answered either by local residents or by tourists. The purpose of these questions was to collect information based on which characteristics and influencing factors of the two investigated groups can be identified. The survey version for local residents included questions referring to their overall attitudes toward the protected area in terms of satisfaction, involvement in park activities and their use of natural resources located on the

territory of the protected area (timber and non-timber forest products).

The tourist version of the questionnaire contained several questions aimed at gathering information necessary for generating the visitors' profile. These questions contributed to the visitors' profile through their focus on two different categories of characteristics, visitor's and visit's characteristics (Togridou, Hovardas & Pantis, 2006). The visitors' characteristics were determined based on answers to socio-economic and demographic questions. Visit's characteristics included such variables as the number of times previously visited the park, travel cost, travel organizer, intended length of stay, group size and budget size for the entire trip. Questions related to the visits and visitor's characteristics are important indicators of recreational activities practiced by various tourist categories.

The concluding part of the questionnaire included two open-ended questions. While the second question was similar for both local residents and tourists, the first one was designed to be different for the two categories of respondents. The first question asked tourists to discuss their most positive and most negative experiences related to their visit to RNP, while local residents were required to discuss the most important benefits from the existence of the park. The second question gave respondents the opportunity to express their suggestions for possible changes, which would improve the effectiveness of RNP. The open-ended question type was most suitable for eliciting the above-mentioned information, due to the question's ability to encourage respondents to express their personal views freely and not restrict them to a standard set of answers.

The finalized questionnaires included 24 and 25 questions for the tourist and local resident versions, respectively. Overall, question types used for developing the two survey versions, fall into the categories of dichotomous questions (Yes/No), multiple choice (one answer from 3 to 9 answer choices), Likert style scale (5 point scale, where 1="Least important/Low and 5="Most important/High), short answer and open-ended questions. Initially, questionnaires were formulated in English, but prior to implementation were translated in Romanian. Local residents were approached using Romanian questionnaires because the majority of potential respondents spoke Romanian. Although representatives of certain minority groups, such as Hungarians and Romani, were also present in the rural areas included in this research, their advanced Romanian language skills did not require the translation of questionnaires. Although the majority of tourists to Retezat National Park are Romanian, the proportion of international tourists, mainly from neighboring countries and Western European countries, is considerably large. Thus, the tourist version of the questionnaire was phrased in both Romanian and English.

#### Sampling Techniques

Two target populations of this research included tourists in RNP and local residents from three rural areas (Cârnic, Nucșoara, Salașu de Sus) from the close proximity of the protected area. A convenience sampling technique was used to identify potential respondents from the tourist population. This meant that tourist inside the park's boundaries and camping areas located on the northern edge of the

park were not selected to participate in this research based on random chance but mainly based on their availability and accessibility at the time of surveying. Following their selection, tourists were required to meet two basic requirements prior to completing the questionnaire. First, all respondents must have been 18 years of age or older, which is a basic requirement set by the Human Subjects Institutional Review Board (HSIRB). Second, all participating tourists must have spent at least one day in RNP or the neighboring campgrounds, in order to reach a certain level of familiarity with the area and to be able to adequately address survey questions.

Local residents were selected by using both the convenience and snowball sampling techniques. As the number of people living in these rural areas is relatively small and social structures have a high degree of compactness, snowballing was identified as the most appropriate sampling measure for generating an appropriate sample size. Local residents also had to meet some basic requirements prior to their participation in this research. First, all participants were required to be temporary or permanent residents of one of the three rural areas, Cârnic, Nucșoara and Salașu de Sus. In identifying temporary residents, two criteria were taken into consideration: length of stay and purpose of the visit. Second, local residents must have been 18 years or older to be able to complete the survey.

#### Questionnaire Administration

Survey implementation began August 1, 2011, and concluded August 22, 2011. During the three weeks of data collection, approximately 150 tourists and 70

local residents were approached with an invitation to participate in the research. Following a short introduction, with an emphasis on the researchers' affiliation with an American academic institution, the purpose of the research was presented to potential respondents. Previous studies underline the importance of clarifying affiliation when undertaking a surveying process involving people from the proximity of protected areas. Newmark et al. (1993) identified a high level of uncertainty on the part of local residents, regarding the affiliation of the researcher. It was found that local residents often erroneously believed that the researcher is affiliated with the management of the protected area. This generally resulted in respondents' refusal to participate or biased answers.

Randomly selected tourists were approached between 9 a.m. and 10 p.m. every day of the week, in campgrounds and other accommodation platforms located in the proximity of the national park (in Cărnic), at the northern entrance to the protected area and highly visited hiking trails. Along with the Informed Consent Form (D), respondents were handed a tourist version of the survey. To avoid biased responses, respondents were informed of the anonymous character of the questionnaire and were left to fill out questionnaires on their own, without the interference of the researcher. International tourists who encountered difficulties in understanding the content of the questionnaire answered questions with the assistance of the researcher. Questionnaires generally did not require more than 20-25 minutes to complete and finalized questionnaires were returned to the researcher immediately upon completion. Participation rate among tourists was relatively high and data



collection was concluded after 107 valid surveys have been collected. Two completed tourist questionnaires have not been included in this research due to bias introduced in answers by the collaboration between the two respondents during the survey process.

Household surveys were conducted with local residents of the three rural areas, Carnic, Nucsoara and Salasu de Sus, identified using simple random and snowball sampling methods. Based on the willingness of local residents to participate in this research, one adult (18 years or older) member of the household was presented a Romanian version of the questionnaire. Although some respondents were left to answer survey questions on their own, many respondents refused participation without the assistance of the researcher. The reasoning behind local residents' requirement for assistance was their lack of necessary skills to adequately register answers on the questionnaire. This required an increased effort on the part of the researcher to prevent bias in the answers of local residents. Overall, a high proportion of approached local residents were in favor of participating and, as a result, 47 valid surveys were collected. Three questionnaires were excluded from the analysis due to the bias introduced in the participant's answers by other members of the household.

### Qualitative Data

#### Informal Discussions

In addition to the questionnaire, informal discussions were also employed to account for some limitations of the survey. Due to the limited amount of time devoted

by tourists to their participation in the research, local residents were the primary participants of individual and group discussions. Discussions with local residents revealed the relevance of questions inadvertently not included in the survey. These questions were disregarded from the implemented survey because their relevance was not anticipated before the field work was undertaken. Such questions aimed at providing a clearer understanding of the relationship between local socio-economic structures and access to/use of natural resources within the protected area and illegal activities with a negative impact on the biodiversity of the park. Discussions provided local residents the opportunity to express their opinions without restraints or having to follow a predetermined set of questions. Moreover, due to an overall low level of social trust and high concern of the researcher's affiliation with park authorities, local residents were more inclined to providing information verbally than in a written form.

### Data Analysis

The main purpose of this research is to test whether the hypothesis introduced in Chapter 1, that there are differences between local residents and tourists regarding their attitudes, perceptions and willingness to pay to support conservation, can be accepted or should be rejected in the case of Retezat National Park and its neighboring rural areas. To compare and contrast the two individual samples survey data has been organized in five major categories: demographic; knowledge and awareness; attitudes and perceptions; willingness to pay; and profiles of individual groups (local residents and tourists).

Summarized and numerically coded survey data was placed in an Excel spreadsheet and data analysis was conducted using the PASW 18 statistical package (Western Michigan University). Basic statistical analyses, such as frequencies and cross tabulations, were employed to identify characteristics of local residents and tourists and to build demographic profiles for each of the two individual samples. The influence of individual sample group's characteristic variables on attitudes, perceptions and willingness to pay was investigated using bivariate correlations. To compare and contrast attitudes, perceptions and WTP of local residents and tourists, two tailed Individual Samples T-Test were employed. The main purpose was to determine whether there are any differences between the two samples and whether existing differences between the sample means were statistically significant.

## CHAPTER IV

### RESULTS AND DISCUSSIONS

This chapter provides an overview of individual methods involved in analyzing survey data, most important research findings and detailed discussion of the results. For the purpose of this research, this chapter is organized in five major categories: (1) Demographics – contains information necessary for constructing the socio-economic profile of the respondents; (2) Knowledge and awareness - provides a better understanding of respondent's overall knowledge of Retezat National Park and awareness on environmental issues; (3) Attitudes and perceptions - is focused on revealing respondent's attitudes and perceptions and identifying the factors that significantly influence people; (4) Willingness to pay – not only provides an answer to the question “Are people willing to pay to support conservation?” but stated amounts and the reasoning behind payment decisions is also revealed in this section; and (5) Individual sample profiles – is focused on analyzing specific characteristics of each of the two investigated samples.

#### Demographics

Of a total of 154 survey participants there were 47 local residents and 107 tourists, representing 30.5% and 69.5 %, respectively, of the overall survey sample. Although the local resident population is underrepresented in this research when compared to the tourist populations, due to a relatively high level of homogeneity

observed within the surveyed rural areas it can be assumed that the sample adequately represents the population. The difference in the number of participants among the two categories of interest has been caused by the accessibility of respondents. As tourists were mostly concentrated in access points to the protected area and campgrounds, they were more easily accessible than local residents.

### Age and Gender

The minimum age of the entire survey sample is 18 years and the maximum is 84 years; the mean age of the sample being 38.97 years. The mean age values for the two survey samples are significantly different. The mean age value for the local residents being 52.62 years while mean age of tourist respondents is 32.97 years.

To provide a clearer understanding of the distribution of respondents across various age categories, four major age intervals have been established prior to data analysis. Information presented in Table 1 reveals further differences between the distribution of local residents and tourist across four major age categories. While the majority of local residents belong to the age categories of 46 years or older (63.8%), 89.7% of the tourists is represented by individuals of 45 years or younger. The largest proportion of respondents from both samples is found in the two extreme age intervals, locals residents in the 46-59 interval and 60 years or older and tourists in the 18-31 years old categories. Overall, the population of the three rural areas outside the borders of Retezat National Park is represented by older individuals than the tourist population.

Table 1  
Age and Gender

Category	Participants	Age				Gender	
		18-31	32-45	46-59	60+	Male	Female
Total	100.00%	40.50%	32.70%	16.30%	10.50%	56.50%	43.50%
Local residents	30.50%	6.40%	29.80%	31.90%	31.90%	68.10%	31.90%
Tourists	69.50%	55.70%	34.00%	9.40%	0.90%	51.40%	48.60%

According to gender, respondents from both samples are relatively well distributed across male and female categories (Table 1). Of the total number of survey participants, the proportion of male respondents was only slightly higher than the proportion of female participants. While tourists are represented by a relatively equal percentage of male and female respondents, the local resident population is represented by a higher percentage of male (68.1%) than female (31.9%) participants. Although the population of the three surveyed rural areas is not dominantly male, male individuals were more likely to participating in this research. Conforming to traditional values and customs, potential female respondents often refused to participate in completing the survey.

#### Level of Education

When asked what the highest level of education they have attained, over 50% of the total number of participants stated that they have a college degree or more, followed by a relatively equal percentage of respondents in the two high school categories (Table 2). The majority of tourists (71%) have attained a college degrees or

higher levels of education, while from the local resident sample less than 30% participants have some sort of college education. Overall, tourists are more highly educated when compared to local residents, the majority of whom have attained high school degrees or lower levels of education.

Table 2  
Level of Education

Category	No formal education	Elementary school or less	Some high school, no degree	High school degree or equivalency	Some college no degree	College degree or more
Total	0.60%	5.80%	14.30%	14.90%	6.50%	57.80%
Local residents	2.10%	19.10%	31.90%	12.80%	6.40%	27.70%
Tourists	0%	0%	6.50%	15.90%	6.50%	71.00%

### Employment and Income

Data regarding respondents' occupation were collected using an open ended question and prior to data analysis were separated in four major categories: employed, student, unemployed and retired (Table 3). Overall, the majority of respondents fall within two major categories: employed (65.5%) and retired (14.8%). Comparing the proportion of respondents that fall within a certain employment categories according to the two major categories reveals further differences between local residents and tourists. A large percentage of local residents are retired (43.5%), 37% are employed,

approximately 20% are unemployed and no local residents have student status. The majority of tourists either have some sort of employment or are students, the two categories combined representing 93.8% of tourist respondents.

Table 3  
Employment and Income

		Total	Local residents	Tourists
What is your occupation?	Employed	65.50%	37.00%	79.20%
	Unemployed	9.90%	19.60%	5.20%
	Retired	14.80%	43.50%	1.00%
	Student	9.90%	0.00%	14.60%
What is your approximate net monthly income?	Less than 159 EUR	17.00%	18.40%	16.50%
	Between 160 and 319 EUR	34.70%	57.90%	26.20%
	Between 320 and 479 EUR	17.70%	7.90%	21.40%
	Between 480 and 639 EUR	4.90%	5.30%	4.90%
	More than 640 EUR	25.50%	10.50%	31.10%

According to the five income categories illustrated in Table 3, the total number of respondents is relatively well distributed. Taking into consideration the differences in the employment categories characteristic of the two surveyed samples, it is not surprising to find that disparities between local residents and tourists exist



from the income viewpoint as well. Over 50% of local residents have a monthly income between 160 and 319 EUR and 18.4% have income amounts well below the current minimum monthly income in Romania (160 EUR). On the other hand, 31% of tourists have a monthly income of more than 640 EUR. While the proportion of tourists in the lowest income category is relatively similar to that of local residents, tourists are still better represented in higher income categories than local residents are. The majority of the differences between the proportions of respondents from both samples among the major income categories is given by the age and employment categories representing each of the two samples. While the majority of local residents is older than 46 years and is retired, a large proportion of tourists is younger than 45 years and is employed. In addition, retirement compensations are considerably lower than the current minimum monthly income (160 EUR). The combined effect of the above mentioned factors is the significant difference in the distribution of local resident and tourist respondents among the five major income categories.

#### Demographic Profile of Respondents

Based on results presented in the previous sections evaluating demographic characteristics of both surveyed samples, demographic profiles for both local residents and tourists were created. The demographic profiles were built based on such characteristics as age, gender, educational level, employment and monthly income. As a result, local residents were found to be represented by male individuals, of 46 years old or older, generally having attained between low (elementary) and

medium (high school) education levels, are currently retired and earning monthly incomes between 240 and 319 EUR interval. Tourists are represented by male respondents younger than 45 years, having attained a higher level of education (college degree or more), are currently employed and earn a monthly income of 720 EUR or more. Investigating and understanding the demographic characteristics of the two analyzed populations of interest provides the basis for clarifying potential differences between individual attitudes, perceptions and WTPs.

### Knowledge and Awareness

The first survey question asked respondents to state if they knew what the main purpose of Retezat National Park is. Of the total number of respondents 85.1% stated that nature protection and biodiversity conservation is the main purpose of RNP (Table 4). Overall, results do not show any significant difference between local residents' and tourists' knowledge of the purpose of RNP. The majority of respondents from both surveyed samples considering nature conservation to be the main purpose of the protected area. Although a large proportion of both respondent types answered nature conservation, the percentage of local residents in the "Tourism" and "Don't know" answer categories is larger than that of tourists. Local residents appeared more prone to associate the existence of the protected area with tourism than conservation purposes.

Table 4

## The Main Purpose of Retezat National Park

		Total	Local residents	Tourists
What do you believe is the main purpose of Retezat National Park?	Tourism	11.70%	<b>12.80%</b>	11.20%
	Nature protection/ Biodiversity conservation	85.10%	78.70%	87.90%
	Don't know	3.20%	<b>8.50%</b>	0.90%

In terms of awareness of the importance of Retezat National Park in nature conservation, respondents were asked to rate their awareness levels on a five point Likert type scale (1="Low" and 5="High"; Figure 4). Local residents who perceive the protected area to be more important for tourism than conservation purposes or did not know what the main purpose of the protected area was, would generally rate their awareness levels as relatively low or low (Figure 4).

Results of the Independent Samples T-test showed that the difference between the mean awareness values characteristic of the two individual samples is significant at the 95% confidence interval (p value of 0.001; Table 5). On a five point scale, tourists' mean level of awareness of 4.36 is significantly higher than the local resident's mean of 3.68. Local resident's awareness of the importance of Retezat National Park in nature conservation is considerably lower than that of tourist, proven by the mean difference value of 0.684.

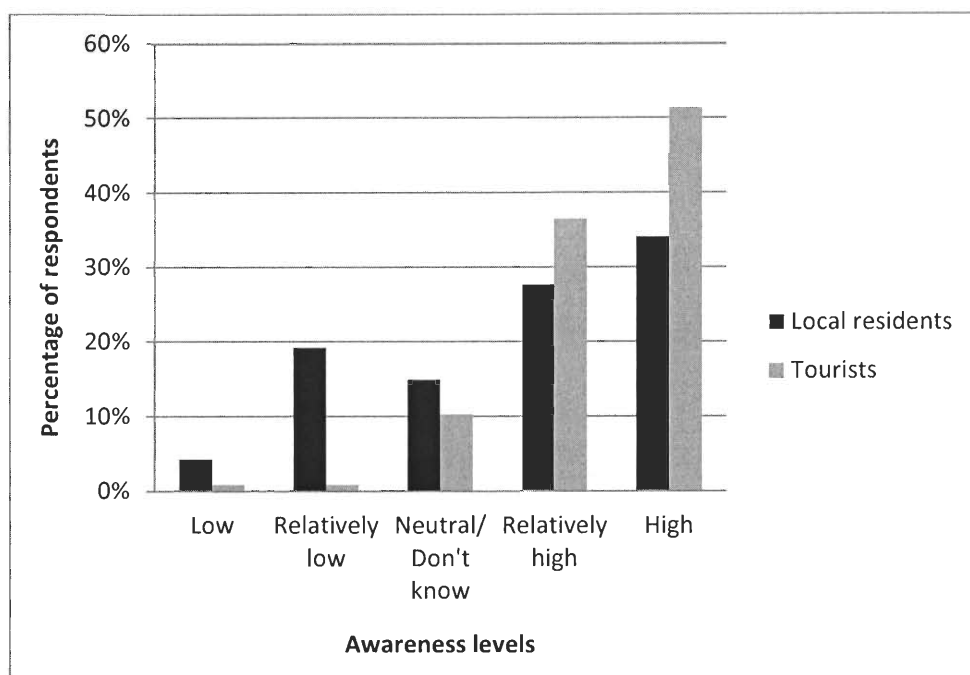


Figure 4. Awareness Levels Regarding Importance of Retezat National Park.

Table 5

Awareness and Concern Levels – Individual Samples T Test

	Mean scores		T	df	Sig. (2-tailed)	Mean Difference
	Local residents	Tourists				
Awareness of the importance of RNP in nature conservation	3.68	4.36	3.457	62.288	0.001	0.684
Concern regarding environmental issues in general	3.53	4.33	3.525	55.701	0.001	0.795

The Levene's Test for equality of variances returned a significance value which was considerably lower than the 0.05 threshold (0.00000268), meaning that the variances of the two samples are significantly different.

To gain a better understanding of local residents' and tourists' knowledge and awareness, respondents rated their level of concern with environmental issues in general (Figure 5). Overall, the majority of the respondents answered that their concern level is either relatively high (43.05%) or very high (40.40%). Approximately 90% of tourists rated their concern levels as high and relatively high, and no tourists rated their concern levels as low.

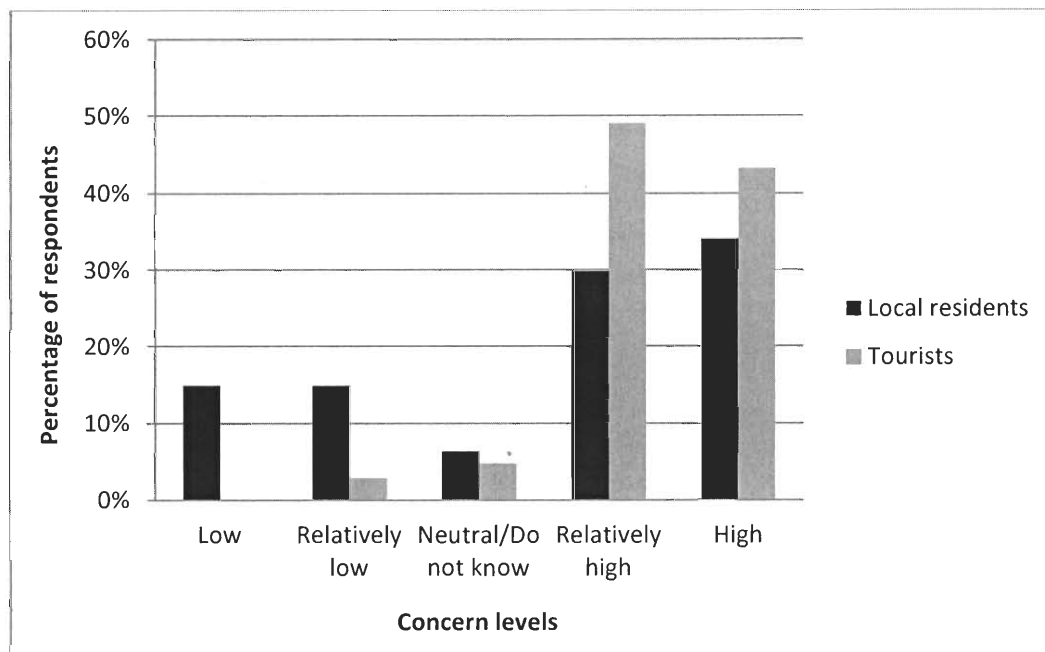


Figure 5. Concern Levels Regarding Environmental Issues.

Although a majority of local residents rated their concern levels as relatively high or high, a significant proportion, approximately 30% of locals is not really or not at all concerned with environmental issues, rating their awareness levels as relatively low or low, respectively.

Understanding the differences between local residents' and tourists' awareness of the importance of the protected area and concern with environmental issues provides the basis for understanding the potential differences in attitudes toward Retezat National Park. The Individual Samples T-test showed that there is a significant difference between the mean concern levels of local residents and tourists at the 95% confidence interval (p value of 0.001; Table 5). On average, tourists are significantly more concerned with environmental issues than local residents.

Although local residents living in the proximity of the protected area have a much wider knowledge of the area's natural features and resources, they do not seem to be as aware of the importance of RNP in nature conservation and are not as concerned with environmental issues as tourists are.

The next question, indirectly soliciting knowledge of the protected area and awareness of the importance of conservation, required respondents to state individual opinions regarding the possibility of allowing access to the Gemenele Scientific Reserve. The reserve is located within the boundaries of Retezat National Park where access is restricted to use for scientific research only. The purpose of this question was to detect any potential differences between the two samples regarding their opinion on allowing the general public's access to the scientific reserve (directly) and

thus their knowledge and awareness (indirectly). According to results summarized in Figure 6, a majority of the respondents stated that they would allow access to the scientific reserve with restrictions of various strictness levels.

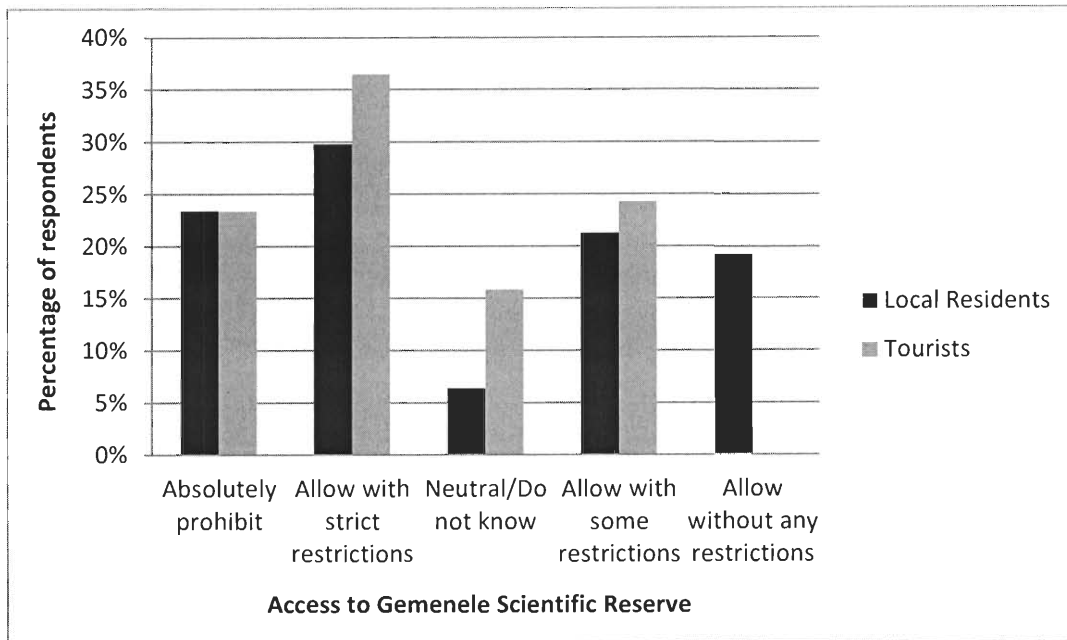


Figure 6. Opinions on Allowing Access to Gemenele Scientific Reserve.

Overall, all respondents seem to be highly aware of the importance of the scientific reserve, as only a small proportion of respondents stated that they would allow access to the reserve without any restrictions. The proportion of local residents in most of the response categories is slightly less than the proportion of tourists, with the only exception being the “Allow without any restrictions” answer choice, favored entirely by local residents (19.1%).

These results strengthen findings presented in the previous sections, that the awareness of local residents of the importance of the protected area in conservation is lower than that of tourists. Not understanding the real value of the park's features and resources, and not being aware of the importance of conservation, caused a considerable percentage of local residents to decide on allowing the general public's access to the scientific reserve without any restrictions. Although the majority of tourist answered that they would allow access to the scientific reserve, they would only do so if restrictions were established regarding visitation activities. These results show that tourists are more aware the importance of conservation and their concern with the potentially negative impacts of recreational activities on the natural environment is higher than local residents. This might be one of the reasons why tourists proved more reluctant toward allowing the general public to visit the scientific area without any restrictions.

Despite the fact that locals have a geographically stronger relationship with Retezat National Park, both in terms of their proximity to the protected area and interaction with the natural environment, their knowledge and awareness levels are lower than that of tourists. Previously presented results show that, although local residents' overall knowledge of the protected area is not significantly lower than that of tourists', local residents' awareness of the importance of Retezat National Park and concern with environmental issues is considerably lower. Investigating the relationship between respondent's knowledge, awareness, concern and their demographic profile, highlighted concern levels with environmental issues and



certain demographic characteristics as significantly impacting respondent's knowledge and awareness. Individual's concern with environmental issues was found to be in positive correlation with awareness levels (correlation coefficient of 0.545 significant at the 0.01 confidence level). As a result, respondents who are more concerned with environmental issues are more aware of the importance of the protected area in conserving nature. No significant correlation between demographic variables such as age, gender and income and respondent's knowledge and awareness has been found (correlation coefficients clustering around 0). The level of education is the only demographic variable found in a positive correlation with individual's awareness (Pearson's  $r$  value of 0.3 significant at the 0.01 confidence level). Respondents from both investigated samples who have attained higher levels of education, appeared to be more aware of the importance of conservation efforts within Retezat National Park.

### Attitudes and Perceptions

Respondents were asked to state their level of satisfaction with Retezat National Park as indicator of their overall view of the protected area. A large proportion of respondents from both samples manifested positive attitudes toward Retezat National Park stating that they are either "Somewhat satisfied" or "Very satisfied" with RNP (Figure 7). Overall, 42.9% of the respondents answered that they were somewhat satisfied, and 39% that they were very satisfied with the existence of the protected area. Only a relatively small percentage (18.1%) of the entire pool of

respondents answered “Neutral/Don’t know” or that they are “Very dissatisfied”.

Although the proportion of local residents somewhat satisfied with the protected area is similar to the proportion of tourists, 42.6% and 43% respectively, the distribution of local residents and tourists in response categories reflecting extreme satisfaction or dissatisfaction with RNP is different for the two samples. While 44.9% of tourists said that they are very satisfied with Retezat National Park, only 25.5% of local residents shared the same level of satisfaction. Moreover, 19.1% of local residents have said that they are not at all satisfied with the protected area while no tourists have manifested such low level of dissatisfaction.

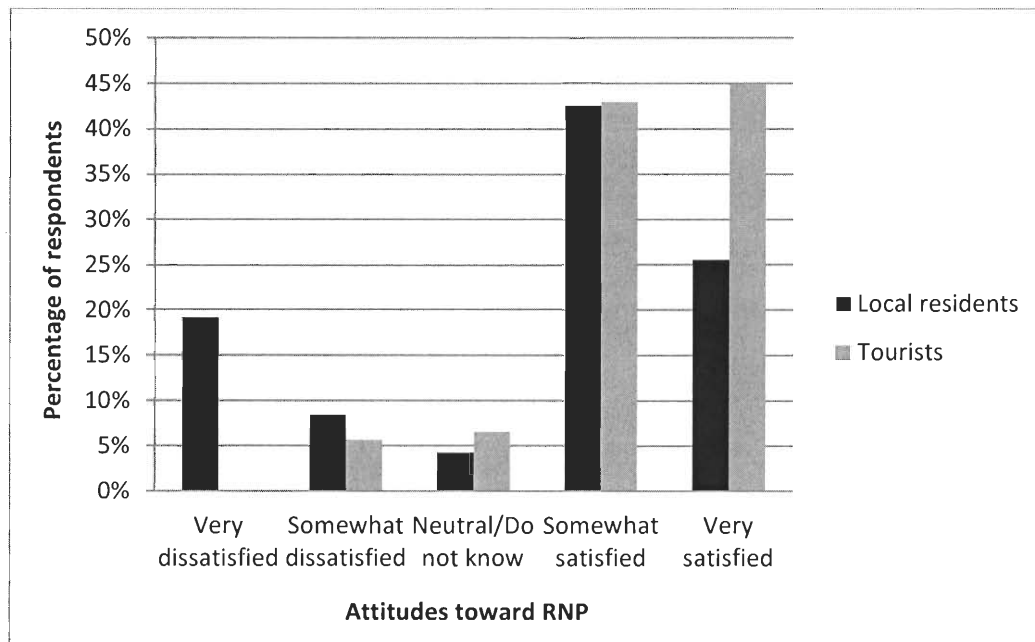


Figure 7. Attitudes Regarding the Existence of Retezat National Park.

Levine's Test for equality of variances was significant, thus the variances of the two individual samples are not assumed to be equal. At the 95% confidence interval, the results of the t-test showed a significant difference between the mean satisfaction levels with the overall existence of Retezat National Park of local residents and tourists (Table 6).

Table 6  
Overall View of RNP – Individual Samples T Test

	Mean scores		t	df	Sig. (2-tailed)	Mean Difference
	Local residents	Tourists				
What is your overall view of the protected area	3.47	4.27	3.539	59.161	0.001	0.803

According to the results summarized in Table 6, tourists' mean satisfaction level with the protected area is significantly higher than that of local residents. These results suggest that tourists' attitudes toward Retezat National Park are not only more positive than that of local residents', but the differences between the two samples are significantly different.

Within the context of significantly different awareness and concern levels for local residents and tourists and strong relationship between attitudes, awareness and concern levels, it is not unusual to discover that tourists have more positive attitudes

toward Retezat National Park. Moreover, differences in attitudes exist not only due to differences in awareness and concern but also due to the different use types people associate with the protected area. Residents of these rural areas either have ownership of forested areas included in the park's territory or previously benefited from natural resources found on the protected area's territory. As a result the primary use type they associate with the protected area is a direct, extractive use. Tourists on the other hand, stated their main purpose in visiting Retezat National Park is associated with recreational uses of the protected area. As conservation measures mainly inhibit extractive uses and cater to recreational uses, local residents faced with restrictions developed varying levels of negative attitudes toward Retezat National Park.

To gain a better understanding of attitudes and perceptions toward Retezat National Park, two questions were employed to investigate the perceived impact of the protected area on the local economic environment and local livelihoods. When asked about the relationship between price levels and the quality of services, a large proportion of tourists stated that the current prices are fair in relation to the quality of existing infrastructure and services (Table 7). Although almost 50% of local residents felt that price levels are fair, a large proportion of the remaining locals stated that prices are moderately higher than the quality of infrastructure and services. The negative correlation between perceptions of price fairness and attitudes toward Retezat National Park was found to be significant at the 0.01 confidence level (Spearman's  $r$  value of -0.277).

Table 7

## Perceptions of the Impact of the Protected Area on the Local Economy

		Total	Local residents	Tourists
How does the level of prices charged compare to the quality of provided infrastructure and services?	Significantly lower	2.0%	4.3%	0.9%
	Moderately lower	9.2%	4.3%	11.3%
	Fair	68.0%	46.8%	77.4%
	Moderately higher	18.3%	38.3%	9.4%
	Significantly higher	2.6%	6.4%	0.9%
Do you feel that local residents benefit from the areas' economic potential related to tourism?	No, definitely not	29.4%	48.9%	20.8%
	No, not really	38.6%	42.6%	36.8%
	Neutral/Do not know	19.0%	2.1%	26.4%
	Yes, to some extent	12.4%	4.3%	16.0%
	Yes, definitely	0.7%	2.1%	0%

Respondents who perceived price levels of being low or fair showed a tendency toward manifesting positive attitudes toward Retezat National Park. As a result, existing attitudes toward the protected area are influenced by perceptions of price and quality relationship as well.

When asked whether there are any benefits to local residents from tourism activities due to the existence of the protected area, results showed a significant difference between the two samples. Although a great proportion of the total number of respondents stated that local residents do not really have any benefits from tourism (Table 7), there are significant differences between means of the two samples. Independents Samples T-test showed that local residents' perception of their economic benefits from the existence of the protected area is significantly lower than

tourists', mean scores representing perceptions being 2.38 for tourists and 1.68 for local residents. These results show that local residents do not perceive any economic benefits from the existence of the protected area. Further analysis showed that there is a significant positive correlation between perceptions of benefits to local residents and attitudes toward Retezat National Park (Spearman's  $r$  value of 0.282 significant at the 0.01 significance level). Respondents, regardless whether they are from the tourist or local resident sample, who believe that there are economic benefits to local residents due to the existence of the protected area, tend to manifest more positive attitudes toward Retezat National Park than those who do not. These results suggest that local residents and tourists believe that there should be benefits for local residents from the existence of the protected area.

#### Willingness to Pay

Research participants were asked whether they would be willing to pay higher entrance fees than the current fee of 1.14 EUR per week to support nature conservation within Retezat National Park. Although a majority of the total number of respondents state that they would be willing to pay to support conservation, tourists were more willing to paying higher entry fees than local residents. Approximately 75% of tourists stated that they would support conservation within Retezat National Park by paying higher entrance fees, while 64% of local residents stated that they are not in favor of supporting conservation efforts within the protected area. Based on the proportion of individuals from the two samples of interest who answered positively to

the WTP question, significant differences between local residents and tourists are evident. Moreover, local residents and tourists who were in favor of supporting conservation within Retezat National Park by paying higher entrance fees stated that they would be willing to pay on average 4.33 EUR and 5.56 EUR per day respectively. Although the average WTP amount for the tourist sample is higher than that of the local resident sample, both amounts are considerably higher than the currently imposed entrance fee of 1.14 EUR per week.

After stating answers to the willingness to pay question, respondents were asked to justify their answers by ranking a set of four statements on a 5 point scale according to the statements importance in influencing WTP decisions. Results of the Individual Samples T-test show that respondents with a positive answer supported their decision of paying for conservation by ranking such statements highest as “To support nature conservation”, “To endow future generations with natural resources” and “I was very satisfied by the visit and it is a way of showing my appreciation” (Table 8). Respondents who were not in favor of paying higher fees to support conservation reasoned their decision by ranking the statements “Others, such as the state or non-governmental organizations should pay” significantly highest among other reasons they were provided with.

Results summarized in Table 8 show that the most important reasons for respondents’ positive answers to the WTP question vary among the two investigated samples. While the most important reason for local residents’ willingness to pay is that they were very satisfied by their visit to RNP and this is their way of showing

their appreciation, tourists ranked nature conservation as the most important reason for stating a positive answer to the WTP question.

Table 8  
Reasons for WTP Decisions – Individual Samples T Test

Decision	Reason	Tourist or Resident	Mean	Std. Deviation
Yes	To support conservation	Tourists	4.78	0.477
		Residents	4.71	0.686
	To enhance recreational activities in the area	Tourists	3.05	1.319
		Residents	3.47	1.375
	To endow future generations with natural resources	Tourists	4.3	0.986
		Residents	4.53	1.068
	I was very satisfied by the visit and it is a way of showing my appreciation	Tourists	4.11	0.891
		Residents	4.59	0.712
No	I cannot afford to pay because the overall trip is already too expensive	Tourists	2.37	1.334
		Residents	3.00	1.742
	I don't feel I should contribute to nature conservation	Tourists	1.81	1.145
		Residents	2.17	1.533
	Others (such as the state, non-governmental organizations) should pay	Tourists	3.44	1.625
		Residents	4.83	0.379
	The overall visit was not satisfactory	Tourists	1.15	0.456
		Residents	1.23	0.679

While a certain proportion of both local residents and tourists who were against paying higher entrance fees believe that others should pay for conservation



(the state, NGOs), recognize that they contribute to nature conservation, by ranking the statement “I do not feel I should contribute to nature conservation” lowest among other answer choices. Overall, respondents from both samples not in favor of supporting conservation by paying higher entrance fees, strongly agree that others should pay to support conservation efforts within the protected area.

At the 0.01 significance level individual decisions of paying or not to support conservation within Retezat National Park was found to be significantly correlated with demographic variables such as age, educational level and income. Positive correlation was found with the educational level (0.355) and income (0.417) variables. Respondents, who have attained higher levels of education or those with higher monthly incomes, are more likely to be willing to pay for conservation than respondents with lower levels of education or income. A negative correlation was detected between respondent’s age variable and willingness to pay decisions (-0.216). Younger respondents showed a greater tendency toward giving positive answers to the willing to pay question than older respondents.

Overall, a greater proportion of tourists are in favor of paying higher entrance fees to support conservation efforts within Retezat National Park than local residents. Previously presented results showed that tourists are more concerned with environmental issues and their level of awareness of the importance of the protected area in nature conservation is higher than that those local residents. This may be one of the main reasons why tourists would favor financially supporting conservation within RNP to a higher degree than local residents would. Moreover, as educational

level, income and age was found to be in correlation with individual's WTP, individual's demographic profile should also be considered when interpreting differences between the two samples of interest. A greater proportion of tourists are in favor of paying higher fees for conservation within Retezat National Park not only due to their high levels of environmental awareness and concern, but also because tourists are represented by young age categories, have attained high levels of education, the majority are employed and earn relatively high monthly incomes. Local residents are represented by an overall much elderly population, have attained relatively low levels of education, the majority are retired or unemployed and have low monthly incomes compared to tourists. In addition, according to the current policy enforced by the management of Retezat National Park, residents of rural areas in the proximity of Retezat National Park are exempt from paying entrance fees and there are no financial compensation for locals with limited access to natural resources. This may also be a significant factor influencing local residents in making willingness to pay decisions. Considering that land areas under the ownership of local residents have been included in the national parks territory and residents have no financial compensation for not being able to benefit from their natural resources, it is the widely accepted view among locals that the current entrance fee exemption represents only the minimum financial compensation they would be entitled to receive. Not only do local residents believe they should not have to pay entrance fees to Retezat National Park, but they also consider that their involvement in the administration of the protected area or financial incentives would generate much

valuable social support from local residents for conservation efforts within the protected area.

### Individual Sample Group Profiles

Based on information collected through questions referring to the surveyed samples individually, characteristic profiles for both local residents and tourists were created. The main purpose in creating the two respondent profiles was to detect the influence of characteristics specific to either the local resident or tourist on individual attitudes, perceptions and willingness to pay.

#### Local Residents

Local residents from three rural areas neighboring Retezat National Park were approached to participate in this research. Of the surveyed local resident sample, approximately 55% were residents from Nucsoara and 36% were from Salasu de Sus. The remaining 9% were temporary residents of Carnic, having permanent residence either in the town of Timisoara (190 km from RNP) or Salasu de Sus.

Local residents were asked whether they believed that there are benefits to the area from the existence of Retezat National Park. The majority of respondents (85%) stated that local communities do not benefit in any way from the existence of the protected area. To support “No” answers to the above question, respondents were asked to rate a set of statements on a 5 point scale (1=“Least important” 5=“Most important”). Such reasons included “Limited or no access to natural resources”, “No direct revenue from the existence of the protected area” and “Minimal or no

involvement of local residents in the management of RNP”. Reasons rated highest according to their importance in influencing negative responses to the question whether local communities benefit from the existence of the protected area were “No direct revenues from the management of the protected area” with an average score of 4.72 and “Minimal or no involvement of local residents in the management of the protected area” with a mean score of 4.53 on a 5 point scale. Although the limited nature of local residents’ access to natural resources within the protected area was rated relatively high in comparison to the remaining statements (mean score 3.08), respondents do not view it as an important reason why benefits from the protected area do not exist. These results show that while local residents’ view not having access to natural resources as important, financial incentives or their involvement in the management of the protected area would provide them more valued benefits than resource use activities. Moreover, local residents view their limited or lack of involvement in the management of Retezat National Park as the second most important reason why their benefits from the existence of the protected area are considerably reduced.

The remaining proportion of local residents from the three rural areas (15%), who stated that there are benefits to locals, were required to rate such statements as “Road maintenance”, “General infrastructure improvements” and “Incomes from tourism” according to the amount of perceived benefits they provide to local communities (1=“Least benefits, 5=“Most benefits”). The small proportion of respondents who stated that local residents benefit from the existence of the protected

area perceived the existing benefits as low. This view is strengthened by the low mean scores of each of the three statements, the One Sample T-test resulting in mean scores of 1.96 and 1.57 for “Roads maintenance” and “General infrastructure improvements” respectively. The mean score for “Incomes from tourism” of 2.86 was highest among the other two answer choices. These results show that while a small percentage of local residents do believe that there are benefits to local communities from the existence of the protected area, benefits are viewed as being very low.

When asked whether they are involved in some way in park related activities, approximately 13% of the local residents stated that they are involved in the administration of the protected area or are independently offering park related services. Such independent involvement in park related activities includes charging entrance fees, offering basic emergency care services or organizing small scale events, such as organized hiking tours for small groups with the approval of the protected area’s management. Not only are a majority of residents not involved in any park related activities, they also do not rely on natural resources located within the protected area’s boundaries. Approximately 83% of local residents stated that they do not rely on natural resources or have any benefits from timber and non-timber forest products.

Two open ended questions posed to local residents gave respondents the opportunity to express their views regarding the existence of Retezat National Park and the future of the protected area. The first question asked participants to state their views regarding the most important benefits from the existence of the protected area.

Although a small proportion of local residents consider that there are benefits from tourism activities, they recognize that residents in Carnic and, to a certain extent, the protected area itself are the only beneficiaries. The majority of local residents perceive nature conservation to be the only benefits from the existence of the protected area. During informal discussions, residents stated that perceived benefits from the existence of RNP are “Wildlife protection”, “Forest conservation”, “The uniqueness of the area is being preserved”, “Romania’s most valuable natural landscapes are being preserved” and “Increases the potential for attracting more tourists to the area in the future”.

Next, local residents were asked to state their views regarding improvements in the management of the protected area or strategies to increase the effectiveness of Retezat National Park. Local residents’ answers to this question can be included in two answer categories: the improvement of waste management and disposal techniques, and access road maintenance. Due to inefficient management techniques, waste is a major issue faced by tourists and negatively affects the natural environment. Due to their poor quality, main access roads to the northern area of Retezat National Park cause major disappointments for many tourists as well. Based on anecdotal evidence, these are considered to be the main reasons why the number of tourist significantly decreased in the past two decades. A local resident respondent stated that:

“During the communism and a few years after its collapse the number of tourists visiting RNP was so high that the public transit service was

operating at full capacity on a regular basis. Nowadays, public transit does not operate on a regular basis or at full capacity. Tourists are more and more disappointed with the state of accommodation facilities and access roads. According to state officials, there are access roads but unfortunately they only exist on “paper”. Funds have been spent but no improvements to the general infrastructure are to be found in reality”.

In addition, respondents believe that conservation efforts within the protected area would be more successful if local residents were involved to a certain extent in future management policies and if a better communication would exist between local residents and the RNP managing institution.

Informal discussions with local residents were employed to gain a better understanding of their attitudes and perceptions toward Retezat National Park and the management of the protected area. Due to the lack of social trust perceived from local residents and their unfounded concern regarding the affiliation of the researcher with the protected area, informal discussions proved to be efficient methods of overcoming some limitations of the questionnaire. Discussions with local residents highlighted the different attitudes and perceptions toward the protected area and toward the management of the protected area. Although local residents generally manifested positive attitudes toward the Retezat National Park, they did not share the same positive feeling toward the management of the protected area with tourists. Their relatively negative attitudes toward the management of the protected area are supported by such statements as “Individuals from the management of RNP should be less interested in their personal gains and invest existing funds solely for improving the effectiveness of RNP and not for other purposes”, “The current management of

RNP should be *dissolved*” and “If only it as possible to hire loyal and dedicated individuals for the administration of RNP”. In addition, local residents appeared unsatisfied with currently enforced policies regarding their access to natural resources located on areas that are privately owned, but included in the protected area’s territory. According to these policies, residents are neither allowed to be involved in resource extraction activities, nor do they receive any financial compensations or incentives for supporting the conservation of natural resources. A local resident stated that “We have all this land but since it has been incorporated in the protected areas territory we have no benefits from them whatsoever. We are not even certain anymore where the boundaries of the protected area are located”. Moreover, local residents feel that there is a certain level of inequality among the benefits received by residents included in the collaborative management program in Retezat National Park. Depending on social status, some residents unfairly benefit from the natural resources of the protected area, causing tensions among local groups of local residents. Based on informal discussion with local residents, the previously mentioned reasons are considered to be the most important factors that contribute to existing negative attitudes toward the management of Retezat National Park and which generate lower support from local residents toward conservation measures within the protected area.

### Tourists

Romanian and international tourists surveyed in and around Retezat National Park were in a proportion of 79% and 21% respectively. Although awareness and



appreciation of Romania's natural treasures transcend the country's borders, the number of international tourists has only started growing in the past couple of decades. Although the majority of international tourists are mainly from Eastern European countries (Hungary, Czech Republic, Poland, Ukraine and Slovakia), a small proportion of tourists come to Retezat National Park from Germany, England, France and the United States of America. International tourists often reasoned their choice of vacationing in Romania by stating that besides its natural features and beautiful landscapes it is considerably more affordable than alternative destinations.

To gain a better understanding of tourists' attitudes, perceptions and WTP, a tourist profile was built based on such information as the location of their origin, travel cost, number of times previously visited RNP, travel organizer, number of people traveling in the group, length of stay and travel budget size. Of the 107 tourist surveyed 62% of respondents live in large size cities (population > 100,000), and approximately 60% of respondents stated that they have never visited RNP before or that they have done so only one time prior to this date. In addition, the majority of tourists (71%) organized their travel on their own and plan to spend no longer than four days (53.3%) in Retezat National Park or in its close proximity. Regarding tourists' spending budget for the time of their stay in Retezat National Park, 52.3% of tourists stated that they anticipate spending no more than 99 EUR during their stay, while 40.2% stated that they will be spending between 100 and 249 EUR.

Bivariate correlations were used to detect how the influence of variables employed in constructing a tourists' profile influenced individuals' attitudes,

perceptions and willingness to pay. The correlation results showed that the number of times tourists previously visited the protected area before, the length of stay in Retezat National Park and the number of people travelling together was positively correlated with awareness and concern levels, as well as with overall views of the protected area. Tourists who have visited RNP before, travel in large groups and spend longer periods of time in the protected area are more concerned with environmental issues and are more aware of the importance of the protected area in nature conservation. Thus their overall view of the existence of Retezat National Park is more positive than of tourists' who have never visited the protected area, travel in small groups and spend short periods of time in the protected area.

Although there is a strong relationship between the previously mentioned variables and their attitudes and perceptions by influencing individual's awareness of the importance of the protected area, concern with environmental issues and their overall view of the protected area, they have not been found to impact answers to the willingness to pay question. The only variable significantly correlated with tourist's willingness to pay is the amount of money tourists are planning to spend during their stay at Retezat National Park. Tourists who are planning to spend larger amounts of money during their stay in Retezat National Park are more willing to pay higher entrance fees to the protected area to support conservation efforts.

Informal discussions with tourist participants revealed significant information that contributes to a better understanding of their attitudes and perceptions. Although based on survey results a majority of tourists have very

positive overall views of Retezat National Park, their attitudes, similar to local residents, are significantly different for the protected area and the management institution of RNP. Attitudes toward the protected area are significantly more positive than those for the management of RNP. Reasons for the differences in their attitudes were generally related to waste management issues, the poor quality of campgrounds and accommodation facilities within the protected area, the lack of tourist information offices at main access points to RNP and the overall poor quality of roads and trails. One of the tourists state that “We have not visited RNP in the past and we were extremely disappointed by the poor quality of the access road. We will probably not visit the area in the future due to having to invest in fixing the damages to our car”.

Two open ended questions were posed to tourists regarding their most positive and negative experiences related to their visit to RNP and ways for improving the management of the protected area and increase its overall effectiveness. Regarding most positive experiences, tourists stated that these are related to the natural values of the area, such as beautiful landscapes and the richness of the RNP’s biodiversity. Tourists consider these the only variables positively influencing their attitudes toward the Retezat National Park. Negative experiences reported by tourists are generally related to the poor quality access roads, outdated accommodation facilities within the protected area’s boundaries, ineffective or inappropriately enforced conservation measures due to the decreased interest manifested by managing institutions and the lack of tourist information and guiding services. A tourist respondent stated: “We were disappointed not only by the lack of tourist information offices, but also by the

quality of accommodation facilities within the boundaries of the protected area and the hostility of their owners”.

Tourist’s answers to the question regarding ways to improve the management of RNP and increase its overall effectiveness are closely related to answers to the previous question, representing strategies for improving visitors’ negative experiences to Retezat National Park. Tourists believe that improvement strategies should be focused on improving the general infrastructure such as modernized access roads, optimized accommodations and basic need tourist facilities within the protected area. Strategies viewed by tourists as most appropriate for improving the effectiveness of Retezat National Park in nature conservation would be based on timely and appropriate enforcement of current conservation measures and the establishment of tourist information services regarding lawful and permitted activities. A majority of tourists believe that, although conservation measures do exist, their inappropriate enforcement decreases the effectiveness of Retezat National Park. This was one of the most often mentioned reasons by tourists not being willing to pay to support conservation measures. These tourists believe that increased interest and a better involvement in the managing institution would have a stronger positive impact than increased financial resources designated for improving conservation effectiveness.

## CHAPTER V

### CONCLUSION

Although based on proximity and the type of relationship local residents and tourist develop with protected areas, it has been assumed that there are certain differences in attitudes, perceptions and willingness to pay to support conservation, no research has been investigating both viewpoints toward a protected area. As far as the researcher knows, no research has investigated both viewpoints about a protected area. This research not only confirms differences between local residents and tourists but also help to gain insight into the extent of the differences between the two categories by identifying the proximate causes and driving forces behind existing attitudes, perceptions and willingness to pay.

The results of this thesis regarding knowledge and awareness levels, attitudes and perceptions and willingness to pay to support conservation within Retezat National Park, reinforce the significant differences between local residents and tourists. Although both local residents and tourists appear to have the similar levels of knowledge of the importance of the protected area, their overall attitudes toward Retezat National Park are strikingly different. Tourists have significantly more positive attitudes and would be more willing to pay to support conservation efforts within the protected area when compared with local residents. Existing attitudes toward RNP are strongly influenced by an individual's awareness of the importance of the protected area in nature conservation and by their overall concern with

environmental issues. Although both categories queried are aware that the main purpose of Retezat National Park is nature conservation, awareness and concern levels are significantly different for local residents and tourists. Overall tourists are more concerned with environmental issues than local residents, and thus are more aware of the importance of RNP in nature conservation. This translates into more positive attitudes from tourists toward RNP in terms of satisfaction levels with the existence of the protected area. These results support the first hypothesis that although local residents have the advantage of proximity and familiarity with Retezat National Park, their awareness and concern levels are significantly lower than tourists'. Moreover, local residents' significantly less positive attitudes toward the protected area than tourists' are attributed to awareness and concern levels. Due to the fact that local residents are not very concerned with environmental issues, their awareness of the importance of the protected area in conservation is relatively low. These two factors significantly influenced local residents' attitudes, generating less positive attitudes toward RNP than tourists.

In addition to awareness and concern levels, the results of this research showed that the perceived level of benefits to the area from the existence of RNP perceived by both local residents and tourists has a considerable impact on overall attitudes. Considering that local residents have a more realistic perception of the benefits to the area than tourists and their livelihood is directly impacted by the existence – or lack thereof – of benefits, the considerably low level of perceived benefits has contributed to unfavorable views regarding Retezat National Park.

Although perceived benefits by tourists to the area from the existence of the protected area are low as well, this did not alter their overall views of RNP as their livelihoods are not impacted by any aspects of the local environment.

Results showed that differences between local residents and tourists are very substantial regarding an individual's willingness to pay to support conservation within Retezat National Park. These results support the second major hypothesis of this research, that local residents are significantly less in their willingness to pay to support conservation efforts than tourists. In addition to the age and income variables, the fact that currently local residents are exempt of paying entrance fees to RNP and that there are no financial compensations or incentives to stimulate local support for conservation, might have influenced local respondents in manifesting resistance toward financially supporting conservation in RNP. While support from local residents is low, the majority of tourists seemed to be in favor of paying significantly higher entrance fees to support conservation. Although the consensus of previous economic valuations based on such welfare measures such as the willingness to pay is that respondents have the tendency to overstate these hypothetical amounts, increasing the entrance fee to a much lower amount than the one suggested by both respondent groups would still generate significantly higher revenue than the current entrance fee.

Local residents have the advantage of being located within close proximity to RNP and thus have the potential to develop a stronger relationship with the protected area than tourists do, but this does not translate into having more positive attitudes

and showing greater support for conservation. On the contrary, due to their proximity their relationship with the protected area is mainly driven by ownership rights or direct benefits from relying on natural resources located on land areas included in the territory of Retezat National Park. Restrictions imposed on local residents and the lack of financial compensations or incentives to encourage local's support for conservation has significantly impacted their overall view of the protected area. Improving overall views of the protected area as well as increasing conservation effectiveness may be attained by including attitudes, perceptions and WTPs in future conservation policies. Although significant differences between local residents and tourists do exist in terms of their attitudes and WTPs, taking into consideration their different viewpoints may generate potential benefits to the protected area and increase its effectiveness in conservation. The results of this research suggest that involving local residents in the management of the protected area and providing financial compensations and incentives has the potential to increase social support for conservation and increase conservation effectiveness. In addition, including tourist's financial support and optimizing entrance fees according to their willingness to pay for supporting conservation, would generate significantly more revenue for RNP, thus increasing the protected area's possibilities of becoming financially sustainable.

#### Limitations and Suggestions for Further Research

Although there are many potential applications of this research in developing more effective conservation policies and increasing the successfulness of protected



areas in nature conservation, there are some limitations as well. The majority of limitations to this research is given by insufficient financial resources and time to conduct more in-depth data collection. First, variations of local residents' attitudes and perceptions between various rural areas would have been better understood if a larger number of rural areas located outside the boundaries of the protected area would have been included in the study area. Often, subtle changes in the local cultural or economic characteristics of rural areas can have a considerable impact on human attitudes and perceptions. Thus, as the study area of thesis research is restricted to the northern boundaries of RNP, results might not be entirely suitable for making assumptions about rural areas located to the east of the protected area. Second, although participation among local residents was relatively high, time constraints imposed by limited financial resources not only made travelling between rural areas difficult, but also reduced the data collection period to three weeks. As a result, the number of local residents that participated in this research could be considered relatively low compared to tourist respondents.

Another major limiting factor in terms of local residents' participation was the limited social trust manifested by a number of potential participants toward the researcher. Although potential respondents have been provided with an HSIRB Informed Consent Form, clearly stating the purpose of the research, the affiliation of the researcher and the terms of participation, negative responses to the invitation to participate in this research were often followed by statements regarding the affiliation of the researcher with management of the protected area.

To overcome the limitations of this study, future research should be investigating people's conservation attitudes and WTP for improving the effectiveness of protected areas at larger spatial and temporal scales. Research conducted over extended periods of time and including a larger number of rural areas located in the proximity of protected areas that have similar spatial and relational characteristics as the three villages included in this research, would better capture potential variations of local residents' attitudes and perceptions. Similarly, approaching tourists at major access points, campgrounds and major attractions found in various areas of protected area, would highlight the influence of location and surrounding natural environment on individual attitudes and perceptions. Considering that local residents and tourists are not the only groups of people interacting with protected areas, two additional groups of people should be included in future conservation based studies evaluating attitudes and perceptions. Investigating representatives of the protected areas' managing institution as well as local officials of the investigated rural areas would help gain a more thorough understanding of the nature of the relationship people develop with protected areas.

From an economic valuation viewpoint, prior to optimizing access fees to protected areas according to willingness to pay amounts stated by local residents and tourists, further research should investigate whether increase in revenue due to higher park entrance fees would provide the necessary financial support for protected area to approach self-sufficiency. As previous research in conservation has not been found to investigate human perceptions and willingness to pay to support conservation efforts

within a Romanian protected area, such in-depth investigation could prove beneficial not only for Retezat National Park but for other Romanian protected areas, facing similar issues when it comes to carrying out conservation tasks.

Appendix A  
HSIRB Approval Letter


# WESTERN MICHIGAN UNIVERSITY



Human Subjects Institutional Review Board

Date: March 15, 2011

To: Lucius Hallett, Principal Investigator  
Andrea-Blanka Szell, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair 

Re: HSIRB Project Number: 11-03-11

This letter will serve as confirmation that your research project titled "Attitudes and Perceptions of Local Residents and Tourists toward the Protected Area of Retezat National Park, Romania" has been **approved** under the **exempt** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: March 15, 2012

Walwood Hall, Kalamazoo, MI 49008-5456  
PHONE: (269) 387-8293 FAX: (269) 387-8276

Appendix B  
Local Resident Questionnaire

**Thesis title:** Attitudes and perceptions of local residents and tourists toward the protected area of Retezat National Park, Romania

**Survey version 2:** to be completed by local residents

**1.** What do you believe is the main purpose of Retezat National Park?

- a. Tourism
- b. Nature protection/Biodiversity conservation
- c. Don't now
- d. Other \_\_\_\_\_

**2.** What is your overall view of the protected area?

- a. Not at all satisfied
- b. Somewhat dissatisfied
- c. Neutral/Do not know
- d. Somewhat satisfied
- e. Very satisfied

**3.** Do you feel that local communities benefit from the existence of the protected area?

- a. Yes
- b. No

**4.** If **Yes**, please indicate the amount of benefits for each of the following:

	<b>Least benefits</b>				<b>Most benefits</b>
Road maintenance	1	2	3	4	5
General infrastructure improvement	1	2	3	4	5
Income from tourism activities	1	2	3	4	5
Other (specify) _____	1	2	3	4	5

**5.** If **No**, please indicate the importance of the following reasons why local communities do not benefit:

	<b>Least important</b>				<b>Most important</b>
Little or no access to natural resources within RNP	1	2	3	4	5
No direct revenue from RNP's management	1	2	3	4	5
Local resident's minimal or no involvement in the management	1	2	3	4	5
Other (specify) _____	1	2	3	4	5

6. Are you involved in some way in park activities?

- a. Yes
- b. No

7. Please indicate in what way \_\_\_\_\_

8. Do you rely to some extent on resources located within the park boundary?

- a. Yes
- b. No

9. If **Yes**, please rate the following resources according to their value to you:

	<b>Least value</b>				<b>Most value</b>
Timber	1	2	3	4	5
Pasture	1	2	3	4	5
Wild animals	1	2	3	4	5
Other (specify) _____	1	2	3	4	5

10. Do you feel that local residents take full advantage of the areas' economic potential related to tourism?

- a. No, definitely not
- b. No, not really
- c. Do not know
- d. Yes to some extent
- e. Yes, definitely

11. How does the level of prices charged compare to the level of provided infrastructure and services?

- a. Significantly lower
- b. Moderately lower
- c. Fair
- d. Moderately higher
- e. Significantly higher

12. Please indicate the level regarding your:

	<b>Low</b>	<b>Relatively low</b>	<b>Neutral/Do not know</b>	<b>Relatively high</b>	<b>High</b>
Awareness of the importance of RNP	1	2	3	4	5
Concern regarding environmental issues	1	2	3	4	5
Compliance with park regulations	1	2	3	4	5



13. What is your opinion on allowing the general public to enter Gemenele Scientific Reserve, which is a restricted area strictly for scientific research purposes?

- a. Absolutely prohibit
- b. Allow with strict restrictions
- c. Neutral/Do not know
- d. Allow with some restrictions
- e. Allow without any restrictions

14. Would you be willing to pay a higher entry fee in order to support conservation in Retezat National Park?

- a. No
- b. Yes

Please state how much (EUR) \_\_\_\_\_

16. If your answer was **NO**, please justify your answer by ranking the following statements according to their importance:

	Least important				Most important
I cannot afford to pay because the overall trip is too expensive	1	2	3	4	5
I don't feel I should contribute to nature conservation	1	2	3	4	5
Others, such as the state NGOs should pay	1	2	3	4	5
The overall visit was not satisfactory	1	2	3	4	5
Other (specify) _____	1	2	3	4	5

17. If your answer was **YES**, please justify your answer by ranking the following statements according to their importance:

	Least important				Most important
To support nature conservation	1	2	3	4	5
To enhance recreational activities in the area	1	2	3	4	5

To endow future generations with natural resources	1	2	3	4	5
I was very satisfied by the visit and it is a way of showing my appreciation	1	2	3	4	5
Other (specify)_____	1	2	3	4	5

17. How old are you? \_\_\_\_\_years.

18. What is your gender?                      a. Female      b. Male

19. What is the highest level of education that you have completed?

a. No formal education	d. High school degree or equivalency
b. Elementary school or less	e. Some college no degree
c. Some high school, no degree	f. College degree or more

20. What is your current family situation?

a. Single	d. Divorced
b. Live with spouse no children	e. Widowed
c. Live with spouse and child (children)	

21. What is your occupation? \_\_\_\_\_ (if currently not working please write unemployed)

22. What is your approximate net monthly income?

a. Less than 160 EUR	e. Between 400 and 479 EUR
b. Between 160 and 239 EUR	f. Between 480 and 559 EUR
c. Between 240 and 319 EUR	g. Between 560 and 639 EUR
d. Between 320 and 399 EUR	h. Between 640 and 719 EUR
i. More than 720 EUR	

**Open ended questions:**

23. What are the most important benefits from the existence of the national park?

*Please*

*describe:* \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**24.** What possible changes could be made to improve the overall effectiveness of Retezat National Park in nature conservation?

*Please*

*describe:* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Thank you for your time and participation in this research project!*

Appendix C  
Tourist Questionnaire

**Thesis title:** Attitudes and perceptions of local residents and tourists toward the protected area of Retezat National Park, Romania

**Survey version 1:** to be completed by tourists

1. What do you believe is the main purpose of Retezat National Park?
  - a. Tourism
  - b. Nature protection/Biodiversity conservation
  - c. Don't know
  - d. Other (please indicate which) \_\_\_\_\_
2. How many times have you visited Retezat National Park before?
  - a. Never
  - b. 1 time
  - c. 2 times
  - d. 3 times
  - e. 4 times
  - f. 5 times or more
3. Who organized your travel?
  - a. Travel agency
  - b. Self
  - c. Other \_\_\_\_\_
4. What is the size of the group you are traveling with? Please include yourself.
  - a. 4 or less
  - b. Between 5 and 9
  - c. 10 or more
5. How much time do you intend to stay within the close proximity of the protected area during this trip?
  - a. 2 days or less
  - b. Between 3 and 7 days
  - c. More than 7 days
6. Approximately, how much did the travel from your permanent residence to Retezat National Park cost?
  - a. 10 EUR or less
  - b. Between 11 and 19 EUR
  - c. 20 EUR or more
7. Approximately, how much money do you anticipate you will be spending during your stay?
  - a. 99 EUR or less
  - b. Between 100 and 249 EUR
  - c. Between 250 and 399 EUR
  - d. 400 EUR or more

8. How does the level of prices charged compare to the level of provided infrastructure and services?

- a. Significantly lower
- b. Moderately lower
- c. Fair
- d. Moderately higher
- e. Significantly higher

9. Do you feel that local residents take full advantage of the areas' economic potential related to tourism?

- a. No, definitely not
- b. No, not really
- c. Neutral/Do not know
- d. Yes, to some extent
- e. Yes, definitely

10. Do you feel that local residents over-exploit tourists economically?

- a. No, definitely not
- b. No, not really
- c. Neutral/Do not know
- d. Yes, to some extent
- e. Yes, definitely

11. What is your overall view of the protected area?

- a. Not at all satisfied
- b. Somewhat dissatisfied
- c. Neutral/Do not know
- d. Somewhat satisfied
- e. Very satisfied

12. Please indicate the level regarding your:

	<b>Low</b>	<b>Relatively low</b>	<b>Neutral/Do not know</b>	<b>Relatively high</b>	<b>High</b>
Awareness of the importance of RNP	1	2	3	4	5
Concern regarding environmental issues	1	2	3	4	5
Compliance with park regulations	1	2	3	4	5

13. What is your opinion on allowing the general public access to Gemenele Scientific Reserve, which is a restricted area for scientific research purposes?

- a. Absolutely prohibit
- b. Allow with strict restrictions
- c. Neutral/Do not know
- d. Allow with some restrictions
- e. Allow without any restrictions

14. Would you be willing to pay a higher entry fee in order to support conservation in Retezat National Park?

- a. No
- b. Yes

Please state how much (EUR) \_\_\_\_\_

15. If your answer was **NO** , please justify your answer by ranking the following statements according to their importance:

	Least important				Most important
I cannot afford to pay because the overall trip is too expensive	1	2	3	4	5
I don't feel I should contribute to nature conservation	1	2	3	4	5
Others, such as the state NGOs should pay	1	2	3	4	5
The overall visit was not satisfactory	1	2	3	4	5
Other (specify)_____	1	2	3	4	5

16. If your answer was **YES**, please justify your answer by ranking the following statements according to their importance:

	Least important				Most important
To support nature conservation	1	2	3	4	5
To enhance recreational activities in the area	1	2	3	4	5
To endow future generations with natural resources	1	2	3	4	5
I was very satisfied by the visit and it is a way of showing my appreciation	1	2	3	4	5
Other (specify)_____	1	2	3	4	5

17. How old are you? \_\_\_\_\_years

18. What is your gender?                      a. Male                      b. Female

19. What is the highest level of education that you have completed?

a. No formal education	d. High school degree or equivalency
b. Elementary school or less	e. Some college no degree

- c. Some high school, no degree      f. College degree or more

**20.** What is your current family situation?

- a. Single      d. Divorced  
b. Live with spouse no children      e. Widowed  
c. Live with spouse and child (children)

**21.** How would you describe the place you live in?

- a. Rural/Village (pop. <10.000)      c. Middle size town (pop. 50.000 – 100.000)  
b. Small town (pop. 10.000 – 50.000)      d. Large city (pop. >100.000)

**22.** What is your occupation? \_\_\_\_\_ (if currently not working, please write unemployed)

**23.** What is your approximate net monthly income?

- a. Less than 160 EUR      e. Between 400 and 479 EUR  
b. Between 160 and 239 EUR      f. Between 480 and 559 EUR  
c. Between 240 and 319 EUR      g. Between 560 and 639 EUR  
d. Between 320 and 399 EUR      h. Between 640 and 719 EUR  
i. More than 720 EUR

**Open ended questions:**

**23.** What were your most positive and or negative experiences related to your visit to Retezat National Park?

*Please*

*describe:* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**24.** What possible changes could be made to improve the overall effectiveness of Retezat National Park in nature protection and biodiversity conservation?

*Please*

*describe:* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



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*Thank you for your time and participation in this research project!*

Appendix D  
Informed Consent Letter

WESTERN MICHIGAN UNIVERSITY

H. S. I. R. B.

Approved for use for one year from this date:

MAR 15 2011

x   
HSIRB Chair

### Consent Form

You are invited to participate in the research project entitled "Attitudes and perceptions of local residents and tourists toward the protected area of Retezat National Park, Romania" which is a partial requirement of the Master's Degree in Geography at Western Michigan University. The study aims at analyzing attitudes and perceptions of local residents and tourists toward the protected area of Retezat National Park in Romania, evaluating awareness and concern regarding environmental issues and eliciting the two population groups' willingness to pay to support conservation within the protected area. The final result of this study may prove useful in the conservation planning and management process by helping the managing organizations better understand the general public's attitudes and perceptions regarding the protected area. A more successful functioning of the protected area can be achieved by both understanding local residents and tourists' attitudes and perceptions and by integrating them into future park management and/or general conservation plans.

Participation in this questionnaire is both voluntary and anonymous. If you choose to participate please complete the questionnaire and return it to the student investigator. Please do not write any personal information, such as name or address, anywhere on this form or on the survey. If you reconsider your participation in this study you may discontinue filling out the questionnaire at any time without any further consequences or if you have already returned the completed survey to the student investigator please let the student know and your information will be removed from the database. Otherwise, a returned survey indicates your consent for the use of the supplied answers in the study. If you have any questions you may contact Dr. Lucius Hallett via phone at (+1)269-387-3407 or via email at [lucius.hallett@wmich.edu](mailto:lucius.hallett@wmich.edu); or Ms. Andrea Blanka Szell via phone at (+1)734-239-1957 (US phone number) or (0746)103639 (Romanian phone number, during the survey process, from May 2010 to June 2010) or via email at [andrea.b.szell@wmich.edu](mailto:andrea.b.szell@wmich.edu). You may also contact the Human Subjects Institutional Review Board via phone at (+1)269-387-8293 or the vice president for research at (+1)269-387-8298.

This consent document has been approved by the Human Subjects Institutional Board Review (HSIRB) for use for one year. The indicator of approval is the stamped date and signature of the board chair in the upper right corner. Subjects should refuse participation in this study if the stamped date is more than one year old.

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## BIBLIOGRAPHY

- Arabatzis, G. & Grigoroudis, E. (2010). Visitors' satisfaction, perception and gap analysis: The case study of Dadia-Lefkimi\_Souflion National Park. *Forest Policy and Economics*, 12, 163-172.
- Baral, N., Stern, M. J., & Bhattarai, R. (2008). Contingent valuation of ecotourism in Annapurna Conservation Area, Nepal: Implications for sustainable park finance and local development. *Ecological Economics*, 66, 218-227
- Baranzini, A., Faust, A., & Huberman, D. (2010). Tropical forest conservation: Attitudes and preferences. *Forest Policy and Economics*, 12(5), 370-376.
- Barrio, M., & Loureiro, M. L. (2010). A meta-analysis of contingent valuation forest studies. *Ecological Economics*, 69(5), 1023-1030.
- Biris, I.A., Marin, G., Stoiculescu, C., Maxim, I., Verghelet, M. & Apostel, J. (2006) COST Action E 27: protected forest areas in Europe. Country report: Romania. *Forest Research and Management Institute ICAS*, Bucharest.
- Blaine, T. W., Lichtkoppler, F. R., Jones, K. R., & Zondag, R. H. (2005). An assessment of household willingness to pay for curbside recycling: A comparison of payment card and referendum approaches. *Journal of Environmental Management*, 76(1), 15-22.
- Borlea, G. F., Radu, S. & Stana, D. (2006). Forest biodiversity preservation in Romania. *Notulae Botanicae Horti Agrobotanici Cluj*, 1842-4309.
- Brandon, K., Gorenflo, L., Rodrigues, A., & Waller, R. (2005). Reconciling biodiversity conservation, people, protected areas, and agricultural suitability in Mexico RID A-5914-2009. *World Development*, 33(9), 1403-1418.
- Carson, R. T. (1996). The contingent valuation of environmental resources: Methodical issues and research needs - Bjornstad, D.J. and Kahn, J.R. *American Journal of Agricultural Economics*, 78(3), 833-834.
- Cogalniceanu, D., Valcu, M. C., Valcu, M., Galdeanu, N. & Stanciu, G. (2004). Seasonal variability of temperature in alpine lakes from Retezat National Park, Romania. *Biology*, 9, 152-157.
- Dimitrakopoulos, P. G., Jones, N., Iosifides, T., Florokapi, I., Lasda, O., Paliouras, F. & Evangelinos, K.I. (2010). Local attitudes on protected areas: Evidence from three natura 2000 wetland sites in greece. *Journal of Environmental Management*, 91(9), 1847-1854.

- Dumitras, D.E., Arion, F. H. & Merce, E. (2011). A brief economic assessment on the valuation of national and natural parks: The case of Romania. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, 39(1), 134-138.
- Emmerton, L., Bishop, J. & Thomas, L. (2006). Sustainable financing of protected areas: a global review of challenges and options. *The World Conservation Union (IUCN)*. Gland.
- Hadker, N., Sharma, S., David, A. & Muraleedharan, T. R. (1997). Willingness-to-pay for Borivli National Park: evidence from a Contingent Valuation. *Ecological Economics*, 21, 105-122.
- Hulme, D. & Murphree, M. (2001). African wildlife and livelihoods: The promise and performance of community conservation. *David Philip Publ.* 280-297.
- Illukpitiya, P., & Yanagida, J. F. (2008). Role of income diversification in protecting natural forests: Evidence from rural households in forest margins of Sri Lanka. *Agro-forestry Systems*, 74(1), 51-62.
- Infield, M. & Namara, A. (2001). Community attitudes and behavior towards conservation: an assessment of a community conservation program around Lake Mburo National Park, Uganda. *Oryx*, 35(1), 48-60.
- Ioja, C. I., Patroescu, M., Rozyłowicz, L., Popescu, V. D., Verghelet, M., Zotta, M. I. & Felciuc, M. (2010). The efficacy of Romania's protected areas network in conserving biodiversity RID B-4018-2011 RID B-4540-2009. *Biological Conservation*, 143(11), 2468-2476.
- Ioras, F. (2003). Trends in Romanian biodiversity conservation policy. *Biodiversity and Conservation*, 12(1), 9-23.
- Jones, N., Panagiotidou, K., Spilanis, I., Evangelinos, K.I. & Dimitrakopoulos, P.G. (2011). Visitor's perceptions on the management of an important nesting site for loggerhead sea turtle (*Caretta Caretta* L.): The case of Rethymno coastal area in Greece. *Ocean and Coastal Management*, 54, 577-584.
- Jones, P., & Burgess, J. (2005). Building partnership capacity for the collaborative management of marine protected areas in the UK: A preliminary analysis RID C-3322-2008. *Journal of Environmental Management*, 77(3), 227-243.
- Kontogianni, A., Langford, I.H., Papandreou, A. & Skourtos, M. (2003). Social preferences for improving water quality: An economic analysis of benefits from waste water treatment. *Water Resources Management*, 17(5), 317-336.

- Loomis, J., Kent, P., Strange, L., Fausch, K., & Covich, A. (2000). Measuring the total economic value of restoring ecosystem services in an impaired river basin: Results from a contingent valuation survey. *Ecological Economics*, 33(1), 103-117.
- Liu, J., Ouyang, Z. & Miao, H. (2010). Environmental attitudes of stakeholders and their perceptions regarding protected area-community conflicts: A case study in China. *Journal of Environmental Management*, 91, 2252-2262.
- Margules, C. R. & Pressey, R. L. (2000). Systematic conservation planning. *Nature*, 405, 243-253.
- Marinescu, D. (1993). Dreptul Mediului Inconjurator. *Sansa Sol*, Bucharest, Romania.
- McClanahan, T., Davies, J. & Maina, J. (2005). Factors influencing resources users and managers' perceptions towards marine protected area management in Kenya. *Environmental Management*, 32, 42-49.
- Miles, L., Newton, A. C., DeFries, R. S., Ravilious, C., May, I., Blyth, S., Kapos, V. & Gordon, J.E. (2006). A global overview of the conservation status of tropical dry forests. *Journal of Biogeography*, 33(3), 491-505.
- Mitchell, R.C. & Carson, R.T. (1989), Using Surveys to Value Public Goods: The Contingent Valuation Method. Washington: *Resources for the Future*.
- Newmark, W.D., Leonard, N.L., Sariko, H.I. & Gamassa, D.G.M. (1993). Conservation attitudes of local people living adjacent to 5 protected areas in Tanzania. *Biological Conservation*, 63(2), 177-183.
- Oszlanyi, J., Grodzinska, K., Badea, O., & Shparyk, Y. (2004). Nature conservation in Central and Eastern Europe with a special emphasis on the Carpathian Mountains. *Environmental Pollution*, 130, 127-134.
- Ozturk, A., Saglam, B. & Barli, O. (2010). Attitudes and perceptions of rural people towards forest protection within the scope of participatory forest management: A case study from Artvin, Turkey. *African Journal of Agricultural Research*, 5(12), 1399-1411.
- Pan Parks. Retezat National Park. Retrieved January 29, 2011 from <http://www.panparks.org/visit/our-parks/retezat-national-park>
- Pate, J., & Loomis, J. (1997). The effect of distance on willingness to pay values: A case study of wetlands and salmon in California. *Ecological Economics*, 20(3), 199-207.

- Petrosillo, I., Zurlini, G., Corliano, M.E., Zaccarelli, N. & Dadamo, M. (2007). Tourist perception of recreational environment and management in a marine protected area. *Landscape and Urban Planning*, 79, 29-37.
- Pickering, C.M. (2010). Ten factors that affect the severity of environmental impacts of visitors in protected areas. *Ambio*, 39, 70-77.
- Polce, C. (2004). Application of Geographic Information Systems to assess environmental suitability for reintroduction of Griffon Vulture (*Gyps fulvus*) in Retezat National Park. *International Institute for Geo-information Science and Earth Observation*. Enschede, Netherlands.
- Pro Natura. Retezat. Retrieved January 29, 2011, from <http://www.pronatura.ro/retezat/>
- Puscariu, V. (1973). Contemporary outlook on national parks and nature reserves. *Nature conservancy*, 17(1), 21-36.
- Retezat National Park Administration. About the park. Retrieved October 15, 2010, from [http://www.retezat.ro/index.php/romana/despre-parc/mediu\\_fizic.html?showall=1](http://www.retezat.ro/index.php/romana/despre-parc/mediu_fizic.html?showall=1)
- Soran, V., Biro, J., & Moldovan, O. (2000). Conservation of biodiversity in Romania. *Biodiversity and conservation*, 9, 1187-1198.
- Stancioiu, P. T., Abrudan, I. V., & Dutca, I. (2010). The Natura 2000 ecological network and forests in Romania: Implications on management and administration. *International Forestry Review*, 12(1), 106-113.
- Stanciu, E. (2003). Developing collaborative management in Retezat National Park. National Forest Administration Romsilva (2005), 'Romanian Forest – National parks and natural parks', Bucharest, Romania.
- Stringer, L. C., Scricciu, S. S., & Reed, M. S. (2009). Biodiversity, land degradation, and climate change: Participatory planning in Romania. *Applied Geography*, 29(1), 77-90.
- Suckall, N., Fraser, E.D.G., Cooper, T. & Quinn, C. (2009). Visitor perceptions of rural landscapes: A case study in the Peak District National Park, England. *Journal of Environmental Management*, 90, 1195-1203.
- Togridou, A., Hovardas, T. & Pantis, J.D. (2006). Determinants of visitors' willingness to pay for the National Marine Park of Zakynthos, Greece. *Ecological Economics*, 60, 308-319.

- Tolunay, A. & Alkan, H. (2008). Intervention to the misuse of land by the forest villages: A case study from Turkey. *Ekoloji*, 17(68), 1-10.
- Turnock, D. (1988). Woodland conservation; The emergence of rational land use policies in Romania. *GeoJournal*, 3(17), 413-433.
- Veen, P., Fanta, J., Raev, I., Biris, I., de Smidt, J., & Maes, B. (2010). Virgin forests in Romania and Bulgaria: Results of two national inventory projects and their implications for protection. *Biodiversity and Conservation*, 19(6), 1805-1819.
- Vodouhe, F., Coulibaly, O., Adegbidi, A., & Sinsin, B. (2010). Community perception of biodiversity conservation within protected areas in Benin. *Forest Policy and Economics*, 12, 505-512.
- Wackernagel, M. & Riss, M. (1996). Our ecological footprint: Reducing human impact on the earth. *New Society Publishers*.
- Weladji, R.B. (1998) Interactions between people and protected areas: The case of the Bénoué Wildlife Conservation Area, North Cameroon. M.Sc. thesis, NORAGRIC, Agricultural University of Norway, Ås, Norway.
- Weladji, R., Moe, S., & Vedeld, P. (2003). Stakeholder attitudes towards wildlife policy and the Benoue Wildlife Conservation Area, North Cameroon RID G-1507-2011. *Environmental Conservation*, 30(4), 334-343.
- Yeo-Chang, Y. (2009). Use of forest resources, traditional forest related knowledge and livelihood of forest dependent communities: cases in South Korea. *Forest Ecology and Management*, 257, 2027-2034.