

ATTITUDES AND PERCEPTIONS OF LOCAL RESIDENTS AND TOURISTS – A COMPARATIVE STUDY OF THE TWIN NATIONAL PARKS OF AGGTELEK (HUNGARY) AND SLOVAK KARST (SLOVAKIA)

STALIŠČA IN PERCEPCIJE LOKALNIH PREBIVALCEV IN TURISTOV – PRIMERJALNA ŠTUDIJA POBRATENIH NACIONALNIH PARKOV AGGTELEK (MADŽARSKA) IN SLOVAK KARST (SLOVAŠKA)

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Abstract UDC 502.3/7:338.48-6:55:001.87(439+437.6)

Tamás Telbisz, László Mari, Alena Gessert, Janetta Nestorová Dická & Péter Gruber: Attitudes and perceptions of local residents and tourists – a comparative study of the twin national parks of Aggtelek (Hungary) and Slovak Karst (Slovakia)

National parks (NPs) are the flagships of protected areas, which primarily serve the protection of nature, but are also important sites for tourism. While karst areas are generally disadvantageous in terms of traditional farming, tourism can provide new livelihoods for those who live there. Therefore, it does matter how the local people relate to the NP and tourism, and the opinion of tourists is also an important factor. In this article, we present the results of a questionnaire survey conducted in the Aggtelek National Park (ANP) and the Slovak Karst National Park (SKNP). Our results show that for locals, the forest is the most important natural resource often visited by them, while for tourists, caves are the first choice. Conflicts between locals and tourists are negligible, and all actors agree to further increase tourism. In both ANP and SKNP, the majority of tourists and locals alike have a rather positive view of the NP. However, there is still a significant group of local residents who have a negative opinion about the NP. One reason for this may be that the locals feel they have only a marginal influence on NP decisions. The ANP plays a more important role in the lives of locals than in SKNP, because ANP has a larger organisational

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Tamás Telbisz, László Mari, Alena Gessert, Janetta Nestorová Dická & Péter Gruber: Stališča in percepcije lokalnih prebivalcev in turistov – primerjalna študija pobratenih nacionalnih parkov Aggtelek (Madžarska) in Slovak karst (Slovaška)

Nacionalni parki so glavna zavarovana območja, namenjena predvsem varstvu narave, poleg tega so ta območja pomembna tudi za turizem. Kraška območja so na splošno neugodna z vidika tradicionalnega kmetovanja, turizem pa lahko tistim, ki živijo na takih območjih, zagotovi nove načine preživljanja. Zato je pomembno, kako lokalni prebivalci zaznavajo nacionalne parke in turizem, pomemben dejavnik pa je tudi mnenje turistov. V tem članku predstavljamo rezultate ankete, ki smo jo izvedli v nacionalnih parkih Aggtelek in Slovak Karst (Slovaški kras). Naši rezultati kažejo, da je domačinom najpomembnejši naravni vir gozd, tega pogosto obiskujejo, turistom pa so najpomembnejše jame. Konflikti med domačini in turisti so zanemarljivi, vsi pa se strinjajo z nadaljnjo krepitvijo turizma. Z vidika obeh parkov ima večina turistov in domačinov pozitivno mnenje o nacionalnem parku. Pri tem pa ima precejšnja skupina lokalnih prebivalcev negativno mnenje o nacionalnem parku. Eden od razlogov za to je morda prepričanje domačinov, da imajo le neznamenit vpliv na odločitve v zvezi z nacionalnim parkom. Nacionalni park Aggtelek ima v življenju domačinov pomembnejšo vlogo kot nacionalni park Slovak Karst, saj je v

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background and more human resources for a smaller population. Although geotourism is still largely missing from the vocabulary of local residents and park management alike, there is a small but significant part of visitors who consider themselves *sensu lato* geotourists. As for the motivation of tourists, the keyword is “cave”, while the content of the term “karst” is much less known for visitors (especially on the Hungarian side). In Hungary, the tourism to Baradla Cave is largely due to school education. We found that the internet, although one of the most important sources of information for visitors, was not the first port of call, and was not outstanding compared to other factors. **Keywords:** protected area, questionnaire, local people, world heritage, geotourism, motivation.

prvem na voljo boljša organiziranost in več človeških virov za manjše število prebivalcev. Čeprav geoturizem še ni uveljavljen v besedišču tako lokalnih prebivalcev kot vodstva parka, se majhen, a pomemben del obiskovalcev šteje za geoturiste v širšem pomenu besede. Za turiste je ključna beseda jama, vsebina pojma kras pa je obiskovalcem (zlasti na madžarski strani) precej manj znana. Na Madžarskem se turizem v jami Baradla razvija pretežno zaradi šolskega izobraževanja. Ugotovili smo, da svetovni splet, čeprav je eden najpomembnejših virov informacij za obiskovalce, ni na prvem mestu in v primerjavi z drugimi dejavniki ne izstopa.

Ključne besede: zavarovano območje, anketa, lokalno prebivalstvo, svetovna dediščina, geoturizem, motivacija

1. INTRODUCTION

Readers of this journal are likely to be enthusiastic about karst areas and presumably examine karst terrains from a scientific perspective, which in most cases (though not always) means geological, geomorphological, speleological, hydrological, or biological studies. Nevertheless, the point of view of people living in karst areas is quite different, they are interested in how they can live in a given landscape (in a sustainable way), what are the agricultural and water supply opportunities, construction and transport constraints, risks, and possibly available raw materials. Today, however, a large proportion of people visit the karst regions as tourists, as these landscapes are often popular destinations due to their spectacular forms such as caves, gorges, collapse dolines or special vegetation (Cigna & Forti, 2013; Božić & Tomić, 2015; Gessert et al., 2018; Telbisz & Mari, 2020). The knowledge of tourists is more limited in many respects than that of scientists or locals, but in many cases, they are the main source of livelihood for local people and can have a serious impact on the deterioration or preservation of the environment. For all these reasons, we believe that in addition to the scientific position that usually appears in professional journal articles, it is also worth exploring and getting to know the opinions and attitudes of local residents and tourists.

In the case of a national park (hereinafter: NP) established in a karst region, the above approaches can meet very markedly. First, national parks may present serious values but also constraints for the local population, second, national parks are generally attractive for tourists, and third, scientific reasons are also significant when new NPs are founded. In order to better understand these different approaches, we are examining the attitudes and opinions of people actually living in karst national parks and of tourists visiting these NPs in the framework of an international project (Karst and National Parks, 2022). In this article, we present the results of

questionnaire surveys conducted in two directly adjacent national parks. These two national parks are the Aggtelek National Park (ANP, Hungary) and the Slovak Karst National Park (SKNP, Slovakia), which are located on the opposite sides of the Slovak-Hungarian border. Furthermore, it is important to mention that the caves in the two areas are jointly part of the UNESCO World Heritage.

The two areas are geologically-geomorphologically connected, and together they form the Gömör-Torna (Gemer-Turňa) Karst. There are also many similarities in their social features (both of them are relatively poor, rural areas; see Leibert, 2013; Korec, 2014; Ritter, 2018; Nestorová Dická et al., 2019), although differences are not negligible either (the Slovak Karst has better transport infrastructure and is close to the second largest city in Slovakia, Košice). The relationships between the natural settings and social conditions of the Gömör-Torna (Gemer-Turňa) Karst were analysed by Telbisz et al. (2015).

National parks have a wide variety of roles (Butler & Boyd, 2000; Frost & Hall, 2015; IUCN 2022), which we now mention only very briefly here: preservation of biological values, preservation of geological values, preservation of landscape, preservation of cultural values, conservation of traditional farming, management of tourism. Of course, these goals are not of equal weight within a national park. In the last one or two decades, the idea that the national park must also serve the maintenance and socio-economic development of local communities has become more and more pronounced (Hall & Richards, 2000; Nolte, 2004; Mose, 2007; Getzner, 2010; IUCN 2022).

Park-people relationships have been studied in a variety of contexts (Hayes, 2006; Arnberger & Schoisengeier, 2012; Mika et al., 2019), not all of which can be presented in a single article. In this article, we focus on the following issues:

- What is the priority order of the above NP goals according to local people and visitors?
- To what extent do local residents perceive that the NP serves also to their benefit?
- How aware are tourists visiting these NPs about “karst” and “geotourism”?
- How do local people and visitors see the values of these landscapes?
- Are there conflicts in the local people – tourism – nature protection triangle?

The above questions have already been examined in a number of national parks using questionnaires (Trakolis, 2001; Papageorgiou & Kassiomis, 2005; Zurc & Udovč, 2009; Šulc & Valjak, 2012; Zgłobicki & Baran-Zgłobicka, 2013; Krpina, 2015; Mika et al., 2019; Zawilińska, 2020; Imecs et al., 2022), but usually only one point of view is presented in the papers, while our approach is as complex as possible given the size limitations of a journal article. As for the national parks (or protected areas) of Hungary and Slovakia, there have been relatively few scientific analyses

of such topics so far (Považan et al., 2014; Baranyai et al., 2015), and even fewer in the case of ANP and SKNP (Tózsá, 1996; Nolte, 2004; Kőszegi et al., 2022). Thus, in addition to contribute to the strategic thinking of the national parks concerned, our research also fills a gap in this area of research. Some aspects of these topics, focusing mainly on geotourism, have already been analysed in a previous article about Aggtelek Karst (Telbisz et al., 2020), and another paper has been published about the analysis of the views and attitudes of local inhabitants towards the Slovak Karst National Park (Nestorová Dická et al., 2020). In the present article, the perspectives of visitors and local residents are demonstrated simultaneously, and the emphasis is on comparing the two national parks.

Ultimately, the aim of this article is to provide quantitative answers to the above questions based on a questionnaire survey among local residents and visitors. We believe that it can be useful for both national parks to achieve their strategic goals (which includes the well-being of the local population) if they are aware of the views of all stakeholders.

2. BRIEF COMPARISON OF AGGTELEK KARST AND SLOVAK KARST

2.1 GEOLOGY-GEOMORPHOLOGY

The geological-geomorphological characteristics of the study area (Figure 1) have been thoroughly researched for a long time, therefore here we only summarize the most important facts in a few sentences. The Gömör-Torna (Gemér-Turňa) Karst is a typical temperate, medium

mountain karst, which is mostly built up of Triassic limestones and dolomites (Zámbó & Ford, 1997). Its relief is characterized by tectonically uplifted plateaus densely covered with dolines (Telbisz, 2011; Gessert, 2016; Telbisz et al., 2016). Among the plateaus there are gorges in some places, and in others there are wider valleys occa-



Figure 1: Location of Aggtelek National Park (ANP) and Slovak Karst National Park (SKNP).

sionally enlarged to small basins, which are covered with non-karstic sediments (Csüllög & Móga, 1997). The cave morphology is extremely diverse, because in addition to inflow, outflow and through caves formed by meteoric water, there are also caves of thermal water origin, and the influence of tectonic effects on speleogenesis is also evident. The longest cave is the Baradla-Domica system, which also plays a key role in tourism (Gruber & Gaál, 2014; Veress & Unger, 2015; Telbisz et al., 2020). Nowadays, the karst plateaus are largely covered by forests. The spontaneous reforestation of recent decades plays a significant role in this process, while in the previous centuries, the plateaus were used primarily as pastures (Tanács et al., 2007; Gessert, 2016). Due to the expansion of forests and bushes, karstic rock outcrops (karren fields) “disappeared” in many places, although these used to be one of the most remarkable elements of the “karstic image” of the landscape. Thus, different opinions exist on whether and to what extent this process of spontaneous afforestation or natural succession should be interfered (Tanács et al., 2007).

2.2 SOCIO-ECONOMIC SITUATION

In order to understand the attitudes of local residents and tourists, the social background must also be briefly presented. From this point of view, the situation of the Hungarian and Slovak side is somewhat different. On the Hungarian side, there are almost only small villages, and the largest settlement in the vicinity of the national park, is Bódvaszilas, with a population of only 1,080. As for the development of the area (or more precisely, for its absence) it was of decisive importance that Aggtelek Karst became a border area after World War I. This fact proved to be a serious drawback for the smaller settlements on the Hungarian side as they were cut off from their economic relations to the north, and transit traffic was also discontinued. As for the Slovak part, the uncertain political situation during the socialist era caused this region to be in the last place in the regional development plan of the Slovak Republic. Further on, after 1989, this region experienced the largest decline. Slovakia's accession to the EU also had a significant impact on this. Therefore, this region is today the most backward in Slovakia with the highest unemployment rate. However, the year 2007 brought a significant change in this area, because both Hungary and Slovakia joined the Schengen Agreement at that time, so the country borders became open. Due to the legacy of the above situation, the transport infrastructure of the area is of varying quality: some roads are in excellent condition, while others are neglected, the train in the Hungarian part of Bódva Valley is slow and it does not continue to Slovakia. As for the Slovak part, the settlement structure is different. The moun-

tains are higher, and as a result, the population became more concentrated in the valleys and basins, thus the settlements are larger, including even some small towns (Rožňava: 19,350 people; Moldava nad Bodvou: 11,295 people). Accordingly, life is more lively here than on the Hungarian side, higher rank roads pass through the area and the region is richer in industrial facilities as well as in cultural monuments (fortresses, castles, etc.; Hutárová et al., 2021). Nevertheless, greater transport and industry mean, of course, more sources of pollution.

There is a significant social link between Aggtelek Karst and Slovak Karst, it is the fact that many people of Hungarian ethnicity live on the Slovak side, too. In addition, a further common ethnographic characteristic is that in both sides, the proportion of Roma ethnicity is high in certain settlements (Telbisz et al., 2015; Nestorová Dická, 2021). It has many socio-economic consequences not discussed in this paper, but also includes some possibilities in tourism (Hutárová et al., 2021).

2.3 NATURE PROTECTION HISTORY

In the field of nature protection, the two areas have been characterised by similar categories, but with some temporal differences. In both places, the geoheritage (caves and karst) was the major factor in the creation of protected areas, but certain categories of biological protection also played an important role. On the Hungarian side, the surface area of some caves became protected first, then the caves themselves in the 1940s, 1950s and 1960s. The Aggtelek Landscape Protection Area was established in 1978, and in 1979 some parts of the area were included in the UNESCO Man and Biosphere reserves. Aggtelek National Park was established in 1985, and currently covers an area of 202 km². The ANP headquarter is located in Jósvalfő, a small, secluded village, next to an entrance of Baradla Cave. ANP is the largest employer in the area (Telbisz et al., 2020) with 145 permanent employees at present.

On the Slovak side, a protected area was first established in 1973 as the “Slovak Karst Protected Landscape Area”. Parts of it became the first UNESCO Man and Biosphere reserves in Slovakia in 1977. The Slovak Karst National Park was established much later, in 2002, and currently covers an area of 346 km². The headquarter of the SKNP is located in Brzotin (a small village near Rožňava). The organization of SKNP is much smaller than that of the ANP as it has only 11 employees (Nestorová Dická et al., 2020).

The caves of the two NPs, or more precisely, the caves of Aggtelek Karst and Slovak Karst, were jointly inscribed on the UNESCO World Heritage List in 1995. The Baradla-Domica system, as a special underground wetland, was added to the “List of Wetlands of International Importance of the Ramsar Convention” in 2001.

2.4 TOURISM

Tourism is a long-standing activity on both sides of the border, and within this, cave tourism has an extremely long history. On the Hungarian side, visitors arrived to Baradla Cave since the beginning of the 19th century, whereas Jasovská Cave on the Slovak side was opened to the public in 1846, making it the oldest show cave in the area of present-day Slovakia (Dénes, 1998; Štrba et al., 2020). However, mass tourism only appeared in the second half of the 20th century.

As none of the national park areas are closed, there are no data on the number of tourists entering their surface area. Hiking-type tourism is present in both national parks, and a well-developed network of hiking trails is available, but hiking on the surface area of the karst can not be considered outstanding in either of the two countries, even if the vicinity of Aggtelek and Jósvalfő in Hungary, as well as the Zádielska and Háj valleys in the Slovak Karst are popular hiking destinations. On the other hand, the number of visitors to the caves is registered, so numerical data are available about the magnitude and changes of cave tourism.

In the ANP, six caves can be visited by tourists (although not all of them currently receive visitors), but the vast majority of visitors arrive in a single cave, Baradla. Its number of visitors peaked around 1980 at 250,000 a year, and since then there has been a sharp decline due to the change of regime in 1990 and the reorganization of the Hungarian tourism market. Currently, the annual number of visitors is around 120,000 (Telbisz et al., 2020). As for the Slovak Karst, there is a significant difference with regard to cave tourism as the caves of the Slovak side are not managed by the SKNP but by the Slovak Caves Administration (Gessert et al., 2018). However, it is expected to change due to new amendment to nature protection law in Slovakia. There are five show caves in the area of Slovak Karst, and the visitor numbers are more evenly distributed among these caves than in the ANP. In fact, Krásnohorská Cave is leased from the state by a private operator and therefore it is not possible to obtain information on the number of visitors of this cave. As for the total number of visitors to the other four caves, it was 97,198 in 2019 (i.e., before Covid-19 pandemic) and 61,765 in 2021. The most visited cave is Ochtinská Aragonit Cave.

3. METHODOLOGY

Assessing the role and development opportunities of national parks and exploring conflicts between different actors is often the subject of research. Questionnaire surveys are generally important elements of the methodology of this type of research (Trakolis, 2001; Papageorgiou & Kassioumis, 2005; Zurc & Udovč, 2009; Šulc & Valjak, 2012; Zgłobicki & Baran-Zgłobicka, 2013; Krpina, 2015; Mika et al., 2019; Zawilińska, 2020).

The questionnaire surveys that form the basis of the results presented in this article were conducted in Hungary in the summer of 2018 and in Slovakia, in the spring and summer of 2019, i.e., before the COVID pandemic. Questionnaires with tourists were conducted at 8-8 locations in both countries, at the entrances to major tourist caves and other busy tourist sites. Questionnaires made with local residents were completed in 14 settlements on the Hungarian side and in 15 settlements on the Slovak side. Questionnaires were filled onsite, with direct, face-to-face questioning, with the help of assistants (university students). The method of convenience sampling was used. Thus, the results are not strictly representative in the statistical sense, but they are nevertheless suitable for the evaluation and analysis of characteristic proportions in the views and attitudes of local people and tourists.

The questions were written on both sides of an A4

sheet. There were a total of 28 questions for visitors and 34 questions for local people, mostly with multiple-choice or Likert-scale questions, but there were also some open-ended questions. Filling the questionnaire was typically a few minutes in most cases. For the visitors, the questionnaire was available in 3 languages in both countries (English, Slovakian, Hungarian). Tourists from countries of other languages could also choose from these options. The results were evaluated using MS Excel. Due to the size limitations of this article, not all questions are processed individually below. Questionnaire data were processed using descriptive statistics. Frequency values for each response option were determined as a percentage of all responses to a given question and plotted on frequency charts comparing the two national parks. Thus, we did not examine specific hypotheses, but characterized the two areas based on the responses received.

A further note is that in the case of both the ANP and the SKNP, the direct area of the national park includes almost exclusively natural areas, more precisely, in the case of the ANP, two settlements, Aggtelek and Jósvalfő are located within the boundaries of the NP. Thus, in the following, when we write “in the national park”, the settlements in the close vicinity of the NP are also included.

4. RESULTS

A total of 1,044 questionnaires were completed during the survey, of which 708 were completed by tourists and 336 by locals. Slightly more filled questionnaires are from the ANP within both categories. The demographic data of the respondents are shown in Table 1. It can be seen that there were slightly more women among the respondents. In three groups (except for tourists in the Slovak Karst) the 30-50 year olds dominated. As for education, those with a secondary education dominated in three groups. The exception in this case was Aggtelek tourists, in which group there was a relative majority with tertiary education (which is a common phenomenon in questionnaire surveys at natural sites, see Zgłobicki & Baran-Zgłobicka, 2013; Allan et al., 2015).

Table 1: Demographic data of the respondents.

Parameter	Option	Local, Aggtelek	Tourist, Aggtelek	Local, Slovak Karst	Tourist, Slovak Karst	Total
n		187	380	149	328	1044
Sex	Male	48%	44%	46%	47%	46%
	Female	52%	56%	54%	53%	54%
Age	14-18	1%	6%	0%	0%	2%
	18-30	16%	19%	19%	41%	25%
	30-50	37%	45%	41%	39%	41%
	50-65	29%	22%	24%	17%	22%
	over 65	17%	8%	15%	3%	9%
Education	primary school	37%	7%	7%	0%	10%
	secondary school	57%	44%	73%	54%	54%
	higher education	6%	49%	20%	45%	36%

4.1 COMPARISON OF THE ATTITUDES AND PERCEPTIONS OF LOCAL RESIDENTS

In order to assess the relationship of local people with the karst landscape, the national park and tourism, it is important to know how they perceive their economic situation, therefore, the first group of questions was about that. Of course, in addition to local conditions, these views are also influenced by the macroeconomic situation. There were three questions about the economic situation, which could be answered on a 1-4 grade Likert scale. The results are shown in Figure 2. It can be seen that in both areas there is a relative majority of people who are more satisfied with their own situation, but overall the answers are broadly balanced in terms of positive and negative responses. There is more dissatisfaction with the situation of the settlement than with the personal situation. Furthermore, we can state that those living on the Slovak side evaluate their situation slightly more positively than those living on the Hungarian side. On the other hand, slightly more than half (59%) of those living on the Hungarian side see the economic changes in the last 10 years as positive, while only half (50%) of those living in the Slovak Karst consider it positively. In connection with the opening of the borders in 2007, 41% of Hungarians and 53% of those living on the Slovak side mentioned positive changes.

In addition to the general questions, we also asked open-ended questions of the locals, in response to which they had to formulate what were the “good” and “bad” things in the current situation of their settlement. We were curious to know how often nature or NP appear in these responses. The responses revealed the following (Figure 3). For both ANP and SKNP, the most common response in the “good” category was “nature” (27% and

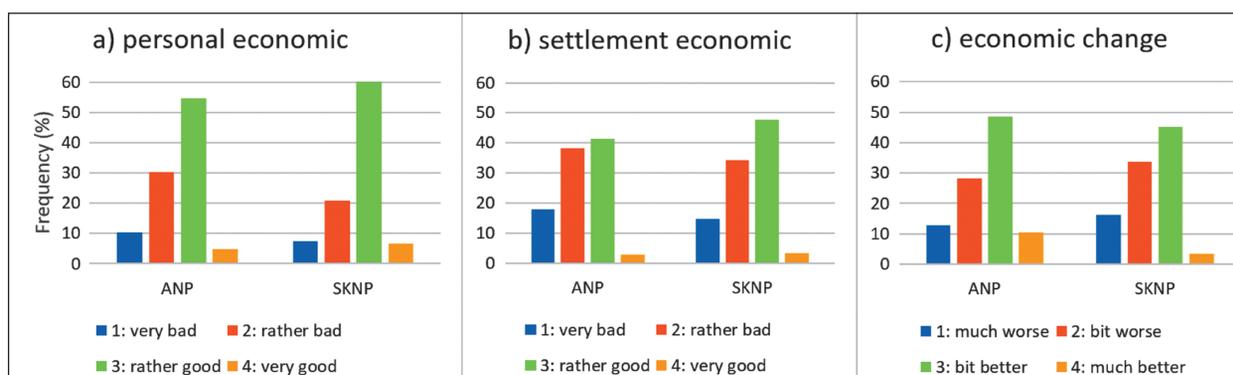


Figure 2: Opinion of the local people about the economic situation. The questions were: a) How do you see your personal (family) economic situation? b) How do you see the economic situation of your settlement? c) How has the economic situation changed during the last 10 years?

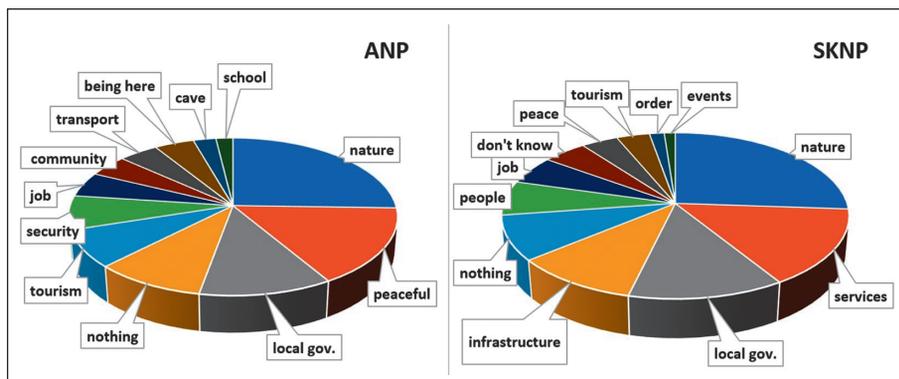


Figure 3: Good things in the actual situation of the settlement

26%, respectively). In addition, Aggtelek Karst residents mentioned “peaceful place” (17%), “tourism” (8%) and “caves” (3%), which can also be considered as features related to nature and NP. In the case of SKNP, fewer of such features were mentioned (“peaceful place”: 4%, “tourism”: 3.5%).

In the “bad” category in the ANP, “unemployment” (47%), “infrastructure (transport)” problems (14%), “ageing, emigration” (13%), “security issues” (12%), “lack of services (shop, doctor)” (12%) and “remoteness” (6%) were typically mentioned. In the SKNP, “Roma ethnicity” (15%), “people” (12%), “transport” (11%), “lack of jobs” (10%) and “lack of services” (9%) were mentioned among the major problems.

The next group of questions examined people’s relationship to the landscape. Does anyone who lives here often go to the caves or to nature (the surrounding forests)? The responses (Figure 4) show that the relationship between local residents and caves is rather weak, as the majority of people never (in ANP) or only 1-3 times a year (in SKNP) visit a cave. The proportion of those who goes to a cave on a monthly or weekly basis is only 5-6%. Most of the latter people are presumably connected to the caves through their work. According to verbal reports, the proportion of local people who visited the caves “for fun” used to be much higher back in the old times. Nowadays, young people prefer other forms of entertainment. Visiting nature (surrounding forests), on the other hand,

is much more significant, with half of the people (ANP: 47%; SKNP: 58%) going to nature on a weekly (or daily) basis (which can be work, recreation, or even mushroom picking).

Living in a karst terrain is never easy (Ravbar, 2004; Day, 2010), so we also asked local people about how they consider living in a karst region as a whole: a blessing or a curse? 80% of the local residents of the Aggtelek Karst and 81% of the residents of the Slovak Karst answered this question as a “blessing” and only 8% (ANP) and 7% (SKNP) answered it as a “curse”. The others gave an evasive or mixed answer. This high positive rate is fairly good in that somewhat disadvantaged region, even if some “psychological self-justification” or “patriotism” is certainly included in the response. It is obvious from the fact that when we asked locals if they would like to move out from their settlement, 37% of those living in the ANP and 34% of those living in the SKNP answered “yes”.

Thereafter, we examined the attitude of locals towards tourism with some questions. First, we wanted to know how the number of visitors is perceived by locals, whether they perceive mass tourism, or just stagnant or scant tourism. The responses show that mass tourism is perceived by only 24% in the ANP and 40% in the SKNP, while the majority believe that the number of tourists is small and that it is more of a transitory nature. In addition to personal perception differences, the answers largely reflect the differences in the situation of the settle-

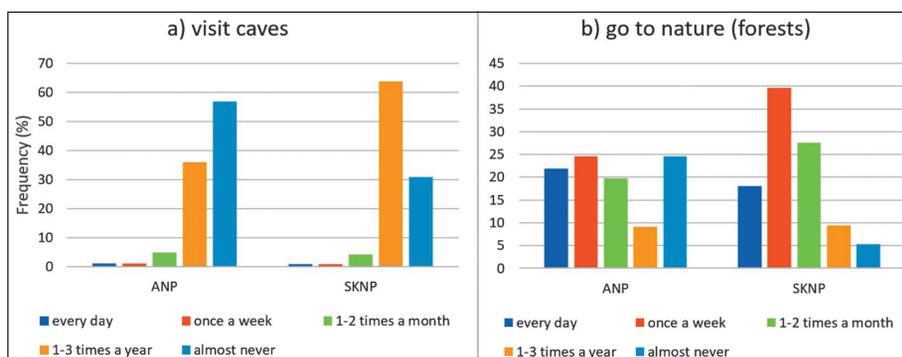


Figure 4: Relation of local people to caves and nature. The questions were a) “How often do you visit local caves?”; b) “How often do you go to the ‘nature’ (surrounding forests, meadows)?”

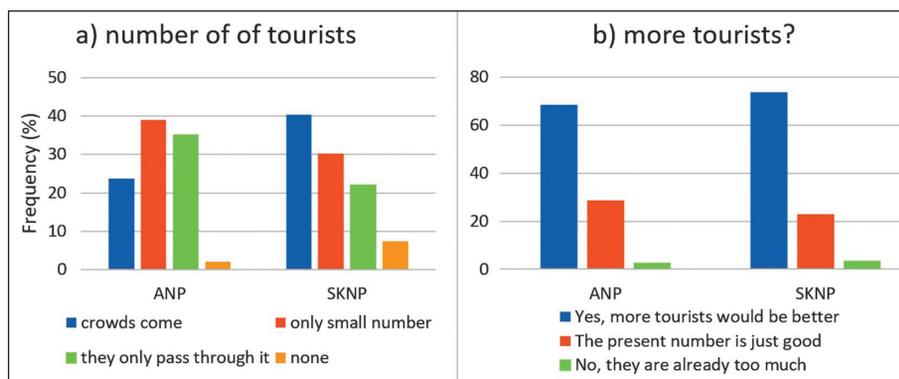


Figure 5: Perception of tourism by local people. The questions were: a) "How many tourists come to your settlement?"; b) "Would it be good if more tourists arrived to the settlement?"

ments, as well as the fact that the heyday of tourism in the Aggtelek Karst (and in Aggtelek in particular) was in the 1980s, to which local residents, especially the older ones, still remember well. Due to the positive memories of this earlier period and the economic hopes related to tourism, it is understandable that the vast majority of the local population is unambiguously in favour of developing tourism. In the Aggtelek Karst, where there are really very few other job opportunities, 20% of people are connected to tourism in some way, either as a shop / restaurant worker or as an accommodation provider, or possibly as a tour guide. In the Slovak Karst, where the economic background is more complex, only 9% of respondents are involved in tourism. Geotourism, which has been developing rapidly since the end of the 20th century (Dowling, 2011), may open up new opportunities in karst tourism, but only a small proportion of respondents (10% in the ANP and 17% in the SKNP) know the concept in a more or less correct sense.

One of the key issues is the relationship between local residents and the NP. Of those surveyed in ANP settlements, 38% said they had a direct relationship with the NP through family, work or business, and a further 38% said they had a personal relationship with the NP through their friends. This means that ANP plays a highly important role in the lives of the vast majority of the inhabitants. In the settlements of the SKNP this proportion is much lower, only 10% of respondents have a closer connection (family, work or business) to the NP and 6% have friends with close connection to the national park. Furthermore, there was also a question for families with children about how often children encounter the NP. This is an important factor in increasing awareness, and both NPs place emphasis on organising regular school or leisure programs (camps) for local children. For this question, 58% of respondents in the case of ANP and 60% in the case of SKNP gave a positive answer, i.e. they indicated that their children met NP programs with a certain regularity.

The main question is whether local residents con-

sider the advantages or the disadvantages of the NP to be more important (Figure 6). We can say that NPs are doing well in this respect, because the vast majority of people (ANP: 75%; SKNP: 90%) tend to perceive the benefits more pronouncedly, however it is sad that there is still a significant minority that perceive the existence of the NP rather as a negative.

Respondents also had the opportunity to list in an open-ended response the advantages and disadvantages in relation to the NP. Among the benefits, "job opportunities" (38%), "tourism" (18%), "forest / nature protection" (5%) were the frequently mentioned answers in the ANP, while in the SKNP, "nature" (18%), "tourism" (9%), "hiking" (3%) and "clean air" (3%) were the most mentioned words. Negative responses included "ban on firewood collection" (30%), "fire restrictions" (8%), "mushroom picking restrictions" (6%), "mowing restrictions" (5%), and "agricultural restrictions" in general (5%) in the ANP, while "harvest restrictions" (5%), "fire restrictions" (4%) and "firewood collection restrictions" (4%) appeared more often in the SKNP, but overall, people list-

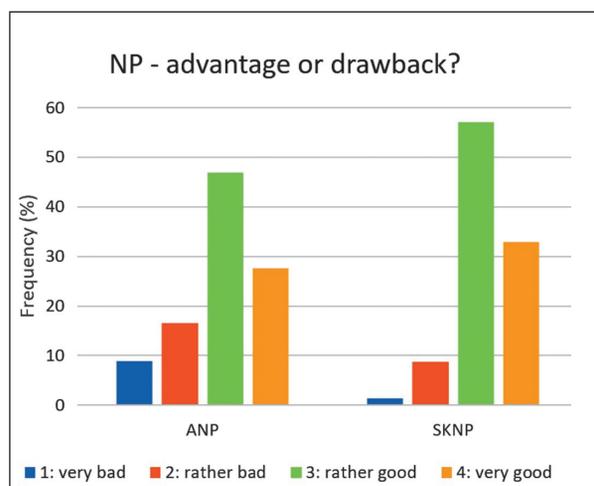


Figure 6: General opinion of local people about the NP. The question was: "In total, is the NP an advantage (good) or a drawback (bad) for the settlement?"

ed fewer disadvantages here than in the Aggtelek Karst. At this point, it is worth noting that a significant portion of these restrictions are actually not due to the existence of the NP, but due to general forest management rules.

Today, learning from past conflicts in the operation of NPs worldwide, there is a strong emphasis on involving local people as much as possible in the NP decision-making mechanism, or at least holding frequent consultations with them (Nolte, 2004; Hayes, 2006; Mose, 2007; Zurc & Udovč, 2009). When local people were asked whether they had any influence on national park business (e.g., forums, councils), 97% of respondents answered “no” in the ANP. Although there are certain efforts by ANP managers to involve the public, this does not seem to be very effective in practice. In the case of SKNP, the proportion of those who answered “no” was much lower (72%) but still high.

An important element in the attitude of local residents to a national park may be how “proud” they are of it. When inventing the model of “national park” (in the USA in 1872), the inclusion of “national pride” was an important consideration for the founders, and the word “national” itself came into this expression partly for this reason (Frost & Hall, 2015). This emotional attitude could be assessed by locals using a 3-point Likert scale, and as a result, we found that for the vast majority of local people, the statement that the “NP is part of our national heritage” is more or less important. Specifically, the “very important” option was chosen by 64% in Hungary and 74% in Slovakia (Figure 7). As the caves are parts of the UNESCO World Heritage, we also asked which title was more important for local residents. Somewhat surprisingly, we got larger differences than for most other questions: in the ANP, two-thirds (67%) of respondents selected the World Heritage title as more important, whereas, in the SKNP, 55% chose the title of NP as the more important.

4.2 COMPARISON OF THE ATTITUDES AND PERCEPTIONS OF TOURISTS

A common feature of tourism in the two national parks is that the vast majority of tourists come from within the

country. The proportion of domestic tourists is 81% in the ANP survey and 88% in the SKNP survey. Although this is not a fully representative sample, the experience of local tourism stakeholders is in line with these proportions. The vast majority of visitors (ANP: 59%; SKNP: 77%) arrive for only one day, a small proportion of tourists for 2-4 days (ANP: 26%; SKNP: 19%) and there are few who stay for at least five days (ANP: 15%; SKNP: 4%). The car is the dominating mode of transport on both sides (ANP: 85%, SKNP: 76%), though the number of approach alternatives is higher on the Slovak side. Organized groups account for only a small proportion of visitors in both national parks (ANP: 7%; SKNP: 18%), while the vast majority arrive here with family (ANP: 69%; SKNP: 53%) or friends (ANP: 17%; SKNP : 22%). It is also common for both sides to have a high proportion of returning visitors (ANP: 72%; SKNP: 78%), many of whom visit these sites regularly. A remarkable difference, however, is that the majority of people in the ANP plan to visit a cave, but only a small proportion (29%) plan to hike on the karst surface. In contrast, in the SKNP, 75% of people plan to hike on the karst. Regardless of the previous difference, people consider educational trails similarly: half of the tourists on both sides (49 and 50%, respectively) consider the educational trails to be “very important” and a good two-fifths (43% and 42%, respectively) consider the educational trails to be “a little important”. Some of the above differences between the ANP and the SKNP can be explained by the fact that in the ANP, data collection took place predominantly near cave entrances, while in the case of the SKNP, several popular surface hiking sites (e.g., Zádielska and Háj valleys) were among the survey locations.

As far as visitor awareness is concerned, there is a fairly significant difference between the two countries regarding the meaning of the word “karst”. Among ANP visitors, there were 40% who said they knew the meaning of the word and were also able to associate it with a relatively correct meaning. In the case of SKNP, the same proportion was significantly higher (71%). We were also curious about the knowledge of visitors about “geotourism”. On the Hungarian side, 62% of respondents said

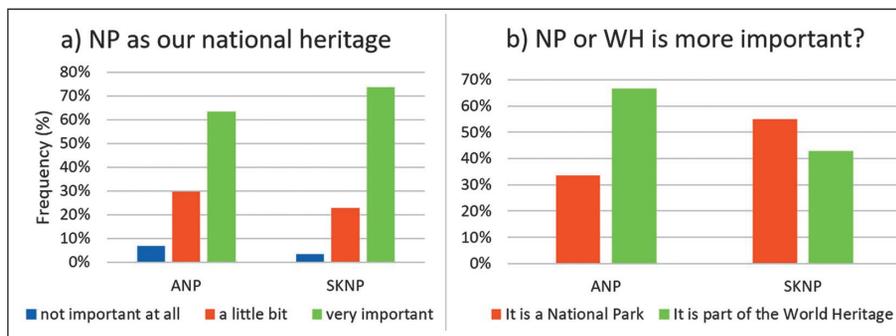


Figure 7: Emotional relationship to the NP and World Heritage titles. The questions were: a) “Is it important for you, that the ‘NP is part of our national heritage and we can be proud of it?’; b)” Which title is more important for you?”

they had already heard the term (which is however questionable in the light of their responses to the meaning of “karst”), and 20% said they considered themselves “geotourist to a certain extent”. On the Slovak side, 57% said they had heard the term “geotourism”, and one-fifth of visitors (22%) thought they were “to a certain extent geotourist”.

Perhaps one of the most important questions is what motivates tourists to visit these national parks (Figure 8). In the ANP, the main motivation is clearly the interest in caves and specifically, in Baradla Cave (or Aggtelek Dripstone Cave as it is known in popular literature). 37% of respondents mentioned the caves in general and 43% specifically Baradla Cave, too. To the contrary, in the SKNP, more general things were mentioned by most visitors as motivating factors such as “look for relaxation” (38%), “visit parts of the country” (34%), and “family / friends suggested” (30%). These factors also appear among ANP visitors, but less frequently. “Look for adventure” also appears among the motivations, but only in

a relatively small proportion (ANP: 15%; SKNP: 7%). It is not surprising, as the show caves or the mid-mountain landscape are not the primary targets for adrenaline addicts. “Interest in karst terrains” is a motivation for only a very few visitors (ANP: 3%; SKNP: 0.3%).

In general, the title of a protected area may also contribute to tourist motivations as it was presented for instance by Reinius & Fredman (2007). Thus, we also included two questions about titles in the survey form. Surprisingly, there were quite significant differences between the two sides (Figure 9). None of the titles had a decisive influence on ANP visitors, with only 22% choosing the “very important” option for the NP title and 27% for the World Heritage title. In contrast, for 72% of SKNP visitors the NP title is “very important” and 79% selected the “very important” option for the World Heritage title.

In addition to motivations, it is also a very important issue where people get information about a tourist destination (Figure 10). In this point, the two NPs are relatively similar: school studies, personal relationships, and

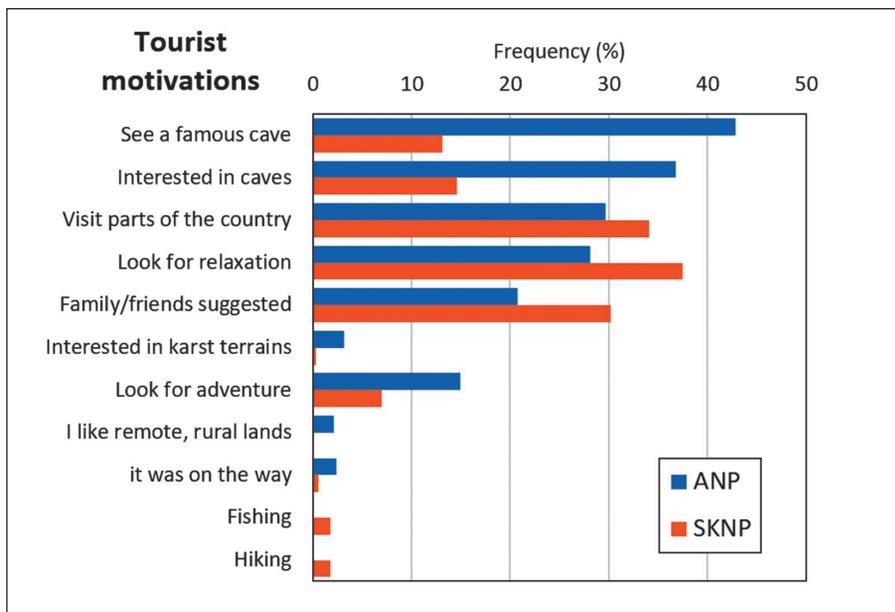


Figure 8: Motivations of tourists to visit these national parks.

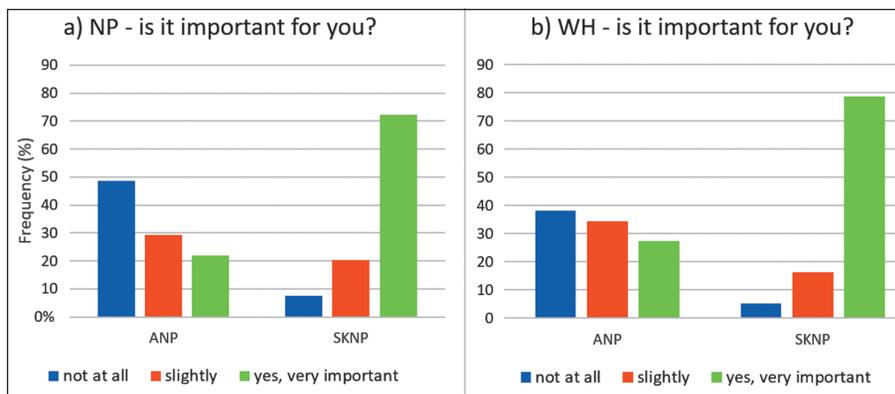


Figure 9: Importance of protected area denomination. The questions were: a) “Is it important for you that this area is a National Park?”; b) “Is it important for you that these caves are part of the World Heritage?”

the “internet in general” are the most frequent answers. One obvious difference, however, is that in the case of the ANP, school studies are of paramount importance. The explanation for this fact is that the “Aggtelek Dripcave” (i.e., Baradla) is included in every textbook from primary school to higher education as a typical example of caves and dripstone formation, thus the reputation and consequently the tourism of this cave is greatly influenced by school studies. Visitors to the SKNP are apparently more likely to be reached by traditional tourist marketing and brochures than visitors to the ANP.

The development of tourism depends on many factors, of which one factor can be the opinion of tourists (among other aspects), therefore we also examined the support rate of different development ideas with the help of questions using 1-4 grade Likert scale. The average scores calculated from these questions are shown in Figure 11. The most popular ideas are those, which are in accordance with nature protection, i.e. the construction of “new panorama points” and the creation of “new education trails / hiking paths”. On the Slovak side, the construction of a “new visitor centre” is even more popular, which can be explained by the fact that there is currently no good visitor centre connected to the national park. The development of an “adventure park”, “swimming pool” or “new entertainment facilities” achieved the lowest average score. Although even in these cases the proportion of supporters is slightly higher than that of the opponents, the group of opponents of these development ideas is quite strong. It can be explained by the fact that many of the visitors believe that the implementation of these developments would occasionally increase noise and/or the environmental impact, thus, they are incompatible with nature conservation goals.

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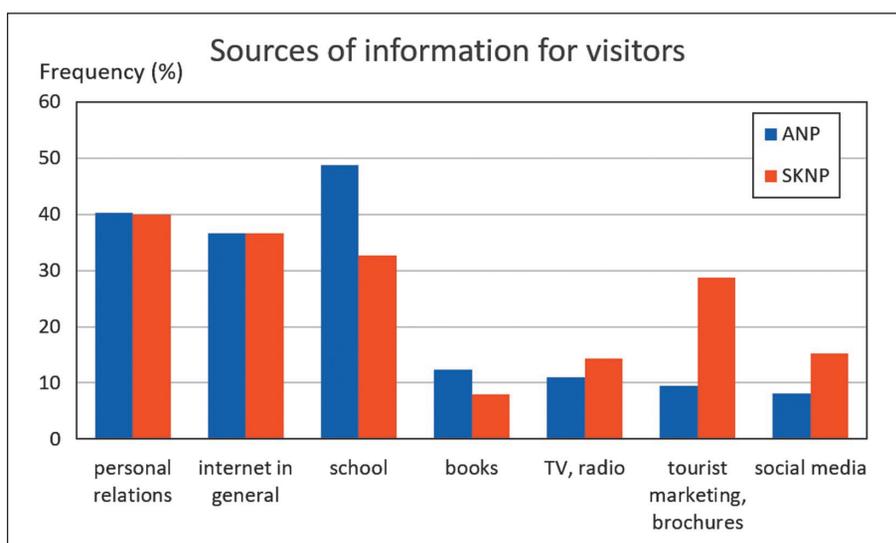


Figure 10: Sources of information of visitors.

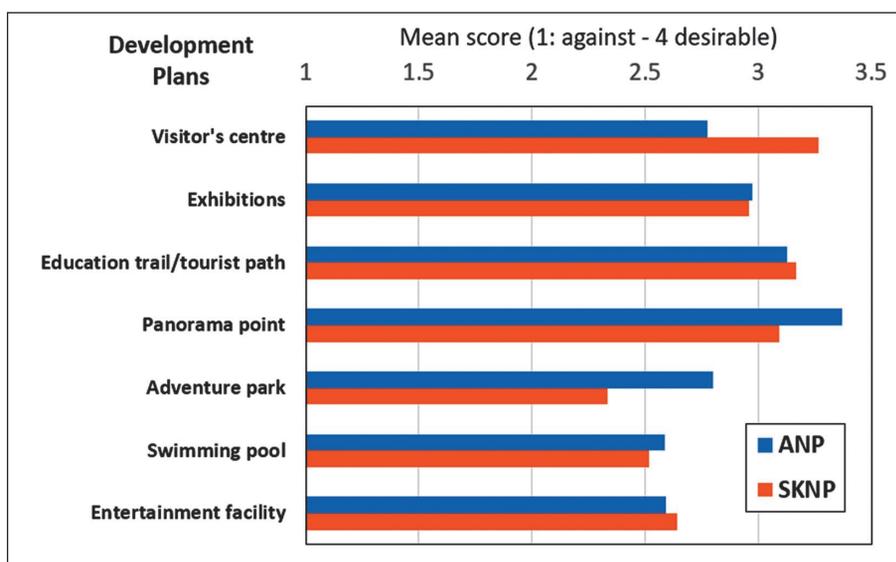


Figure 11: Opinions about development ideas. Mean scores. 1: I'm absolutely against it; 2: I'd rather not support it; 3: I'd rather support it; 4: I'd find it desirable.

4.3 COMMON QUESTIONS TO LOCALS AND VISITORS

There were two question groups that we asked of both locals and tourists. The first group of these questions examined the value of this landscape. These were multiple answer / multiple choice questions, and the respondents had to choose from predefined options. For local residents in both national parks, “forests” (ANP: 73%; SKNP: 71%) and “caves” are equally predominant values (Figure 12). The “forests” provide everyday relaxation and a better environment, while the “caves” contribute to their livelihoods through tourism. On the Hungarian side, the fact that this is a “peaceful landscape” was mentioned almost as frequently as the previous values (ANP: 68%), but this was much less frequently selected by local people on the Slovak side (SKNP: 45%). It is reasonable as the settlements on the Slovak side are much larger in size and transit traffic is also much stronger. It is noted that “traditional farming” received the least mention, which is also not surprising as agriculture no longer plays a role in the lives of the vast majority of local people, and even those who have an active relation with agriculture (or keep memories of it from their ancestors) are also more likely to have experienced “struggle with the land”, thus they do not perceive it as a value. Tourists, of course, appreciate the landscape somewhat differently. For them, on both sides, the “caves” represent the greatest value of the landscape (ANP: 93%; SKNP: 83%). Furthermore, they also appreciate “surficial karst landforms” higher (ANP: 55%; SKNP: 44%) than locals. Naturally, in addition to the caves, the “forests” and the “peaceful landscape” are also valued by visitors, but only secondarily. Among all options, there are only two answers that are more often

mentioned by SKNP respondents: one is “special plants” and the other is “monuments”. The latter can be explained by the greater richness of the Slovak side in monuments, but the reason for the former is still unclear.

Based on the official documents (laws) and the literature, we summarized the general tasks of the NPs in seven points. Respondents could express on a 1-5 grade Likert scale how much they agreed with these goals for the given NP. (Here we note that this group of questions was not yet included in the ANP tourist questionnaire, so the results are only relevant for the other three groups of the survey.) The results show that the “protection of geological values” is paramount in each measured group, followed with slightly lower scores by “biological protection”, “landscape protection” and “protection of cultural values” (Figure 13). Geology rightly came first here, as both ANP and SKNP were created primarily for the preservation of the underground and superficial karst features. Tourists gave even higher scores for these tasks than locals. At the same time, it should be noted that in the daily activities, budget proportions and publications about these national parks, biological conservation is still given more emphasis than geological conservation, but it is a worldwide phenomenon (cf. Gordon et al., 2018). The lowest score was given to “scientific research” – it is no surprise as the “average person” (either local resident or tourist) is generally less aware of the significance of this activity. This result is typical in similar surveys (Telbisz et al., 2021). Nevertheless, it is a very important task for national parks to support research. The evaluation of “education” is also relatively low, although it received higher scores than research. Perhaps the most interesting is the rating of tourism. Many people may feel that there

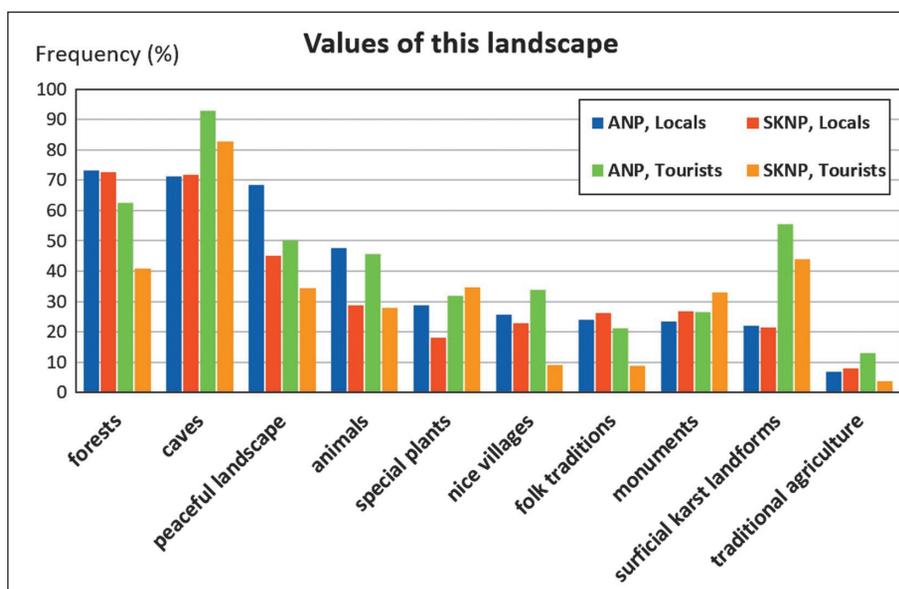


Figure 12: Values of the landscape according to locals and visitors.

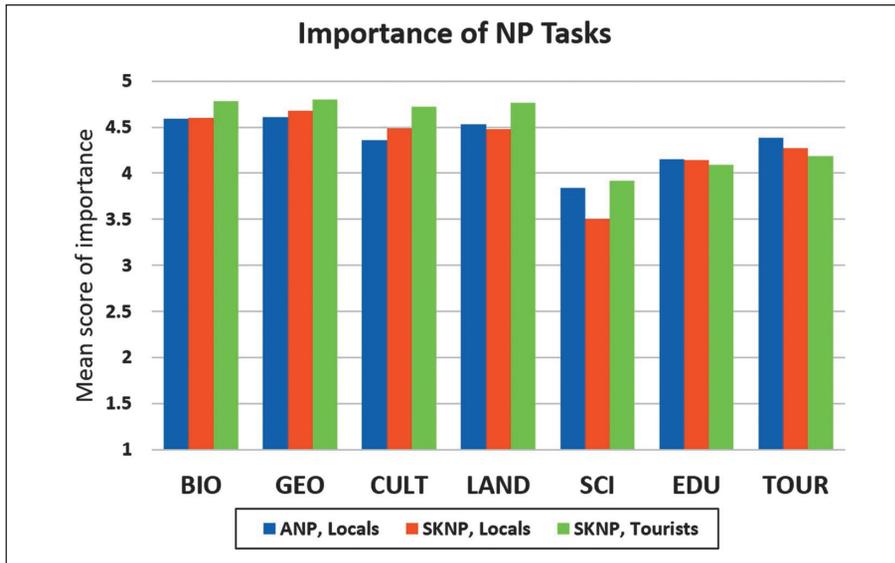


Figure 13: Importance of NP tasks according to local people and visitors (1: not important at all, 5: absolutely important). BIO: Biological preservation; GEO: Geological preservation; CULT: protection of cultural; LAND: landscape preservation; SCI: scientific research; EDU: education; TOUR: tourism.

is a contradiction between tourism and conservation, but the fact is that the intention to boost tourism was already an important goal when the first U.S. national parks were created, and this motivation has been present in the setting up of most national parks since then. In addition

to presenting the values of the national park to visitors, tourism also serves the livelihood (job opportunities) of the local community, so it is no coincidence that this task received higher scores from the local population than from visitors.

5. DISCUSSION AND CONCLUSIONS

The above results are generally easy to interpret. In the following, we explain how we see the role of NPs in the socio-economic development of local communities and, more specifically, in tourism.

In our opinion, the rather negative socio-economic situation (unemployment, ageing, ethnic problems, lack of services) is a complex problem, and the NPs alone are not capable to manage these problems and even it is not their primary task. However, they can be part of the solution. On the Hungarian side, the situation is more favourable in the sense that the ANP has a larger organizational background and more human resources for a smaller population and smaller area. Here, the NP plays a significant role in reducing unemployment and even in developing certain services through its intellectual and tender resources. On the Slovak side, the SKNP is small in terms of organization, and does not really have enough human and financial resources to develop. However, more help is expected from other economic actors.

The unfavourable factors of tourism are the predominance of one-day visits and the strong seasonality (winter tourism is almost non-existent). Another partly unfavourable, but also partly favourable factor is that tourism consists mainly of domestic visitors. This may be

less favourable in terms of revenue, but as the Covid-19 pandemic has demonstrated the number of domestic tourists are more stable in times of possible restrictions on international travel. The large proportion of returning tourists is admittedly a favourable factor. It is generally believed that recreation, as a shorter-distance, shorter duration journey seeking relaxation, is more sustainable than longer-duration, longer-distance tourism (McKercher, 1996). As both ANP and SKNP are more about recreation, this can be considered more sustainable.

Another question is whether we can talk about geotourism in these national parks. In the broadest sense of the word, the answer is definitely yes (for types of geotourists, see Hose, 2008; Božić & Tomić, 2015), as cave tourism is one of the most important, though often less conscious, branch of geotourism (Cigna & Forti, 2013; Telbisz & Mari, 2020). Geotourism to ANP and SKNP is characterised by the fact that a smaller but not insignificant part of the visitors consider themselves to be geotourists in a broader sense. At the same time, geotourism is still largely missing from the vocabulary of local residents and NPs. More intensive use of this notion could strengthen the networking with other geotourism sites (learning ideas from each other, promoting each other),

which could directly or indirectly contribute to the development of tourism.

Based on the motivation of tourists, we can say that the keyword is “cave”, while the content of the term “karst” is much less known (especially on the Hungarian side) and motivates even fewer. In Hungary, the tourism of the Baradla Cave (popularly known as the Aggtelek Dripstone Cave) is largely due to school education. Today, however, that is not enough. The number of visitors to a cave is also determined by many other factors, such as what other tourist sites and busy routes it is connected to. Thus, in Hungary today, the Tapolca Lake Cave, which is close to the popular Lake Balaton and has a high-quality karst exhibition, but is much smaller than Baradla, receives more visitors than Baradla. But as another international example, Postojna can also be mentioned. It is located close to busy international pathways and has a well-developed visitor infrastructure and marketing, thus, an enormous number of visitors. Naturally, this cave absolutely deserves the attention of visitors.

An interesting observation in our survey is that the “internet”, although one of the most important sources of information for visitors, was not in the first place and was not outstanding compared to other factors. This result differs from the experience of other similar surveys (Zgłobicki & Baran-Zgłobicka, 2013; Allan et al., 2015). The reason for this is difficult to say, perhaps the weaker economic situation of the region also plays a role in that. In fact, a lot of information is available on the Internet about the karst attractions of this region, but we note that while the ANP website is up-to-date and available in

three languages, the SKNP website is not so easy to find and is only available in Slovak.

It is an interesting fact about protected area titles and their role they play in marketing that the attitudes in the two countries are significantly different, in Hungary these names are much less important for people than in Slovakia. There may be general cultural reasons for this, but exploring them requires further research.

Our survey has shown that both ANP and SKNP have the trust capital as the majority of both tourists and locals have a rather positive view of the NP. However, there is a significant group of local residents who perceive rather the restrictions and drawbacks of the national park (see Nestorová Dická et al., 2020 for more details). NPs are therefore given the opportunity to take advantage of this trust capital, involving local people more closely in decision-making.

We have left to the end an important question of whether tourism should be developed at all. Taking into account the opinions of local residents and visitors as well as professionals, NP managers and mayors, it seems that almost everyone in both national parks agrees that tourism development is necessary, and there is still plenty of room to increase the number of visitors without compromising nature conservation goals (Telbisz et al., 2020).

Finally, we recommend that the two national parks work even more closely together (although relations are already good), as this could further boost tourism if the two national parks would elaborate together a larger, more complex offer for visitors.

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