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Attitudes of local people towards Apuseni Nature Park, Romania

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Abstract

Nature parks are protected natural areas whose purposes are the protection and conservation of landscapes in which the interaction of human activities with nature over time has created a distinct area, with significant landscape and/or cultural value, often with great biological diversity. This is the case of Apuseni Nature Park, which includes a significant karst terrain and is a very important tourist destination. In this article, we examine the attitude of local people towards the protected area with the help of a questionnaire composed of 32 questions. After the general questions, the economic situation was examined first. Then the respondents had to evaluate the values and the difficulties of their region and their relation to tourism. The answers reveal that they are aware of the importance of tourism, which may represent a serious complementary income for them. The most intriguing questions were some open-ended questions, which focused on the relationship of locals to Apuseni Nature Park. Based on the answers, we can conclude that the negative opinions slightly dominate. The dissatisfaction of the locals, the feeling of limitations due to the park are expressed in many different ways. But probably the most relevant problems can be linked to the rules and laws. As it is a nature park, people in fact, live inside the park, thus, the equilibrium between their lives and the purposes of the park should be approached. The administration of the nature park should involve local people more closely in decision-making, and maybe certain rules should be changed.

Keywords: nature park, local people, questionnaire, karst, geotourism, protected areas

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Introduction

In the framework of an international project (Karst and National Parks 2022), we are examining the attitudes and opinions of people living in karst national parks (NPs) and of tourists visiting these parks (Mari, L. *et al.* 2022). Although Apuseni Nature Park (ANP) is "only" a nature park, it is a protected area with invaluable bio- and geoheritage, including remarkable karst features. It is a popular tourist destination and also home to almost 10,000 people. Thus, it is a perfect location to study the attitudes of local people towards the protected area, and their relation to tourism.

ANP is situated in the territory of Apuseni Mountains, the western part of the Romanian Carpathians (*Figure 1*). In translation "apuseni" means "sunset" referring to the position of the mountains relative to the central part of the country.

Nature parks – as IUCN Category V - Protected Landscape – have a lot of roles (IUCN 2022), among which we now mention only the most important ones:

– to maintain a balanced interaction of nature and culture through the protection of landscape and associated traditional management practices, societies, cultures and spiritual values;

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– to contribute to broad-scale conservation by maintaining species associated with cultural landscapes and by providing conservation opportunities in heavily used landscapes;
– to provide opportunities for enjoyment, well-being and socio-economic activity through recreation and tourism;
– to provide natural products and environmental services;
– to provide a framework to underpin active involvement by the community in the management of valued landscapes and the natural and cultural heritage that they contain;
– to encourage the conservation of agrobiodiversity; to act as models of sustainability so that lessons can be learnt for wider application.

Some authors call "protected landscapes" as the conservation model for the 21st century (Beresford, M. and Phillips, A. 2000). Some researchers even call protected landscapes as the most effective conservation mechanism in some situations (Mallarach, J.M. *et al.* 2008), whereas others discuss whether protected landscapes are really protected areas at all (Dudley, N. *et al.* 2010).

Like national parks, nature parks may also present serious values but also constraints for the local population that may be occasionally more severe than in a national park. This fact will be emphasised in the conclusions of this article. The karst landscapes are often popular destinations due to their spectacular forms, such as caves, gorges, collapsed dolines or special vegetation (Cigna, A.A. and Forti, P. 2013; Božić, S. and Tomić, N. 2015; Dollma, M. 2018; Ruban, D. 2018; Telbisz, T. and Mari, L. 2020; Telbisz, T. *et al.* 2020, 2021). The tourism based on these values can be complementary or, for some local people, even the main source of livelihood and can have a serious impact on the deterioration or preservation of the environment.

Nowadays, the extent to which the management of protected areas should also serve the socio-economic development of the local inhabitants is a frequently examined question (Mose, I. 2007). In addition, it is also important to get to know the relationships between different actors of the park – local people – tourists triangle (Hayes, T.M. 2006). One part of these complex relationships is the attitude of local people toward the protected area which is often examined with the help of questionnaires (Trakolis, D. 2001; Zurc, J. and Udovč, A. 2009; Šulc, I. and Valjak, V. 2012; Mika, M. *et al.* 2019; Nestorová Dická, J. *et al.* 2020; Zawilińska, B. 2020).

In this article, we present the results of a questionnaire survey conducted among the locals from Apuseni Nature Park. We focus on the following issues:
– What is the priority order of the nature park goals according to local people?
– To what extent do local residents perceive that the nature park also serves to their benefit?
– How do local people see the values of these landscapes?
– Are there conflicts in the local people – tourism – nature protection triangle?

Brief description of Apuseni Nature Park

Natural conditions

Based on geological maps of 1:200,000 scale and our GIS-analysis (Telbisz, T. *et al.* 2016), it is calculated that in almost half (48%) of the area we can find partly or fully karstifiable rocks that explains the large number of karst landforms. Actually, karst landforms are present in more than 24 percent of the territory. Metamorphic rocks occupy 30 percent of the area, whereas plutonic and volcanic rocks are present in smaller amounts. Thus, the diversity of rocks ensures the diversity of landscapes, too.

The mean altitude of the park area is 1,120 m with 66 percent of the surface between 1,000 m and 1,400 m a.s.l. (*Figure 1*). The relief is characterised by large plateaux with many deep valleys and gorges.

The rivers belong to three main river basins, Someș in the East, Arieș in the South and Criș in the West, all of them are tributaries to Tisa and finally to the Danube. Also, from a hydrologic point of view, we have to mention the presence of a large endorheic area with a

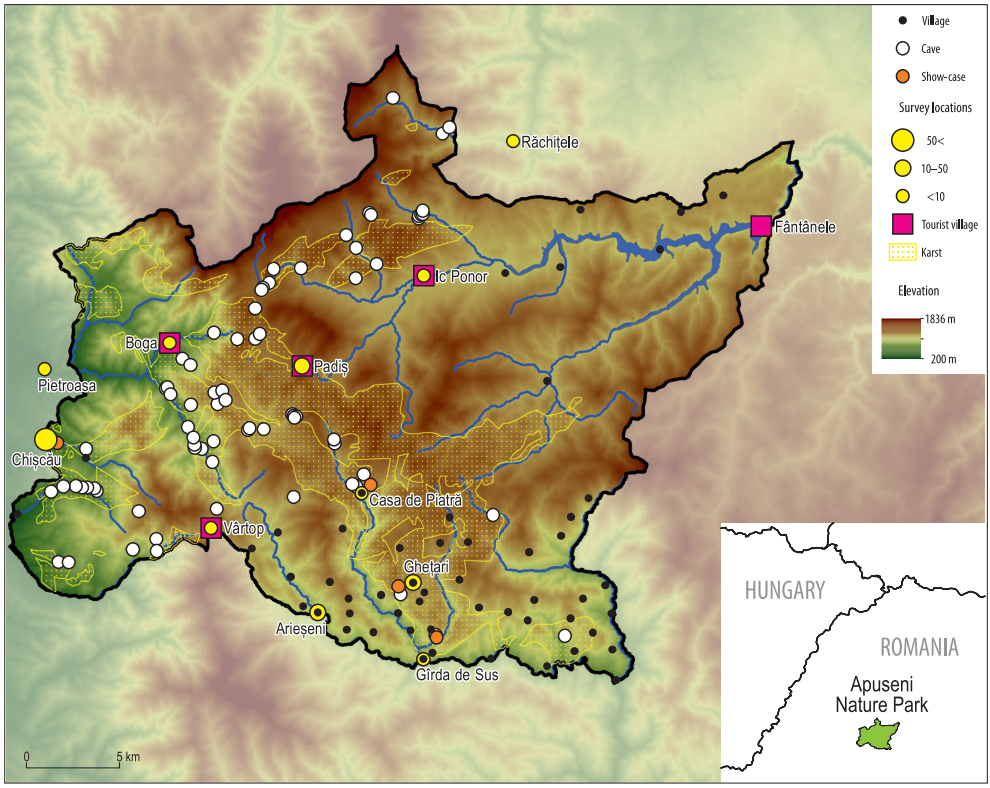

Fig. 1. Location of Apuseni Nature Park and the extent of karst area (with caves), settlements and survey locations

surface of 59 km^2 (Orășeanu, I. 2016). There is also a 7.5 km^2 size artificial lake and several temporary lakes on the karst surfaces.

The climate is characterised by an average temperature of 4 °C to 10 °C, decreasing with the altitude. The highest precipitation values in all of Romania (more than 1,400 mm a year) are measured in the western side of the mountains (Badea, L. 1983). A specific feature is the fog that can be often seen in the karstic depressions especially in autumn.

Based on CORINE Land Cover database, forests cover more than 70 percent of the park, the rest is covered by pastures and grasslands. A very small amount is agricultural land. The forest cover has been seriously modified by human impact since the Middle Ages (Jakab, G. *et al.* 2021).

Socio-economic situation

Being a mountain region, the nature park is characterised by small villages. Among the 53 settlements, 43 have a population of less than 300. The structure of the villages is dispersed. The 53 settlements belong to 17 municipalities (local administrative units), and these are parts of 3 counties. It is interesting that none of the municipalities is entirely inside the park. The total number of inhabitants is around 10,000. The main economic activities are forestry and agriculture, mainly farming. As the region represents an attractive destination for tourists, the number of touristic facilities – pensions, restaurants, shops – is growing (Cucu, V. 1984; Horváth, Gy. 2006; Tempo online 2022).

Nature protection history

At the beginning of the 20th century, Gyula Czárán was the first who created touristic trails. Some of them are still used. The famous scientist Emil Racoviță suggested protecting large areas in Apuseni Mountains in 1928. The first protected elements inside the park were caves: Scărișoara ice cave – 1938, Cetățile Ponorului – 1955. The first scientific documentation considering nature protection of the area was made in the 1970s. In 1990, the area was declared a "national park", however, this declaration was not followed by setting up a really working institution. In 2000, as part of the National Spatial Planning Plan - Section III about protected areas, it was transformed into a "nature park". It corresponds to IUCN Category V - Protected Landscape. With a total area of more than 767 km^2 it includes 3 Natura 2000 sites, and further 55 protected areas, mainly nature reserves and natural monuments, 41 of them are karstic. The Apuseni Nature Park Administration was established in 2004 (Bleahu, M. 2019).

Tourism

The park area is not closed and there is no entry ticket, so there is no precise data on the number of tourists entering the area. The park administration estimates that the number of visitors is about 500,000 a year. Hiking-type tourism is very typical, and a well-developed network of hiking trails is available, there are more than 30 trails with a total length of over 400 km.

There are more than 1,500 caves in the park. According to legislation (GEO, 2007), 37 caves are "classified" (i.e. have international, national or local importance under different categories), that is more than 28 percent of all classified caves in the country. There are four "show caves" (Bear Cave, Scărișoara ice cave, Vârtop ice cave, Poarta lui Ionele Cave), and the number of visitors to these caves is registered. In the last decade, the number of visitors was 128,000 a year on the average, taking into consideration all four caves (data from ANP Administration).

According to National Statistical Institute data there are 114 accommodation facilities in the municipalities intersected by the park, with a capacity of more than 2,500 beds. The tourist overnights spent in these municipalities are more than 110,000 a year (Tempo online, 2022). We can presume that the real number of tourists is higher, because not all of them are officially registered. Further on, there are some free camp places in the area of ANP, where the number of tourists is not registered, thus, we can assume that the total number of visitors is even higher.

Methodology

Our questionnaire survey was planned using the experiences of similar surveys conducted in other protected areas (Trakolis, D. 2001; Papageorgiou, K. and Kassioumis, K. 2005; Zurc, J. and Udovč, A. 2009; Šulc, I. and Valjak, V. 2012; Zgłobicki, W. and Baran-Zgłobicka, B. 2013; Krpina, V. 2015; Mika, M. *et al.* 2019; Zawilińska, B. 2020).

The questionnaire survey that provides the basis of the results presented in this article was conducted in the summer of 2019 and in the summer and autumn of 2021. Questionnaires with locals were conducted at 11 locations, at the entrances to major tourist caves and other busy tourist sites or in villages situated near the park. 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.

The questions were written on both sides of an A4 sheet. There were a total of 32 questions, 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. The results were evaluated using MS Excel.

A further note is that some of the questionnaires were filled in locations that are outside the park but in the close vicinity, generally where accommodation or other service facilities are present.

We also have to mention that it was very difficult to convince some locals to complete the survey. There were several cases when after finding that there are questions regarding the park, they refused to complete the questionnaires.

Results

A total of 139 questionnaires were completed during the survey. In the following analysis, the percentage is always related to the actual number of answers for each question (i.e. not counting the forms, in which the actual question remained unanswered). The demographic data of the respondents are shown in *Table 1*.

Table 1. Demographic data of the respondents

Indicator	Categories	Percentage of answers
Sex	male	63.8
	female	36.2
Age, years	14–18	2.9
	19–30	14.4
	31–50	32.4
	51–60	27.3
	over 60	23,0
Education	primary school	29.1
	secondary school	50,0
	higher education	20.9

It can be seen that there is an almost 2/3 to 1/3 proportion for males. About 1/4 of respondents are of inactive age. As for education, those with a secondary education dominated.

Living place and jobs

The first group of questions refers to the actual living place and job of the respondent. The survey was done in 11 locations, but the respondents live in 29 different places, including the survey places, of course. The other places are very close to the survey locations. Only 17 respondents mentioned that they had moved from their childhood settlement to another one, but even in these cases, the movements took place between very near settlements. So, we can say that the population of the region is very stable.

For the question *"What is your actual job?"* 52 different answers were given, from a total number of 136. To better understand the structure of jobs, they were grouped into 10 categories, and the result is presented in *Figure 2*.

Comparison of the attitudes and perceptions of local residents

In order to assess the relationship of local people to the karst landscape, the nature park and tourism, it is important to know how they perceive their economic situation; therefore, the second group of questions was about that. Of course, in addition to local conditions, these views are also influenced by the macroeconomic situation. Thus, 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 3*.

It can be seen that for their own economic situation there is an equilibrium between *"bad"* (51.1%) and *"good"* (48.9%) answers, though *"bad"* is slightly dominant. As there

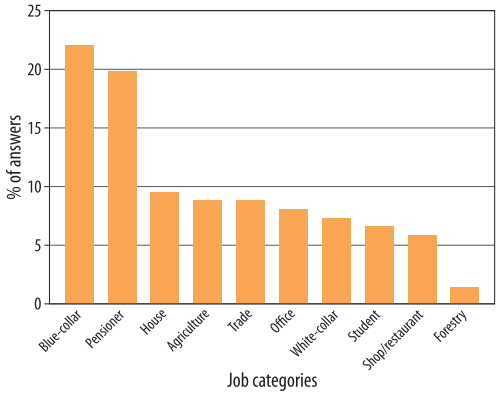

Fig. 2. Job categories of the respondents

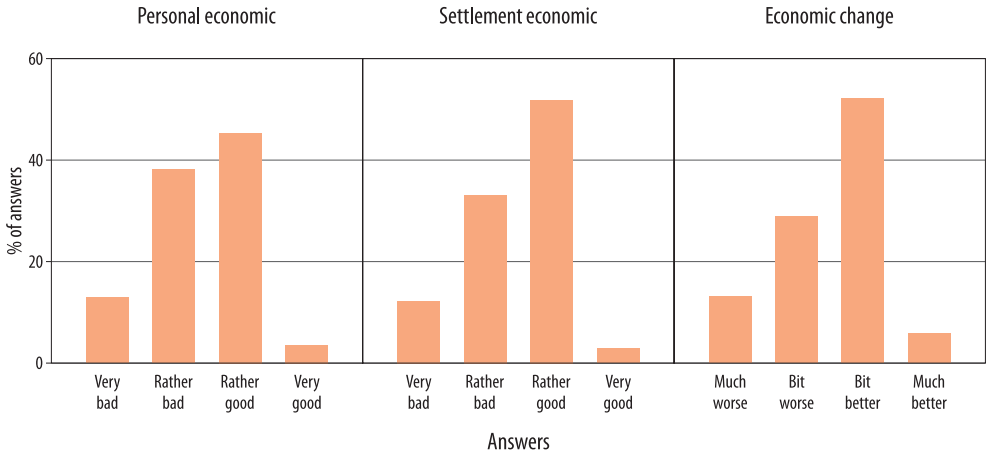

Fig. 3. Opinion of the local people about the economic situation. The questions: a) How do you see your personal (family) economic situation? b) How do you see the economic situation of your settlement? c) How has the economic situation changed during the last 10 years?

are 139 answers, the difference in absolute values is only 3 respondents. Referring to the situation of the settlement, the proportions are somehow reversed. From the 139 answers the *"good"* has a value of 54.7 percent, while *"bad"* is 45.3 percent. It is interesting to see the figures for the "change" question. Again, the "*better*" dominates (58.0%), while "*worse*" is 42.0 percent, which is slightly similar to the opinion about their settlement. We can conclude that the respondents generally feel the positive changes that took place in their region. But we have to underline that the domination of positive feelings is very weak, and the amount of "*very good*" or "*much better*" is insignificant (2.9% and 5.8% respectively).

Another question in this group is connected with the opening of the borders. The respondents had to say "*yes*" or "*no*" for the question whether the opening of borders had a positive or negative effect on their life. (After joining the EU, even if Romania is not a member of the Schengen convention, crossing the border became significantly easier as it is possible to do it only with an identity card.) They were also asked to give some reasons for their answer. Of the 126 answers 92 said "*yes*" (73.0%) but only 60 respondents gave some explanation. They emphasised that travelling became easier (30.2%) and only 4.0 percent said that by the opening of borders, the number of tourists coming to their region will increase.

In addition to the general questions, we also asked some open-ended questions, in response to which they had to formulate the *"good"* and *"bad"* things in the current situation of their settlement. As it can be expected the answers to the open-ended questions are very diverse and therefore difficult to interpret.

For the question "*What is good in your settlement?*" 120 answers were given, with 65 varieties. The categorised results are presented in *Figure 4*.

Almost ¼ of the respondents revealed the importance of tourism (24.2%). 20.0 percent underlined the development of infrastructure, mainly the asphalting of the roads (more than 6.0%) and the connection to water supply and waste-water systems (about 6.0%). The answers included in *"good"* group are very different. Some examples: "*better life*", "*everything is good*", "*we have everything*". The most interesting answers are: "*you can feel a small prosperity*", "*the young went to work abroad bring money to home*", "*the tractors help the work*" or "*it is good that we*

Fig. 4. Good things in the actual situation of the settlement

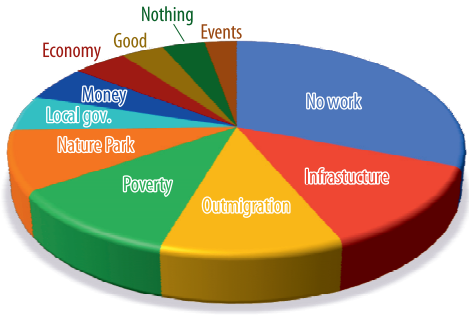

Fig. 5. Bad things in the actual situation of the settlement

do not have to buy food on tickets" – these answers recall the sad memory of the communist era. All the presented answers are unique in some way. The next element is simply "*nothing*" (13.3%). It is strange to give such a categoric negative answer to a question which is about the good things. The local government is the next element with 7.5 percent of the answers. Some examples: "*good management*" (2.5%), "*the mayor is doing his job*". To some surprise, only 6.7 percent of the respondents consider nature as being a good thing in their settlement. The other types represent a small amount. But the following answer is also interesting: "*it is nice, but the young are gone and no one stays…*"

We were curious about how often "nature" or the "nature park" appeared in these responses. As mentioned before, "nature" has a very low representation (6.7%), while the "nature park" does not appear at all among the answers to the "*what is good…*" question.

For the question "*What is bad in your settlement?*" 127 answers were given, with 86 varieties. We tried to group the answers into 23 categories, which is still too much. In *Figure 5*, only the categories with more than two answers are presented.

The most important element is "*unemployment – no work*" (26.8%). In the second place is "*infrastructure*" with 11.0 percent. This is interesting because in the previous question, 20.0 percent of the respondents considered the infrastructure to be good. It is also interesting that the same elements are considered *"bad"* by certain people that were considered *"good"* by others in the previous question, namely "*asphalt roads*" or "*water supply*". Naturally, it is obvious that the respondents are from different places. The results clearly show that the different villages in the region develop in different ways. A more detailed analysis of this topic would reveal some interesting conclusions. Outmigration and poverty are in the third place with 9.4 percent each.

A few lines up we were wondering if the "nature park" appears as a good thing. In fact, it did not, but it appeared as a bad thing with 7.9 percent. Some of the answers simply mentioned the park as being *"bad"* (2.4%), but there were some other noteworthy answers regarding the park: "*the park is bothering people*"; "*the park hinders us*"; "*the park gives laws and harsh fines*", "*they make fun of people*".

Local government is also mentioned by some people as a bad thing (4.7%). However, one should remember that it was also mentioned as a good thing in the previous question (7.5%). It is similar to the opposite views about "*infrastructure*".

Some interesting answers from the less important categories among the "bad things": "*few money*", "*small pension*" (money category); "*people do not cultivate the lands*", "*development is not allowed*" (economy category); "*good, everything is good*" (good category); "*we have no possibilities*", "*we are forgotten by the world*" (nothing category); "*there are few places for fun, recreation*" (events category).

Finally, some remarkable answers from the individual ones: "*stopping the economic activities of wood processing*"; "*mafia leadership*"; "*crowd*"; "*logging not allowed*". Even if these answers are isolated and some of them extreme, they raise up some questions. However, answering these questions is not among the aims of our study.

At the end of this group of economic questions, we asked local residents if they would like to move out from their settlement. We got 135 answers, of which 74.1 percent were "*no*". Those who might move out expressed their will to move to a city (11.1%) or abroad (7.4%). This is interesting because after reading the answers for the economic questions one could feel that a significant proportion of the locals – almost half of them – expressed a kind of dissatisfaction. Still, the majority choose to stay.

Connection with the landscape

The next group of questions examined people's relationship to the landscape. First, they were asked to select the values of their region. Nine elements were listed and they could choose several of them. The results are visible in *Figure 6*. "*Caves*", "*forests*" and "*peace*" are the most considered values.

The second question referred to the difficulties of the region. Five elements were listed and respondents could choose several of them. The results are visible in *Figure 7*. 129 answers were given, it seems that this question was less interesting or the options less expressive, as generally, the number of chosen elements is lower.

In this question, the respondents had the possibility to give their own answers, too. 19 answers were gathered, and their structure is very similar to those from the questions referring to the bad things of the settlement. 36.8 percent underlined the lack of jobs again.

The next question in this group refers to the direct connection of inhabitants to caves and nature. Does anyone who lives here often go to the caves or to the nature (the surrounding forests)? The responses (*Figure 8*) show that the relationship between local residents and caves is rather weak, as the majority of people "*never*" (54.7%) or only "*1–3 times a year*" (37.2%) visit a cave. The proportion of those who go to a cave on a monthly or weekly basis is only 8 percent.

Visiting nature (surrounding forests), on the other hand, is much more significant, with more than half of the people (53.6%) going to nature daily and 21.7 percent weekly. These answers can be explained probably by

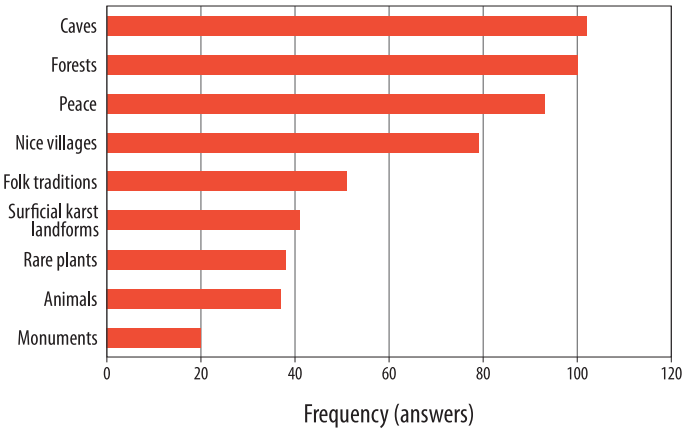

Fig. 6. The values of the region according to the respondents

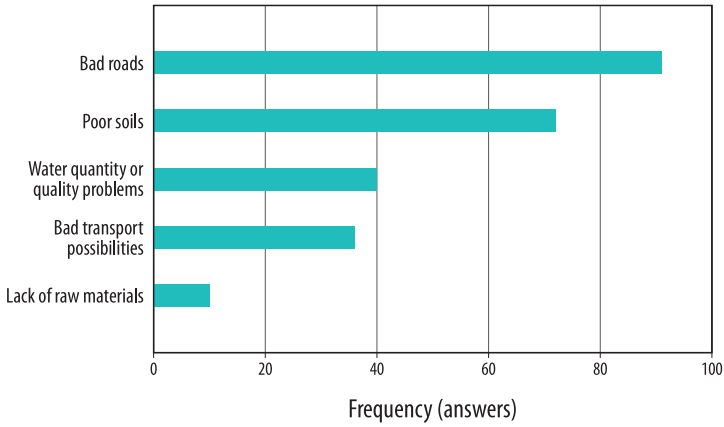

Fig. 7. The difficulties of the region according to the respondents

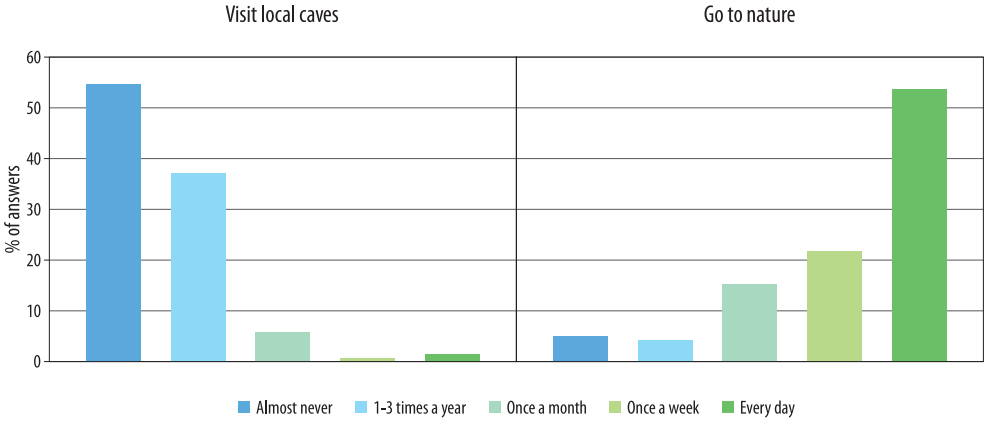

Fig. 8. Local people and caves / nature

the fact that locals live in villages, which are closely connected to nature. Caves are not so interesting for locals, but they represent a very important attraction for tourists.

Living in karst terrain is never easy (Ravbar, N. 2004; Day, M. 2010), so we also asked local people about how they consider living in a karst region as a whole: a blessing or a curse? We got 127 answers and the absolute majority considered living in a karst region a "*blessing*" (92.1%), while only 3.1 percent considered it a "*curse*". The others gave an evasive or mixed answers.

Tourism

The next group of questions deals with tourism through four 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 – 135 answers – show that 55.6 percent perceived a high number of tourists (i.e. "*crowd*"), whereas 24.4 percent a small number of tourists. The remaining 20.0 percent believe that the number of tourists is more of a transitory nature.

As can be seen in *Figure 9*, 91.2 percent of the respondents thought that "*more tourists would be better*". This answer suggests that locals have an interest in developing tourism.

The next question tries to detect the personal relation of locals to the tourists or tourism in general. As it was an open-ended question the 128 answers had 26 varieties. It was easy to group them into categories as the majority of the answers is clearly "*no*" (*Figure 10*). 58.6 percent of the respondents have no relation with tourists at all, 14.1 percent offer rooms, while 25.0 percent work in tourism services including accommodation, catering, guiding etc. The remaining 2.3 percent consider themselves as "*friend of tourists*", which means that they have a positive attitude towards tourists without any direct involvement.

The fourth and last question of this group deals with the topic of geotourism. This concept, which has been developing rapidly since the end of the 20th century (Dowling, R.K. 2011) may open up new opportunities in karst tourism. The question was if they knew what the term "geotourism" means, and if their answer was "*yes*" they also had to give some kind of definition. Only 19.0 percent of the 105 answers stated to know the meaning of "geotourism", and only 18 answers were given to the open-ended part of the question, using the following terms in their definition:

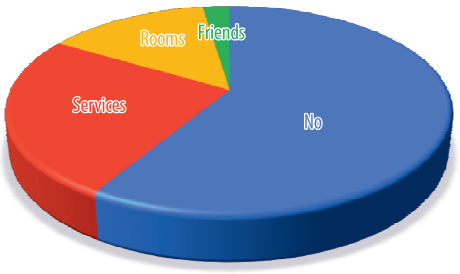

Fig. 10. Personal relation to tourism

"*nature*" (5.0%), "*geography*" (3.6%), "*geology*" (2.2%) and "*caves*", "*karst*", "*mountain*" (0.7% each). These results prove the fact that the theoretical knowledge is very poor, even if practically all of them live in a place where geotourism is in fact significant.

Relation to the nature park

One of the key issues is the relationship between local residents and the nature park. Seven questions were formulated in order to explore the details of this relationship.

First, we were curious to see if locals were aware of the protection category of their region. They had to choose from: "*nature*

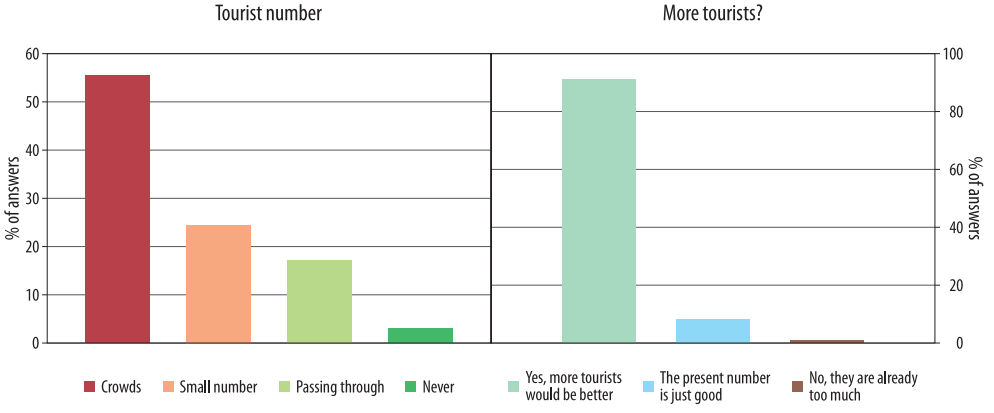

Fig. 9. Perception of tourism by local people

park", "*national park*", "*natural monument*" or "*protected area*". From the 127 respondents, 83.5 percent knew correctly that they lived in a "nature park". However, 7.9 percent thought that they were in a "*national park*", probably confusing the two terms. The rest chose the "*protected area*" or the "*natural monument*" category (6.3% and 2.4%, respectively).

The second question was "*Do you have any personal connection to the nature park?*" 68.3 percent of the 126 respondents declared that they had no relation. Those who pretended to have relations gave 12 different answers, which were grouped in three categories. The proportions can be seen in *Figure 11*.

24.6 percent described their relationship as "*friendship with someone working at the nature park*", 5.6 percent had a working relation and 1.6 percent a relation of respect. It seems that the nature park doesn't have an important role in the lives of the majority of inhabitants – at least not at the level of personal relations.

There was also a question for families with children about how often their children meet nature park programs (in school or other ways). This is an important factor in increasing awareness. We got only 90 answers, and from these, only 12.2 percent affirmed that their children heard about the nature park. There were two very clear answers saying that in their child's school there was a thematic competition about the park and another parent remembered that the representatives of the park attended the classes. The distribution of the other answers can be seen in *Figure 12*. 46.7 percent affirmed that their children did not hear about the park, the others were not sure (28.9%) or they simply did not know (12.2%).

The next two questions were open-ended. The respondents were asked to specify the advantages and the disadvantages of the park for the locals. As we saw at the question referring to the economic situation, the nature park appeared rather as a bad thing though not in a high frequency. So, one can expect that in these open-ended questions, the "*rather bad*" reputation of the park appears again.

For the question about advantages 123 answers were given with 50 varieties. We grouped them into 19 categories. In *Figure 13*, only the categories with at least three answers are presented.

The figure speaks for itself. "*Nothing*" has an absolute majority with 52.0 percent. But the next two categories (disadvantage – 7.3%, and not many – 6.5%) can also be considered as rather negative attitudes. So, altogether, the neutral and negative answers have a proportion of almost 2/3 (65.9%). Tourism has a value of 4.9 percent, while the further answers have less than 4.0 percent. Some interesting descriptions for advantages: "*for locals absolutely nothing, maybe for nature*"; "*too little, maybe some tourists*"; "*I don't think the locals feel it*".

For the question about disadvantages 118 answers were given with 106 varieties. It was rather difficult to group the answers. Their

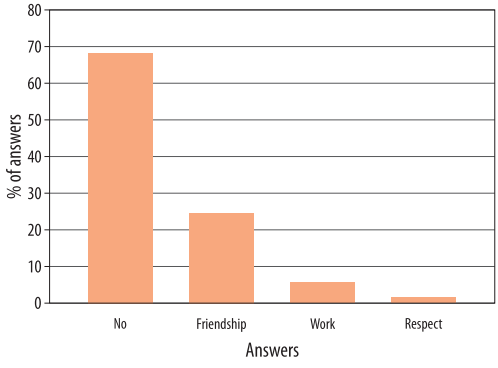

Fig. 11. Personal relation to Nature Park

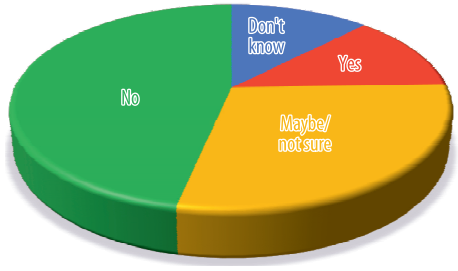

Fig. 12. The respondents' answers to the question "Do your children meet nature park programs in the school or other ways?"

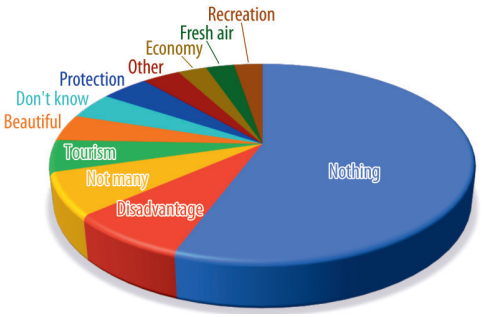

Fig. 13. Advantages of the nature park for the local inhabitants

structure can be seen in *Figure 14*. Those who consider that the park has no disadvantages represent 13.6 percent of the respondents. To better understand the structure of the groups, we can highlight some representative opinions from each group. For group "*wood cutting*" (22.0%): "*you can't cut trees*"; "*we don't have access to our own forest*"; "*we can't collect firewood*". In the group "*penalty*" (13.6%) there are some hostile opinions: "*many disadvantages, fines over fines*"; "*we are fined, we are afraid of them*"; "*they don't let us sell our products, they charge us taxes*". The group "*many*" has a proportion of 11.9 percent. Some examples: "*lot of disadvantages*"; "*many limitations*". Finally, some examples from the group "*rules*" (8.5%): "*we have stricter laws than other communes*"; "*laws invented by them*".

After considering the detailed answers, we can look at the overall opinion of local residents whether they consider the advantages or the disadvantages of the nature park to be more important (*Figure 15*).

The general opinions seem to be more balanced than we would expect based on the previous open-ended questions. *"Good"* answers have a proportion of 46.2 percent, while *"bad"* answers of 53.8 percent, i.e. the negative opinions slightly dominate.

Learning from past conflicts in the operation of national parks and other protected areas worldwide, there is a strong emphasis in many places on involving local people as much as possible in the NP decision-making mechanism or at least holding frequent consultations with them (Nolte, B. 2004; Hayes, T.M. 2006; Mose, I. 2007; Zurc, J. and Udovč, A. 2009). When local people were asked whether they had any influence on park business (e.g. forums, councils), 53.2 percent of respondents answered "*no*", and only 23.0 percent said "*yes*". The others did not know or were not interested. An interesting opinion here: "*people have lost their interest, they don't go any more to meetings*".

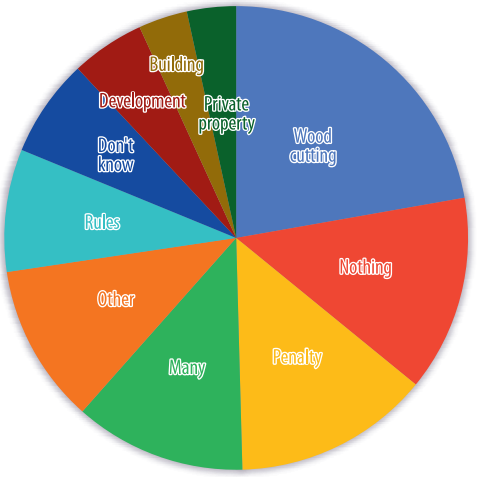

Fig. 14. Disadvantages of the nature park

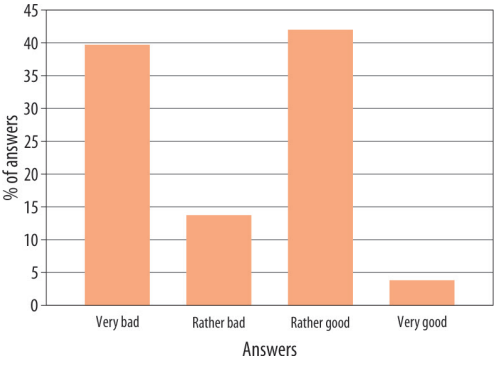

Fig. 15. General opinion of local people about the nature park

Based on the official documents (laws) and the literature, we summarised the general tasks of the parks in seven points. Respondents could express on a 1-5 grade Likert scale how much they agreed with these goals for the Apuseni Nature Park.

As it can be seen in *Figure 16*, the results show that the protection of geological and biological values are the most highly appreciated. At the same time, it should be noted that in the daily activities, budget proportions and publications about protected areas, biological conservation is generally given more emphasis than geological conservation, but it is a worldwide phenomenon (cf. Gordon, J.E. *et al.* 2018). The lowest score was given to "*cultural values*" followed by "*education*". "*Scientific research*" is somehow in the middle; however, it should be a very important task for nature parks. Tourism is also under-rated. Probably locals are not yet aware that tourism – which is important for them – can be developed within the framework of the nature park. Conflicts may arise between tourism and conservation (e.g. waste material, etc.), but for the benefit of local people, it is important to find ways that make sustainable development of tourism possible while preserving the integrity of nature.

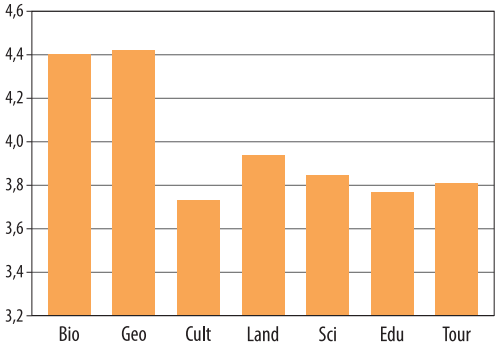

Fig. 16. Mean scores given to the importance of each task of the park according to local people (1.00 = not important at all, 5.00 = very important). Bio = biological preservation; Geo = geological values; Cult = cultural values; Land = landscape protection; Sci = scientific research; Edu = education; Tour = tourism.

Discussion and conclusions

The most intriguing questions were those in connection with the nature park. As we already mentioned in the Introduction, there were several situations when potential respondents refused to fill in the questionnaire after realising that there were questions regarding the park. As for the economic questions, we can feel a kind of optimism, and the proportion of inhabitants who would like to move away from their settlement is equal or less than in similar surveys conducted in other karst areas. For instance, the proportion of locals who would move away from the Slovak Karst was between 23.0 and 55.0 percent, depending on their attitude cluster (Nestorová Dická, J. *et al.* 2020), 37.0 percent for Aggtelek karst (Telbisz, T. *et al.* 2018), and 36.0 percent for Tara National Park in Serbia (Brankov, J. *et al.* 2022). However, when speaking about the park, the balance tilts towards the negative opinions. The dissatisfaction of the locals, the feeling of limitation due to the park are expressed in many different ways.

The most relevant problems can be linked to the rules and laws. From discussions with the park administration, it is revealed that they also have difficulties in making the locals to follow the rules. This may be due to the inherited mentality of the communist period when the nature protection rules were less severe and even they were taken less seriously. Or are the rules really too severe? This is a question that should be analysed based on cooperation and mutual understanding. The administration of the nature park should involve local people more closely in decision-making, as stated by many other authors (Hall, D. and Richards, G. 2000; Tosun, C. 2006; Jamal, T. and Stronza, A. 2009; Puhakka, R. *et al.* 2009). Most dissatisfactions are connected with forestry and wood. At this point, a strange fact should be noted that the administration of the park – actually of all national and nature parks in Romania – belongs to the state-owned National Forest Administration (ROMSILVA), which is primarily interested in the economi-

cal use of forests and less in nature protections (Băltăreţu, A. and Busuioc, M. 2009).

From the answers, we can conclude that tourism is already an important issue for a significant part of local people, but it could be a complementary or even basic revenue for an even higher proportion of them. However, keeping the equilibrium between tourism development and nature protection is very important (Williams, P.W. and Fennell, D.A. 2002). In this process, the nature park and also the rules – and respecting them - have a major role.

Another question is whether we can talk about geotourism in Apuseni Nature Park. In the broadest sense of the word, the answer is yes (for types of geotourists, see Hose, T.A. 2008; Božić, S. and Tomić, N. 2015). In parallel with this survey a closely similar survey was made among tourists, the results of which will be presented in another article. In that survey, more than 400 questionnaires were completed, and more than 52.0 percent of the respondents affirmed that they heard about the term "geotourism". But when asked if they consider themselves as being "geotourists" only 29.4 percent answered affirmatively. Thus, it seems that the term is not well known even to the majority of tourists. Still, their knowledge about geotourism is better than that of locals. 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 of Apuseni Nature Park.

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