

Attitudes and preferences of visitors of Krka National Park, Croatia

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Abstract

The primary function of national parks (NPs) is nature conservation, but for the majority of them, tourism also plays an important role. Tourism generates significant incomes, but the benefits are often unequally distributed in space, as are the disadvantages. The karst regions are generally less developed terrains in terms of traditional livelihoods, but due to their special morphology, tourism offers great opportunities. Nonetheless, mass tourism can also pose increased environmental risks. In this article, we examine the above questions on the example of Krka NP, especially from the perspective of tourists, as we conducted a questionnaire survey with visitors. The results confirmed that there is a high degree of spatial inequality both in the awareness of attractions and the distribution of tourist accommodation. This fact has already been recognised by the management of the NP, and serious steps have already been taken to reduce inequality, but their impact is not yet significant enough. Based on the survey, tourism in Krka NP is determined by same-day visits. Tourists who come here primarily consider waterfalls, lakes and rivers to be the most important values of the landscape, while cultural values are considered less significant and even less known. Local products are virtually unknown in the NP palette, so this could be a direction for development. Another point that could be developed is the awareness of visitors in the field of karstification. As the survey was conducted during COVID period, its impact on tourism was also briefly examined. This impact was manifested in the fact that the proportion of retirees and tourist buses was very small, whereas the majority of visitors (90%) arrived in the NP as independent travellers. For one third of foreigners, COVID played a role in choosing Croatia as a destination. As for domestic tourists, two thirds chose to find a destination in Croatia because of COVID.

Keywords: national park, protected area, questionnaire, tourism, karst, spatial inequality, geotourism, COVID

Introduction

National parks are perhaps the best known institutions for nature conservation. Although their primary task is, above all, nature conservation, in fact, the 150-year history of national parks shows that they have a number of other responsibilities. Historically, tourism has played a significant role in national parks (BUTLER, R.W. and BOYD, S.W. 2000; FROST, W. and HALL, C.M. 2015) from the beginning (Yellowstone National Park, USA, 1872), despite tourism (especially mass tourism) has many adverse side effects (BUTLER, R.W. and BOYD, S.W. 2000). National park as a concept has also been an important

element of national identity from the beginning, although not equally in all ages and countries (FROST, W. and HALL, C.M. 2015). The relatively untouched national park areas are also invaluable areas for scientific research, as well as excellent locations for education (primarily in geography and biology) to increase environmental awareness (FROST, W. and HALL, C.M. 2015). Cultural values were less significant in the original concept, but during the boom of European national parks after World War II, these were also incorporated into the national park model (FROST, W. and HALL, C.M. 2015).

In many places and times, the relationship between national parks and the local popula-

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tion has not been conflict-free at all (KŐSZEGI, M. et al. 2019). Stronger restrictive rules in national parks are often perceived as negative by local residents (TRAKOLIS, D. 2001; MOSE, I. 2007; TELBISZ, T. et al. 2020), but a similar or even greater problem may be that local residents often feel that the national park is part of the state administration far from their own world, and national park benefits (mainly related to tourism) are enjoyed by others (KŐSZEGI, M. et al. 2019; TELBISZ, T. et al. 2020). Therefore, there is today an expectation that the national park should support the socio-economic development of the local population (ROMANO, B. 1995; MOSE, I. 2007), however, many believe that focusing on economic development may conflict with the primary goals of nature conservation. Thus, they emphasize that the management should use various tools to maintain the primary role of conservation if development were to conflict with this (DUVAL, M. 2006; KALISCH, D. and KLAPHAKE, A. 2008; PETRIĆ, L. and MANDIĆ, A. 2014). The much later concept of geoparks also aims, from the outset, to contribute to the sustainable development of the local population (MCKEEVER, P.J. and ZOUROS, N. 2005; FARSANI, N.T. et al. 2011; LAZZARI, M. and ALOIA, A. 2014). Regardless of intent, the direct economic impact of national parks is difficult to measure in many cases (MAYER, M. et al. 2010).

The above issues related to national parks are examined from several perspectives in the framework of a research project aimed at exploring the specificities of karst national parks in selected areas of Central Europe. Karst terrains are often depopulated areas, at least in Europe (PEJNOVIĆ, D. and HUSANOVIĆ-PEJNOVIĆ, D. 2008; TELBISZ, T. et al. 2014, 2015, 2016, 2019, 2022), but due to their special natural features (caves, gorges, collapse sinkholes, stream sinks, etc.), national parks are often found on them (TELBISZ, T. and MARI, L. 2020). Thus, in many places the question arises as to what these national parks can offer to the aging and decreasing local population. Karst areas can be important targets for sensu stricto or sensu lato geotourism (Božić,

S. and TOMIĆ, N. 2015; ANTIĆ, A. et al. 2020; TELBISZ, T. and MARI, L. 2020).

The project uses a variety of methods: semi-structured interviews, questionnaires with the local population and tourists, and statistical and GIS analyses to answer the above questions, of which we now present and analyse the results of a tourist questionnaire survey in the Krka National Park.

Study area

Croatia is an area rich in karst terrains, six of its eight national parks are located in completely karstic, two in partly karstic terrain (TELBISZ, T. and MARI, L. 2020). In Croatia, tourism plays a particularly important role, and the existence of national parks (and protected areas in general) has been shown in many places to have contributed to local socio-economic development (KODERMAN, M. and OPAČIĆ, V.T. 2020). However, in many cases the consequence was an increase in spatial inequalities (ŠULC, I. and VALJAK, V. 2012).

Krka National Park (*Figure 1*) is located in the south-central part of Croatia, in the county of Šibenik-Knin. This county is typically an aging and depopulating area (LAJIĆ, I. and MIŠETIĆ, R. 2013; MRĐEN, S. and BARIĆ, D. 2016; RADELJAK KAUFMANN, P. 2016). 89 percent of the county is built up from well-karstified limestones and dolomites (TELBISZ, T. et al. 2022). Within the county, one can observe sharply differing population processes between the coastal and the interior areas (RADELJAK KAUFMANN, P. 2016; TELBISZ, T. et al. 2022). The Krka National Park, founded in 1985, belongs to the inner, sparsely populated areas, and its elongated stretch of 109 km² can also be divided into two sharply different parts in terms of tourism. The part close to the coast (and the motorway), where the most spectacular limestone tufa waterfalls are visited by the vast majority of tourists. On the other hand, the long sections along the upper river branches are much less visited, although there are also beautiful and interesting sights: wide gorges, tufa cascades

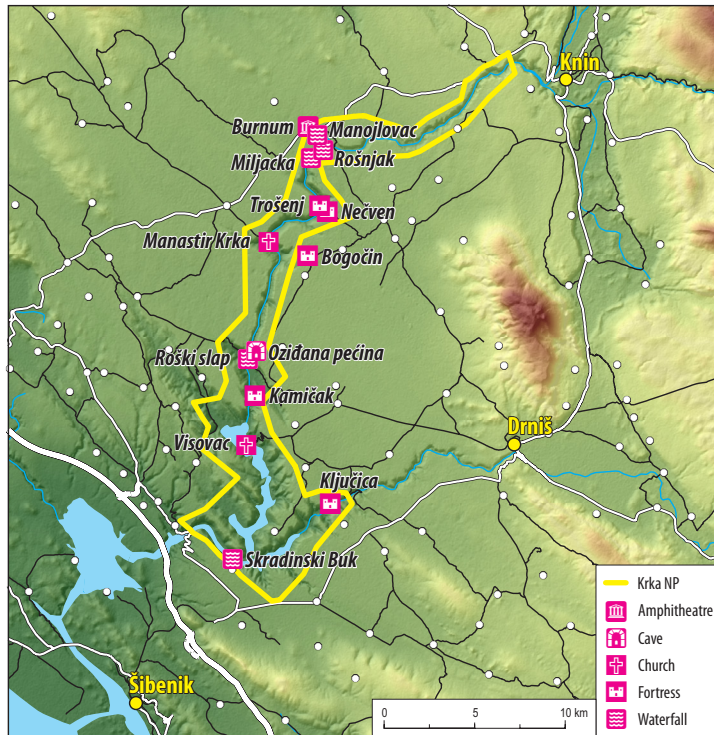


Fig. 1. Location and main tourist sights of Krka National Park

(albeit with slightly less water) and cultural attractions (island of Visovac with monastery, Roman monuments, watermills).

The visitors number of Krka NP increased rapidly after the War of Independence in the 1990s, reaching 1.4 million by 2018 (RADELJAK KAUFMANN, P. 2020), so restrictions had to be introduced: on the one hand, the number of people in the area of Skradinski Buk waterfalls was limited to 10,000; on the other hand, bathing at waterfalls was banned (GOJMERAC, M. 2018). This second restriction not only disappoints many tourists who come here (unaware of the new regulations), but a significant portion of the local population are also dissatisfied with this measure (*Photo 1*). The rapid increase in the number of visitors is in line with the global trends that characterise nature-based tourism (ecotourism, geotourism) in most countries on Earth (KUENZI,

C. and McNEELY, J. 2008; BALMFORD, A. *et al.* 2009). COVID, of course, here as everywhere, caused a sharp decline in 2020 (with 423,000 visitors), but by 2021, that decline has partly been compensated (734,000 visitors this year).

Considering the characteristics of the sample area, we are looking for answers to the following questions:

- To what extent does the spatial inequality characterise the Krka NP? I.e. how perceptible are the inner areas from the point of view of the average tourist? The attractions of the inner areas and potential accommodation possibilities?
- How do tourists rate the sights of Krka NP?
- What are the motivations of visitors to come here? Where do they get information?
- How satisfied are they with what they are experiencing here and what kind of development would they support?



Photo 1. Skradinski Buk waterfalls before (left) and after (right) the ban on swimming

- From the point of view of tourists, what is the order of tasks for the Krka NP?
- Does it mean something to tourists that this is a karst region? And in general, how aware are visitors of the geological heritage?

Notwithstanding the more general questions above, as the survey was conducted during the period covered by COVID, we were also interested in the local effects of the pandemic, and we asked two questions specifically about it.

Methodology

The knowledge about certain objects in national parks and geoparks, the motivation of visitors, the source of information, and visitors' attitudes to certain issues of nature conservation or development ideas are often examined with the help of questionnaires (PAPAGEORGIOU, K. and KASSIOUMIS, K. 2005; ZGLOBICKI, W. and BARAN-ZGLOBICKA, B. 2013; ALLAN, M. *et al.* 2015; ŠTRBA, L. 2019). These can be carried out on-site or online. Similar surveys have been conducted in several national parks in Croatia (ŠULC, I. and VALJAK, V. 2012; KRPIŃA, V. 2015).

We conducted an on-site questionnaire survey in Krka NP from 30th August to 3rd September 2021. This was the first week after the overcrowded summer period, when there were still quite a few tourists, but the overcrowding was no longer typical, and there were relatively few visitors in the early

morning and late afternoon hours. According to the official statistics, there were 28,704 visitors during this week in the Krka NP.

The questionnaires were filled with the help of 9 assistants at several resting points in the area around Skradinski Buk waterfalls, which corresponds to convenience sampling. Visitors had the option to complete the questionnaire themselves or with the help of a questionnaire assistant. The questions were written on both sides of an A4 sheet. There were a total of 28 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 questionnaire was available in 5 languages (English, German, Croatian, Italian, Hungarian) with the same content. 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.

Results

Demographic characteristics

In total, 525 people took part in the survey. About a third came from Germany, 10–10 percent from France and Poland, 7–7 percent from the United Kingdom and Croatia, and more

than 1 percent from the Netherlands, Austria, Hungary, Switzerland, the USA, Belgium, Italy, Ireland, Romania and Slovakia. The whole sample allows for statistically reliable conclusions (of course only for the given period), but the analysis of the differences between tourists from different nations is not really possible given the number of items for most nationalities. However, some simple observations can be made even if it is not statistically reliable.

According to the age distribution (Table 1), young people (18–30 years old) were in the majority among respondents (59%), and the proportion of respondents decreased with increasing age. On the one hand, it is a common feature that young people are always more likely to complete a questionnaire. Nonetheless, the lack of the elder generation (retirees) is particularly striking, which can be clearly explained by COVID because the pandemic reduced the number of older travellers much more strongly. In terms of education, the sample was dominated by people with tertiary education (72%), which is typical for surveys conducted at natural sites (ZGŁOBICKI, W. and BARAN-ZGŁOBICKA, B. 2013; ALLAN, M. et al. 2015; ŠTRBA, L. 2019). In addition, in the national park visitor survey in 2019, the most numerous respondents were those between 21 and 36 years of age and 68.5 percent of respondents had university degree (Krka National Park, 2019).

Table 1. Demographic data of respondents

Indicator	Number	Percentage of answers, %
Age, year		
18–30	308	59.1
31–50	139	26.7
51–65	59	11.3
over 65	15	2.9
Education		
Primary school (or less)	6	1.2
Secondary school	127	26.3
Higher education (university)	349	72.4
Sex		
Male	225	43.6
Female	290	56.2
Male/Female	1	0.2

Slightly less than half of those who completed the questionnaire were men (44%) and the majority were women (56%).

Some basic characteristics of tourism in Krka National Park

The next group of questions examined some general technical characteristics of tourism. From these, it can be stated that two-thirds (65%) of the respondents arrived at the Krka NP by car, a little less than a third (29%) by bus (tourist bus or regular bus service). It is clear that these rates have also been significantly modified by COVID, as tourist bus groups have been the most severely hit by the pandemic. An insignificant but interesting highlight is that 3 percent of visitors arrived in the national park by boat, which is possible because in a deep, ria-type valley you can sail from the sea to the gates of the national park. In addition, we can mention 2 percent of environmentally conscious visitors, who arrived here by bicycle.

Consistent with the above, only 10 percent arrived organized by a travel agency, the rest being independent travellers, either with family (43%) or independent group / friends (43%) or alone (3%). The vast majority of visitors (92%) spend only one day in the Krka NP, while 5 percent stay for 2–4 days, and even fewer (3%) for longer. This is an unfavourable ratio in terms of tourism revenues, however, it is typical for many other karst regions where there is a single prominent attraction (e.g. Baradla Cave in Aggtelek NP – TELBISZ, T. et al. 2020).

Spatial inequalities

We can examine spatial inequalities from two sides, on the one hand in terms of sights and on the other hand in terms of accommodation. It is true that the Skradinski Buk waterfalls are the most spectacular within the NP, but the rest of the NP also hides beautiful and interesting sites. But when visitors were asked “what other attractions do you visit within

the NP?”, only a minority (40%) answered, and even within that, most of the respondents (24%) said “nothing”. As for the remainder, many mentioned destinations, which are in fact not in the area of Krka NP. So finally, only 21 percent of respondents left, who could mention destinations (Visovac, Roški Slap) and activities (hiking, visiting caves) that are possible within the Krka NP (but in fact even the latter activities were quite common activities, which are not necessarily linked to Krka NP). Therefore, we conclude, that the spatial inequality is extremely strong in this respect.

As far as accommodation is concerned, the disproportion is also remarkable. Only a minority of respondents (23%) answered the question about accommodation, and only 14 percent of those respondents mentioned accommodations in Krka NP (more precisely, next to it), while all other respondents named accommodations along the coast (Split, Vodice, Šibenik, Zadar, etc.). It is in line with the fact that most of them visit Krka NP within a same-day visit that usually takes only a few hours and visit the region for other motives (e.g. coastal tourism). Therefore, the disproportion is significant in this respect as well, and we can conclude that the inner settlements cannot benefit much from the accommodation business related to the national park tourism. However, although the share of visitors who stay in the vicinity of the national park is small, the inland settlements still benefit from it, especially when we look at it in relative terms. Given how small and depopulated these settlements are, these numbers are locally significant and growing over the last 10–15 years. The national park is one of the attractive factors for this, while the other one being that tourists look for cheaper accommodation in places that are not overcrowded as an alternative to the coast.

Values of the national park from the point of view of tourists

One of the multiple choice (multiple answer) questions in the questionnaire examined what

the values of this landscape are according to tourists (*Figure 2*). As expected, of the pre-specified response options almost everybody chose the “waterfalls” (92%), and the vast majority (82%) also marked the “lakes and rivers” option. The “forests” option got the third place (66%) that is somewhat surprising as Krka NP is not a classic “densely wooded” area. Nonetheless, it is an unambiguous fact that the forest cover of the NP along the valley sides of the river Krka is relatively high compared to its surroundings. Half of the visitors (51%) also selected the “peaceful landscape” option, despite the fact that it may not be so easy to experience in an often crowded park. The option “animals” are in fifth place (49%), although most visitors are likely to meet only fish in Krka NP. However, pictures and information about the animals in the area are prominently displayed on the information boards, and many people links nature conservation to the protection of animals and plants.

The option “caves” received few votes, which is not surprising as only one cave (Oziđana pećina) can actually be visited in the NP area, and in fact few people get there. Furthermore, there have been few votes for “surface karst landforms”, which are less obvious along the main visitor route, and few visitors are aware that the waterfalls them-

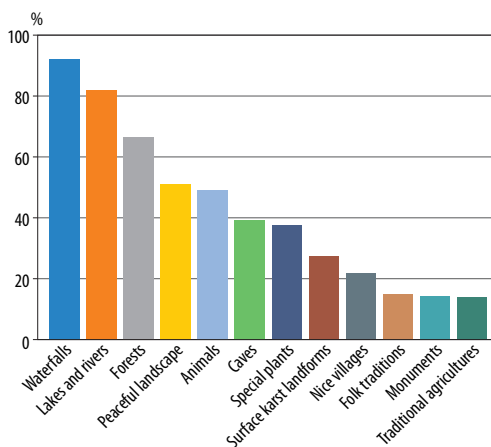


Fig. 2. Values of the national park according to visitors

selves and the gorge valley were formed by karst processes. Cultural values (i.e. the options “nice villages”, “monuments”, “traditional agriculture”, “folk traditions”) are important for only a small number of people in the Krka NP (15–20%), which is understandable because these values, although present, are really not as significant as they are in relatively nearby other areas, such as cities along the coast. In addition, most visitors do not even experience the cultural values because they spend only a few hours in the NP.

The following aspect was mentioned in a separate question, but we write about that at this point. In several national parks, the existence of local products are also among the values, partly due to the preservation of cultural heritage and partly as a contribution to the socio-economic development of local people. The actual situation in Krka NP according to our survey is that 85 percent of the respondents provided an answer to the question “Do you know local products with the trade mark of Krka NP?”, but only 4 percent of them answered “yes”.

Motivation and source of information

In another multiple choice (multiple answer) question, visitors could answer why they chose Krka NP as the destination of their visit (Figure 3). The vast majority (73%)

pointed out that they were interested in natural attractions. The second most important factor was to know the country (“I like to get around the different parts of this country”) with 38 percent of respondents. Somewhat less significant factors were “friends suggested” (27%), “looked for relaxation” (22%), “wanted an adventurous tour” (23%). “Interest in karst landforms” is a motivation factor for only a small minority (6%). As noted above, no statistically relevant conclusions can be drawn for selected nationality given the small subsample size, but here we note that “relaxation” and “getting around the different parts of this country” were significantly more important for Croatians than for foreign respondents.

Regarding motivations, it is also meaningful to examine the effect of the title of an area (e.g. national park, world heritage, geopark) on visitors’ motivations (REINIUS, S.W. and FREDMAN, P. 2007; TELBISZ, T. et al. 2020). Therefore, we also asked a question in this connection, which revealed that “the fact that Krka is a NP” is an important aspect for more than half of the visitors (56%), it matters a little to 31 percent and only 13 percent answered that it doesn’t matter at all.

The main source of information (Figure 4) is, as expected, the “internet in general” (62%). Compared to this, “personal relations” (28%) and “social media” (20%) lag far behind, but

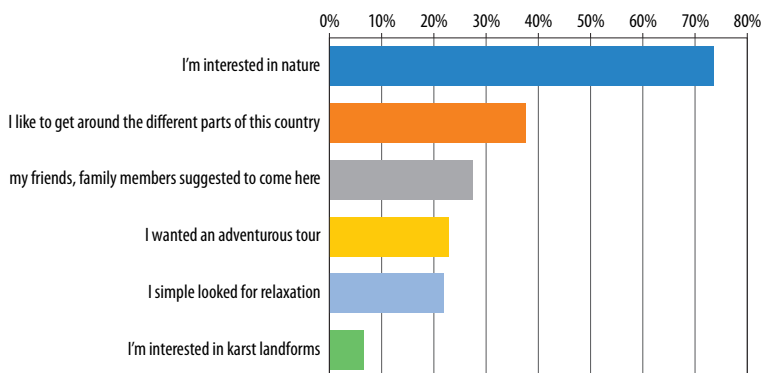


Fig. 3. Motivation of visitors to visit Krka NP

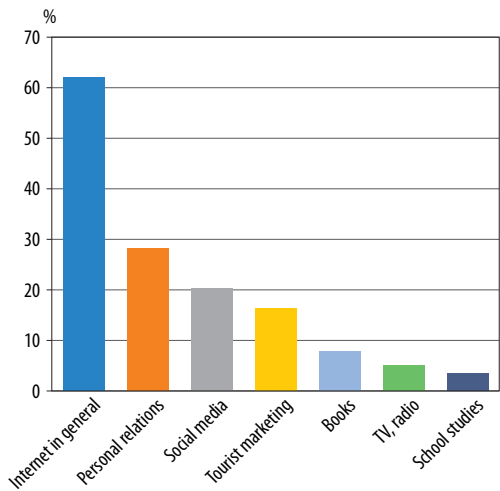


Fig. 4. Information sources of visitors

obviously their role should not be underestimated. The classic “tourist marketing and brochures”, although slightly less important than these (16%), still adds to the information of tourists. At this point again, a clear difference can be observed between Croatian and foreign respondents: in the case of Croatians, “school studies” (42%) and “TV and radio” (35%) are also significant sources of information, in contrast to foreign respondents.

Visitor satisfaction and development ideas

Respondents could answer to the questions related to satisfaction that covered five different topics on a 4-point Likert scale.

Basically, visitors are predominantly satisfied with the services (Figure 5). The highest score was given to “accessibility”, which is completely reasonable as most visitors arrive here by car (bus) and the two main entrances to the Krka NP are close to the highway. Although the average scores for the other four questions are quite similar, for the “eating options” and “accommodation” the answer option “3: rather yes” received slightly more votes than “4: perfectly” unlike the questions of “guidance” and “visitor

information”. So when it comes to services, maybe it is worth focusing the development on accommodation and eating option – but only with maximum consideration of the environmental aspects!

To some extent, the number of days that tourists spend in a given area is also a measure of satisfaction. As we have seen above, the vast majority only come here for one day. In the questionnaire, there was another question, which asked how many days the visitor would spend here if (s)he had more time. 48 percent said they would spend here only one day to visit the waterfalls. However, 30 percent answered that they would spend here more days even with the present conditions, and 22 percent chose the option that they would spend here more days only if there were more possibilities (sites, programs). Interestingly, in the 2019 Krka NP visitor survey 70.3 percent of respondents stated that they would have spent several days in the area if they had known about other sites and options in the national park in advance. Furthermore, 67.5 percent said that were they to spend more than one day in the area, they would opt for accommodation in the surrounding rural area (Krka National Park, 2019).

Of the tourist development options, the respondents could vote for seven options also on a Likert scale 1–4 (Figure 6). The results reveal that most of the respondents would support the construction of new panora-

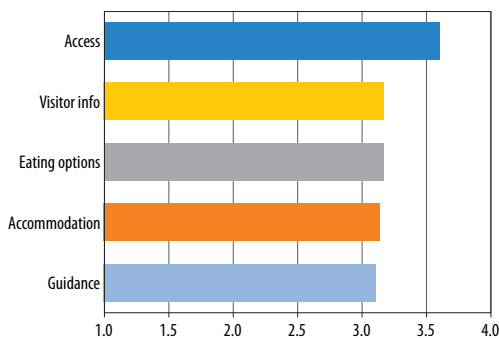


Fig. 5. Visitors’ satisfaction. Average scores on a 4-point Likert scale.

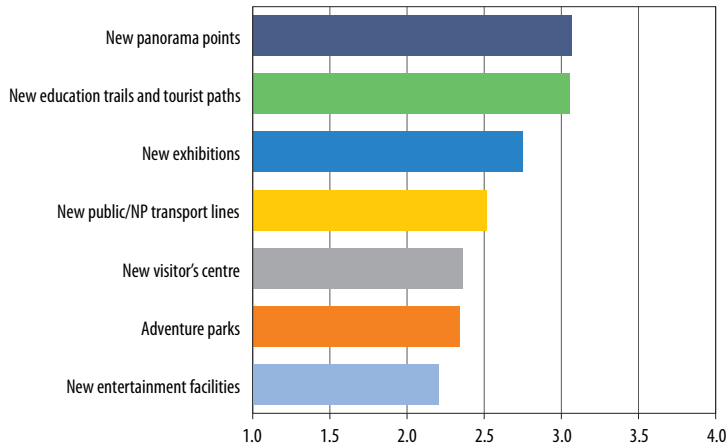


Fig. 6. Visitors' support to different development ideas. Average scores on a 4-point Likert scale.

ma points, presumably because, although there are already excellent panorama points around the waterfalls, they are often overcrowded. In addition, people in general like lookout points. The creation of new education trails and tourist paths got similarly high popularity. Nevertheless, the actual situation is that there are already a relatively large number of education trails and tourist paths in the NP, but most people do not visit them (except for the Skradinski Buk waterfalls) – partly perhaps due to a lack of information and partly due to the typical 1-day long visit.

The creation of new exhibitions is slightly less supported, but much more than the construction of a new visitor centre. These opinions seem slightly paradoxical as visitor centres often contain exhibitions. The “construction of new public/NP transport lines within the Park” received an average score, which means that it is neutral for a large part of the visitors as they visit only Skradinski Buk waterfalls. Nevertheless, this could be an important element in bringing the interior of the park closer to tourists, therefore to decrease spatial inequality.

The lowest support in the average score, and more importantly, a significant proportion of dismissive opinions exist in relation to the establishment of new entertainment possibilities or adventure parks. But even for

these development ideas the proportion of supporters is slightly higher than that of the opponents. However, the relatively high rejection rate indicates that many people consider this type of development to be incompatible with the classic nature conservation tasks.

Tasks of the national park according to tourists

Naturally, the tasks of a national park are prescribed by the relevant law of the given country (see MARI, L. *et al.* 2022 in this issue). Nonetheless, an important question is how much visitors are aware of these tasks and which ones they consider important. This was measured on a 1-5 Likert scale, listing 8 different tasks.

Taking into account the characteristics of Krka NP, the visitors placed the protection of the “hydrological values” in the first place (average score 4.79) (Figure 7). “Biological values” (4.76) and “landscape” protection (4.7) received similarly high average scores. It is normal as these goals are almost everywhere among the most important tasks in national parks. The preservation of “geological values” (4.59) did not lag far behind the above goals, which is a little bit surprising, because in many places the experience is that geological preservation is significantly behind the

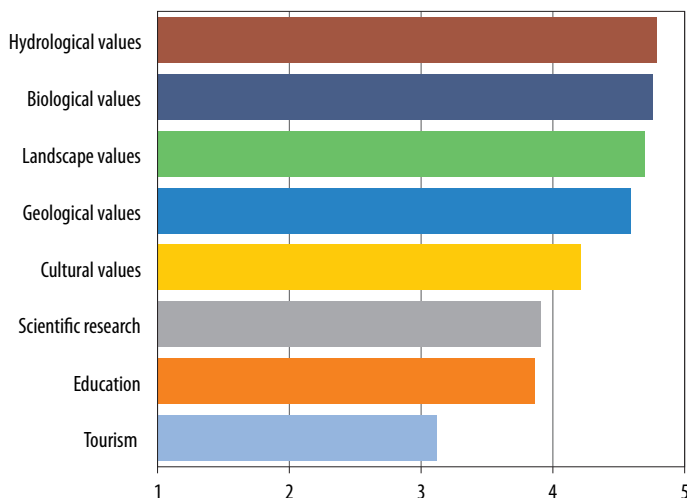


Fig. 7. Importance of the tasks of the national park according to visitors. Average scores on a 5-point Likert scale.

biological issues (BRILHÁ, J. 2002; GORDON, J.E. et al. 2018; SZEPESI, J. et al. 2018). However, in Krka NP, it seems that visitors are aware that the tufa waterfalls as the main attractions are after all geological values. “Cultural values” (4.21) are even further down the list, which is evident, as this is historically a later task for national parks, and the primary responsibility of national parks is still nature conservation. However, it is noted here that Krka NP is about the coexistence of man and nature/river for centuries (as especially visible in watermills and the use of hydro energy, but also agriculture etc.), therefore, this should clearly be better presented in the NP. The tasks of “scientific research” (3.91) and “education” (3.86) have got even lower scores, which is a typical result of similar surveys (NESTOROVÁ DICKÁ, J. et al. 2020; TELBISZ, T. et al. 2020), although these roles are very important for most national parks. However, this opinion of visitors is easy to understand as only a small proportion of them are in connection with these activities. The most surprising result is that “tourism” received the lowest average score (3.12). The interpretation and significance of this fact is explained in more detail in the Discussion section.

Awareness of geological heritage and karstification

One of the important issues in our research is how well people are aware of karstification and the geological heritage in general. On the one hand, because karstification is a very important practical topic in water supply in many places, and national parks could or should provide education on this topic. On the other hand, the role of geotourism related to either karstic or non-karstic geological heritage is constantly growing nowadays. Nevertheless, a common experience is that people are still less aware of the meaning and values of geotourism.

Well, this latter fact was also confirmed by the results of our survey. When people were asked if they “know the meaning of the word *karst*”, only 18 percent answered “yes”. And when the meaning of the word ‘karst’ had to be explained shortly, only 30 percent of those who answered “yes” could give a more or less accurate answer. Another third (31%) could write only general adjectives (like “rocky” or “barren” surface), and the remaining more than third part (39%) gave no or incorrect answers. We obtained roughly similar proportions when asked if the

visitor had already visited other karst areas. 24 percent of respondents answered “yes”, but only a few of them were able to name any karst region within Croatia or abroad. In this respect, only Croatian respondents differed significantly from the average, as more than half of them (57%) said that they had visited other karst areas. By the way, the most frequently named karst region among both Croatians and foreigners was the Plitvice Lakes – which is a correct answer.

When asked about geotourism (“Have you ever heard the expression geotourism?”), roughly a quarter of respondents (27%) said “yes”. And only 14 percent of all respondents were able to give a more or less adequate description of what the word “geotourism” actually means.

The effect of demographic characteristics

The question arises as to how the above results are influenced by certain demographic characteristics such as gender, age, or education. In most cases, we found that these factors did not result in a statistically significant difference in responses. However, some cases can be highlighted when their effects have been observed. The effect of age is the most noticeable: the knowledge of young people (18–30 years old) about karst and geotourism is significantly lower than that of older people (the age group 51–65 is the best in this respect). Unsurprisingly, young people are much more likely to be adventure-seekers than older people.

Among the information sources, books are the most popular among the 51–65 age group, while their significance is negligible among young people. In contrast, the internet and social media are much more important for the younger age group. It may be surprising, but the level of education has less influence on the results, and even where the difference is statistically significant, there is no clear explanation either. For example, people with university degree mentioned less frequently the “animals” among the NP values, but they

selected the option “I am interested in nature” more often among the motivations. As for the information sources, “school studies”, “TV and radio” and “social media” are less important for those with a higher education degree, while the “internet” was mentioned in a higher proportion. Gender is even more indifferent to the questions examined, but we can mention, for example, that among the values of the NP, “special plants” were selected by a significantly higher proportion of women, and among the information sources “social media” was also chosen more frequently by women.

The role of COVID

Issues about COVID were not among the primary goals of the study, but because “life brought it so” that the survey fell by the time of COVID (the survey took place in fact at the end of a wave trough), we also asked respondents two COVID-related questions. The first question was whether COVID motivated visitors to visit natural areas (like the Krka NP). Behind this question was the idea, that in many places during COVID period, it was experienced that people visited outdoor natural places to a greater extent than exhibitions or programs in enclosed spaces (either out of compulsion or for personal consideration).

In the case of Krka NP, this was not the case for 71 percent of the respondents, but for 19 percent it was slightly important, and for 10 percent it was a predominant or decisive factor in the choice of a natural site as a tourist destination.

The second question was whether COVID influenced the choice of Croatia as a destination for foreign visitors. For Croatian respondents this question was slightly modified: “did Covid-19 crisis motivate you to take your holiday in Croatia”. 34 percent of foreign visitors answered “yes”, which is a fairly significant proportion. In the related open-ended question (“why did you choose Croatia”), respondents generally argued that the number of incidence was small in Croatia, or that it

was administratively easier to travel here (as Croatia was on the “green list” at the time). For Croatian respondents, COVID played an even more important role with 67 percent saying that COVID influenced them to spend their holidays in their home country.

Discussion

The above results reflect that in the Krka NP both the distribution of visitors and the distribution of accommodation are highly unequal. However, in order for the local population to benefit from the NP, it would be important to reduce inequality and develop the interior. This idea is not new, as the management of the NP has already recognized this fact and started along this line as the project “Unknown Krka: the hidden treasures of the upper and middle courses of the Krka River” testifies it (RADELJAK KAUFMANN, P. 2020). The reconstruction of lesser-known attractions in the interior (development of access, new exhibitions, hiking trails, Burnum project) has started and these locations also appear on the NP’s website and in its leaflets. However, this does not seem to be effective enough yet, as the survey reflects that the vast majority of visitors are unaware of these opportunities. As for rural tourism or simply, accommodation in the interior areas, these places obviously cannot compete with the attractiveness of the coastal zone, but for those who want a bit quieter and more affordable accommodation, they can be a good alternative to stay here. So, this can be a very important part of the development of the interior areas and the entrepreneurial layer of the local population can also be involved in its implementation. The creation of Krka NP trademark and the marketing and selling of local products by the NP could also help the local people, especially the local business community. However, it seems that this trade has not yet really developed here, so it is no accident that only a small fraction of tourists could name local products. Thus, this could be a potential direction for the fu-

ture development of Krka NP in the service of the local population.

One of the unexpected results of the survey was that among the tasks of the national park, the role of tourism was rated relatively low by visitors. In several other national park surveys (Aggtelek NP, Hungary; Slovak Karst NP, Slovakia; Tara NP, Serbia), tourism received a higher score in the ranking of national park tasks and an even higher score in the questionnaires completed by local people (TELBIŠZ, T. *et al.* 2020; NESTOROVÁ DICKÁ, J. *et al.* 2020). There are several possible reasons for this. Local residents experience the “benefits” of the national park most directly through tourism, so they understandably expect the development of tourism from the national park as well. This is especially true in the former socialist countries, where the entrepreneurial culture is less developed, especially in disadvantaged areas (KŐSZEGI M. *et al.* 2019; TELBIŠZ, T. *et al.* 2021). Thus, people expect that the national park can also manage tourism development in the most efficient way. This approach is deeply rooted in people, although in some places (e.g. in Aggtelek NP) there is a definite change of concept at the managerial level, the NP trying to step back in the development of tourism and entrusting this issue to independent contractors. To the contrary, in capitalist countries, the majority of people consider it natural for a long time that the development of tourism should be the responsibility of the private sector, whereas the national park should focus primarily on nature conservation issues. If tourism development is predominantly managed by the national park, conflicts between nature conservation and development occur within the national park organization, while if the private sector enters into tourism development, the conflicts arise between the national park and the economic actors. Both can have advantages and disadvantages. In any case, the fact that in the case of the Krka NP, tourism received the lowest score among the tasks of the national park may be the result of the fact that the majority of visitors come from countries that

have long followed the capitalist economic model. In contrast, the proportion of domestic visitors to the above-mentioned national parks (Aggtelek NP, Slovak Karst NP, Tara NP) is much higher than in Krka NP.

One of the tasks of national parks is to “educate” or, more generally, to increase knowledge or awareness of people in environmental or scientific issues. In our opinion, in the case of Krka NP, one of the most basic issues of this education would be the presentation of karstification, as karst processes created the dominant surface landforms of the NP. However, the survey revealed that knowledge transfer in this area is not efficient enough. However, as the relatively small size of Croatian subsample demonstrates, where the issue of karstification is more emphasized in public education, the knowledge of the karst-related concepts and facts may be slightly higher. In our previous survey, we found that the concept of “karst” was significantly better known in the Tara NP, Serbia (TELBIŠZ, T. *et al.* 2021). Nevertheless, we must add to the Tara case, that the proportion of teachers among the respondents was relatively high, as school groups, and consequently teachers, make up a large proportion of the Tara NP’s visitor composition, and it could significantly increase the knowledge about karst in the Tara survey). Nonetheless, we feel that the presentation of the concept of karst processes and the accentuation of the practical significance of karst hydrology should be given more emphasis in the knowledge dissemination activities of Krka NP. Knowledge transfer in NPs may include ‘individual’ learning, but organized field education programs can make a major contribution to deepening students’ knowledge of both karstification and the specific landscape (SÜTŐ, L. *et al.* 2020).

“Geotourism” is actually a long-standing form of tourism, but it actually got its own name only in the 1990s and has been on the rise ever since. Geotourists are usually divided into several groups (HOSE, T.A. 2008; BOŽIĆ, S. and TOMIĆ, N. 2015), and the vast majority of tourists in Krka NP can be classified as

general geotourist (or *sensu lato* geotourist) according to our survey. It means that they do not come here with a well-defined geological interest, however, what they actually visit is a (hydro)geological formation. Although Krka is not a geopark but a national park, if the geological heritage were given a little more emphasis, it would help raise awareness of the concept of geotourism and possibly help do some marketing to other lesser-known geotourism sites. And it would be a small step forward towards a spatially more even distribution of tourism. According to our survey, the link between Krka and Plitvice is well defined in the thinking of visitors, but other lesser-known geo-destinations could also be better advertised for Krka visitors.

Conclusions

Our survey conducted in Krka NP confirmed that there is a high degree of spatial inequality both in the awareness of attractions and the distribution of tourist accommodation. This fact has already been recognised by the management of the NP, and serious steps have already been taken to reduce inequality, but their impact is not yet significant enough.

Based on the survey, tourism in Krka NP is determined by the one-day long visits. Tourists who come here primarily consider waterfalls as well as lakes and rivers to be the most important values of the landscape. Cultural values are considered less important and even less known here. Local products are virtually unknown in the NP palette, so this could be a direction for development.

The main motivation of Krka visitors is “to look for natural beauties”, and the internet is their main source of information, but personal contacts and social media are not negligible either. Visitors are basically satisfied with the services (accommodation, eating options, guidance, visitor information), and the accessibility of the area is considered excellent, which can be explained by proximity to the highway (or in general, proximity to the coast). Among the development opportuni-

ties, the new panorama points and the educational trails / hiking paths enjoy the greatest support, while the development of entertainment facilities and adventure parks has a significant rejection rate (although these latter also have supporters). The awareness of the visitors in the field of karstification and geotourism is not very high, its development would be a reasonable goal.

The impact of COVID in the study period was manifested in the fact that the proportion of retirees and tourist buses was very small, whereas the majority of visitors (90%) arrived in the national park as independent travelers. For one third of foreigners, COVID played a role in choosing Croatia as a destination (because it was easier to travel here and the number of incidence was smaller than in other countries). As for the domestic tourists, two thirds chose to find a destination in Croatia because of COVID.

Visitors consider the preservation of hydrological values, biological values, landscape and geological values to be the main tasks of the NP, whereas they position education, research and the development of tourism as being less important (naturally, these latter tasks are also supported). Based on this, one can say that the idea that national parks should (also) serve the socio-economic development of the local people (cf. MOSE, I. 2007) is not really reflected in the opinions of visitors.

Of course, the above statements do not mean that in the development of the strategy of the national park, the managers should rely predominantly on the opinion of the visitors. These opinions may be overridden on the basis of other considerations. Nonetheless, these opinions are worth considering when answering the questions below.

In fact, the management of the NP (or its higher authority, the state) must decide whether

- they want quantitative development in tourism? (Because the NP is already experiencing overcrowding for a significant part of the year.)
- they want qualitative development in tourism?

- they want to adapt the developments to the needs of the local population?
- to what extent is it important to increase NP income as a development priority? (To what extent is the national park forced in this direction from the budget side?)
- or is the principle of nature conservation a decisive factor in contrast to the above points?

However, the discussion of these questions will be the subject of another article, in which the results of the questionnaire survey with the local population and the interviews with the main actors will be taken into account.

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