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HUMANITA

D.3.1.1

Report on **tourists' surveys results**

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Impressum

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HUMANITA – Human-Nature Interactions and Impacts of Tourist Activities on Protected Areas

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archive of Malá Fatra National Park, Kamenjak Protected Areas, Tuscan-Emilian Apennine National Park and Bükk National Park

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Section 1 – Surveys preparation

1. Introduction and objectives

The Report on Tourists' Survey results (D.3.1.1) is the first deliverable of Activity 3.1 "Understanding human impacts and their attitude towards nature". The elaboration of the survey addressed to tourists visiting protected areas **aims at understanding tourists' attitudes towards nature and, particularly, protected environments.** The questionnaire is the tool by which to investigate the knowledge of tourists about protected areas, their habits in organizing the visit, the type of excursion carried out, the awareness of the impacts generated on the visited area, the challenges and threats facing the areas. The significance of the expected results from this survey doesn't lie in quantifying objective data. Instead, it focuses on evaluating the level of sensitivity and perception tourists demonstrate in their interactions with nature, as well as their ability to make sustainable and mindful choices, taking into account the fragile ecological balance. The overall objective is to investigate, understand, and accordingly try to improve the mutual interaction among these delicate ecosystems. The aim is to highlight the factors that **define tourists' behaviors, examining their prevalence, significance, impact, and potential to influence tourists' attitudes towards sustainability.**

The activity took place with the **distribution of questionnaires to those tourists** visiting the **five project pilot areas** scattered in Central Europe among **Austria, Slovenia, Slovakia, Italy, Hungary,** and **Croatia,** mostly mountain areas but also **coastal.** The on-site distribution of the surveys has been carried out **between July and October 2023.**

The questionnaires are structured in sections of questions, mostly closed-ended, to gather general information regarding the target group, the choices adopted for the planning of the visit, the methods of carrying out the visit or excursion, the relationship and interaction with the environment visited. The expected output of the analysis of the surveys, conducted with a common approach, aims to outline the complex picture of behaviours of tourists in approaching protected areas.

1.1. Methodology of surveys' structure and administration

The survey structure has been developed by Eurac research with the inputs provided by the partners It has been decided to set **almost exclusively closed-ended questions** to make the activity as attractive and feasible as possible to the public, seeking a good compromise between the time required for the completion and the average time available to a tourist engaged in personal activities, with the need to collect good results, especially in terms of quality and the most extensive on a thematic level. The closed-ended questions, in the context of a natural environment, where the choice to participate in the survey is arbitrary and unscheduled, help to maximize the expected results by reducing the required effort in part, focusing the answers on a range of concepts already proposed.

The **final structure of the survey** is divided into the following sections:

1. **General information:** Some personal data such as age, gender, place of origin and level of education are requested to obtain a **general overview of participants' profiles.**
2. **Approach to the Protected Area:** a small number of questions aimed at probing how the tourists have matured the intention and **the plan of the visit,** if they are **aware of the state of protection,** where present, and by which means of transport they reached the site.
3. **About today's visit:** a block of questions is proposed to understand the **specific attributes of the experience carried out,** including the type of activities practiced, the criteria for choosing the routes travelled, aspects of the environment and the activities that are most valuable and important.

4. **Human-nature interactions:** this is the central section of the questionnaire. Here we try to grasp the **relationship with the environment,** the **interaction with the fauna,** the **sensitivity to the protection of nature** and the attention in trying to **reduce the impacts** that arise **from human-environment interactions.** Investigating the execution of environmental conservation initiatives and promoting awareness about the challenges and threats facing natural areas are fundamental elements under scrutiny to assess public understanding and behavioral tendencies concerning environmental concerns within protected regions.

The questionnaire, realized in the **first version in English,** has been **translated** into the **6 different languages** of the involved countries (German, Slovenian, Slovak, Italian, Hungarian and Croatian). The **distribution and administration of the questionnaire were regulated by a common methodology** shared among all pilot sites. It consists of a few simple rules, that are:

- The questionnaires must be **distributed by operators** who have been provided with brief but comprehensive **instruction on the HUMANITA project** (project macro-themes).
- Questionnaires are **distributed in paper form** as they are considered to be more easily manageable by operators and participants themselves. Although the paper considerably lengthens the processing time, it does not subordinate to the need to have one or more smart devices available, especially simultaneously to more people interviewed.
- The operator distributes the questionnaires letting the **respondents answer on their own** (not reading the questions or the answers). Operators are however available for any questions, assistance and explanations on the project.
- The operator makes sure that the **questionnaires are always filled in completely** and not partially (no empty unanswered/questions) .
- **Common distribution criteria** have been agreed (how many people are asked to participate, how many per group) to achieve the greatest possible homogeneity of the sample under examination. It was therefore decided to concentrate the distribution of the questionnaires mainly during the afternoon and late afternoon, to **collect information on the day spent** and the activities carried out. Regarding the choice of distribution among tourists, to secure a varied and uneven sample, it was suggested to deliver the questionnaires in a discontinuous and scattered manner as much as possible.

The questionnaire has been used in each pilot site identified by the project to gain comparable data from different countries and protected areas. The **minimum number of questionnaires to be collected for each site has been set at 80,** a common threshold representing the appropriate quantity of questionnaires to allow good data analysis and ensure statistical value.

2. Areas of study

The survey was conducted across five project pilot areas situated in Central Europe, namely:

1. Karawanken-Karavanke UNESCO Global Geopark (AT – SLO)
2. National Park of Malá Fatra (SK)
3. Tuscan-Emilian Apennine National Park (IT)
4. Bükk National Park (HU)
5. Kamenjak Protected Areas: Lower Kamenjak, Medulin Archipelago (HR)

These areas belong to different geographical contexts including protected areas with different statutes (National parks, UNESCO Global Geopark, Natura 2000, Biospheric Reserves, etc ...) in the Apennines, Alps, Carpathians, Dinarides, Pannonia, and Istria. The identification of the pilot sites has been carried out by the project partners.

Below is a **brief presentation of each pilot area,** which illustrates its **main geographical, geomorphological and ecosystem characteristics.** For each area are also presented the **main issues and challenges at the environmental level to which the site is subjected.** The description of the areas and the associated critical issues and challenges is based on the documentation prepared by the areas themselves and reported specifically in the **D.1.2.1 Report on environmental impacts of tourism in pilot sites.**

2.1. Karawanken-Karavanke **UNESCO** Global Geopark

2.1.1. Conservation area overview

The **Karawanken-Karavanke UNESCO Global Geopark** is a cross-border region **between Austria and Slovenia,** characterized by **an outstanding natural and geological heritage, dated around 500 million years ago.** Five Slovene and nine Austrian municipalities are bound together within this area of 1,067 km^2. **48 geosites** and **14 Geopark localities,** which are sites and/or areas of geologic and geomorphologic importance and interest strongly characterize the area. Nature of the Geopark includes an extraordinary biodiversity with numerous plant and animal species on the eastern border of the Alps, and several rare habitats conserved for centuries thanks to human persistence.

2.1.2. Tourism impacts

The main protection objectives relating to the criticalities of the impacts of tourism, aim at:

- Opposing the pressure from **intensive land use,** especially **due to tourism and agriculture.**
- Mitigating **erosion,** particularly on the extensive debris slopes.
- Mitigating the **soil erosion, trampling,** and **general disturbance to the local flora and fauna due** to the passage of **hikers and mountain bikers,** therefore improving visitors' management. In this regard, 87 vegetation species turned out to be on the regional red list, of which 82 were classified as least concern, 4 as near threatened and 1 as vulnerable.
- Monitoring and mitigating the **pollution,** particularly of the **karstic water aquifers** potentially **caused by hiking and cycling activities.**

Mountain biking in Geopark Karawanken–Karavanke

2.2. National Park of Malá Fatra

2.2.1. Conservation area overview

The **National Park of Malá Fatra is located in the westernmost Slovak high mountains Malá Fatra.** The Krivánska part of the Malá Fatra mountains was designated the Protected Landscape Area in 1967, and then re-classified in 1988 to National Park Malá Fatra. **It covers an area of 226 km², and the protective area is 233 km².** Varied geological history, rare and precious flora and fauna, forest and mountain compounds with precious dwarf pinewoods and wildlife, are the elements that distinguish this area. To preserve the rarest and most threatened habitats and species, **the territory of the national park was included in the framework of protected areas NATURA 2000** as an area of European importance and a protected birds'zone.

2.2.2. Tourism impacts

The main protection objectives relating to the criticalities of the impacts of tourism, aim at:

- Protecting s**elected species and biodiversity,** especially in areas with a large number of tourists (firstly Chled nature reserve, which is probably the most tourist-affected reserve within the park).
- Hindering **soil erosion along tourist trails,** especially in slate terrains, and **degradation of the habitats by trampling.**
- Reducing the **disturbance of the animals due to movement of tourists,** particularly in winter and during the night.
- Educating **tourists to behave properly** as, to not leave designated paths to avoid the creation of secondary trails, not biking on hiking trails, not bivouacking on the saddle or where not allowed, and not harvesting where not allowed.

Parallel trails on the pilot sites

Tourist induced trampling on Mt. Chleb

2.3. Tuscan-Emilian Apennine National Park

2.3.1. Conservation area overview

The territory of the **Tuscan-Emilian Apennine National Park** is characterized by a **wide richness of environments,** wooded ridges, forests, grasslands, blueberry moors, lakes, waterfalls, lakes and rocky walls. Wolves, red deers, roe deers and golden eagles are part of the local fauna that, together with rare botanical species, make this territory an **environment of extreme importance for biodiversity.** The mountain range of the Apennines, which rises between the sea of Tuscany and the plain of Emilia, makes it a park embraced by the Mediterranean and Europe. The **contiguity with the Mediterranean and European climatic zones** gives the territory the **peculiar characteristics favorable to host most of the Italian biodiversity.**

2.3.2. Tourism impacts

The main protection objectives relating to the criticalities of the impacts of tourism, aim at:

- Limiting the **impacts of human activities** on nature, like rock climbing and slackline on protected bird nesting sites and on geological heritage. Fighting **illicit acts** like illegal motorized tourism, camping and lighting fires were not permitted.
- Monitoring the **cycling activity that** in some more sensitive areas **is limited or forbidden** by ordinances of the park, but however practiced.
- Reducing **trampling and disturbance to protected species,** especially birds in Pietra di Bismantova, and following paths outside the designated paths.
- Limiting the **damaging effects on the undergrowth due to mushroom and flower picking.**
- Regulating the **traffic of vehicles that** significantly **impacts in terms of noise, pollution, and dust,** improving alternative solutions like connections with local transport or closing roads to traffic, at least for limited periods of time.
- Improving **tourists' discipline in respecting the environment,** and fighting unsustainable behaviors like littering.
- Improving the **coexistence in grazing areas, between animals, livestock guardian dogs and tourists** who are sometimes frightened by the animals when they are on the same paths or places.

Cycling is an activity that can be carried out in the park but respecting the rules that limit or prohibit the practice in some areas.

2.4. Bükk National Park

2.4.1. Conservation area overview

Bükk National Park, established in 1977, is situated in the Bükk Mountains of northern Hungary, a part of the Northern Mountain Range. It is Hungary's largest national park with an area of 43,200 hectares from which 97% is covered with forests. Mountainous and forested, the park **hosts several unique and rare wildlife species,** some considered endangered. The most important feature of the vegetation, flora and fauna of the mountain is its great diversity, **from subalpine elements to the sub-mediterranean characteristics of the southern foothills.** It stands out especially for important geological features that include various karst formations within its limestone mountains, caves (once inhabited by pre-historic people), swallow-holes, and ravines. **45 of the 853 explored caves in the park are strictly protected.**

2.4.2. Tourism impacts

The main protection objectives relating to the criticalities of the impacts of tourism, aim at:

- Reducing the **disturbance to wildlife,** especially large predator species (lynx, grey wolf, brown bear) and **threats on vulnerable habitats** (e.g. amphibian habitats), restricting economic and sporting activities.
- Protecting the **bat colonies and the nesting** of strictly **protected raptors** from the negative impacts of humans.
- Limiting the **trampling damage on vulnerable grasslands** (e.g. rocky grasslands close to observation points) **and trail erosion** to prevent biodiversity loss.
- Tackling the **illegal motorized tourism** (bike, quads).
- Drastically reducing **non-virtuous behavior by tourists,** such as littering.
- Evaluating how to **manage infrastructure for winter tourism** reducing the **pressure on the environment.**
- Coping with the **foragers and collectors.**
- Educating **hikers to not leave the designated paths** and to avoid introducing invasive species, bacteria and viruses.

Foraging

2.5. Kamenjak Protected Areas: Lower Kamenjak, Medulin Archipelago

2.5.1. Conservation area overview

Lower Kamenjak and Medulin Archipelago are two of the four protected areas in the municipality of Medulin. They are located in the **Kanenjak Peninsula,** in the **southernmost part of Istria, in Croatia,** facing Mediterranean, and in the Northern Adriatic Sea. The peninsula, characterized by the typical **Mediterranean climate,** is the **habitat of endangered and protected species.** In the past, this area was covered in holm oak forests that have been degraded over the centuries by timber harvesting and cattle grazing. Today forests have finally turned into grasslands with an abundance of plant species. The distinctive and valuable **landscape of Kamenjak is a combination of forests, grasslands, garrigue, maquis and rocky ground.**

2.5.2. Tourism impacts

The main protection objectives relating to the criticalities of the impacts of tourism, aim at:

- Dampening the **pressure of overtourism** on fragile ecosystems, sensitive habitats, wildlife behaviors and their habitat.
- Regulating **motor vehicle parking** by limiting access and ensuring a r**eduction of damages and pollution,** especially of heavy metals, caused by their passage. Possible strategies in this direction are to assign parking lots outside the protected area and to renovate roads by adopting ecological methods (green concrete).
- Regulating the access, limiting and banning the **anchoring, to vessels in coves and bays with sensitive and protected maritime habitats.**
- Establishing **protective measures** for the **areas where the dinosaur footprints are located,** also by fencing off the area and informing the public about these valuable sites.
- Preserving **flooded and partially flooded sea caves** limiting visitor activities inside the caves.
- Reducing **trampling and deviations** from the established pathways.
- Preventing **illegal activities** as camping in prohibited areas, throwing trash in nature, parking cars in areas not allowed.

Cars in Kamenjak

3. Methodology of analysis

The collection of questionnaires at the pilot sites ended approximately in the first weeks of autumn, **between October and November 2023.** The site managers took care to collect from their collaborators all the copies of the collected questionnaires and to send them to PP2-Eurac research, at the headquarter based in Bolzano (IT). **Eurac research had the task of processing the surveys, first transforming the paper into documents in digital format, and then analyzing the results.** In this regard, it was decided to use the **SurveyMonkey platform,** transferring the collected data in the digital version of the questionnaire and using the available tools to obtain a first analysis framework. The partners in this phase have done a very important job of support in aiding where necessary in the translation of the contents reported by hand on paper. Specifically, PP8-CEEweb, has collaborated on the activity, including on the platform all the questionnaires collected at the Bükk National Park (HU). The digital transposition in SurveyMonkey allowed us to automatically extract the aggregated data analysis both overall and relative to each area. From this base of analysis, it has been proceeded to elaborate the total systematic analysis of the results obtained, **crossing the results of the questionnaires with the reports produced by the partners in charge of the pilot sites related to the impacts of tourism (D.1.2.1, Report on environmental impacts of tourism in pilot sites).** In summary, the phases of the elaboration of the questionnaires, after their collection has had the scope to translate the data in a usable, and shareable form, and to derive results in terms of images of behavior, trends, affinities, values, and concepts among the pilot sites statistically relevant.

4. Overview of survey collection

At the end of the period of activity in the pilot sites, **a total of more than 600 questionnaires were collected.** In detail, each area has collected:

Karawanken-Karavanke **UNESCO** Global Geopark (AT/SLO)	**250***
National Park of Malá Fatra (SK)	**94**
Tuscan-Emilian Apennine National Park (IT)	**161**
Bükk National Park (HU)	**195**
Kamenjak Protected Areas: Lower Kamenjak, Medulin Archipelago (HR)	**82**
TOTAL	**612**

*The decision to select a subset of 80 questionnaires from the total collected stemmed from the distinct approach adopted by the **Karawanken-Karavanke Geopark.** They opted to finalize and utilize a customized version of the questionnaire, which differed from the one developed by the project and distributed in the other pilot areas. Only the questions unchanged from the original version of the survey have been taken into account and therefore compared with the results of the other areas.

Section 2 – Surveys analysis

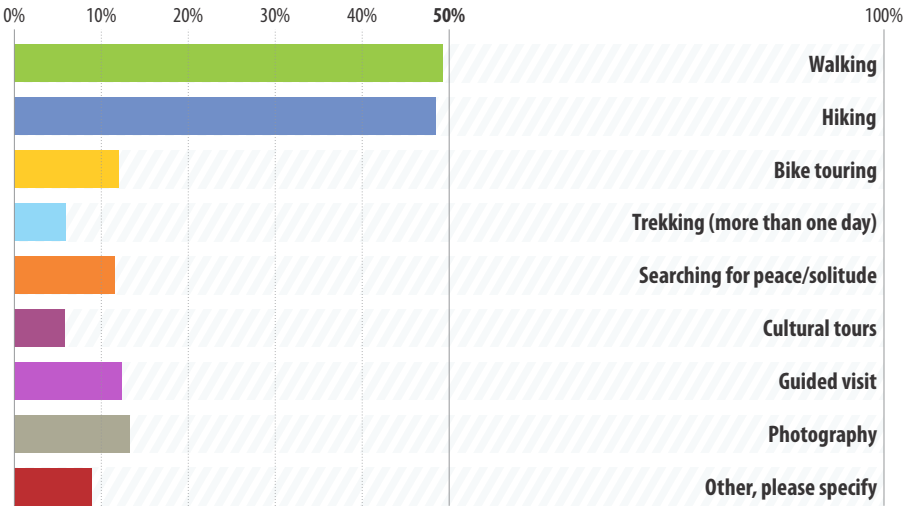
5. Aggregated analysis

This section provides an **overview of the questionnaire results across all pilot areas** in an aggregated form, aiming to grasp tourists' overall attitudes towards protected areas. It will also delve into the challenges they encounter and their demonstrated level of environmental awareness. Acknowledging the considerable sway of tourist behavior on biodiversity preservation, it's essential to emphasize their potential impact, whether beneficial or detrimental, as it directly influences ecosystem health, resulting in tangible consequences.

5.1. Overview of the respondents

- The pilot sites aimed to achieve a minimum threshold of 80 surveys each, and the exact **total number of questionnaires collected is 612.** Looking at the population of the participants, the age group with the highest representation is the median one, which is between 40 and 49 years (26.79%), and between 30 and 39 years (23.77%). Overall, the public is mainly represented by young people and people of middle age, while the over 50 are among the least represented.
- The audience is almost **equally divided between males and females.** The data on tourist education show that one-third have obtained secondary education, another third have obtained a master's degree, while the remaining part consists mainly of bachelor's graduates, followed to a minimum by different qualifications, such as professional degree, doctorate and primary education.
- 88.96% of the participants were aware of being within a protected area, although it should be remembered in this regard that not all pilot areas are recognized as protected areas.
- The knowledge of the natural sites by the tourists happens in most the cases thanks to the word of mouth between friends, as declared 63.77%. Below you use the network and social media to get to know and look for information on places to visit.
- On the mobility options chosen to reach the natural areas, the private car is the most preferred option, chosen by 72.86% of respondents. Much more sporadic is the choice to move with public transport 11.68%, or with car sharing 8.39%. Among other answers, almost 9% claims to have reached the sites with the bike.
- The visit and the excursions to the natural areas are distinguished above all for being destinations of sporting activities. The excursions to the protected areas take place mainly for walking (49.18%) and hiking (48.36%). These natural places, however, lend themselves to many other activities that, although less practiced, represent a wide range of opportunities sought by the public. Among these attract good attention and interest bike touring, nature photography, guided tours and the search for peace and relaxation. These areas are overall evaluated as ideal places to benefit from wide open spaces and direct contact with nature. This is confirmed by 84.84% of tourists declaring that what they value most of their visit is the natural heritage and beauty of the environment, followed by sports and recreational activities practiced (37.56%), and the chance to observe wildlife (23.72%), especially in Karawanken-Karavanke Geopark.

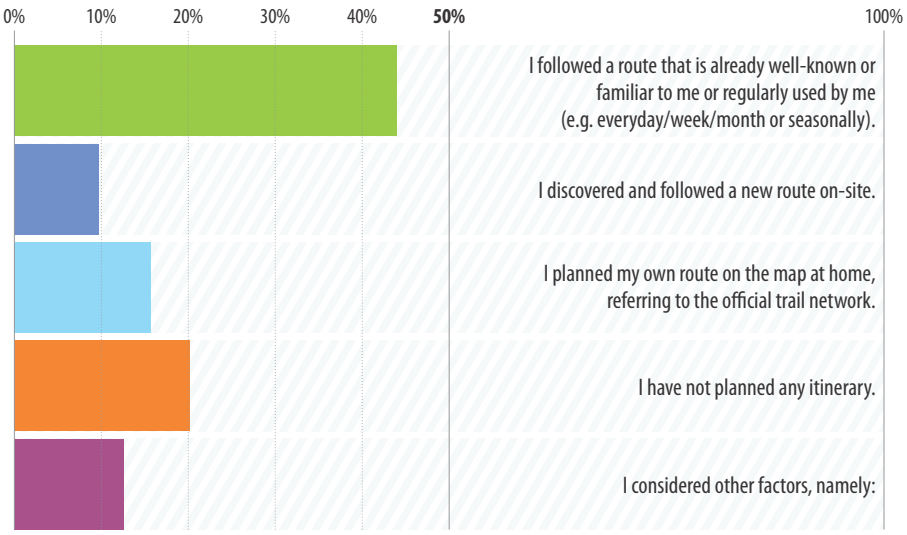
Q11: Which kind of visit/vacation have you had or planned within this Protected Area?
Please select max. 3 answers



To understand the quality of the experience, the type of visit or holiday, tourists were asked to indicate the duration of their stay in the protected area. **What emerges is a rather limited stay ranging** from half a day to a day for the vast majority of respondents (respectively 32.95% e 37.38%), with the Kamenjak Protected Area boasting the longest average duration among all areas, and this can be explained by the fact that it is a coastal destination, often catering to medium to long-term vacation stays. Only 17.05% refer to stay 2-3 days, while those who choose to spend more time are a clear minority of the total. This fortunately does not seem to be reflected in touch-and-go tourism, because although the duration of stay is generally limited, well more than half of the respondents say they have already visited the area in the past, 25.08% from 1 to 5 times, and 42.46% more than 5 times.

Just under a third mention that they visited the natural area for the first time. This indicates a certain fondness and loyalty that often prompts them to revisit previously visited locations, sometimes retracing the same routes they are already familiar with. The visitors asked about the choices of route put in place in the day spent responded in 44.11% of cases, to have completed already known routes, followed by 20.07% by those who had not planned any itinerary. Only a small part of visitors, instead, declare to have explored a new itinerary discovered on the site, while another minority has planned from home the itinerary consulting the official map of the trail network. **This data highlights a prevailing tendency among visitors to rely more frequently on familiar knowledge, past experiences, or official information provided through maps and various materials.**

Q13: How did you plan the itinerary for today's route and destination?

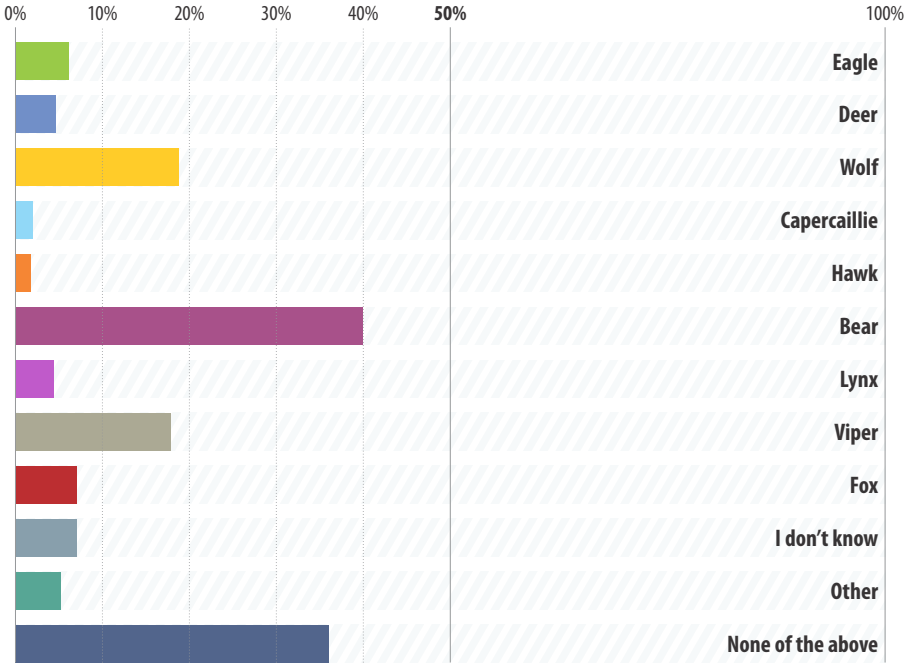


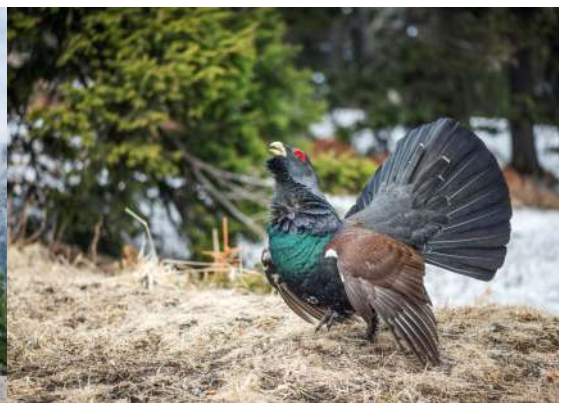
40% of the tourists also used an app or a digital device to plan the itinerary for the excursion of the day, but it is still a minority compared to those, 59.97%, who say they have not used it. Among the most popular apps stand out Strava (24.07%), Garmin (25.73%) and among the open answers Google Maps.

Overall, evaluating the awareness of tourists about the nature and characteristics of the environment they have visited, they appear quite prepared. 88.96% are aware of being in a protected area, therefore with specific characteristics of ecosystems' protection. The majority also recognizes the role of protected areas in conserving biodiversity in the face of human pressure (43.07%), while about a third think that the function of conservation is focused on countering human-environment conflicts and the pressure generated by tourism. Although these are undoubtedly critical aspects that protected areas must consider, they are not at the heart of the main objectives, specifically aimed at containing human pressure on natural resources. This viewpoint results especially amplified by the Karawanken site's focus on wildlife.

The relationship between visitors and the environment has been investigated also trying to understand what perception of fear and limitation may arise depending on the presence of certain species of fauna in the specific protected areas. The purpose of the question was therefore to understand if the outdoor experiences are somehow influenced by awareness of the possible presence of given species of wild animals. What has emerged, on a general level, is a widespread and very distinct concern for a rather narrow circle of animals. At the top of the list, perhaps predictably there is the most famous carnivore of the mountains, the bear. 40.19% of respondents claim to have a certain apprehension about the bear, answers that also come from areas where it is verified not to be present. Following in the general ranking are the wolf (18.86%) and the viper (17.71%). It should also be added, however, that 36% of tourists say they do not feel any particular concern or influence in the planning of their excursions towards any of the species listed.

Q19: Which one of these species in the wild would limit your leisure activities in this area?
Please select max. 3 answers



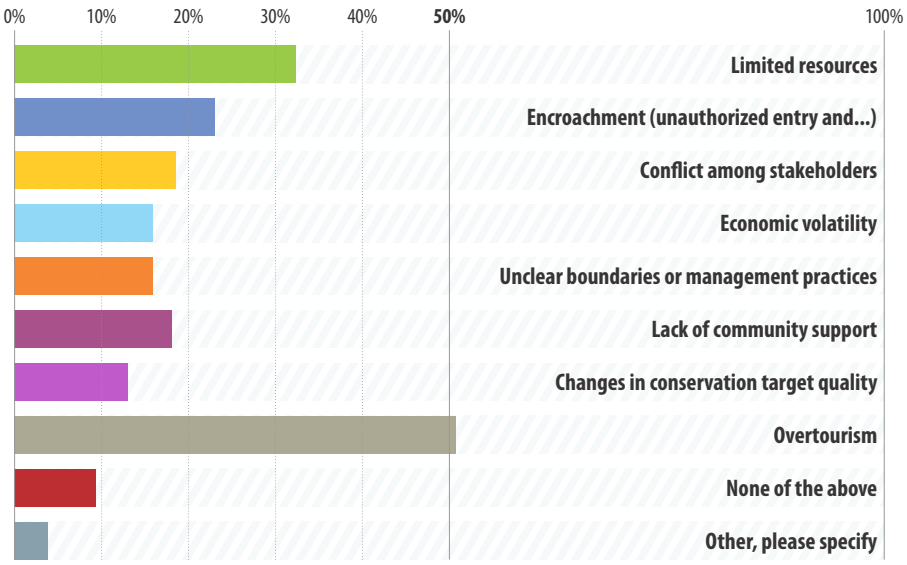


5.2. Attitude and impact

A central block of the proposed questions was aimed at investigating what the direct perception and awareness of tourists on the potential impacts was generated by themselves, through the activities practiced during the day, on the environment. Asking them what they thought about the hike during the day, and the possibility of having generated some kind of impact on the natural environment, a little more than half (55.17%) says that there were no. Slightly prevails the opinion that the human presence and interaction with the environment, do not constitute an overall impact factor, essentially disconnecting personal action from the impacts to which the environment is subjected. The 44.83% instead that recognizes to create some sort of impact, considers that it mainly regards the vegetation, damaged especially by trampling due to walking and hiking activities, then the soil, impacted by displacement, compaction, muddiness and erosion, and the wild fauna, disturbed by the human presence and affected by habitat fragmentation.

The awareness of tourists on the environmental impacts has been evaluated by probing the personal attitude in paying attention to the state of the environment in which they were. Tourists were asked if they had noticed any sign of disturbance, damage or element harmful to the environment, whether it was abandoned garbage, overcrowding, pollution or damage to the paths. A little more than half of the answers, 55.63%, are negative. This is a fact that derives from two possible factors, what is not reported as a threat can in fact be explained both in an individual inattention, but also in the actual lack of the problem itself. Visitors claim to implement overall good practices to mitigate impacts, 73.80% are careful not to disperse waste in the environment, 47.76% are careful to limit and avoid noise, as well as not to disturb the wildlife in certain areas or where they are aware of their presence. 38.31% claim to respect the restrictions applied to certain areas during the breeding season. Most respondents therefore adopt measures to protect and preserve the environment, showing a certain sensitivity towards the issue.

Q30: In your oppinion, what are the main challenges and treats this site is facing? Challenges:
Please select max. 3 answers



This is also confirmed by the high importance that tourists place on conservation programs applied by the management of natural sites. On a scale of values from 1 to 5 they evaluate this aspect 4. In planning an excursion in a naturalistic area, they prefer those sites where specific biodiversity protection programs are active, therefore rewarding those who are more committed to actively promoting concrete actions. Sensitivity and attention to environmental needs that have been evaluated also prove the knowledge and preparation of tourists on the specific opportunities and threats that affect the areas visited. They were asked to give their assessment of which aspects they considered to be relevant to the sites visited, based on personal knowledge, experience and lessons learned on the site. On the challenge side, tourists have massively pointed to overtourism as a threat but at the same time as an opportunity, when properly managed with sustainable criteria. With three answer options admitted to this question per respondent, then follows a block of other aspects that stand between 13% and 32% of

the votes. Factors of challenge and opportunity are considered, in descending order of vote: limited availability of resources, unauthorized entry and resource extraction within the boundaries of the protected areas, conflicts among the local stakeholders, lack of community support in protecting, developing and promoting the areas, unclear boundaries or management rules, economic volatility, and changes in conservation practices. On the other hand, the threat picture appears more varied, with logging and deforestation (46.86%) and waste management (41.76%) which are two aspects that tourists consider decisively most problematic. On a scale of decreasing importance, follow other issues very felt and very current topics: drought, soil erosion, the danger of fires, wildlife poaching, car parking problems, and human-wildlife conflicts.

The experience in the protected area is evaluated as a time to question personal behavior and attitudes towards the environment, and this denotes that contact with nature and its elements can actually lead to greater awareness. 46.11% of the respondents say that the visit to the protected area has somehow influenced the personal attitude and awareness towards nature, its ecosystems and its limits. The general perception after the visit is to consider themselves more informed and sensitive especially on flora, fauna and protected species, and on the protected area values. There is a minority who feel more attentive to local traditions, cultural values, soil elements and earth sciences.

As proof of the change in sensitivity detected with the latest questions, the vast majority of visitors, 90.30%, affirm wide availability in adapting the excursion in case of possible closures or limitations to the paths due to monitoring activities, revegetation, cleaning, etc… More than half of the respondents (65.17%) were also in favor of paying an entrance ticket to support scientific and operational activities for the protection of biodiversity in the area. The economic availability is mostly up to 5 euro per pass (70.45%), or between 6 to 10 euro. Please note that the results of this question refer to the pilot sites except the Kamenjak areas where there is already an entry ticket.

In conclusion, some interesting insights could be grasped by comparing visitors who have never been in the pilot area before with those having visited it more than five times. The level of awareness of being in a protected area is higher for those visiting the site habitually (90.59% as compared to 83.51% of those for the first time). Public transports are more used by those tourists visiting the areas for the first time (19.19% versus 5.84%). While guided visits are chosen more by newcomers (20.81% as compared to 5.41%), tourists already familiar spend more time in photography (21.24% as compared to 7.61% of newcomers) and bike touring (18.92% versus 5.58%). GPS devices are quite used by both groups, 45.64% by the newcomers and 35.16% by those habitual, as they are often used also to track progresses. Whereas newcomers have more varied attitudes towards the protected area, they are interested in natural heritage foremost but also in all the other aspects, returning visitors focus more on sports and recreational activities (42.25%).

Regular tourists are more critical towards environmental hazards they notice and 52.33% affirm having noticed some sort of issues as compared to 35.75% of newcomers. On the other hand, they are more aware of their impact on the environment, recognized by 46.43% of them, as compared to 40.33%. In addition, they seem more aware and concerned by the challenges and threats the areas are facing. Finally, newcomers show a marked change in attitude after visiting the area (53.30%), whereas the same cannot be said about regulars, with the majority declaring they did not (46.19%). Regular tourists, in conclusion, are willing to pay an entrance ticket to support restoration activity, as long as it is lower than 5 euros, as compared to newcomers who are willing to pay more (6-10 euros is ok for 30.85%), due to the limited number of times they would go.

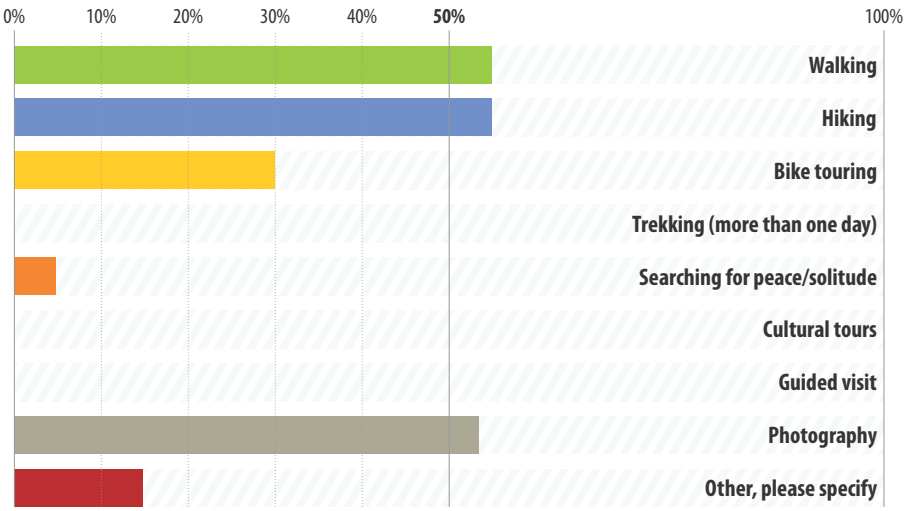
6. Analysis by pilot area

In this section, the analysis has been conducted by pilot area; results have been compared with the report on tourist impact in the protected area provided by the PPs to investigate whether the same issues the PPs lamented were then reflected in the questionnaires' results and in the perceived impact of tourists in the natural environment of the region. The results are organized in a structured manner, beginning with an introduction to the demographic data of the respondents. This is followed by a comprehensive overview of the activities undertaken in the pilot area as a whole. The middle segment of the section delves into the respondents' level of awareness regarding protected areas and their intrinsic values, as well as their attitudes towards the natural environment and wildlife. Lastly, the challenges and threats perceived by tourists are presented to foster dialogue among stakeholders.

6.1. Karawanken-Karavanke **UNESCO** Global Geopark

6.1.1. Overview of the respondents

Q11: Which kind of visit/vacation have you had or planned within this Protected Area?
Please select max. 3 answers



For this area, the tourists' population is slightly more represented by males (56.25%) and has generally a high level of education, being the master's degree the most chosen option (45%), followed by the bachelor's degree; however, in the summary table of the PP, the bachelor's degree is more represented, followed by the master level of education and the secondary school. The destination is reached by 33.75% of respondents by foot and more than a half of respondents live in the nearby area (52%). Visits are generally quite short (65% are staying half a day and 28.75% of one day, despite the tourist impact report containing a longer average stay - 4 days in summer), and are habitual, with almost four out of fifth respondents having already visited the site more than five times (76.25%). This also affects the type of itinerary they are choosing to do, with almost three out of four respondents not planning anyone, rather they have followed a route that is already familiar to them and thus are not relying on any GPS device (67.50%). One of the main drivers of their visit is provided by the chance of spotting wildlife, with the highest percentage among pilot areas (42.50%), and possibly related also to the photography activity that is practiced by more than a half of the visitors (53.75%). What tourists look for the most during their visits is natural heritage (95%), followed by sports or other recreational activities (53.75%), especially hiking and walking but also bike touring (the highest among pilot areas) and climbing, as stated by 10% of participants, specifying the field "other choices". Indeed, the possibility of practicing various sports activities outdoor is considered fundamental (value 5 on a Likert scale 1-5) by 67.20% of respondents, despite this value still being inferior to the presence of biodiversity conservation actions. In the PP report however, it is photography the main activity chosen by respondents (48.40%), followed by biking (44.80%) and finally walking; the interest towards wildlife in general is indeed conveyed similarly from other replies. The recognizability of the

destination is indeed crucial for over half of the respondents, possibly influenced by the significant percentage of photographers among them in the area.

6.1.2. Attitude and impact

In contrast to other pilot sites, the Geopark Karawanken shows a relatively low level of awareness regarding its status as a protected area, with only 61.25% of respondents recognizing it as such. However, it's worth noting that the area encompasses 18 Natura 2000 sites, indicating its significant ecological importance. The overall analysis underscores tourists' interest in wildlife, with 77.50% of respondents highlighting the primary role of protected areas in biodiversity conservation, particularly in mitigating human-wildlife conflicts. Notably, 64.40% of respondents express strong support for coexistence efforts, emphasizing its crucial implementation. The conflicting use of natural resources seems not to be a primary concern for tourists in the area as they do not recognize it as a role to be given to PAs. Moreover, a substantial portion (42.40%) consider themselves well-knowledgeable in nature and its conservation. A frequently reported observation (26.40%) is the presence of non-touristic elements in the surroundings, such as old buildings and the remnants of a hotel, given that 68% of respondents emphasize the fundamental importance of their destination possessing unspoiled natural beauty, which appears to be incongruent with the observed decay.

6.1.3. Challenges and threats

More than half of respondents (67.50%) reported some environmental hazard: the issue of abandoned trash is widely present in all pilot sites, and here it makes no exception. This should also be framed to the catastrophic natural events that happened at the beginning of August, which caused the fall of trees and much damage to the structures and the environment of the park. Nonetheless, the attention visitors pay to the most regard taking home their waste (67.09%). Limiting loud activities and not disturbing wildlife in certain areas or when present are chosen by many people and again suggest a particular sensibility towards wildlife from respondents of this site; however, respecting the restrictions of visitable areas during the wildlife breeding season seems not to have as much importance as compared to the other pilot areas, whereas it strongly deals with wildlife impact. What deserves to be noticed is the high number of respondents (16.46%, rising up to 20% if considering all the 250 answers collected) declaring not to pay any attention to the aspects listed. Although they are only a small part, they unfortunately still represent that too large part of the public towards which to direct information and awareness campaigns.

6.2. National Park Malá Fatra

6.2.1. Overview of the respondents

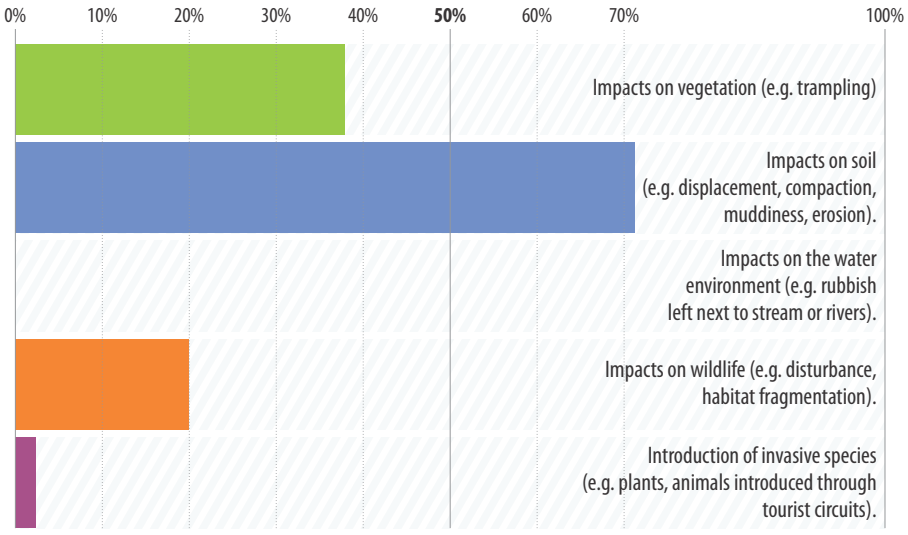
In the National Park Malá Fatra, 94 questionnaires have been collected. The respondents within this area are generally young, with 30.85% in their 30s, followed by 25.53% in their 40s and almost one-fifth in their 20s (24.47%); two-thirds are males and the level of education in prevalently secondary school (52.13%), followed by the master's degree (36.17%) and the bachelor's one (8.51%). The majority of tourists are from Slovakia (70.21%), while one-fifth of visitors come from the Czech Republic, and a minority from Poland (7.45%). Visits are mainly short-term, with half a day or one day chosen by 65.96% of respondents in total. The activity conducted in the area sees a marked preponderance towards hiking and walking, whereas the others are marginal.

6.2.2. Attitude and impact

98.92% of respondents are aware of being in a protected area and they declare to have practiced in the area mostly sports activity. The impact that tourists perceive in their activities is mainly explained through the question "Do you think that today's activity/excursion may have/had an impact on the natural environment?". For this pilot site, there is a slight majority that does not consider themselves responsible for any impact (52,13%). Those who recognize that they had an impact, mostly identify displacement, compaction and other soil-related issues as main issues caused by human presence (71.11%), followed by impacts on vegetation (37.78%), interactions strictly linked with the main activities carried out here, either walking or hiking, as shown above. Despite considering to a lesser extent to have an impact on wildlife (20%), as compared to those mentioned above what the visitors pay most attention to when visiting the PAs deals with wildlife disturbance: they don't leave the designated path (59.57%), act carefully when noticing wildlife presence (42.14%) and avoid loud activities (30%). Respondents also understand the importance of respecting the restrictions of visitable areas during the wildlife breeding season and are in favour of their seasonal closing (91.14%). They report it not to be an important issue to be able to move freely (mean value of 2 on a Likert scale 1-5). However, it has been reported by the pilot site that this is frequently happening, with the creation of secondary trails; this might also be since most respondents followed a route that is already well-known to them (65.22%) without double-checking whether it is official or not. Finally, the impact on water is not considered relevant by any respondent, and only one mentioned the introduction of alien species as a potential distress for the environment.

Q23: If yes, which of the following possible environmental interactions do you associate with your activity/excursion?

Please select max. 2 answers



6.2.3. Challenges and threats

Among the challenges and threats that the pilot site is facing, the issue of overtourism has been selected by the vast majority of visitors and that often recurs also in the open-ended answers as well, related to trash and misbehaviours. In addition, the presence of some conflicting interests emerges from the options most selected: conflict among stakeholders, limited resources, encroachment and unclear boundaries or management practices. Tourists are aware of these big issues but, At the same time, almost half of them (46.81%) recognize that the role of a PA should be primarily to conserve biodiversity and ecosystem services in the face of human pressure on natural resources. Tourists are therefore aware that, in addition to basic functions, today the challenges for protected areas have increased and are very complex. On the same note, the human pressure and the conflicting use of resources emerges also among the threats: soil erosion and waste management, directly relatable to over-tourism. Soil erosion however is not really stressed by the pilot site itself, especially considering the morphological condition of certain areas (such as Chrapáky), which is indeed facing erosion but due to natural reasons more than touristic impact, as the trail is not considered a touristic hotspot. To a lesser extent, the issue of conflict emerges also among the threats, with logging and deforestation being chosen by the majority of respondents (76.60%) and legal or other stakeholders' conflicts, which might be investigated by the pilot site.

When asked about environmental distress they noticed during the visits, 65.96% of respondents reported some issues: the overtourism plays again a central role in the negative perception of the surroundings, as well as some inconveniences in the trails. The most cited words are displayed in this figure.

42.55% of respondents say they do not feel their attitude towards the environment has changed after the visit. On the other hand, those who declared the excursion had an impact (38.30%) and is prone to a change in own habits, report an influence especially regarding flora and fauna, protected and valuable species, followed by PA values, despite its role being perceived not homogeneously among respondents. Moreover, it is interesting to acknowledge how, despite having paid attention to soil-related impacts, nobody mentioned earth science and soil, as a topic learned from being in this area.

6.3. Tuscan-Emilian Apennine National Park

6.3.1. Overview of the respondents

In this pilot area, 161 visitors participated in the survey; the majority of respondents fall within the age range of 40 to 49, with a slight prevalence of respondents above this age bracket (39.75%) compared to those below (31.67%). The respondents are predominantly male, constituting 59.49% of the sample, and the most common educational attainment is a master's degree, accounting for 43.75% of respondents. An overwhelming majority (90.62%) of respondents are aware that they are in a protected area.

Regarding the duration of visits, the majority are planned to be short-term, with 68.32% of respondents opting for half or one-day visits. However, a significant minority considers slightly longer stays. Notably, this destination is also selected for work-related trips, including team-building activities or fieldwork.

The main planned activities encompass a variety of sports activities such as walking, hiking, climbing, and bike touring. However, compared to other pilot areas, the educational component is particularly significant in the Tuscan-Emilian National Park. Cultural tours and guided visits are widely chosen as planned activities (33.97% cumulatively) and are highly valued by visitors (48.12% cumulatively). Additionally, more than a quarter of respondents (26.28%) select itineraries proposed by the park through its guides.

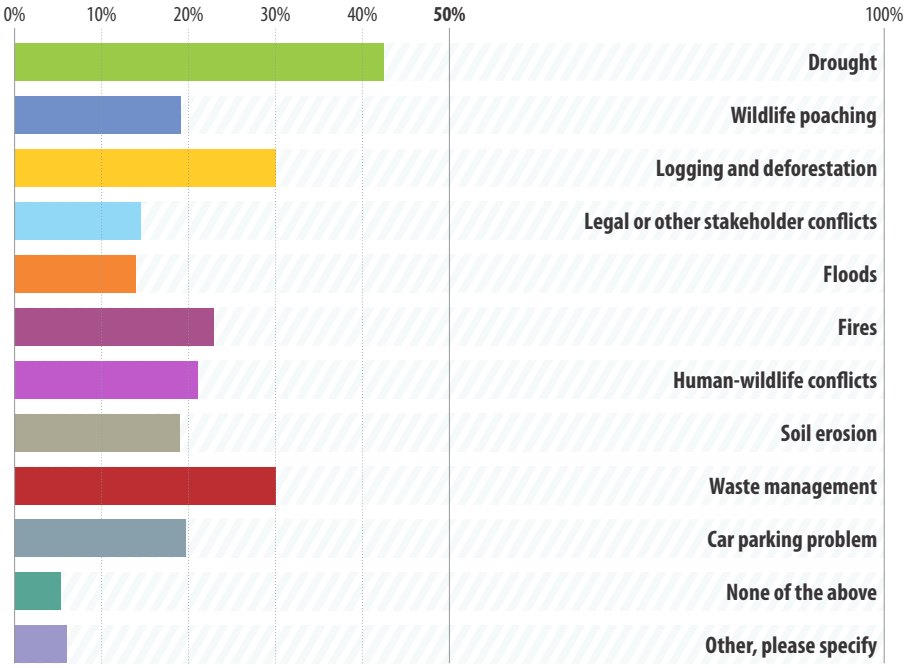
6.3.2. Attitude and impact

In response to the question, **"Do you think that today's activity/excursion may have had an impact on the natural environment?"** an overwhelming majority (77.85%) chose "no." This might also be related to the number of guided visits and cultural tours displayed above, which should suggest an increased level of awareness of the issues of the environment and the related tourist impact. Nonetheless, among those who

acknowledged potential impact, significant recognition was given to impacts on vegetation (52.94%) and soil (44.12%), considering the array of activities conducted in the pilot area. Wildlife impact also emerged as a concern (29.41%), while impacts on water were less relevant (2.94%), and no respondents mentioned the introduction of invasive species, suggesting either a low familiarity with the topic or the irrelevance of the issue according to respondent's views. Similarly, when asked, **"Did you happen to observe any kind of environmental hazard/distress/threat (e.g., rubbish left, overtourism, damaged tracks, etc.) within the area you visited?"** the majority of respondents (71.70%) declared not having to.

6.3.3. Challenges and threats

Q31: In your oppinion, what are the main challenges and treats this site is facing? Threats:
Please select max. 3 answers



It is interesting to correlate these responses with the level of attention visitors pay when in a Protected Area (PA). The most commonly chosen action is taking waste home (69.18%), indicating a sense of responsibility for waste management. Staying on designated paths (44.03%) also reflects a conscientious effort to minimize environmental impact. Furthermore, visitors demonstrate care towards wildlife, recognizing their impact and expressing the importance of being cautious around them, minimizing noise, and respecting visitation restrictions during breeding seasons. Interestingly, the majority (91.14%) are supportive of certain areas being closed for restoration activities, highlighting a willingness to prioritize conservation efforts. Additionally, visitors express a high degree of importance (mean value of 4 on a Likert scale ranging from 1 to 5) for the park to have active biodiversity protection programs. However, the desire for unrestricted movement (mean value of 3 on the same Likert scale) presents a contrast and warrants further investigation. Notably, around one-third of visitors report being wary in reporting possible issues, suggesting potential for synergies between visitors and park staff through citizen science initiatives focused on nature conservation.

When asked about the challenges and threats facing the area, nearly half of the respondents identified limited resources as a significant concern. This underscores the fundamental role of a Protected Area (PA) in managing the conflict between human needs and environmental capacity. Notably, over a third (32.26%) cited a lack of community support as a relevant issue, particularly considering that 44.38% of respondents hail from nearby provinces such as Reggio Emilia, Modena, Parma, and Pisa. However, the issue of conflict does not seem as pronounced when considering other challenges perceived by tourists, none of which received more than 15% of selections each. Overtourism, as previously noted, remains a significant challenge for the park from the perspective of visitors. Regarding threats, there is no clear predominance except for the issue of drought, which had a severe impact on Italy during the survey period.

Additionally, waste management, likely exacerbated by the presence of a large number of tourists, emerges as an important concern. Human-wildlife conflict is notably high compared to other pilot areas, with more than one-fifth of respondents considering it quite threatening for the park.

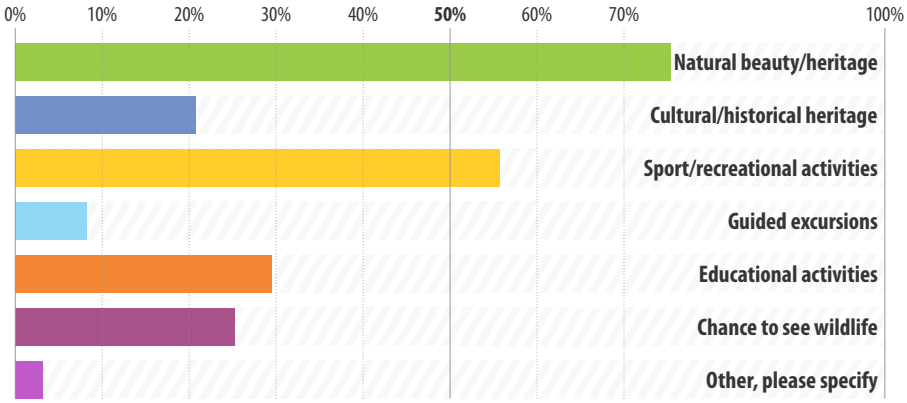
Specific species such as bears, vipers, and wolves have been cited as limiting visitors' leisure activities (30.19%, 18.24%, and 16.98% respectively), although the majority of respondents still believe that no species is actually doing so.

After the visit, more than half of respondents declared to have changed their attitude towards the environment, being now more aware of PAs' values (46.94%), as well as of flora and fauna (44.90%). These great numbers could be related to the high guided visit attendance, which should be boosted to raise awareness also in the impacts that are less considered (such as on water and the introduction of alien species).

6.4. Bükk National Park

6.4.1. Overview of the respondents

Q17: What did you value most when you planned today's visit?
Please select max. 3 answers



In this pilot area, the survey engaged 195 individuals. The age distribution shows that approximately one-fourth of respondents fall into each of the age classes 18-29, 30-39, and 40-49. Females are slightly more represented, comprising 53.14% of the respondents. Regarding education level, the majority hold secondary school qualifications (34.90%), followed by those with bachelor's degrees (27.60%) and master's degrees (18.75%). Visitors predominantly express interest in physical activities such as walking or hiking, with a smaller proportion opting for guided visits (15.90%). The average duration of stay is relatively short, with 83.51% staying for half a day or one day (cumulatively). Nearly half of the respondents did not plan their itinerary but instead opted for familiar routes, resulting in a fairly even distribution between first-time visitors, those visiting one to five times, and those visiting more than five times, each comprising almost one-third of respondents. While natural heritage emerges as the most valued aspect of their visits (75.52%), sports and recreational activities also receive high acclaim from nearly half of the respondents. Educational activities and opportunities to observe wildlife are similarly valued, each noted by approximately one-fifth of respondents.

6.4.2. Attitude and impact

In terms of their environmental awareness regarding the impact of their activities, it is noteworthy that over half of the respondents do not perceive themselves as having had any significant impact. However, among those who did acknowledge an impact, the majority cited effects on vegetation (77.23%), which aligns with concerns raised by local partners. Comparatively, impacts on wildlife were also frequently mentioned (45.54%), followed by concerns about soil degradation (38.61%). Notably, only a small percentage of respondents mentioned invasive species (4.95%), possibly indicating unfamiliarity with the issue. In efforts to minimize their impact, most respondents prioritize packing out their waste, alongside actions aimed at minimizing disturbance, particularly to

wildlife. Despite expressing a high preference for freedom of movement (with a mean value of 4 on a Likert scale ranging from 1 to 5), visitors demonstrate a conscientious attitude, avoiding straying from designated paths to mitigate impacts on soil and vegetation. Additionally, a significant majority (87.50%) express support for seasonal closures during wildlife breeding seasons, highlighting their willingness to accommodate conservation efforts.

6.4.3. Challenges and threats

In the pilot area, over-tourism emerges as a prominent challenge within the park, closely followed by encroachment and the limitations of available resources in the region. Additionally, economic volatility is noted as a potential source of conflict, particularly among park visitors, alongside concerns about changes in conservation objectives. While further investigation is warranted, initial insights gleaned from threat analyses reveal some insights. Logging and deforestation are highlighted by 53.26% of respondents, underscoring their significance as pressing issues. Waste management also garners attention, exacerbated by over-tourism and irresponsible behaviours among visitors. Wildlife poaching, identified by nearly a quarter of respondents, presents another significant concern. Other notable threats revolve around climate change impacts, including fires, droughts, and soil erosion.

Although not as prevalent as indicated in the aforementioned figures, when directly queried about environmental concerns, some respondents emphasized waste as a primary issue, particularly attributing it to overtourism and the excessive number of cars. However, it is noteworthy that 67.37% did not report any environmental distress.

Furthermore, post-visit, there appear to be limited changes in visitors' awareness of environmental issues, resources, and limitations. A majority (65.10%) stated that their awareness remained unchanged following their visit. However, over a third (31.77%) expressed heightened awareness, particularly regarding flora and fauna (62.71%) and the values of protected areas (42.37%). Notably, there is an increase in awareness regarding earth science and soil compared to other sites (23.73%), alongside significant citations concerning cultural values and traditions (18.64%), which might be related to the high interest in educational activity mentioned above.

6.5. Kamenjak Protected Areas: Lower Kamenjak, Medulin Archipelago

6.5.1. Overview of the respondents

In this pilot area, we gathered responses from 82 individuals. The age distribution shows an equal split between the 30-39 and 40-49 age groups, each comprising 28.40% of the total, while 23.46% represent young adults aged 18 to 29. Females constitute a slight majority at 57.50%. In terms of education, over one-third of respondents hold a master's degree (33.75%), followed closely by those with secondary education (27.50%). A notable divergence from other pilot areas is the average length of stay. For 38.27% of respondents, their stay is six days or more, while nearly one-fifth stay for at least 2-3 days. There is a consistent distribution among those who have never visited, those who have visited less than five times, and those who have visited more than five times (almost one-third each). This pattern may be attributed to the diverse nationalities represented among the respondents, suggesting a greater investment in travel experiences within this area.

In this area, bike touring stands out as a prominent activity, garnering more attention compared to other pilot areas. Notably, a significant percentage of visitors come seeking moments of peace and solitude, surpassing all other pilot locations. The primary draw for most visitors is undeniably the natural heritage of the area. However, recreational opportunities and the presence of cultural landmarks also play pivotal roles in shaping visitors' choices. This site boasts a rich array of rare flora and fauna, including a specific trail showcasing dinosaur tracks, which serves as a captivating attraction for tourists. Cultural tours and guided visits are also highly favoured by visitors. Furthermore, more than a fourth of respondents, are drawn to the area for swimming, taking advantage of the allure of the Archipelago's renowned sea.

6.5.2. Attitude and impact

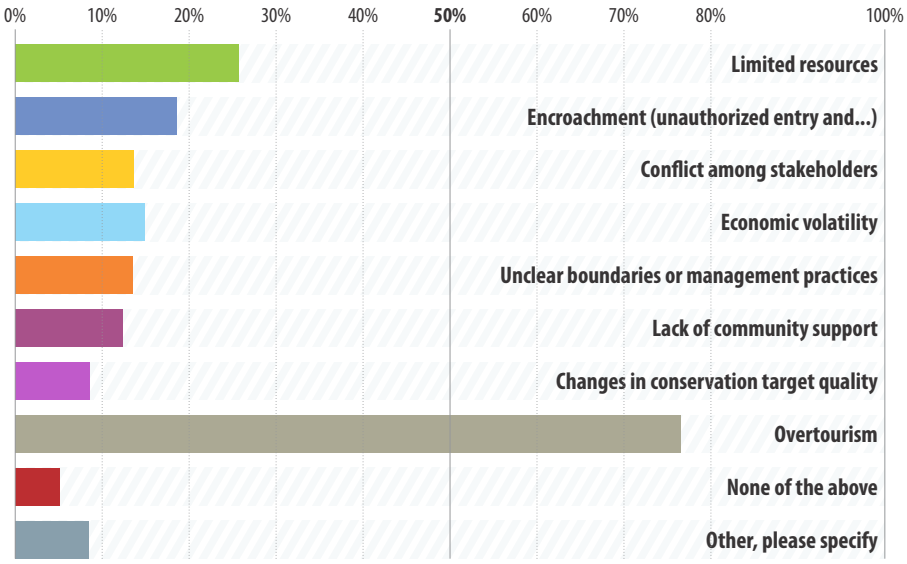
The impact of excursions is acknowledged by 68.75% of respondents, with a significant focus on its effects on vegetation (68.42%). Additionally, a notable proportion of respondents also recognize impacts on wildlife (49.12%), water (29.82%), and soil (24.56%). Interestingly, invasive species are highlighted by 7.02% of respondents, the highest percentage among all sites surveyed. This emphasis on wildlife may stem from the unique marine environment of the area, facilitating more frequent encounters with diverse wildlife. To mitigate these impacts, respondents prioritize actions such as responsibly disposing of waste and minimizing disturbances, such as adhering to visitation restrictions during wildlife breeding seasons and avoiding disruptions to wildlife habitats. While visitors highly value the freedom to explore (rated at a mean value of 4 on a Likert scale ranging from 1 to 5), they also express a strong acceptance for seasonally closing the area for conservation-related efforts and are highly in favour of active biodiversity protection programs (also rated at a mean value of 4 on the same Likert scale). This underscores the importance of balancing visitor experience with environmental conservation efforts.

6.5.3. Challenges and threats

The issue of overtourism looms large over all other challenges faced by the area. This sentiment is not only evident in responses directly addressing challenges but also expressed clearly in open-ended questions regarding potential environmental hazards. During the summer months, the archipelago experiences an overwhelming influx of tourists, resulting in environmental degradation and discomfort for visitors due to overcrowding. This observation is corroborated by the pilot area's assessments. In contrast, other challenges are deemed relatively less significant, with only a handful of respondents selecting each. Accessibility poses a notable concern, with parking issues being particularly pronounced compared to other pilot areas. Additionally, respondents frequently lament the dust stirred up by vehicular movement, contributing to an unpleasant environment. Fires and droughts are also prevalent concerns, with 44.87% and 35.90% of respondents respectively highlighting their significance. These issues are exacerbated by the arid hinterland environment, which faces pressures from deforestation and logging activities.

Another significant distinction from other pilot sites is that over half of the respondents (53.66%) reported a shift in their attitude towards nature. This shift primarily manifests in a heightened appreciation for flora and fauna (69.57%) and the values associated with protected areas (41.30%). While an overwhelming majority (95.12%) were aware of being in a protected area, the roles they attribute to it vary considerably. While 40.24% perceive its primary role as conserving biodiversity in the face of human pressure on natural resources, an even larger portion (42.68%) view it as primarily addressing human-wildlife conflicts and tourism pressures, highlighting visitors' sensitivity to these issues. Interestingly, cultural tours were also mentioned by nearly one-fifth of respondents, indicating a growing interest in the cultural aspects of the area. This finding is noteworthy, particularly considering the pre-existing high valuation of the area's cultural heritage, despite the limited availability of guided tours.

Q30: In your oppinion, what are the main challenges and treats this site is facing? Challenges:
Please select max. 3 answers



Conclusions

The activity of the questionnaires with tourists allowed to obtain significant data on behavior, attitudes and awareness of tourists on the impacts generated by their interaction with the natural environments in particular within the protected areas covered by the study. The analysis refers to the five pilot areas involved but it also represents a relevant and valid reference sample for other naturalistic areas in similar territorial contexts. Examining all the outcomes presented, it is advisable to focus specifically on the following aspects.

All the pilot sites are visited mostly for walking and hiking, in some cases, as in the Bükk National Park and the Malá Fatra National Park are almost exclusive catalysts of tourism in the area, while in other cases such as Karawanken Geopark and PNATE the public interest is divided into numerous additional practical experiential opportunities. Karawanken Geopark is especially favored for bicycle touring and nature photography, while PNATE offers guided tours and the serenity of less crowded locales. The scenery is still different in Kamenjak where the natural areas are favorite destinations especially for other activities. Examples include bike touring, seeking quietness and particularly embracing the coastal landscape for activities like swimming, diving, and water sports. Tourists intercepted by this survey return the image of a trend of visits to protected areas on a mostly daily scale, except for Kamenjak Geopark which is instead a destination for longer stays, for most cases (38.7%) even more than 6 days. In an area sustained by tourism, particularly during the bustling summer season, the profound effects of human activity and overtourism are prevalent and call for urgent containment measures.

Another noteworthy observation is that in 4 out of 5 sites, most visitors are already acquainted with the area and have explored it on at least five previous occasions. Conversely, in the PNATE, this trend is reversed, with a majority of visitors experiencing the park for the first time. This lead to reflect on at least a couple of considerations:

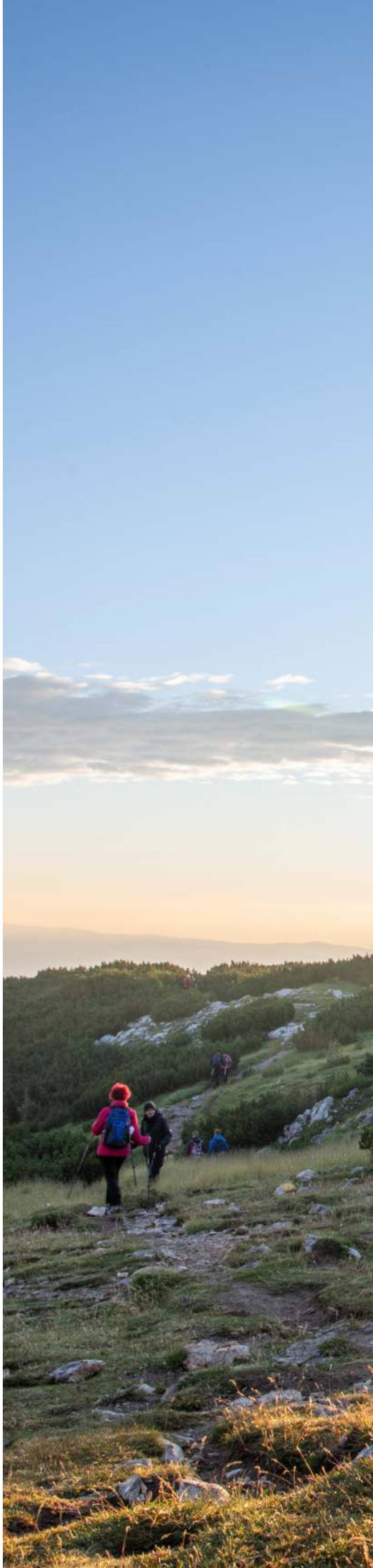
(1) a significant part of those who frequent the protected areas has the habit of returning there, to build a personal connection with the places and proportionally also to feel close and involved in their protection. It is an already rather responsive and responsible public towards environmental issues, and as such, a priority audience for protected areas to target more focused content, initiatives, and programs.
(2) A loyal public, if properly motivated and informed, can act as a sounding board of good practices and strengthen the measures taken by the sites, but also join more effectively in supporting and contributing to specific activities. Consider, for instance, the potential of citizen science activities and the valuable data that increased adoption of tracking apps could offer in bolstering the sustainable management of these areas.

However, the opinion of visitors on their role in generating environmental impacts is divided. There is a general uncertainty that sees the two fronts of response sometimes equally represented, in other cases the affirmative answer prevails, in Kamenjak, in others the negative one prevails, in the PNATE. Among those who recognize the possibility of having generated impacts, they identify them in almost all sites, especially in soil and vegetation. It's noteworthy that in all regions, one of the most significant and urgent challenges recognized is indeed overtourism, which poses a substantial threat to the delicate natural balance of local ecosystems due to the overwhelming presence of humans. This indicates the acknowledgment of the significant and impactful role played by people and tourism in the complex system of human-environment interactions and its consequent impacts.

In conclusion, it is noteworthy to highlight a certain disparity between the threats and major issues identified by protected areas within their context, and those perceived or estimated by the public. At the Bükk National Park visitors highlighted heightened risk factors and negative potential concerning the environment, logging and deforestation and waste management, while the more concrete pitfalls are due to the passage of motorised vehicles, trampling and plant and mushroom harvesting. This suggests that tourists may not fully consider the complexities of human-environmental conflicts in this area, and perhaps beyond. It also reflects a lack of grounded awareness regarding the damage and consequences that seemingly harmless actions and behaviors can cause over time. The disjunction between actuality of the pilot sites and external perceptions,

as uncovered in this study's conclusion, emphasizes a crucial strategic imperative for all sites and protected areas to prioritize in the immediate future. The informational, educational, and outreach efforts undertaken by protected areas must align with the objective of equipping the public with the essential knowledge required for them to develop concrete awareness and, consequently, take proactive measures.

It will not only be about the task of implementing a comprehensive communication and training strategy. What also emerges from the analysis is the imperative to establish a framework for dialogue and engagement with the public, harnessing its potential and directing existing positive sentiments towards the advancement of the entire human-environmental system.



Acknowledgments

The activity illustrated within the Report on Tourists' Survey results (D.3.1.1) has actively involved all the partners demanding a consisting engagement starting from the early stages, aimed at the drafting and structuring of the survey, to the final stages of reading and analysis of the results. All the work was carried out over a period of about 9 months, from June 2023 to February 2024, that involved the project partners at different times and with different tasks.

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