Barbara **OSÓCH** • Wojciech **ZBARASZEWSKI**

ASSESSMENT OF POLAND'S NATIONAL PARKS IN TRIPADVISOR USERS' REVIEWS

Barbara OSÓCH (ORCID: 0000-0002-8364-7904) – University of Szczecin, Institute of Spatial Management and Socio-Economic Geography

Wojciech ZBARASZEWSKI (ORCID: 0000-0002-1373-1895) – West Pomeranian University of Technology, Faculty of Economics

Correspondence address:
Mickiewicza Street 64, 71-101 Szczecin, Poland
e-mail: barbara.osoch@usz.edu.pl; wojciech.zbaraszewski@zut.edu.pl

ABSTRACT: Nature tourism, including tourism in protected areas, is becoming increasingly important. Since protected areas are traditional and popular tourist destinations, it is advisable that opinions posted about them online should be studied. The article analyses the opinions of visitors to Polish national parks posted on Tripadvisor.com by May 2023. The ranking created shows which of these valuable natural areas are visited in which seasons and by which target groups. The study points to evident seasonality of visitation, associated with the warmer part of the year in most of the parks, and shows that the groups of visitors come mainly from Poland and the neighbouring countries. It is noted that, based on visitor ratings, some national parks are visited by tourists from all over Europe and while others attract mainly Poles. The scope of the study is limited by the incomplete data obtained for the national parks (with no reviews retrieved for 4 national parks, i.e., Tatra, Białowieża, Świętokrzyski, Ojców). The method used was adapted to achieve the goal of the study, which was to identify and analyse Tripadvisor.com users' opinions on Polish national parks. Users' reviews are an invaluable source of information, informing subsequent choices made by other travellers visiting the parks.

Introduction

The main purposes of national parks are to protect nature, natural processes and cultural values and to preserve biodiversity (Act, 2004). They also have scientific, teaching and educational functions. They open their spaces for scientific research and tourism, primarily to satisfy informative and educational needs.

National parks in Poland represent diverse geographical regions and landscapes. Among them are two coastal parks, five lake district parks, five parks in the northern and central lowlands, five parks in the old mountain and highland strip, five parks in the Western Carpathians and one more in the Eastern Carpathians. Most of them are in the south of Poland, which is due to the ultimate natural and landscape values of this area (Figure 1).

Tourist traffic in national parks is the subject of numerous scientific studies and conferences. Polish national parks are popular among tourists, as evidenced by their high visitorship (Figure 2).

The tourism infrastructure in national parks consists of elements such as accommodation facilities (shelters, tourist chalets), catering and other accompanying facilities. The visitors are offered designated hiking, cycling, horse riding, water trails, nature trails, nature museums, educational centres, animal show centres, and other.

Recent years have seen changes in preferences regarding ways of participation in tourism and the choice of recreation, with mass tourism giving way to individual tourism, enabling contact with nature and thus rest and regeneration, which is pursued in small groups of family members or friends (UNWTO, 2020). This, in turn, has triggered a search for alternative forms of recreation, intimate discovery and finding out places of unique appeal.

Figure 1. Distribution of Poland's National Parks
Source: Ekoportal (2025).

Websites have become some of the most important sources of information and serve tourists planning their trips and deciding on the purposes of their trips, ways of spending time and the services they will use (Buhalis, 2022). Prior to setting off on a journey, tourists often go online for reviews posted by others regarding the services and the venues of their planned destinations. Quantitative

assessments and descriptive opinions about places, attractions and tourist enterprises can be found on the websites of tourist service intermediaries (e.g. Booking.com; Airbnb.pl), social networking sites where service providers maintain their profiles (e.g. on Facebook), and specialised tourist social networking sites (e.g., Tripadvisor). Research has shown that opinions expressed on the Internet about visited places (sightseeing options, accommodation) are a valuable source of information and largely help in making decisions about the direction of travel and in choosing the accommodation (Gretzel & Yoo, 2008; Liu & Park, 2015; Guo & Pesonen, 2022; Niezgoda & Nowacki, 2023). This study fills an information gap by stock-taking the websites and online tourist services. The aim of this study was to identify and analyse Tripadvisor users' opinions on national parks in Poland.
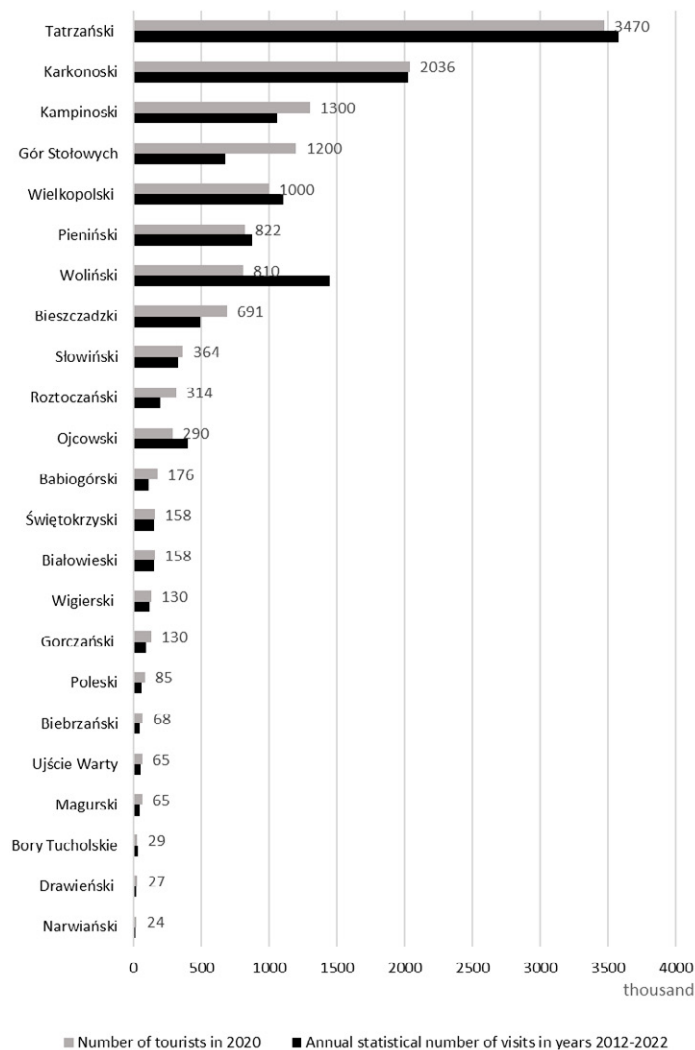

Figure 2. Number of tourists visiting Polish national parks in 2020 and the average figure for 2012-2022
Source: authors' work based on GUS (2021).

Literature review

The natural environment is a set of interconnected components which shape the geographical space for the needs of tourism. They consist of the atmosphere layer (the climate, weather phenomena), the hydrosphere layer (surface and underground waters), the lithosphere layer (the structure and topography of the land and soil), and the biosphere layer (the living world, i.e., forests, different types of habitats, protected areas) constituting the basis for human activity. Together they create a landscape understood as an image of the earth's surface, distinguishing the specific area, created by a co-occurring combination of natural and anthropogenic features (Szulczewska, 2009). Since the

beginning of mankind, the natural environment has been a source of resources for humans to use, a reservoir of spiritual experiences, and has had a therapeutic function. The landscape values of the natural environment fuel the development of tourism and, more and more commonly, recreational activities (Fossgard & Fredman, 2019; Wolsko et al., 2019). The desire to keep the natural environment intact has warranted the creation of protected areas. On the other hand, the development of infrastructure and an intensified tourist traffic pose a threat to the protected natural environments (Widawski & Jary, 2019; Balochet al., 2023).

The literature offers many guides to sustainable tourism in protected areas (Skulimowska, 2023). They contain collections of the most relevant aspects related to nature conservation in general and to making nature available to the increasing tourist traffic. One of the issues discussed in such publications is the financial, economic, socio-cultural and environmental costs of tourism in protected areas (Eagles et al., 2002; Lee & Middleton, 2003). There are also instructional guides out there whose topics are restricted to nature conservation and to making the nature of the national parks available for tourism in the countries around the Baltic Sea (Parks & Benefits, 2012). A study by Zbaraszewski et al. (2022) compares between the protected areas located in the cross-border area of the Pomerania Euroregion, including an assessment of the degree of satisfaction reported by visitors to Polish and German protected areas. The characteristics of the visitors to Wolin National Park are discussed in Żyto's publication (2019). The opinions of Szczecin residents on the general public's knowledge of Wolin National Park have been analysed by Bąk and Zbaraszewski (2014). Other leading topics are the motives and preferences of visitors to national parks, including Góry Stołowe National Park (Żyto et al., 2018) and the volume of tourist traffic, e.g., in Bieszczady National Park (Prędki & Demko, 2021).

As national parks are some of the most popular destinations for tourists in Poland (attracting nearly 30% of the country's tourist traffic), there is a rich and diverse list of publications on individual Polish national parks and their connections with tourism (Miazek, 2020). Most of these studies are based on surveys of the people visiting individual parks. One of the issues addressed is the preparation and adaptation of the small recreational infrastructure to serve tourists, e.g., in Kampinos National Park (Dzioban et al., 2008), Gorce National Park (Bordas & Markiewicz, 2011), and Polesie National Park (Śliwińska et al., 2020). There are publications regarding specific natural attractions, as well as anthropogenic developments being examples of cultural heritage, attracting tourists to parks, e.g., traces of past mining activity in Góry Stołowe National Park (Żyto, 2021). Some authors study anthropogenic environmental impact on Polish national parks (Rogowski et al., 2025), with others discussing the negative effects of tourism on the environment of Drawa National Park (Głuchowski & Nawrocka-Grześkowiak, 2013) and Biebrza National Park (Kiryluk & Borkowska-Niszczota, 2009).

The need to monitor and control the volume of tourist traffic in protected areas is widely discussed (Kajala et al., 2007; Martin & Tfebicky, 2000; Graja-Zwolińska & Spychała, 2014; Zawilińska, 2021), e.g., with reference to Tatra National Park, Babia Góra National Park (Buchwał & Fidelus, 2010), and Góry Stołowe National Park (Rogowski, 2017). Gałązka (2009) has conducted comprehensive research among persons visiting Polish national parks for tourist activities. According to the author, the development of tourism in a national park brings benefits not only to the area's managers and visitors but also to the local community.

The literature on the subject reports attempts to evaluate websites for various sectors and categories of services provided. In particular, many attempts to evaluate websites have focused on travel-related websites (Ostovare & Reza Shahraki, 2019; Shrestha et al., 2021; Pourabedin, 2021), government websites (Lee-Geiller & Lee, 2019), (Verkijika & De Wet, 2018), educational websites (Gi-Zen et al., 2011), (Acosta-Vargas et al., 2020), museums (Kabassi, 2017), and social institutions such as hospitals. Publications assessing websites of foreign (Osóch & Zbaraszewski, 2021) and Polish (Osóch & Zbaraszewski, 2020) national parks are available, as well. The authors of the latter assess the structure and usability of park websites for various recipient groups, proving that they do not have a unified structure and, in most cases, are not knowledge banks about the place visited.

Using sentiment analysis (SA), Tripadvisor reviews of South Africa's national parks have been analysed. The results showed positive sentiments concerning national parks expressed by visitors on social media, with few expressions of negative feelings. Importantly, national parks play a social role by developing positive interactions with nature and thus influencing the well-being of the visitors. The weaknesses of the analyses included underrepresentation of the sample of visitors publishing

reviews, and the use of unconventional language (e.g., abbreviations, slang, etc.), which may reduce the effectiveness of automatic computing systems (Roberts et al., 2018). Similar findings have been made in other studies (Hausmann et al., 2020; Mangachena & Pickering, 2021), where Twitter reviews of the same national parks in South Africa, are explored. Their authors identified the visitors' particular interest in specific events, e.g., commemorations related to the history of the park, or discoveries of natural significance. Another example could be the study of reviews posted on Tripadvisor regarding the Danube Delta, which focuses on the dominant tourist themes, memories of the visits, and the main layers of the experience (Stoleriu et al., 2019). The result of the study showed that there were more reviews concentrating on how to organise one's arrival in the park than those that spoke of what to see there.

The results of the sentiment analysis have been used to implement a natural language processing technique, using which the strengths and weaknesses of Plitvice Lakes National Park in Croatia were extrapolated from the point of view of visitors. Multidimensional scaling and cluster analysis have also been used to identify key topics discussed in the visitors' reviews (Sergiacomi et al., 2022). The above research tool has also been used in a study of Tripadvisor reviews posted by visitors to Tatra National Park (Niezgoda & Nowacki, 2020). The aim of the study was to identify the main reasons why the visitors chose to experience nature in the National Park and whether such reasons were in any manner related to the topics of ecological awareness and nature conservation. It was proven that the most active forms of leisure (e.g., hiking, mountain climbing) were the main motivation for visiting outdoor destinations. The authors pointed out the need to assume that the reviews contained elements considered by the visitors as the most important.

Research methods

Tripadvisor is an information-sharing platform covering people's journeys at every stage of travel, including planning and the sharing of experiences upon return. The authors of the posted opinions, reviews, pieces of advice and tips about selected places are the travellers themselves who have already visited these venues and wish to share their experiences and impressions with others. The website contains almost 1 billion reviews of 8 million accommodation facilities, catering facilities, transport options, including airlines, and tourist attractions (TripAdvisor, 2023).

These include man-made, i.e., anthropogenic, objects and, various forms of sports and cultural activities such as rafting trips, hikes, rallies, museum trips, shopping centres, as well as natural objects created without human intervention or with little human help, including: tourist trails, gardens, green areas, and various forms of nature protection, e.g., national parks and individual objects located within them, i.e., rocks, water reservoirs, waterfalls, caves, peaks, and others.

Entries about these facilities are posted on the website by the travellers themselves or by people managing the facilities. Each opinion can rate the given spot or activity on a numerical scale ranging from 1 (terrible) to 5 (excellent) or be made in a descriptive version, i.e., as a review. The ability to write a review is only available to registered users. A single review consists of a minimum of 100 characters. The traveller enters the date of their trip, writes what type of journey it was, and adds keywords that make it easier to locate their opinion later. The website allows the publication of reviews in at least 22 foreign languages. The various filter categories allow for the selection of types of facilities, the language in which the opinion is written, the season of the trip, and the nature of the trip.

The aim of this study was to identify and analyse the website users' opinions about the Polish national parks they visit. The type of research applied here is referred to as an opinion survey or, simply, a social study. The research material used in the study consisted of reviews posted on the Tripadvisor.com as of May 2023. The method used was adapted to achieve the goal of the study. In the first step, Polish national parks were identified on the Tripadvisor.com website. In the next step, the posted reviews on the national parks were studied. On this basis, the reviews were classified by seasons, and the main categories to which they related were distinguished.

For the purposes of the present article, 2,931 reviews regarding Polish national parks (Figure 1), which themselves are a tourist attraction, were analysed. The results, as retrieved from Tripadvisor as of 1 May 2023, are presented in Table 1.

The information presented in the Table concerns the number of assessed natural attractions within the national park, the total number of reviews regarding the given national park, the number of opinions broken down by year, the percentage of visits to national parks in different seasons, as well as the percentage of reviews made in foreign languages, i.e., by people registered on the website as foreigners. The information obtained from Tripadvisor was correlated with statistical data from the Central Statistical Office regarding the volume of tourist traffic within the parks in 2020 and on average between 2012 and 2022.

Results of the research

Table 1. Opinions about Polish national parks on Tripadvisor

National Park	Name of the attraction on the website TripAdvisor	Total number of reviews	Average numerical rating (rating scale from 1 to 5)	Percentage of opinions during the period: summer (6-8), winter (12-2), spring (3-5), autumn (9-11)	Percentage of entries in languages other than Polish
Babia Góra	Babiogórski National Park; Park Czarnego Daniela	79	5.0	summer − 46%	14%
Białowieża	no data	no data	no data	no data	no data
Biebrza	Biebrza National Park; Leśniczówka Grzędy	70	4.5	summer − 61.9% spring − 23.8% autumn − 14.3%	44%
Bieszczady	Bieszczady National Park; Połonina Caryńska; Połonina Wetlińska; Park Krajobrazowy w Wetlinie; Solina; Wielka Rawka; Tarnica; Zagroda Żubra w Mucznem	157	5.0	summer − 34% winter − 13% spring -1% autumn − 32%	26%
Bory Tucholskie	National Park Bory Tucholskie	12	4.8	summer − 67% winter − 8% spring − 8% autumn − 17%	16%
Drawa	Drawa National Park, Drawieński Park Narodowy, Kamień Pojednania	9	5.0	summer − 78% winter − 22%	44%
Gorce	Gorczański Park Narodowy; Góra Turbacz; Bór na Czerwonym; Gorczański Park Narodowy	29	4.5	summer − 34% winter − 17% spring − 38% autumn − 11%	10%
Góry Stołowe	Stolowe Mountain National Park; Skalne Grzyby; Szczeliniec Wielki; Błędne Skały; Wodospad Pośny; Skalna Czaszka; źródło wody mineralnej Wielka Pieniawa; Park Zdrojowy	180	4.8	summer − 42.2% winter − 16.1%, spring − 16.1%, autumn − 25.5%	25%
Kampinos	Kampinoski Park Narodowy	24	4.5	summer − 37.5% winter − 12.5% spring − 30% autumn − 20%	71%
Karkonosze	Karkonoski National Park; Szklarka Waterfall; Śnieżka; Wodospad Kamieńczyka;Termy Cieplickie; Podgornej Waterfall; Wild Waterfall; Chybotek; Szrenica; Gravitational Anomaly Spot; Siruwia Japanese Garden; The Death Curve; Skała Słonecznika; Złoty Widok; The Elbe river source; Śnieżne Kotły; Krucze Skały; Park Ducha Gór; Sowie Skały; Karpatka; Hutsky Vodopad; Równia pod Śnieżką; Polana Jakuszycka; Skałki Końskie Łby	54	4.5	summer − 61% winter − 13% spring − 13% autumn − 13%	32%
Magura	Magurski Park Narodowy	8	4.5	summer − 87.5% spring − 12.5%	12%

National Park	Name of the attraction on the website TripAdvisor	Total number of reviews	Average numerical rating (rating scale from 1 to 5)	Percentage of opinions during the period: summer (6-8), winter (12-2), spring (3-5), autumn (9-11)	Percentage of entries in languages other than Polish
Narew	Narew National Park	4	4.0	summer − 75% spring − 25%	25%
Ojców	no data	no data	no data	no data	no data
Pieniny	Pieniny National Park; Spływ Dunajcem; Trzy Korony; Homole Canyon; Sokolica; Szopczanski Gorge; Góra Wdżar; Zaskalnik Waterfall; Park Górny im. Adama hrabiego Stadnickiego; Dunajec Gorge; rezerwat przyrody Biała Woda; przełęcz nad Lopszanką	292	4.5	summer − 53% winter − 7% spring − 14% autumn − 26%	27%
Polesie	Poleski Park Narodowy	18	4.5	summer − 66% winter − 6% spring − 28%	22%
Roztocze	Roztocze National Park; Rezerwat Bukowa Góra; Zwierzyńczyk; Lipowiec Vineyard; Kamieniołom Babia Dolina	80	5.0	summer − 45% winter − 6% spring − 25% autumn − 24%	9%
Słowiński	Słowiński National Park; Wydma Czołpińska; Flooded Forest	120	4.5	summer − 64% winter − 4% spring − 9% autumn − 23%	69%
Tatra	Lake Morskie Oko; Rusinowa Polana; Dolina Pięciu Stawów Polskich; Rysy; Black Pond, Dolina Kościeliska; Dolina Chochołowska; Szczyt Mnich; Wodogrzmoty Mickiewicza; szlak Orla Perć; Dolina Lejowa; Kamień Karłowicza;	1488	no data	no data	no data
Świętokrzyski	no data	no data	no data	no data	no data
Ujście Warty	National Park Warta Mouth	16	4.5	summer − 44% winter − 12% spring − 19% autumn − 25%	31%
Wigry	Wigry National Park; Jezioro Blizenko	41	4.5	summer − 66% spring − 12% autumn − 22%	46%
Wielkopolska	Wielkopolski National Park, Goreckie Lake, Szachty Lake	10	4.5	summer − 30% spring − 40% autumn − 30%	40%
Wolin	Wolin National Park; Kawcza Mountain; Grodzisko w Lubinie; Turquoise Lake; Natural History Museum; Bison Showcase; Park Zdrojowy; Lubiewo Beach; Karsiborska Kępa; Wolin Island	240	4.5	summer − 46% winter − 15% spring − 22% autumn − 17%	42 %

Source: authors' work based on the Tripadvisor (2023).

The average numerical score for all the parks is high, i.e., 4.62. Only in one case was it 4 – for the Narew National Park. The remaining ratings were found to range between 4.5 and even 5 for Bieszczady, Roztocze, Babia Góra and Drawa NPs. Most of the ratings were posted on the website after visits in the summer season during the holiday months, i.e., between June and August (over 45%), followed by equal numbers in the spring and autumn seasons (less than 21% each) (Figure 3). Incomplete data prevented analysis for 4 other national parks. This is hard to understand because these parks are very frequently visited (Tatra NP) and widely recognised outside Poland (Białowieża NP). A high rating in winter was only given to Babia Góra NP. The linguistic structure can be identified by the review languages used. Apart from the native Polish language, most opinions were written in English. Other

languages used were German, Russian, Italian, Spanish, Swedish, Danish, Czech, Slovak and Dutch, with one comment posted in Japanese.

Two national parks, i.e., Słowiński (69.5%) and Kampinos (71%), have a much higher share of reviews in languages other than Polish. The national parks located near a national border (Wolin, Karkonosze) were also reviewed in the languages of their closest neighbours, i.e., German and Czech.
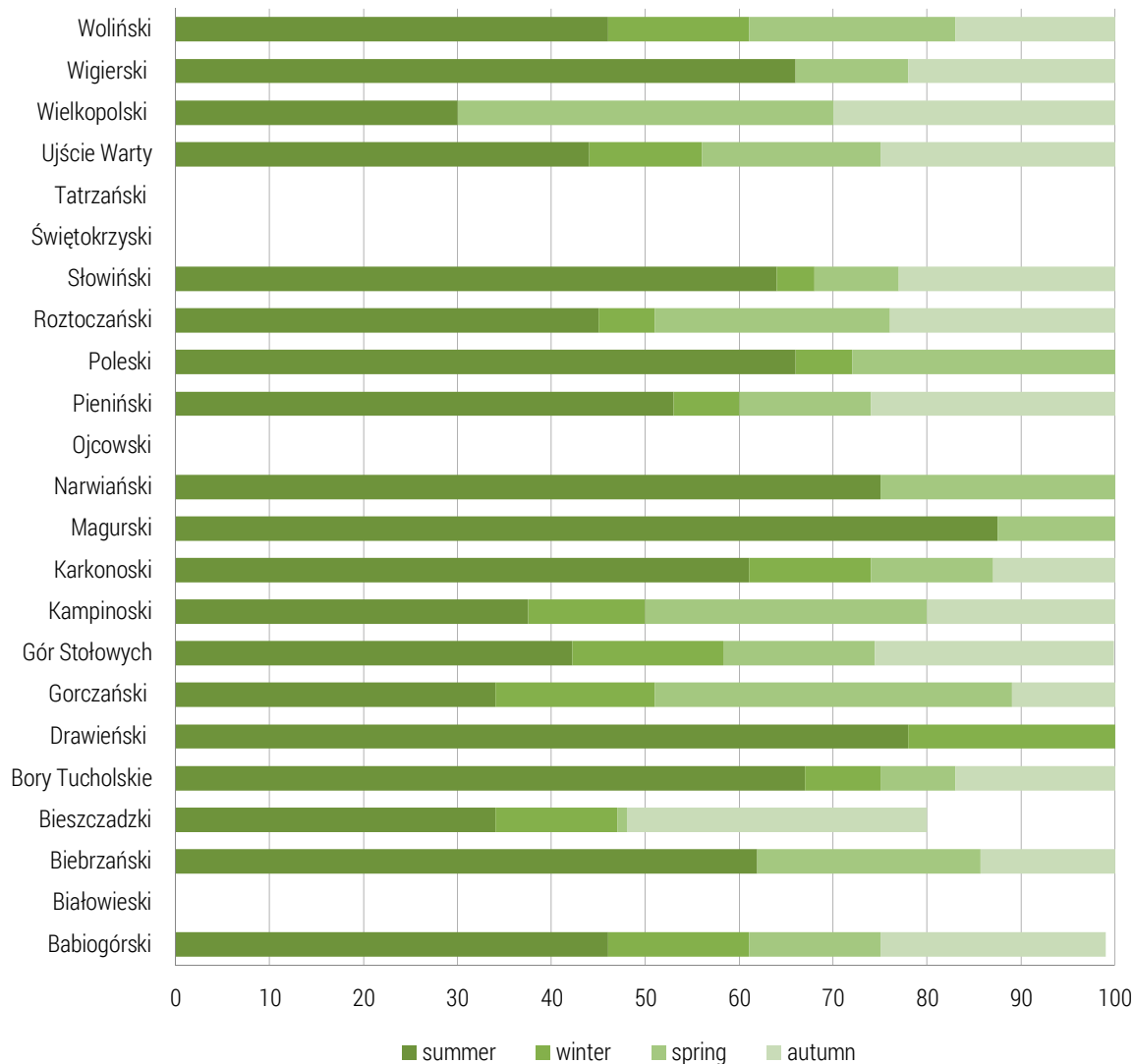

Figure 3. Percentage of reviews posted in different seasons of the year

Source: authors' work based on the Tripadvisor (2023).

Karkonosze National Park prevailed in terms of the number of tourist attractions available for evaluation. However, this did not translate into the number of reviews posted, as there were only 54 such entries. Other parks with slightly fewer assessed landscape elements were Tatra National Park, Góry Stołowe National Park, Pieniny National Park and Wolin National Park. The many attractions in Karkonosze National Park were used to identify their types and prevailing themes. This allowed for a generalisation of reviews of other Polish parks. There were found to be 4 thematic categories. The first group were opinions about the natural attractiveness of the landscapes visited. The second group consisted of opinions about tourism and recreation development, where tourists most often focused on identifying the location, availability of parking lots, and the capacity and difficulty of tourist trails, including cable cars. The third group contained practical information related to tourist routes and on how to prepare for going out into the field. The fourth group of issues concerned the emotions accompanying tourists visiting the Park.

The park that as an attraction received the most ratings from travellers is Tatra National Park (1,488 opinions). It was followed by Pieniny National Park (292) and Wolin National Park (240). These values are correlated with the number of actual visits to the mentioned national parks. These parks were among the most popular ones with tourists. In 2020, Tatra National Park attracted almost 3.5 million tourists, Karkonosze NP just over 2 million tourists, and Pieniny and Wolin NPs saw below 1 million tourists each (Figure 2). At the same time, the least visited parks, i.e., Narew NP (24,000 tourists in 2020) and Drawa NP (27,000 tourists in 2020), enjoyed only a small number of opinions and ratings on the website, with 4 and 9 entries, respectively, as well.

Wolin National Park, one of the two Polish national parks that cover portions of the Baltic Sea, attracted 240 reviews. The opinions written by Poles are short and concise, usually consisting of only 2 or 3 sentences. One major topic prevailed. Out of 131 Polish reviews, only 4 went beyond the coast, beach and bison enclosures, describing part of the Regressive Delta of the River Świna and Turquoise Lake. The tourists' attention focused on the beauty of the views, the peace, the beech forest, the countless tourist routes for walkers and cyclists, the viewpoints along the coast, and its allure for photography lovers, as the venues offer unique outdoor settings. There were critical comments identified, too, which regarded the insufficient level of infrastructure maintenance or the neglect of the existing infrastructure, e.g., the stairs to one of the viewpoints on Kawcza Góra. The reviewers also mentioned the insufficient information on the route to the bison centre, as it was not clear to them that the facility was closed on Mondays. Reviews written in languages other than Polish were more extensive, discussed different subjects, and were supplemented with photographs. Among the foreign-language opinions, there was one negative comment regarding the paper maps lacking markings of the entrances to the park and missing translations on the park's official website.

Discussion/Limitations and future research

Our overview of the Tripadvisor platform showed that the manner in which the information was presented and conveyed by the reviewers, as well as their positive and negative assessments of the places visited, were reliable and consistent with the actual situation. The study also pointed out the website's imperfections. They are mainly due to a fussy compilation of comments or the posting of a small number of comments. For a considerable group of the parks, there were reviews that had not been updated on an ongoing basis (the latest entries had been several years old). While we were conducting the analyses and exploring the subject, the number of reviews posted kept changing (fluctuating). This was probably due to ongoing maintenance or editorial work by the website's staff. Similar conclusions were drawn while researching the websites of specific Polish national parks. We noticed the lack of uniform domain names or common rules of their operation, e.g., graphic design (Osóch & Zbaraszewski, 2020). The numbers of tourist visits to national parks (Figure 2). between 2012 and 2022, especially in 2022, mostly coincided with the indicated values. The numerical values of the individual data often resulted from the specifics of the individual parks. One example is Kampinos National Park, whose open borders prevented any precise counting of the tourists. Another reason may be inconsistent and only periodically conducted monitoring. The national parks employed differing methods for collecting data on tourist traffic, i.e., direct (visitor counting), indirect (e.g., ticket sales statistics), and with electronic devices (Muhar et al., 2002; Kajala et al., 2007).

The analysed opinions on visits to Polish and foreign national parks posted on Tripadvisor showed uneven numbers of comments on different parks, which made comparisons impossible. In this study, it was possible to briefly characterise the topics presented and identify four main groups simply because the number of comments posted was small. Studies by Zhang and Cole (2016) and Barbierato et al. (2021) were based on over 10,000 records, while research carried out by Sergiacomi et al. (2022) explored over 15,000 entries (opinions expressed by respondents). It was necessary to use research tools such as content analysis and sentiment analysis.

One limitation of the conducted research was the lack of socio-demographic information about Tripadvisor users. This prevented any broader research into the characteristics of the sample (Stoleriu et al., 2019). Preferably, the visitor's tastes could be explored based on their personal characteristics through further in-depth surveys.

Another limitation of our study resulting from the nature of the website was the presence of fake reviews. This does not only concern negative reviews but also positive reviews. To increase their own popularity, some companies buy fake reviews to post on their list. As Niezgoda and Nowacki (2020) points out, when analysing the content of the above website, one must assume in advance that all the information included there is true. This issue does not affect the content analysis method and techniques, but in fact leads to inaccuracies in the descriptions and, as a result, customer dissatisfaction.

On the Tripadvisor website, national parks were largely rated as tourist attractions on their own. An equally large number of the parks assessed here also included individual landscape elements or activities that could be visited or practised within them, which constituted attractions permitting an individual assessment, e.g. rock groups, valleys, nature reserves, viewpoints, nature trips. Some examples were the landscape spots in Karkonosze National Park, i.e., Mount Śnieżka with 784 reviews, Kamieńczyk Waterfall rated by 653 people, and Szklarka Waterfall with 424 reviews. It is worth noting that natural objects were rated much less often than cultural objects (e.g., the Vang Stave Church has the most reviews of all the objects found in Karkonosze National Park – 1,046).

4 of the national parks were not included in the "attraction" category, i.e., Tatra, Białowieża, Ojców and Świętokrzyski. In 4 cases, national parks were listed only in the Polish language, i.e., Gorce, Kampinos, Magura, and Polesie. One national park – Drawa NP – was available on the website in two language versions, Polish and English. The remaining 14 National Parks were available on the website only under their English names.

The location of a national park in an area crossing the national border or close to the border may influence the number of ratings on the website. Parks found close to the border attracted many more foreign tourists. And again, the leading parks in this respect were those that were also the most frequently visited protected areas in Poland, i.e., Wolin NP with a large number of tourists from the cross-border region of Pomerania, Tatra NP with tourists from Slovakia, and Bieszczady NP located in close proximity to the Slovak and Ukrainian border.

The Polish coastal and mountain strips are areas of high tourist and, above all, recreational value. The prevailing types of tourism pursued there were leisure and long-term tourism, mainly by families with children. Tourists going on holiday to the Baltic Sea coast in West Pomeranian and Pomeranian Voivodeships, and those visiting the mountainous areas in Lower Silesian Voivodeship (Dolnośląskie) and Lesser Poland (Małopolska), usually had more time at their disposal to explore the national parks located there. The diversity of tourist attractions and tourist trails with varying levels of difficulty were perceived as adapted to the needs of every age group and of all recipients with different skills and qualifications. Other parks located in areas where short-term tourism is the prevailing type of leisure and those that attract the so-called day-trippers coming by while in transit had correspondingly lower ratings, e.g., Wielkopolska NP (10 ratings) and Warta Mouth National Park (16 ratings).

A noticeable feature of the reviews analysed in our study regarding both Polish and foreign parks (Hausmann et al., 2020; Mangachena & Pickering, 2021) was the use of predominantly positive emotions related to the protected areas visited. There were no negative opinions in this regard, with the only critical comments concerning not the elements of nature but rather the difficulties in accessing the nature parks.

There is a clear need to verify and optimise the national parks' websites both in terms of what is presented and how it could be presented using modern and user-friendly technologies. One more strength of the TripAdvisor.com website is that users can sort properties according to the criteria that we adopted in our study. Obtaining data from social networking sites is a difficult task and requires constant learning, modifying the existing methods and developing completely new ones that allow obtaining information from new sources.

Conclusions and suggestions

The natural attractiveness of Poland's national parks and the resulting large volume of tourist traffic are among the highest in the country and can compare with many cultural sites of global importance. Apart from the main statutory purpose of the parks, which is nature conservation, the parks' management is also concerned with the management of the infrastructure provided, information and supervision of tourist traffic on their territory. Parks, unlike, for instance, tourist companies, do not strive to intensify tourist traffic or derive income from it.

The implementation of the basic goals, i.e., to ensure nature conservation, tourists' safety, comfort and access to natural values, requires appropriate management, infrastructure maintenance, cooperation with organisations and local governments, and publication of information addressed to tourists. To be effective, knowledge about tourist activities and tourists' preferences and opinions about the places visited is required. The easiest way to obtain such insights is by conducting social research independently or in cooperation with, for example, the academic or scientific community. Online public opinion surveys reduce the costs and speed up this process.

The summary presented and our research will contribute to filling the information gap on the opinions of tourists spending time in naturally valuable areas. Our results offer assistance in comparing information about national parks and their websites, and the reviews posted. In the future, they provide a basis for further social research regarding, among others, the motivations behind and the ways of spending time and experiencing nature.

Social media allows visitors to be incorporated into the first stage of management of protected natural resources, which is the collection of information. However, involving the visitors in any of the subsequent steps of the process would be extremely complex. Firstly, because it would be necessary to engage very large samples to be representative of the entire population. Secondly, it would be difficult to find simple and appropriate channels to contact and interview so many respondents.

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The contribution of the authors

Conceptualization, W.Z. and B.O.; literature review, B.O.; methodology, W.Z. and B.O.; formal analysis, W.Z. and B.O.; writing, W.Z. and B.O.; conclusions and discussion, W.Z.

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Barbara OSÓCH • Wojciech ZBARASZEWSKI

OCENA PARKÓW NARODOWYCH POLSKI W OPINII UŻYTKOWNIKÓW SERWISU INTERNETOWEGO TRIPADVISOR

STRESZCZENIE: Turystyka przyrodnicza, w tym turystyka na obszarach chronionych, staje się coraz ważniejsza. Ponieważ obszary chronione są tradycyjnymi i popularnymi celami turystycznymi, wskazane jest zbadanie opinii zamieszczonych na ich temat w Internecie. W artykule przeanalizowane zostały opinie odwiedzających polskie parki narodowe zamieszczone w serwi-sie Tripadvisor.com do maja 2023 roku. Stworzony ranking wskazał na tereny cenne przyrodniczo odwiedzane w różnych porach roku oraz przez różne grupy odbiorców. Wykazano, iż wyraźna sezonowość związana jest w większości parków z ciepłą porą roku, a grupy odwiedzających pochodzą w większości z Polski i krajów sąsiadujących. Zauważono, że na podstawie ocen odwie-dzających, niektóre parki narodowe są odwiedzane przez turystów z całej Europy, podczas gdy inne przyciągają głównie Pola-ków. Zakres badania jest ograniczony przez niekompletne dane uzyskane dla parków narodowych (brak recenzji dla 4 parków narodowych, tj. tatrzańskiego, białowieskiego, świętokrzyskiego, ojcowskiego). Zastosowana metoda została dostosowana do realizacji celu badania, którym była identyfikacja i analiza opinii użytkowników serwisu Tripadvisor.com na temat polskich par-ków narodowych. Opinie użytkowników są nieocenionym źródłem informacji, wpływającym na późniejsze wybory dokonywane przez innych podróżnych odwiedzających parki.

SŁOWA KLUCZOWE: parki narodowe, serwis internetowy, e-usługi, turystyka przyrodnicza