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SOCIAL MEDIA AS A TOOL OF BUILDING REPUTATION AND IDENTITY OF NATIONAL PARKS

Kristína KORENÁ – Petra PÁRTLOVÁ

ABSTRACT:

Social media have turned out to be a suitable tool of marketing communication that enables the virtual connection of individual public accounts (profiles) to share information, data and create conditions for the joint implementation of activities. The submitted study focuses on the evaluation of the use of marketing communication in nine selected European national parks. The study analyses data that indicates the level of using social networking sites for presenting the official profiles and websites in the context of building reputation and identity in order to determine to what extent national parks use suitable tools of marketing communication and what are its possibilities and limitations. Marketing communication was examined using the rhetorical and descriptive analysis of text, which enabled performing a content analysis focused on three main parts: Pathos, Ethos and Logos. Within the descriptive analysis, another part of the research dealt with communication focused on the issue of education, environmental protection and business activities in the area of tourism. A new formula for calculating Social Media Effectiveness was proposed, calculated at a global level. Based on the results obtained, Plitvice Lakes National Park was rated the best, while the results in terms of marketing communication were recorded in the case of the Swiss national park, National Park Saechsische Schweiz. The main barrier to marketing communication is the reluctance to use English as the main language of communication and in the case of the *Facebook* platform, a higher number of posts. The results also showed that good marketing communication has an impact on the number of visitors to national parks and the right combination of published posts influences the behaviour of national park visitors. Furthermore, we confirmed the influence of communication on the possibility to educate especially the younger generation through media platforms, which is a positive finding.

KEY WORDS:

descriptive analyses, marketing communication, national park, rhetorical analyses, social media, social media platform

1 Introduction

In the context of climate change occurring on our planet and the increasing negative impacts on civilisation, the issues of environmental protection of which *homo sapiens* is an integral part are coming to the fore. Therefore, the efforts to preserve the original or close-to-nature segments of the landscape for the next generations is a logical requirement. The most valuable, as well as the most endangered, areas include biosphere reserves, where there exist declared 'National Parks' on the territory of individual states with the approval of their headquarters in Paris. This study focuses on strengthening the identity and good reputation of these most valuable parts of our nature using social networking sites. The issue of climate change and its impacts on forests appears to be highly topical and concerns the whole of society, as a society should strive to protect nature and its values and minimise the burden placed on it. Ensuring the sustainability of protected areas has an impact on preserving ecological, environmental and social indicators. The COVID-19 pandemic and the related reduced logistics and mobility of people, as well as the whole transport system, the study by C. M. J. Fayet,[1] provided data that pointed to the interconnectedness of people and ecosystems, or to the fact that people and their behaviour, as well as technical and technological progress, can have a significant negative impact on their conservation. Complex interdependencies between sustainability principles have also been confirmed. However, it shall be noted that man has always been a part of nature and cannot be separated from it. The system of conservation of protected areas needs to be strictly observed using various tools. A suitable tool appears to be sufficient information and transfer of knowledge that could significantly contribute to preventing the destruction of rare ecosystems and disruption of biodiversity by means of social media. Social media enable national parks to efficiently and very quickly transmit current information about the situation in the National Park but also continuously educate the public. According to A. Hausmann et al., social media platforms can be ranked among popular communication channels of visitors to national parks to share experiences through media, including the corresponding reviews published there.[2] Public social media can point to the image of destinations and also contribute to influencing a wide range of the public. M. Tajpour and E. Hosseini show in their research that the use of social media positively contributes to building identity and reputation.[3] Existing studies confirm that social media can be a reliable indicator for evaluating the relationship between visitation and the reputation of national parks or protected areas.[4] Examining social networking sites can also show the existing potential of a future visitation, or understanding spatial patterns of visitation (e.g., the visitors' behaviour, understanding their preferences and moods).[5] Until recently, direct contact with visitors (focus surveys) has been used for these purposes; social media, however, can represent a significantly cheaper and faster alternative. It is also possible to find out about the length of the stay on the platform, the gender or the age structure of the followers.

National parks should refine their online communication strategies.[6] Effective communication with park visitors is important to ensure that the needs of visitors are met in accordance with the principles of the protection of nature. It is important to inform about how the landscape is protected in real time, whether it concerns its aesthetical, cultural, historical or scientific value.[7] Current research often highlights the use of social media as a new communication channel, as confirmed, e.g., by J. M. Twenge, W. K. Campbell[8] or B. Barbosa et al.[9] Correlation was also confirmed between social media and tourism activities.[10] Digital platforms play an important role in building the so-called public reputation of destinations or regions but can also influence the behaviour of their visitors.[11] Tourists as potential visitors can receive information through these media either by following the profiles of national parks or through the so-called hashtags of a given locality and thus be informed about the current situation in parks. Given the diversity of preferences for shared information on social media, it is necessary to enhance the profiles to share the necessary information that would highlight the importance of protecting the national heritage as well as the current measures concerning national parks and effectively shape the public through various educational activities such as upcoming or planned training, workshops or conferences. Social media have become a daily routine and are a basic way of communicating, searching for events and checking the news. Generation Z represents the most active users of social media, or social networking sites such as *Facebook, Twitter, TikTok* and *Instagram*. According to *Datareportal*, in June 2022, the total number of users was 4.7 billion, and in the last year, it has grown by 227 million, which points to the importance of focusing on this young generation. A typical social media user actively uses or visits 7.4 social media platforms a month, and spends (on average) 2.5 hours using these media a day. *Facebook* (2.936 billion users) remains the most widely used social media platform in the world. *Datareportal* also presents the ranking of the most widely used social media platforms by the number of their active users (in billions), which include *YouTube* (2.476), *WhatsApp* (2.000), *Instagram* (1.440), *WeChat* (1.288), *TikTok* (1.023 billion users over 18) and *Facebook Messenger* (1.000).[12]

During the COVID-19 pandemic and mainly after the lifting of the government measures related to the pandemic, social networking sites turned out to be an effective tool in the recovery of sustainable tourism. This fact points to the importance of focusing on social media and on the effective use of these media to study tourists' behaviour during and after their tourist trips. Monitoring their behaviour also provides information and enables responding to their needs and expectations, which may contribute to building the identity and reputation of a given destination.[13] Shared posts of national parks can also help to understand how the image of national parks as tourist destinations is perceived and is created in the virtual social environment. Information or data from social media can serve for creating marketing strategies in the fields of ecotourism and nature conservation.[14] The rebuilding of sustainable tourism should be carried out using smart solutions in the form of digital platforms. These smart solutions are also beneficial for environmental protection and the education of communities and provide a suitable environment for all generations of tourists.[15]

The main goal of the study is to analyse the marketing communication of selected European national parks on social media and assess the effectiveness of selected social media (user profiles) in building a positive reputation and identity. The inquiry aims to answer research questions about the tools of digital platforms used by European national parks, the influence of the number of posts on building a positive reputation and identity, and the focus of posts on environmental protection, education and tourism-related business activities. The research evaluates both quantitative and qualitative data to provide insights into the impact of marketing communication on visitors and the possibility of educating the public through social media.

1   FAYET, C. M. J. et al.: The Potential of European Abandoned Agricultural Lands to Contribute to the Green Deal Objectives: Policy Perspectives. In *Environmental Science & Policy*, 2022, Vol. 133, No. 4, p. 44-53.
2   HAUSMANN, A. et al.: Social Media Data Can Be Used to Understand Tourists' Preferences for Nature-Based Experiences in Protected Areas. In *Conservation Letters*, 2018, Vol. 11, No. 2, p. 1-9.
3   TAJPOUR, M., HOSSEINI, E.: Entrepreneurial Intention and the Performance of Digital Startups: The Mediating Role of Social Media. In *Journal of Content, Community & Communication*, 2021, Vol. 13, No. 7, p. 2-15.
4   See, for example: ALVARADO-HERRERA, A. et al.: Corporate Social Responsibility, Reputation and Visitors' Commitment as Resources for Public Policies' Design for Protected Areas for Tourism Sustainable Exploitation. In *Social Responsibility Journal*, 2020, Vol. 16, No. 4, p. 537-553; WILKINS, E. J. et al.: Social Media Communication Preferences of National Park Visitors. In *Applied Environmental Education & Communication*, 2020, Vol. 19, No. 1, p. 4-18; WILKINS, E. J. et al.: Uses and Limitations of Social Media to Inform Visitor Use Management in Parks and Protected Areas. A Systematic Review. In *Environmental Management*, 2021, Vol. 67, No. 1, p. 120-132.
5   PLUNZ, R. A. et al.: Twitter Sentiment in New York City Parks as Measure of Well-Being. In *Landscape and Urban Planning*, 2019, Vol. 189, p. 235-246.
6   ABRAMS, K. M. et al.: Encouraging Safe Wildlife Viewing in National Parks: Effects of a Communication Campaign on Visitors' Behavior. In *Environmental Communication*, 2020, Vol. 14, No. 2, p. 255-270.
7   WILKINS, E. J. et al.: Social Media Communication Preferences of National Park Visitors. In *Applied Environmental Education*
& Communication*, 2020, Vol. 19, No. 1, p. 4-18.
8   TWENGE, J. M., CAMPBELL, W. K.: Media Use Is Linked to Lower Psychological Well-Being: Evidence from Three Datasets. In *Psychiatric Quarterly*, 2019, Vol. 90, No. 6, p. 311-331.
9   BARBOSA, B. et al.: Sempre ligados: Utilização dos smartphones pela geração Y e capital social. In *Revista Ibérica de Sistemas e Tecnologias de Informação*, 2020, Vol. 35, p. 152-166.
10   AN, S. et al.: A Study on the Tourism-Related Information Consumption Process of Tourists on Social Networking Sites. In *Sustainability*, 2022, Vol. 14, No. 7, p. 1-16.
11   JIMÉNEZ-BARRETO, J. et al.: Linking the Online Destination Brand Experience and Brand Credibility with Tourists' Behavioral Intentions toward a Destination. In *Tourism Management*, 2020, Vol. 79, p. 1-15.
12   KEMP, S.: *Digital 2022: July Global Statshot Report*. Released on 21st July 2022. [online]. [2022-12-14]. Available at: <https://datareportal.com/reports/digital-2022-july-global-statshot>.
13   HYSA, B. et al.: Social Media in Sustainable Tourism Recovery. In *Sustainability*, 2022, Vol. 14, No. 2, p. 1-24.
14   ALAEI, A. R. et al.: Sentiment Analysis in Tourism: Capitalizing on Big Data. In *Journal of Travel Research*, 2019, Vol. 58, No. 9, p. 175-191.
15   SUN, Y. et al.: A Model to Measure Tourist Preference Toward Scenic Spots Based on Social Media Data: A Case of Dapeng in China. In *Sustainability*, 2018, Vol. 10, No. 1, p. 1-13.

To answer Research Question 1, the presented research will find information about the selected European national parks, or rather which popular social media are used. *Facebook* and *Instagram* user profiles will be examined, or more specifically, the following primary data will be followed and evaluated: the frequency of posting on each profile, the response of users to these posts, whether the communication of user profiles is in English, or whether social media tools are used, etc. All attributes (activities and events) of national parks contribute to establishing proper communication and have thus an impact on building their reputation and identity, as it has been proven that they are positively accepted by the public.[16] For effective management and promotion of national parks, it is necessary to innovate and improve communication on social media platforms. Similarly, it is also necessary to address the public and obtain feedback from them through information on experiences and activities the visitors have undertaken there since those shared posts turn out to be important information sources that can significantly support the activities and operation of national parks. The significant increase in the use of social media provides new opportunities aimed at gaining insight into problems, trends, influential actors, and other information.[17]

RQ1: Which tools of digital platforms are used by European national parks, to which extent and which content do they present on selected social networking sites?

Research Question 2 will be answered using secondary data. Moreover, through a detailed analysis of these profiles, there will be found information about the use of social media platforms, including the visitation, the length of the visit, and demographic and geographic data (gender and age distribution, country visitation). This information will be used for the identification and evaluation of the effectiveness of selected national parks and the impact this information has on building a positive reputation and identity.[18]

RQ2: To what extent does the number of posts influence building a positive reputation and identity aimed at gaining new viewers?

To answer Research Question 3, qualitative and quantitative analyses need to be performed for a detailed evaluation of individual profiles and their marketing communication. It will be evaluated both in terms of content, i.e., whether such posts are published by national parks, and in terms of the percentage of posts focused on three basic areas, specifically education, tourism and environmental protection, since these areas can significantly contribute to building the identity and reputation of all national parks. Previous research studies confirm that social media are a particularly important tool for educating the public. Individual user profiles can thus represent a suitable means of educating the public in the areas such as environmental protection, which national parks definitely are.[19] Proper communication and sharing interesting posts can positively influence the attitudes and behaviour that would lead to the active conservation of protected areas.[20]

RQ3: Which of the selected European national parks publish posts focused on environmental protection, education, and tourism-related business activities on the selected social media platforms?

2 Literature Research

For the management of areas aimed at protecting nature with a unique nature landscape structure, information and communication technologies are used with varying degrees of intensity and for different purposes.[21] Modern technologies are increasingly more often used for creating long-term strategies with the aim of ensuring the sustainability of these areas as well as refining human activities and human behaviour in these areas.[22] Social networking sites and media, big data, or the Internet as such have changed the behaviour and attitudes of visitors to these important areas quite significantly.[23] X. Y. Leung[24] and B. Güçlü et al. define three phases of using the Internet for communication. In the first phase (in the 1990s), the Internet was used as a tool of communication for publishing information. In the second phase (2000 – 2010), the Internet was used for marketing rather than for communication. The third phase, which we are experiencing now, is aimed at e-commerce and demand for personalised and aggregated activities.[25] It was in this period when the concept of "smart destination" emerged. D. Flores-Ruiz et al. and J. Reinhardt distinguish several groups or categories of social media: social networking sites (e.g., *Facebook* and *Twitter*), media sharing networks (e.g., *Instagram, Snapchat, YouTube*), discussion forums (e.g., *Reddit and Yahoo!*), book and content curation networks (e.g., *Pinterest*), consumer review networks (e.g., *TripAdvisor*), blogging and publishing networks (*Tumblr*) or social shopping networks.[26]

Many studies deal with the use of social media from various perspectives.[27] R. Dolan et al.[28] and G. K. Shahi and T. A. Majchrzak[29] focus on gaining information and data collection; other authors analyse the specifics of individual networks,[30] or studies focused on a specific platform.[31] R. Graham et al. analyse communication of Canadian national parks with the public,[32] while M. Rachmaniah et al.[33] and A. P. Menayang and R. F. Martadetermined the importance of e-commerce for building reputation and identity.[34] Other

16   HYSA, B. et al.: Social Media in Sustainable Tourism Recovery. In *Sustainability*, 2022, Vol. 14, No. 2, p. 1-24.
17   STIEGLITZ, S. et al.: Social Media Analytics – Challenges in Topic Discovery, Data Collection, and Data Preparation. In *International Journal of Information Management*, 2018, Vol. 39, p. 156-168.
18   PÁRTLOVÁ, P. et al.: Building Reputation and Social Media – How Effectively Do Attractive European Tourist Destinations Communicate on Them? In *Entrepreneurship and Sustainability Issues*, 2022, Vol. 10, No. 1, p. 467-482.
19   RISSELADA, H. et al.: The Impact of Social Influence on the Perceived Helpfulness of Online Consumer Reviews. In *European Journal of Marketing*, 2018, Vol. 52, No. 3-4, p. 619-636.
20   PIKE, S., LUBELL, M.: The Conditional Effects of Social Influence in Transportation Mode Choice. In *Research in Transportation Economics*, 2018, Vol. 68, p. 2-10.

21   FEMENIA-SERRA, F. et al.: Towards a Conceptualisation of Smart Tourists and Their Role within the Smart Destination Scenario. In *Service Industries Journal*, 2019, Vol. 39, No. 2, p. 109-133.
22   ROMAN, M. et al.: Respondents' Involvement in Tourist Activities at the Time of the COVID-19 Pandemic. In *Sustainability*, 2020, Vol. 12, No. 22, p. 1-21.
23   PENCARELLI, T.: The Digital Revolution in the Travel and Tourism Industry. In *Information Technology and Tourism*, 2020, Vol. 22, No. 3, p. 455-476.
24   LEUNG, X. Y.: Technology-Enabled Service Evolution in Tourism: A Perspective Article. In *Tourism Review*, 2020, Vol. 75, No. 1, p. 279-282.
25   GÜÇLÜ, B. et al.: City Characteristics that Attract Airbnb Travellers: Evidence from Europe. In *International Journal for Quality Research*, 2020, Vol. 14, No. 1, p. 271-290.
26   See: FLORES-RUIZ, D. et al.: Using Social Media in Tourist Sentiment Analysis: A Case Study of Andalusia During the Covid-19 Pandemic. In *Sustainability*, 2021, Vol. 13, No. 7, p. 1-19; REINHARDT, J.: Social Media in Second and Foreign Language Teaching and Learning: Blogs, Wikis, and Social Networking. In *Language Teaching*, 2019, Vol. 52, No. 1, p. 1-39.
27   See: CINELLI, M. et al.: The Echo Chamber Effect on Social Media. In *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 2021, Vol. 118, No. 9, p. 1-8; DWIVEDI, Y. K. et al.: Setting the Future of Digital and Social Media Marketing Research: Perspectives and Research Propositions. In *International Journal of Information Management*, 2021, Vol. 59, No. 1, p. 1-37.
28   DOLAN, R. et al.: Complaining Practices on Social Media in Tourism: A Value Co-Creation and Co-Destruction Perspective. In *Tourism Management*, 2019, Vol. 73, p. 35-45.
29   SHAHI, G. K., MAJCHRZAK, T. A.: Amused: An Annotation Framework of Multi-Modal Social Media Data. In SANFILIPPO, F. (ed.): *Intelligent Technologies and Applications. INTAP 2021. Communications in Computer and Information Science*. Grimstad : Springer, 2022, p. 287-299. [online]. [2022-12-13]. Available at: <https://arxiv.org/pdf/2010.00502.pdf>.
30   Compare to: HEIKINHEIMO, V et al.: User-Generated Geographic Information for Visitor Monitoring in a National Park: A Comparison of Social Media Data and Visitor Survey. In *ISPRS International Journal of Geo–Information*, 2017, Vol. 6, No. 3, p. 1-14; SILAA, V. et al.: A Method of Supplementing Reviews to Less-Known Tourist Spots Using Geotagged Tweets. In *Applied Sciences*, 2022, Vol. 12, No. 5, p. 1-24.
31   See: BOON-ITT, S., SKUNKAN, Y.: Public Perception of the COVID-19 Pandemic on Twitter: Sentiment Analysis and Topic Modeling Study. In *JMIR Public Health and Surveillance*, 2020, Vol. 6, No. 4, p. 1-17; FALK, M. T., HAGSTEN, E.: Visitor Flows to World Heritage Sites in the Era of Instagram. In *Journal of Sustainable Tourism*, 2021, Vol. 29, No. 10, p. 1547-1564.
32   GRAHAM, R. et al.: Visitor Activity Planning and Management in Canadian National Parks: Marketing within a Context of Integration. In MILLER, M. L., GALE, R. P., BROWN, P. J. (eds.): *Social Science in Natural Resource Management Systems*. London : Routledge, 2019, p. 149-166.
33   RACHMANIAH, M. et al.: Web-Based Marketplace to Support Ecotourism E-Commerce. In *IOP Conference Series: Earth and Environmental Science*, 2018, Vol. 187, p. 1-14.
34   MENAYANG, A. P., MARTA, R. F.: Branding of North Sulawesi Tourism through the Hexagon of Competitive Identity. In *Jurnal Studi Komunikasi*, 2020, Vol. 4, No. 2, p. 410-434.

studies deal with the behaviour and psychological aspects of social media platform users.[35] Recently, studies have focused on areas such as education[36] or educational activities[37] associated with the unprecedented spread of using social networking sites. Although social media were intended for private purposes,[38] they now represent a tool used by all types of users, including institutions, organisations (businesses), destinations, various associations and others.[39] Many national parks around the world are now using social media in order to provide various information about their activities and events aimed at self-presentation and building PR.[40]

C. Marcotte and P. A. Stokowski examined the three largest national parks and their *Facebook* communication using rhetorical analysis of texts (content and form of posts). The output of the research was the finding that posts published on *Facebook* tend to be more emotional and informational in nature and their content is related to the uniqueness of places in parks, park management and visitors.[41] E. J. Wilkins et al. also investigated effective communication with national park visitors in the USA. Using a questionnaire survey, they found that effective communication has a significant impact on improving the experiences of visitors and their behaviours. The authors also state that the more often and effectively social media are used, the greater the reach of their posts, including the growing number of followers. However, they also add that most national parks do not have sufficient funds and their funds are time constrained. Therefore, they suggest focusing on one platform only with the largest number of users, and gradually adding other platforms.[42] It has been found that in the USA, the most popular social media platforms used by national parks are *Facebook* and *Twitter*, *YouTube* and *Instagram*.[43] As for European national parks, conducted studies point out that e.g., *YouTube* is used to a limited extent, which is also in line with the questionnaire survey conducted by L. Parolini and G. Schegg.[44]

The dominant research framework in social sciences is a quantitative analysis where researchers mostly use mathematical and statistical measurement. C. Barros et al. used a different method, specifically recording information on visitors and their behaviour using the system of 'geotagged data' from social networking sites. The obtained data is then used for measuring various aspects of visitors' behaviour. This is highly accurate spatial data captured through mobile GPS devices recording the visitors' routes in national parks.[45] Other studies are focused on extracting data from social media where users share text or visual posts or tag their location in their posts using hashtags. For their research, they used a detailed review of advanced methods, namely spatial-temporal analysis, content analysis,[46] and network analysis aimed at the description and identification of relevant data obtained from social media platforms.[47] A very popular method is a questionnaire survey and its statistical processing with the

aim of analysing the preferences of visitors to protected areas.[48] P. Pártlová et al. used the online tools *Social Blade* and *SimilarWeb*, from which they were able to obtain values concerning the activities on social media profiles, such as the number of followers, likes or media uploads. For the purposes of measuring the effectiveness of the published posts, they created a Social Media Effectiveness Index.[49]

The above literature research will be used as a basis for data collection and subsequent methodology. We will primarily use similar methods, i.e., both qualitative and quantitative methods. A sample set will be created using the primary data and information subject to the rhetorical analysis of posts concerning three basic areas, Ethos (an appeal to ethics), Pathos (an appeal to emotions) and Logos (to appeal to logic and reasons). This text will be processed using the quantitative method, or descriptive content analysis to specify the phenomena under review, including quantification of statistical occurrence. This will provide answers to RQ1 and RQ3. RQ2 will be answered on the basis of collected secondary data using selected social media platforms and monitoring of real-time analysis of profiles. These platforms mainly follow the most widely used social media, namely *YouTube, Facebook, Instagram*, etc. Based on the obtained secondary data it will be possible to update the used Social Media Effectiveness Index.

3 Methodology

In accordance with the issue under review and the set goals, nine European national parks were selected out of more than 500 national parks. The condition was their regular activity on two selected social media platforms, *Facebook* and *Instagram*, which were the most commonly used for marketing communication by European national parks. The basic descriptive characteristics of the selected national parks are presented in Table 1.

Table 1: Description of nine selected national parks in Europe

Country	National Park	Hectares	Established	Setting Up of User Account	
				FB	IG
Austria	Hohe Tauern	185.600	1981	03/2010	09/2016
Croatia	Plitvice Lakes National Park	29.500	1949	09/2009	06/2017
Czech Republic	Šumava National Park	68.060	1990	03/2009	*04/2020
Germany	National Park Saechsische Schweiz	9.350	1990	03/2010	03/2014
Hungary	Bükk Nemzeti Park	43.140	1977	02/2011	06/2017
Latvia	Gauja National Park	91.740	1973	05/2014	11/2015
Netherland	Hoge Veluwe National Park	5.500	1935	08/2012	08/2012
Poland	Karkonosze National Park	5.570	1959	07/2011	09/2015
Slovenia	Notranjski Regijski Park	22.200	2002	01/2012	09/2016

Source: Own processing, based on: The European Continent Is Home to Over 400 National Parks. [online]. [2022-12-05]. Available at: <https://nationalparksofeurope.com/europes-parks/>.
*Legend: * the first post was published on 1st September 2020*

The next stage involves data collection and the analysis of secondary data obtained from the official profiles on the selected social media platforms, *Facebook* and *Instagram*. For individual profiles, the following data and information was collected for the period from 1st September 2021 to 1st September 2022 using the online analytical tools *Social Blade* and *Similarweb* (see Tables 2 and 3). These analytical tools provide data

35   Compare to: HAUSMANN, A. et al.: Social Media Data Can Be Used to Understand Tourists' Preferences for Nature-Based Experiences in Protected Areas. In *Conservation Letters*, 2018, Vol. 11, No. 2, p. 1-9; SCHWARTZ, A. J. et al.: Visitors to Urban Greenspace Have Higher Sentiment and Lower Negativity on Twitter. In *People and Nature*, 2019, Vol. 1, No. 4, p. 476-485.
36   JANG, H., PARK, M.: Social Media, Media and Urban Transformation in the Context of Overtourism. In *International Journal of Tourism Cities*, 2020, Vol. 6, No. 1, p. 233-260.
37   WATKINS, T. et al.: Science in Places of Grandeur: Communication and Engagement in National Parks. In *Integrative and Comparative Biology*, 2018, Vol. 58, No. 1, p. 67-76.
38   PEDERSEN, M. O., JENSEN, H. S.: The SAGE Handbook of Web History. In *Internet Histories*, 2019, Vol. 3, No. 3-4, p. 396-399.
39   GEISSINGER, A. et al.: The Sharing Economy as an Entrepreneurial Evolution of Electronic Commerce. In VINOGRADOV, E., LEICK, B., ASSADI, D. (eds.): *Digital Entrepreneurship and the Sharing Economy*. London : Routledge, 2021, p. 72-87.
40   WENGEL, Y. et al.: The TikTok Effect on Destination Development: Famous Overnight, Now What? In *Journal of Outdoor Recreation and Tourism*, 2022, Vol. 37, p. 1-6.
41   MARCOTTE, C., STOKOWSKI, P. A.: Place Meanings and National Parks: A Rhetorical Analysis of Social Media Texts. In *Journal of Outdoor Recreation and Tourism*, 2021, Vol. 35, p. 1-10.
42   WILKINS, E. J. et al.: Social Media Communication Preferences of National Park Visitors. In *Applied Environmental Education & Communication*, 2020, Vol. 19, No. 1, p. 4-18.
43   See: MHILU, J., LYIMO, B. J.: Social Media Marketing on Attracting Tourists: A Case of Tanzania National Parks – Arusha. In *Olva Academy – School of Researchers*, 2019, Vol. 2, No. 3, p. 1-36; WILKINS, E. J. et al.: Social Media Communication Preferences of National Park Visitors. In *Applied Environmental Education & Communication*, 2020, Vol. 19, No. 1, p. 4-18.
44   PAROLINI, L., SCHEGG, R.: *Social Media Use of Parks in Europe. Results of an Online Survey and an Analysis of Social Media KPIs in Parks in Austria, France, Germany, Italy and Switzerland*. Released on 31st October 2019. [online]. [2022-12-16]. Available at: <https://www.tourobs.ch/media/1gbgvtiz/parks-use-of-social-media.pdf>.
45   BARROS, C. et al.: Using Geotagged Photographs and GPS Tracks from Social Networks to Analyse Visitor Behaviour in National Parks. In *Current Issues in Tourism*, 2020, Vol. 23, No. 10, p. 1291-1310.
46   MARCOTTE, C., STOKOWSKI, P. A.: Place Meanings and National Parks: A Rhetorical Analysis of Social Media Texts. In *Journal of Outdoor Recreation and Tourism*, 2021, Vol. 35, p. 1-10.
47   TOIVONEN, T. et al.: Social Media Data for Conservation Science: A Methodological Overview. In *Biological Conservation*, 2019, Vol. 233, p. 298-315.
48   See: HAUSMANN, A. et al.: Social Media Data Can Be Used to Understand Tourists' Preferences for Nature-Based Experiences in Protected Areas. In *Conservation Letters*, 2018, Vol. 11, No. 2, p. 1-9; SINCLAIR, M. et al.: Using Social Media to Estimate Visitor Provenance and Patterns of Recreation in Germany's National Parks. In *Journal of Environmental Management*, 2020, Vol. 263, No. 6, p. 1-12.
49   PÁRTLOVÁ, P. et al.: Building Reputation and Social Media – How Effectively Do Attractive European Tourist Destinations Communicate on Them? In *Entrepreneurship and Sustainability Issues*, 2022, Vol. 10, No. 1, p. 467-482.

on the number of followers, published posts, likes and comments, and possibly shares. The period for data collection is selected according to the most recently created account, specifically the *Instagram* account of Šumava National Park (see the legend below Table 1). The main criteria for selecting *Facebook* and *Instagram* posts, in addition to the period mentioned above, is the creation of posts by the individual national parks, not those shared by other users. The analysis did not include created events, photos or videos without accompanying text, job offers (internship or employment), questionnaire surveys, sole emoticons or interjections.

Based on the collected secondary data, it has been found that the analysed *Facebook* posts of eight out of nine selected national parks maintain the continuity of 1 year (see Table 2). The posts on the user profile of Karkonosze National Park were suspended on 17th June 2022 due to extensive publishing activity, as *Facebook* is not capable of working with a large number of posts, which manifests itself as page not loading or freezing. This problem has also been recorded by the viewers of the profiles of Šumava National Park and Notranjski Regijski park. When the number of posts is high, *Facebook* notifies the user about automatic selection of the most relevant ones and some posts can be filtered out, which also applies to comments.

Table 2: Facebook during the period 1st September 2021 – 1st September 2022

National Park	Total Number of:				
	Followers	Media Uploads	Likes	Comments	Shares
Bükk Nemzeti Park	24,238	224	24,123	499	3,379
Gauja National Park	4,100	211	3,692	26	558
Hoge Veluwe National Park	27,453	163	16,361	1,773	1,225
Hohe Tauern	52,425	186	29,805	727	1,968
Karkonosze National Park	75,381	*218	37,241	3,505	2,651
National Park Saechsische Schweiz	3,300	101	4,615	513	1,511
Notranjski Regijski Park	11,136	262	18,301	681	1,951
Plitvice Lakes National Park	86,842	227	54,429	2,993	3,064
Šumava National Park	37,546	297	27,752	1,335	7,374

Source: Own processing
*Legend: * the last analysed post was published on 17th June 2022*

The *Instagram* social media platform enables the loading of all published posts and reaches the end of user profiles, which means that the continuity of 1 year was maintained for all the selected national parks. Table 3 shows that *Instagram* is able to work correctly even with a large number of posts without any limitations to their analysis (see Karkonosze National Park).

Table 3: Instagram during the period 1st September 2021 – 1st September 2022

National Park	Total Number of:			
	Followers	Media Uploads	Likes	Comments
Bükk Nemzeti Park	3,488	24	3,931	51
Gauja National Park	2,829	135	5,209	21
Hoge Veluwe National Park	15,261	174	60,884	794
Hohe Tauern	22,502	189	92,703	522
Karkonosze National Park	34,458	993	502,991	1,717
National Park Saechsische Schweiz	2,515	71	9,492	204
Notranjski Regijski Park	1,814	122	5,306	112
Plitvice Lakes National Park	36,403	135	113,900	1,574
Šumava National Park	3,897	70	11,473	83

Source: Own processing

The effectiveness of published posts on both platforms will be measured using the newly proposed tool Social Media Effectiveness index (SME).[50] The social media variable is a given platform; the reader is a variable, i.e., the number of likes, comments or followers. The result is the average annual increase in the given variable per published post:

$$\text{SME}_{\text{variable}_{\text{national park}}} = \frac{\text{variable}}{\text{total posts (current year} - \text{year of account creation)}}$$

For the purposes of comparison, the calculated results are converted to a comparable unit from the perspective of all users (followers) of a given platform. Moreover, the current values from the *Datareportal*[51] are used to create an updated Social Platform Global Activities Users (SPGAU) index:

$$\text{SPGAU SME}_{\text{variable}_{\text{country}}} = \frac{\text{Social platform SME}_{\text{variable}_{\text{country}}}}{\text{number of platform users}}$$

The activity of individual national parks on selected social media platforms was determined and evaluated using the ranking method or multicriteria method. This means that the calculation of the index includes several variables, specifically the average number of likes and new followers per post.

The research includes posts published between 1st September 2021 and 1st September 2022. Subsequently, a rhetorical and descriptive analysis of the text is performed. Posts published on social media platforms should be perceived as so-called intentional language, which is characterised by Aristotle's three appeals of persuasion (Ethos, Pathos and Logos). Using rhetorical text analysis, it can be discovered how national parks persuade viewers and followers through published content, form and style, and how they apply social and cultural practices to influence audiences.[52] To perform a classification of the posts based on their content, a quantitative descriptive analysis will be used to identify the relevant thematic areas. This method enables the analysis of posts and the calculation of percentages for each category. To calculate the percentages, the total number of posts for each national park and each platform will be summed and then divided by a denominator, which is the number of posts in each category.[53]

Throughout the year, the posts consist mainly of texts and photographs, with some of them being commented on by the public. Based on the data obtained, there will be selected texts created by individual national parks and will then be subjected to qualitative data analysis using the software tool ATLAS.ti, i.e., keywords experience, education and pedigree will be selected for Ethos, the key topic emotions will be selected for Pathos, and in Logos, facts and statistics will be sought for (see Table 4). Similarly, in terms of the marketing communication of the selected national parks, there will be selected keywords concerning the field of environment, education activities and tourism (see Table 5).

50   See: PÁRTLOVÁ, P. et al.: Building Reputation and Social Media – How Effectively Do Attractive European Tourist Destinations Communicate on Them? In *Entrepreneurship and Sustainability Issues*, 2022, Vol. 10, No. 1, p. 467-482.
51   KEMP, S.: *Digital 2022: July Global Statshot Report*. Released on 21st July 2022. [online]. [2022-12-14]. Available at: <https://datareportal.com/reports/digital-2022-july-global-statshot>.
52   STUCKI, I., SAGER, F.: Aristotelian Framing: Logos, Ethos, Pathos and the Use of Evidence in Policy Frames. In *Policy Sciences*, 2018, Vol. 51, No. 3, p. 373-385.
53   POLLOCK, J. R. et al.: Descriptive Analysis of Components of Emergency Medicine Residency Program Websites. In *Western Journal of Emergency Medicine*, 2021, Vol. 22, No. 4, p. 937-942.

4 Results

Collection and Analysis of Secondary Data from Social Media Platforms

Using the method of secondary data collection and their analysis, the analytical tool *Similarweb* was used to evaluate the website traffic of the selected national parks' websites for a three-month period from July 2022 to September 2022, since July and August are the peak travel seasons and September is the month where prices fall. A website is the main form of presentation on the Internet. Users search for national parks using non-paid search, i.e., keywords and direct search for websites. Users search most for Plitvice Lakes National Park, with more than 1.3 million visitors to the website for the period of three months where the average duration of visits was nearly 5 minutes. The least visited website in the monitored period is the website of Hohe Tauern national park, with the average duration of a visit being 1 minute. However, the average duration of one visit to Notranjski Regijski park with the total number of 54,000 is only 8 seconds, which could be due to the long loading time of the website.

Table 4: Evaluation of website traffic during the period July 2021 – September 2021

National Park	Total Visits	Monthly Visits			Average Visit Duration (in Minutes)
		July	August	September	
Bükk Nemzeti Park	187,800	66,500	78,300	43,000	1:44
Gauja National Park	74,700	36,200	23,000	15,500	1:13
Hoge Veluwe National Park	471,700	192,900	151,200	127,600	2:34
Hohe Tauern	49,000	11,900	20,100	17,000	1:06
Karkonosze National Park	101,200	27,000	43,900	30,300	2:02
National Park Saechsische Schweiz	175,300	65,700	74,900	34,700	2:00
Notranjski Regijski Park	54,400	14,800	21,700	17,900	0:08
Plitvice Lakes National Park	1,364,000	369,500	527,200	467,300	4:41
Šumava National Park	181,400	87,500	66,800	27,100	2:00

Source: Own processing

Interesting findings were the results concerning the demographic structure of visitors to the official websites of individual parks (see Table 5). The available data shows that the largest share of visitors are men (except Bükk Nemzeti Park) and visitors aged 25 – 34 and 35 – 44 (except Karkonosze National Park).

Table 5: Demographic structure of visitors to websites during the period July 2021 – September 2021

National Park	Gender Distribution (%)		Age Distribution (%)					
	Female	Male	18 – 24	25 – 34	35 – 44	45 – 54	55 – 64	65+
Bükk Nemzeti Park	56.56	43.44	16.02	23.90	23.50	15.42	12.66	8.51
Gauja National Park	45.19	54.81	12.02	34.75	21.53	16.18	11.30	4.21
Hoge Veluwe National Park	47.40	52.60	12.90	24.42	20.44	19.20	13.33	9.72
Hohe Tauern	41.12	58.88	19.44	27.95	20.66	15.17	9.60	7.18
Karkonosze National Park	45.23	54.77	23.20	30.98	18.32	11.09	10.15	6.26
National Park Saechsische Schweiz	40.42	59.58	18.29	22.82	18.63	16.34	12.75	11.17
Notranjski Regijski Park	44.14	55.86	6.71	21.46	31.42	19.94	13.73	6.75
Plitvice Lakes National Park	46.15	53.85	16.65	27.53	22.88	16.10	10.61	6.23
Šumava National Park	47.33	52.67	17.47	24.95	22.44	14.77	12.32	8.06

Source: Own processing

Next, the analysis of secondary data was performed using the analytical tool *Social Blade* over the period from 1st September 2021 to 1st September 2022. The obtained results show that the first national parks that started to influence the visitors through the first posts (see Table 1) published on their official *Facebook* profiles were Croatia and the Czech Republic, and the Netherlands and Germany on their official *Instagram* profiles, although some national parks started to use *Facebook* and *Instagram* relatively late compared to the other parks under review, specifically Latvia (*Facebook*) and the Czech Republic (*Instagram*).

The largest number of published posts (see Table 2) in the period September 2021 – September 2022 was recorded on the *Facebook* profiles of Šumava National Park and Notranjski Regijski Park. However, Plitvice Lakes National Park and Karkonosze National Parks show the highest interaction with users in terms of the number of followers, likes and comments. For the *Facebook* profile of Karkonosze National Park, it was only possible to obtain data for the period 9th June 2022 – 17th June 2022 since the page did not allow retrieving data for the entire period under study. Nevertheless, it did not affect the results obtained, as in spite of this, considerably more posts were analysed than for the other parks. An important fact, however, is that while the other *Facebook* profiles published about 100 – 300 posts for the monitored period, Karkonosze National Park published approximately the same number of posts for less than 3 months. In the case of the second social networking site under review (*Instagram*), the most published posts, likes and comments (see Table 3) were recorded in the profile of Karkonosze National Park. Although it is not the highest number of all analysed profiles, it exceeds the annual number of posts by 432%; in terms of the number of likes, it is 664% and 204% in the case of the number of comments.

Rhetorical Analysis: Application and Interpretation

The collected posts in the period September 2021 – September 2022 were further analysed using a not frequently used analysis, rhetorical analysis: ethos, pathos, and logos. Table 4 categorises the collected posts into individual categories. The number of posts in individual categories is calculated as a percentage share for each of the analysed platforms. In the case of Facebook, Hohe Tauern National Park (102 posts) and Karkonosze National Park (98 posts) have the largest share of the total annual number of posts in the Ethos category. As for Pathos, the largest share was recorded in the case of Bükk Nemzeti Park (59 posts) and Gauja National Park (58 posts); as for Logos, it was Notranjski regijski park (26 posts) and Karkonosze National Park (22 posts). In the case of Instagram, Karkonosze National Park has the largest share in all three categories (a total of 993 published posts): 436 posts for Ethos, 126 posts for Pathos, and 144 posts for Logos. The second largest representation of all nine parks under review in all categories was recorded in the case of Hohe Tauern, specifically 103 posts for Ethos, 57 posts for Pathos, and 57 posts for Logos out of the total number of 189 posts.

Table 6: Text content analysis: Ethos, Pathos and Logos

National Park	Period from 1 September 2021 to 1 September 2022 (in %)					
	Ethos		Pathos		Logos	
	FB	IG	FB	IG	FB	IG
Bükk Nemzeti Park	25,45	41,67	26,34	29,17	5,80	4,17
Gauja National Park	18,96	22,22	27,49	31,85	4,27	8,15
Hoge Veluwe National Park	41,72	39,66	20,86	19,54	11,66	12,07
Hohe Tauern	54,84	54,50	29,57	30,16	11,29	11,64
Karkonosze National Park	44,95	43,91	12,84	12,69	10,09	14,50

National Park						
National Park Saechsische Schweiz	31,68	32,39	34,65	43,66	1,98	8,45
Notranjski regijski park	37,79	35,25	19,08	15,57	9,92	6,56
Plitvice Lakes National Park	36,12	19,26	22,47	19,26	6,17	7,41
Šumava National Park	26,60	51,43	17,17	27,14	3,03	10,00

Source: Own processing

Descriptive Analysis: Content Categories

In the next step, descriptive analysis was used to categorise the analysed posts. The selected key topics are environment, education and tourism. Table 5 shows the categorisation of the posts and their percentage share for individual platforms considered. The largest percentage in terms of the *Facebook* platform in the category environment was recorded for National Park Saechsische Schweiz (25 posts) and Hohe Tauern National Park (24 posts); in the category of education, the largest percentage share was recorded in the case of Karkonosze National Park (73 posts) and Hohe Tauern National Park and Notranjski Regijski Park (63 posts), and as for the last category, tourism, it was Šumava National Park (212 posts) and Gauja National Park (150 posts). In terms of *Instagram*, the largest percentage share of published posts was recorded in the case of Karkonosze National Park where 60 out of the total number of 993 posts were published in the category of environment, 329 posts in the category of education, and 276 posts in the category of tourism. The second largest share in the categories of environment and education was recorded in the case of Hohe Tauern National Park (24 posts in the category of environment and 64 posts in the category of education). As for the category of tourism, it was Gauja National Park (101 posts).

Table 7: Categorisation of text content: Environment, education, tourism

National Park	Environment		Education		Tourism	
Period from 1st September 2021 to 1st September 2022 (in %)						
	FB	IG	FB	IG	FB	IG
Bükk Nemzeti Park	7.59	4.17	21.88	45.83	29.91	16.67
Gauja National Park	1.42	2.22	4.74	2.96	71.09	74.81
Hoge Veluwe National Park	0.00	0.00	35.58	33.91	41.10	40.23
Hohe Tauern	12.90	12.70	33.87	33.86	29.03	28.04
Karkonosze National Park	9.17	6.04	33.49	33.13	34.40	27.79
National Park Saechsische Schweiz	24.75	23.94	8.91	15.49	41.58	39.44
Notranjski Regijski Park	3.44	1.64	24.05	25.41	54.96	28.69
Plitvice Lakes National Park	10.13	7.41	22.47	11.85	58.59	34.07
Šumava National Park	4.71	14.29	9.43	37.14	71.38	20.00

Source: Own processing

Updated Social Media Effectiveness Index

The level of effectiveness of individual national parks' *Facebook* and *Instagram* social media profiles is presented in Table 8. Based on the above tables, it is possible to calculate the average values for both social media. The calculation considers the number of years from the creation of the official account (Table 1) and the number of interactions with users in terms of the number of followers and uploads of media (Tables 2 and 3). Based on the obtained data, it was possible to use the formula of Social Media Effectiveness and calculate the average values of individual social media profiles. For illustration, the calculation for Bükk Nemzeti Park is presented below:

$$SME_{Followers_{Bukk\ Nemzeti\ Park}} = \frac{24\ 238}{224(2022 - 2011)}$$

$$SME_{Followers_{Bukk\ Nemzeti\ Park}} = 1\ 190,26$$

This value is then converted from the perspective of the users of a given platform (*Facebook*: 2.91 billion and *Instagram*: 1.478 billion):

$$SPGAU\ SME_{Followers_{Bukk\ Nemzeti\ Park}} = \frac{1\ 190,26}{2\ 910\ 000\ 000}$$

$$SPGAU\ SME_{Followers_{Bukk\ Nemzeti\ Park}} = 4,09024E - 07$$

A similar method is used for other analysed profiles (see Table 8).

Table 8: Index Social Media Effectiveness (SME) and Index Social Platform Global Activities Users (SPGAU) for Facebook and Instagram

National Park	Facebook			Instagram		
	SME	SPGAU SME	Ranking	SME	SPGAU SME	Ranking
Bükk Nemzeti Park	1 190.26	4.09024E-07	6	726.67	4.91655E-07	2
Gauja National Park	155.45	5.34193E-08	8	146.69	9.92482E-08	6
Hoge Veluwe National Park	1 684.23	5.78774E-07	4	701.66	4.74733E-07	4
Hohe Tauern	3 382.26	1.16229E-06	3	714.35	4.83322E-07	3
Karkonosze National Park	3 803.63	1.30709E-06	2	242.91	1.64348E-07	5
National Park Saechsische Schweiz	65.35	2.24559E-08	9	70.85	4.79331E-08	9
Notranjski Regijski Park	425.04	1.46061E-07	7	89.21	6.03607E-08	8
Plitvice Lakes National Park	4 973.33	1.70905E-06	1	1 348.26	9.12219E-07	1
Šumava National Park	1 643.43	5.64752E-07	5	111.34	7.53335E-08	7

Source: Own processing

From the above table, it is possible to see the trend of the effectiveness of using the analysed social media platforms, i.e., *Facebook* and *Instagram*. The original index was calculated in relation to the total number of users of a given social medium. The results show that in terms of *Facebook*, Plitvice Lakes National Park is the most efficient while the least efficient is National Park Saechsische Schweiz. As for *Instagram*, similar results were achieved, which can be confirmed by the results of the qualitative analyses performed.

5 Discussion

In accordance with the achieved results, RQ1 can be answered as follows:

RQ1: Which tools of digital platforms are used by European national parks, to which extent and which content do they present on selected social networking sites?

The national parks under study use several available platforms, such as *Facebook*, *Instagram*, *YouTube*, occasionally *Twitter* or *Pinterest*, etc., with the most actively used being *Facebook* and *Instagram* where several posts are published by these parks on a daily basis. Therefore, the research presented focuses on these two social networking sites. The selected national parks publish posts that contain rhetorical statements concerning the quality of places and experiences the national parks offer. The texts published by the national parks on social media

platforms express interest and positive personal feelings or describe important moments and memories from the visits to the parks. These linguistic and symbolic means can influence the public. This is in line with the study by E. J. Wilkins et. al. who conclude that posts on social networking sites can be defined as acts of public communication highlighting the tangible qualities of national parks, aimed at attracting both actual and potential visitors.[54] C. Marcotte and P. A. Stokowski deal with the application of rhetorical analysis on the sample of U. S. national parks where they mention the application of rhetorical analysis as a new discourse approach through which researchers can interpretatively analyse different types of written and visual texts in the tourism sector.[55]

The posts on *Facebook* and *Instagram* are very similar in their nature, typically e.g., news, information and updates, events, questions, contests and even prohibitions and orders. The performed analysis shows that national parks publish different types of posts with emotional appeals to express the experiences from various places. These posts often make significant references to moments in life and use natural and cultural symbols to develop a discourse about each park as a special place. An important finding is an emphasis on Ethos for both social media platforms as the main approach to argumentation in the texts published on social networking sites. The acquired data shows that on social media, European national parks are primarily presented as places for sharing information and education, and secondarily as places for sharing emotions or for other purposes. In accordance with the achieved results, RQ2 can be answered as follows:

RQ2: To what extent does the number of posts influence building a positive reputation and identity aimed at gaining new viewers?[66]

According to the collected data, the best platform in terms of the number of followers and comments appears to be *Facebook*, while in terms of the total number of published posts and received likes it is *Instagram*. Therefore, it cannot be determined which platform is better for communication since the national parks examined often publish similar or even the same posts. Social media enable remote real-time access to sources of information through data. The data can be used to retrieve information on human-nature interaction,[56] values of sites, tourists' preferences for biodiversity,[57] and the appearance of typical destinations. Through profiles on social networking sites, it is possible to approach more individuals or groups of important persons and cooperate with them to promote a selected destination. This evidences the great opportunity to establish closer contact with visitors as clients and build a relationship with them or gain more detailed information about their desired destination. The obtained data can be used to improve the offerings of a given locality in the future. *Facebook* and *Instagram* are the most widely used social media platforms with great potential for their application in tourism. In the recent decade, their application in tourism is further developing with the aim of influencing more final consumers.[58] Moreover, the role of social media platforms in terms of tourism destinations is also developing in order to increase the attractiveness and health safety of tourist destinations by providing information about them.[59] On the other hand, social media are an essential tool for the development of destinations but also because of the opportunities they pose.[60] The considered and proper use of social media involves a positive impact on awareness, which subsequently affects the overall value.[61] However, the most important role in terms of promotion is the engagement of users and their interaction (likes, comments, shares, reviews, etc.). According to C. De las Heras-Pedrosa et al., social media are not essential for improving reputation and identity but play a key role in achieving visitor engagement.[62] Social media can be used to assess the impact on user groups and their interactions.[63] B. B. Dedeoğlu et al. argue that tourists follow and consider posts shared on social media, although most of them take into account rather posts created by other visitors.[64] In accordance with the achieved results, RQ3 can be answered as follows:

RQ3: Which of the selected European national parks publish posts focused on environmental protection, education, and tourism-related business activities on the selected social media platforms?

The analysis performed shows that the selected national parks are focused most on posts related to tourism on both platforms (*Facebook* and *Instagram*). Using these posts in their texts, they promote the events organised in the parks, accommodation possibilities and others. The second largest share of posts is related to educational activities through which the parks educate their followers. These posts often present various endangered species living in the parks. Education also plays a key role in achieving social, economic and environmental goals. Especially through education, it is possible to create formative awareness using various approaches and tips that can encourage and motivate young people to sustainable behaviour.

Nowadays, tourists are using social media increasingly more often, including the currently very popular application *TikTok*.[65] Published reviews and recommendations, especially video reviews, increase interest in a specific locality and create a base that helps tourists to make decisions concerning their 'holiday' destination.[66] The effects of *TikTok* on tourism are still a topical issue. The results of the study by Y. Wengel et al. confirm that unintentional promotion via *TikTok* has affected visitation to a given destination.[67] Unlike *Facebook* and *Instagram*, *TikTok* uses a different algorithm that promotes content on the basis of user interactions, video information and settings of a given device and account.[68] This means that *TikTok* will prioritise posts that generate many interactions in the first hour. Within the presented research, it has been found that *TikTok* is used only by two of the selected national parks, namely Gauja National Park and Plitvice Lakes National Park. In both profiles, there are published videos showing the natural heritage of both parks, which might attract a larger number of visitors. Although it is necessary to set up promotion correctly and be prepared to avoid negative environmental impacts related to the accessibility and amenities of the national parks if the number of tourists increases.

Research on social media will continue to face challenges resulting from frequent changes to and preferences of various social media platforms. Nevertheless, social media play an increasingly more important role in our lives, which will make them a primary decision-making tool for nature-based tourism.

6 Conclusion

The main research goal of this study was to examine the marketing communication of selected European national parks on social media platforms *Facebook* and *Instagram*, and to evaluate their effectiveness in building a positive reputation and identity. The conducted research provides valuable insights into the use of

54   WILKINS, E. J. et al.: Social Media Communication Preferences of National Park Visitors. In *Applied Environmental Education & Communication*, 2020, Vol. 19, No. 1, p. 4-18.
55   MARCOTTE, C., STOKOWSKI, P. A.: Place Meanings and National Parks: A Rhetorical Analysis of Social Media Texts. In *Journal of Outdoor Recreation and Tourism*, 2021, Vol. 35, p. 1-10.
56   TOIVONEN, T. et al.: Social Media Data for Conservation Science: A Methodological Overview. In *Biological Conservation*, 2019, Vol. 233, p. 298-315.
57   HAUSMANN, A. et al.: Social Media Data Can Be Used to Understand Tourists' Preferences for Nature-Based Experiences in Protected Areas. In *Conservation Letters*, 2018, Vol. 11, No. 2, p. 1-9.
58   ĆURLIN, T. et al.: Twitter Usage in Tourism: Literature Review. In *Business Systems Research*, 2019, Vol. 10, No. 1, p. 102-119.
59   TUCLEA, C. E. et al.: The Role of Social Media in Health Safety Evaluation of a Tourism Destination Throughout the Travel Planning Process. In *Sustainability*, 2020, Vol. 12, No. 16, p. 1-17.
60   PINO, G. et al.: A Methodological Framework to Assess Social Media Strategies of Event and Destination Management Organizations. In *Journal of Hospitality Marketing and Management*, 2019, Vol. 28, No. 2, p. 189-216.
61   STOJANOVIĆ, I. et al.: Effects of the Intensity of Use of Social Media on Brand Equity: An Empirical Study in a Tourist Destination. In *European Journal of Management and Business Economics*, 2018, Vol. 27, No. 1, p. 83-100.

62   DE LAS HERAS-PEDROSA, C. et al.: Exploring the Social Media on the Communication Professionals in Public Health. Spanish Official Medical Colleges Case Study. In *International Journal of Environmental Research and Public Health*, 2020, Vol. 17, No. 13, p. 1-17.
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65   FELDKAMP, J.: The Rise of TikTok: The Evolution of a Social Media Platform During COVID-19. In HOVESTADT, C. (ed.) et al.: *Digital Responses to Covid-19*. Cham : Springer, Cham, 2021, p. 73-85.
66   POP, R. A. et al.: The Impact of Social Media Influencers on Travel Decisions: The Role of Trust in Consumer Decision Journey. In *Current Issues in Tourism*, 2022, Vol. 25, No. 5, p. 823-843.
67   WENGEL, Y. et al.: The TikTok Effect on Destination Development: Famous Overnight, Now What? In *Journal of Outdoor Recreation and Tourism*, 2022, Vol. 37, p. 1-6.
68   TIKTOK: *How TikTok Recommends Videos #ForYou*. Released on 18th June 2020. [online]. [2022-12-17]. Available at: <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

social media for the management and promotion of national parks, highlighting the importance of effective communication and engaging with the public to build a positive reputation and identity.

Tourism is an important sector and the use of social media for its promotion is increasingly more important in terms of the potential use of communicated destinations or regions. At the same time, there is an ongoing social debate that may contribute to streamlining and improving offered services and products of sustainable tourism. Data retrieved from social media can be used for increasing the awareness of visitors and the management of protected areas. Using social media and the data retrieved from them can help the managers of national parks to effectively guide visitors from the perspective of protecting valuable areas so that a given area is preserved unchanged while allowing the public to access this area.

We focused on the presentation of nine European national parks, including the analysis of their texts published on social media platforms *Facebook* and *Instagram*. The study increases the awareness of the method of rhetorical discourse in the areas of tourism and recreation and provides information about future communication strategies through social media, especially in terms of choosing a form and a style of the message. In the submitted text, we tried to answer two research questions, which primarily focused on monitoring the impact of marketing communication through *Facebook* and *Instagram*. Based on the results, it could be concluded that Plitvice Lakes National Park has the most effective marketing communication in terms of identity and reputation building. In contrast, the least effective communication was recorded in the case of National Park Saechsische Schweiz. The posts published on both platforms under study are most focused on activities related to tourism and least on the environment. Within the analysed social networking sites, the national parks communicating the most about the opportunities for tourism development are Šumava National Park (FB) and Gauja National Park (IG), while Hohe Tauern (FB) and Bükk Nemzeti Park (IG) are the least active in this area. Educational posts are published the most on the official profiles of Hoge Veluwe National Park (FB) and Bükk Nemzeti Park (IG). An interesting finding is a fact that these two parks are also the least active in terms of the educational posts published, however, on their official profiles on the other platform, i.e., Hoge Veluwe National Park on *Instagram* and Bükk Nemzeti Park on *Facebook*. The last analysed field in terms of the number of posts is posts related to the environment where the largest number of environment-focused posts are published on both *Facebook* and *Instagram* profiles of National Park Saechsische Schweiz, while the least active park in this field (both on *Facebook* and *Instagram*) is Hoge Veluwe National Park.

The limitations of the conducted research include the application of the proposed method of solution on the selected nine national parks in the EU communicating on the *Facebook* and *Instagram* platforms. The countries were selected in order to meet the requirements for the integrity of the territory and the use of both platforms for communication. Further research should thus focus on other states and platforms in terms of examining marketing communication of national parks through social media and thus provide an overview of social media used or not used by national parks. Another limitation identified is *Facebook* itself because it is not able to work with a large number of posts and it was thus not possible to maintain the continuity of one year for one of the national parks under study, which may lead to the generalisation of the results achieved. As a solution, a filter could be added that would enable the user to browse the history of events without any limitation or search for posts of a certain date, as in the case of Gauja National Park or Nationalpark Sächsische Schweiz. The last limitation is the communication of the selected national parks in the language of the country in which they are located. The very nature of the applicability of social media implies that English should be the basic language of communication which was confirmed only in the case of three national parks, namely Gauja National Park, Hoge Veluwe National Park and National Park Saechsische Schweiz. Here, a problem may arise concerning translation and misunderstanding the motivation of a given published post. The authors believe that in the coming years, with Generation Y as the main users of social media, it will be necessary, even essential to communicate in English, which will also allow increasing the awareness of these accounts to a wider global public.

An interesting finding was that social media have been evolving even during the pandemic and the ongoing global crises. It shows that the pandemic and the crises influence not only the form of using social media but also the time spent on social networking sites. It has been found that the published posts do not always have the effect or value on the followers the individual profiles intend to achieve by posting them but often represented a form of entertainment, a motivation to mutual interaction as well as a certain opportunity to spend some time in the online environment. Further research will also aim to determine the possible applicability of the proposed methods and practices in other social-economic areas the authors want to focus on in the future.

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