

Facebook Season – a Survey of Current Practices of National Hunting Associations Facebook Pages: the Case of the EU

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Abstract

National hunters' associations (NHAs) are non-governmental organizations (NGOs) dealing with topics of hunting and conservation. We believe that NHAs have an important role in promoting hunting, wildlife protection, and shaping a positive public opinion about these subjects. Paper explores the basic characteristics and activities of the official Facebook Pages of NHAs among EU countries. The results have shown that the official NHA Facebook Pages don't use the potential visible through the number of registered hunters and Page followers. Also, certain parameters used in the paper show preferable Page content in order to achieve more engagement. The findings of this paper are the first step into understanding the use of Facebook in hunting promotion and will serve as a starting point for further research.

Keywords: hunters, hunting organizations, hunting tourism, social media

Introduction

Hunting is a highly popular form of outdoor recreation, counting around 7 million people in Europe that actively participate in this activity (Brainerd, 2007; Sharp, Wollscheid, 2009). Hunting is an important part of cultural heritage in many countries (Stedman, Heberlein, 2001; Rutanen et al., 2007; Willebrand, 2009) and hunting management is now seen as a form of sustainable wildlife use. Despite those facts, the number of hunters in Europe has been declining since the early 1990s and dropped by about 18% until 2011 (from 9 million in 1991 to 7.4 million in 2011) (Massei et al., 2015).

All hunters in the EU are organized within their national hunters' associations (NHAs). These organizations represent hunters and share similar goals, which are habitat conservation, sustainable game management and wildlife use, education and promotion of hunting. Due to

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the decline in the number of hunters these organizations face serious challenges. Alarming-ly, the average population of hunters is aging rapidly and not being replaced by the sufficient number of newcomers (Massei et al., 2015). Broad social changes, such as urbanization, population aging, coupled with the broad lifestyle changes have contributed to this declining trends in hunting (Mehmood et al., 2003; Massei et al., 2015). Most importantly, although being an important tradition in many cultures that helps in keeping the balance of game, hunting has become a publicly undesirable activity. This negative image is further disseminated by mainstream media, especially when illegal hunting is concerned. However, Coetzer, and Van Niekerk (2012) point out that negative attitudes towards hunting and hunting tourism are often due to the misconceptions regarding hunting.

Knowing that the number of hunters in the EU is declining, it is significant to reach a wider audience and potentially new hunters, with the emergence of social media as an important communication channel, new opportunities are given to the organization of hunters to spread their part of the story. An appropriate media presence through social network sites (SNS) provide a means for engaging existing and attracting new hunters and improving the image of hunting among general public. According to Von Essen et al. (2017) social media such as internet forums and Facebook groups are very used among hunting communities. However, very little research and data are available on how to manage social media communication of related to hunting and hunting tourism. Schuett et al. (2009) noted the necessity of research of wildlife agencies that facilitate the interest in participation in hunting. Also, Lovelock (2009) did a survey on the promotion of hunting and fishing tourism by National Tourism Organizations (NTOs). NTOs are official tourism agencies responsible for marketing and promoting tourism. They also play a significant role in promoting “niche tourism” products (hunting). However, survey found that only 14% of NTO websites had information on hunting.

Social media have become not only highly significant for the tourism industry as a medium for information exchange (Dogra et al., 2020; Rathore, 2020; Süli, Martynin-Csamangó, 2020), but also a widely used tool for marketing activities because it is cost-effective and strongly influences like-minded customers’ perceptions (Kaplan, Haenlein 2010). From a researcher’s perspective, SNS has become an important data source for various topics within tourism studies (Mkono, 2016; Mkono, Holder 2019). In recent years, there has been a concerted effort to utilize the power of social media to monitor tourism and recreational activities, but not for hunting and NHAs. As SNS continues to grow, tourism and related activities researchers are seeking new ways to draw insights on tourist experience, destination management, and other related phenomena. There is increasing interest in mining data from social networking sites (e.g. Facebook and Twitter) to improve understanding of wildlife participants’ practices and behavior (Wood et al., 2013; Martin et al., 2014; Belhabib et al., 2016; Hinsley et al., 2016; Shiffman et al., 2017) and their activity.

This paper focuses on NHAs that represent the non-governmental hunting organizations on a country level. The need for this kind of research comes from the ongoing anti-hunting propaganda coming from most mass media. Hence the purpose of the paper is to access the existing practice of using Facebook Pages by NHAs in the EU in order to gain valuable insight into both positive and negative aspects of communication with the Facebook fans and to provide propositions for a strategic approach and tactical measures for NHA in this regard. This would potentially enable reaching new hunters for membership and also serve as a promotion of hunting tourism in their countries. To the best of the authors’ knowledge, this subject lacked previous research which makes this paper an important insight into the official presence of NHAs.

Methods and data

In this research, we have focused our attention on official national hunters' associations (NHAs) Facebook Pages of countries in the EU. Total data collection included 27 pages from the EU countries. Croatia was excluded since the NHA didn't have an official Facebook Page at the time of data gathering.

A semi-automated approach was used for data collection. Facebook Page data were collected manually, including the number of users who liked the Page, whether the page is verified or not, when a Page was created, etc. The metadata of Page posts was scraped automatically using Netvizz v1.6, a freely available Facebook tool that enables quantitative analysis of engagement metrics and content analysis of public Facebook pages (Spry, 2019). This tool extracts metadata from different sections of Facebook Pages (Rieder, 2013) including information such as Facebook's post-classification, the actual text of the post, picture URL (if available), date and time of posting, number of post likes, comments, shares, etc.

The data for Pages were collected manually. The information gathered for each Facebook Page is provided in Table 1. Information about Pages is grouped into general information about usage with main page elements used and page popularity performance.

Table 1. *Gathered information for Page characteristics*

General usage
<ul style="list-style-type: none"> • Year when DMO joined Facebook • Page verified by Facebook • Number and type of Page Tabs • Presence of Facebook review option • Availability of posting for Page fans • Presence of "call to action" button and type of action • Frequency of DMO posting
Page popularity
<ul style="list-style-type: none"> • Number of Page likes/fans • Average score and estimated number of reviewers obtained by Facebook review option

The authors arranged Facebook post metrics into two main groups. First group (Table 2) included basic metrics of users' engagement: „Likes” (indicating interest in an existing post), “Comments” about the content, “Shares” on personal Profile or other Pages and posting content on the Page's wall (depending on the communication policy set by the Page owner) (Treadaway, Smith, 2012; Sabate et al., 2014). We also included additional variables – comment replies (replies to the existing comments) and comment likes (number of likes on comments).

Table 2. *The information (variables) gathered for users' engagement*

User's engagement	Description
Likes	Number of likes a post received or a user made
Shares	Share count for posts
Comments	Number of base level comments (in threaded conversations)
Comment replies	Number of reply level comments (in threaded conversations)
Comment likes	Number of likes on the comments

Second group (Table 3) is content characteristics, including length of post, time of posting, day in the week when content is posted and type of post (link, photo, video, status or event).

Table 3. *The information (variables) gathered for post's characteristics*

Post's characteristics	Description
Length of post	The number of characters in the post, including the characters of links
Day of posting	self-explanatory
Type of post	Link, photo, video, status, event or music

Call-to-action button at the top of the page that links to any destination on or off Facebook and can help Pages to drive business objectives. Currently there are seven call to action options available: book now, contact us, use app, play game, shop now, sign up and watch video.

A Page's rating is based on multiple sources, such as the reviews and Recommendations people share about business Pages on Facebook. Only Pages that allow Recommendations may show a rating. Rating is based on how many people recommend or don't recommend the Page, as well as any past ratings and reviews it may have (www.facebook.com/help). Page rating (under Review tab) ranges from 1 to 5.

The authors gathered information on all 6269 published posts over one year, from March 1, 2018, to February 28, 2019. The data gathering was performed on March 28th, 2019. This time delay between last collected data and time of data gathering was necessary in order to see how fans interacted with the most recent posts. A month span between actual posting time and time of data gathering is based on the findings of Sabate et al. (2014), that suggest that content posted on the Internet, and especially a dynamic SNS such as Facebook for more than a month is not likely to receive more significant interaction.

Statistical analyses were performed using the IBM SPSS (ver 23). Pearson's correlation coefficient r was applied to assess the relationship between the engagement of Page fans and the actions of NHA Pages.

Results

General Page usage

The average NHA Page in the EU is 6.15 years old. Most of the official Pages (59.26%) were created between 2010 and 2012 (Figure 1). At the moment of the analysis, only the Croatian NHA did not have an official Page on Facebook.

Only two Pages are verified by Facebook (Germany and the United Kingdom) or 7.41%. The verification process can be seen as important from the fans point of view who tend to have more confidence in verified Pages.

Almost half of the Pages (44.44%) had a review option enabled on Page. We found that the Pages with less than 10000 fans have this option enabled in 63.16% of cases while only 33.33% of Pages with more than 10000 fans have this option enabled.

"Call-to-action" button is used on 40.74% of the Pages. Table 4 shows the proportion of available „call-to-action“ buttons used by national hunters' associations. "Sign up" is the most frequent "call-to-action", showing the intention of NHAs to continue the interaction with the Fans.

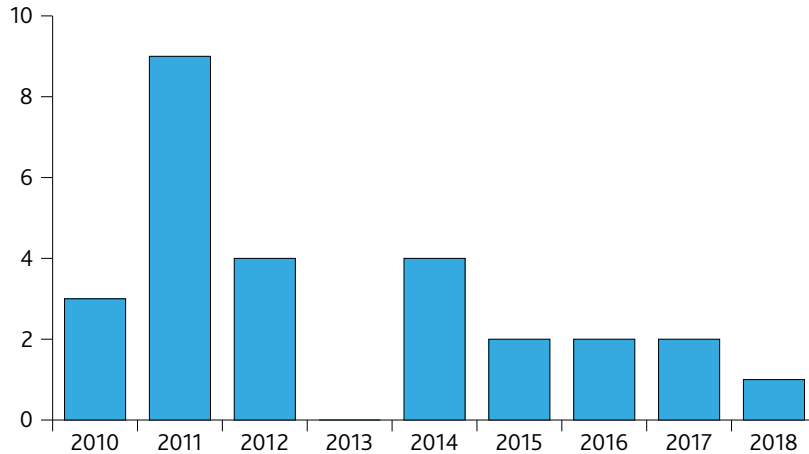


Figure 1. Number of newly created Pages by year

Table 4. Presence and type of „call-to-action“ buttons used

„Call-to-action“ button	N	%
No call for actions	16	59.26
App	1	3.70
Call now	2	7.41
Contact us	3	11.11
Sign up	4	14.82
Visit group	1	3.70

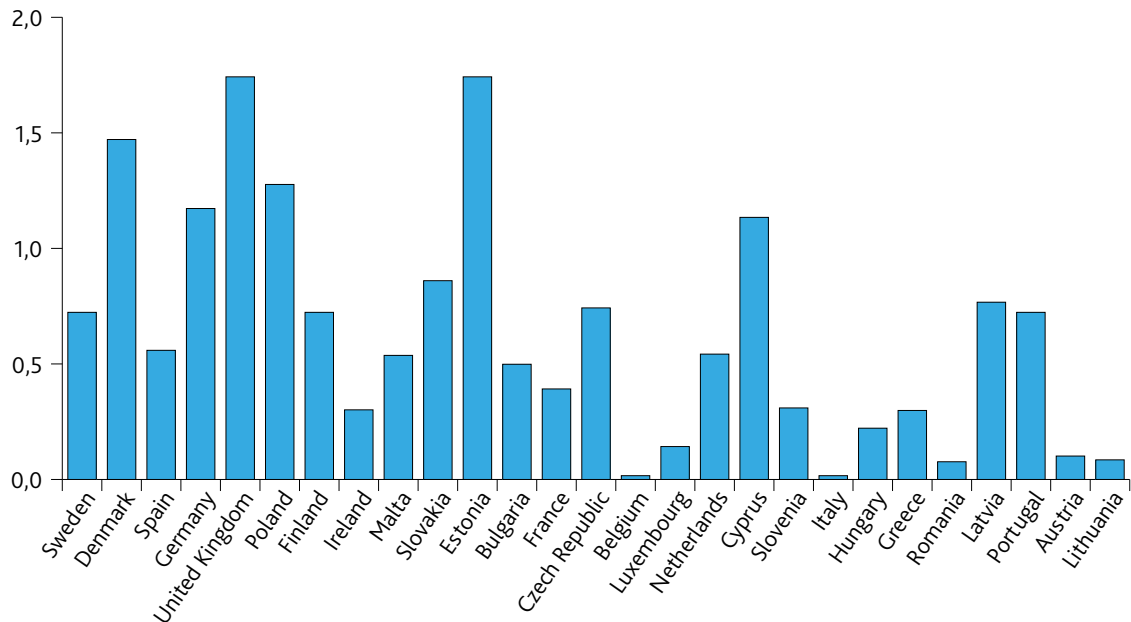


Figure 2. Average number of daily posts of NHA's Facebook Pages

The average number of daily posts per country in the EU was 0.64 times a day. Pages with less than 10000 fans had an average of 0.47 posts per day, while Pages with more than 10000 fans have had 0.96 posts per day (Figure 2).

Page popularity

The popularity of NHA Pages in the EU varies from communities below 1000 fans up to fan communities around 50000 fans (see Figure 3). The total number of official NHA Page fans reached 320942 in the EU. The size of the community seems to negatively correlate with the date the Facebook Page was created ($r=-0.552^{**}$, $p=0.003$, $**$. Correlation is significant at the 0.01 level (2-tailed)). The smallest community of 732 belongs to the Page of Lithuania hunting association which was created last in 2018. The highest number of fans doesn't correspond to the oldest Facebook page. Page with the most fans is the German NHA Page with 49503. Most of NHA Pages (66.67%) have less than 10000 followers. Pages with a more considerable following are Germany, the United Kingdom, France, Poland, Sweden, Denmark, Spain, Netherlands, and Finland. All these Pages were created in the 2010-2011 period, except the Netherlands which was created in 2014.

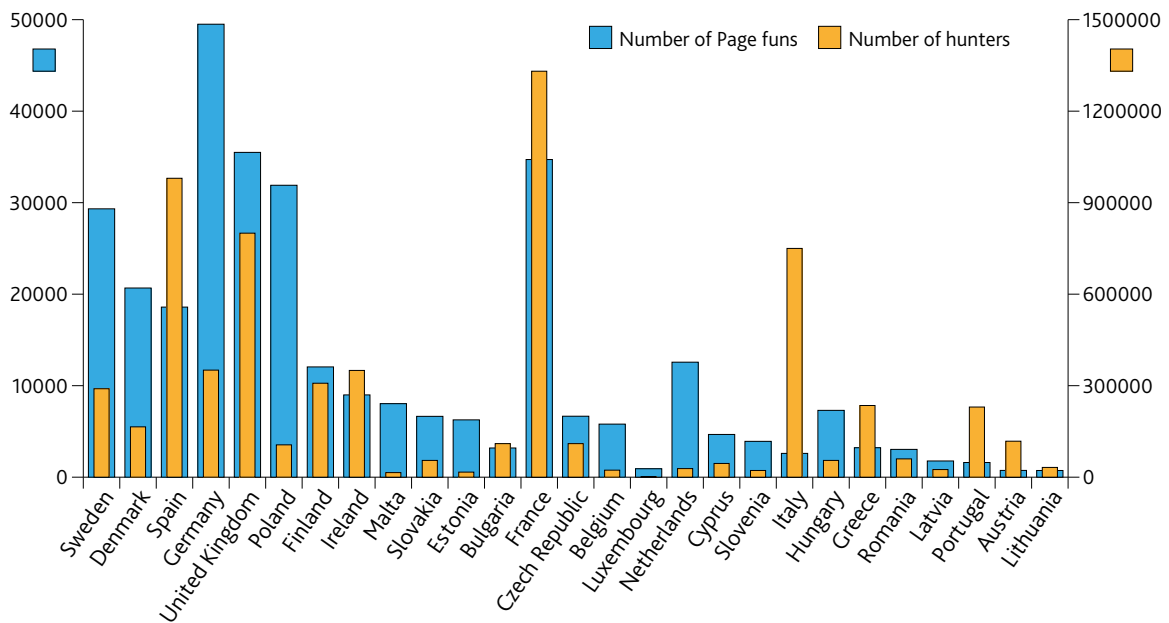


Figure 3. Number of EU NHA Facebook Page fans in March 2019 (left vertical axis) and number of hunters in EU in 2010 (FACE - Annual Report 2009-2010)

Considering that the main target group for these Pages are people who hunt and are interested in hunting this can also be viewed through the number of hunters in each country and in the EU (see Figure 3). According to the last census in 2010 there was a total of 6667770 hunters in the EU and above 7 million in entire Europe (FACE - Annual Report 2009-2010). Looking at the population of this size a total of 320942 followers combined can be seen as a bad result taking into account the fact that a certain percentage of followers are non-hunters.

As mentioned above, more than half of NHA Pages have the review option enabled. The average review scores are 4.2. Interesting is the fact that three Pages have not been reviewed even with this option being enabled.

Users' engagement and post characteristics

The results for the set of engagement variables are shown in Table 5. The most prevalent way of engagement is "like". „Likes“ are followed by „shares“ and „comment likes“. The average length of the post is 393.65 characters. When looking at posts by type, the average length of posts containing links is 246.88 characters, photos 589.32 and posts with video 240.59 characters. Statuses or posts containing only text have the largest average number of characters with 752.81.

Table 5. Engagement factors of EU NHA Page posts

Engagement factor	N	Total	M	SD
Likes	6269	306635	48.91	105.54
Comments base	6269	38555	6.15	35.29
Comment replies	6269	28542	4.55	25.16
Comment likes	6269	98370	15.69	106.94
Shares	6269	170260	27.16	296.17

N- Number of posts; *M*- Mean; *SD* -Standard deviation

A number of characters, however, don't seem to have an influence on users' engagement (measured by a total number of likes, comments, and shares). Using the Pearson product-moment correlation coefficient the relationship proved to be weak ($r=0.024$, $p=0.059$). However, while there was no relationship with posts containing video ($r=0.032$, $p=0.424$), links ($r=0.007$, $p=0.681$) and photos ($r=0.020$, $p=0.350$), statuses seem to have more engagement when the post is longer ($r=0.187^{**}$, $p=0.002$, (**. Correlation is significant at the 0.01 level (2-tailed)).

Table 6. Pearson Product-moment Correlations between Post length and users' engagement factors

Variable	Likes	Comments	Shares
Post length	0.024	0.038**	0.001

** . Correlation is significant at the 0.01 level (2-tailed).

The time of posting showed that during working days, the posting is relatively equally distributed, with the peaks on Tuesday and Thursday (see Figure 4). Thursday is the peak when the most posting is done. The lowest percentage of posts is recorded on Sunday.

Table 7 shows the average weekly users' engagement. Posts receive the most likes on Mondays and Sundays. Posts are most frequently shared on Tuesdays and Mondays, and most commented on Saturdays and Thursdays. One of the possible reasons for these results is that even though Sunday is the day with the least posts it is the day when most of the hunting activities in the field are carried out. Thus, hunters are looking for useful information or posts online and are likely to be more engaged on the day and day after hunting. The lowest number of likes is associated with the highest number of posts, Tuesdays and Thursdays.

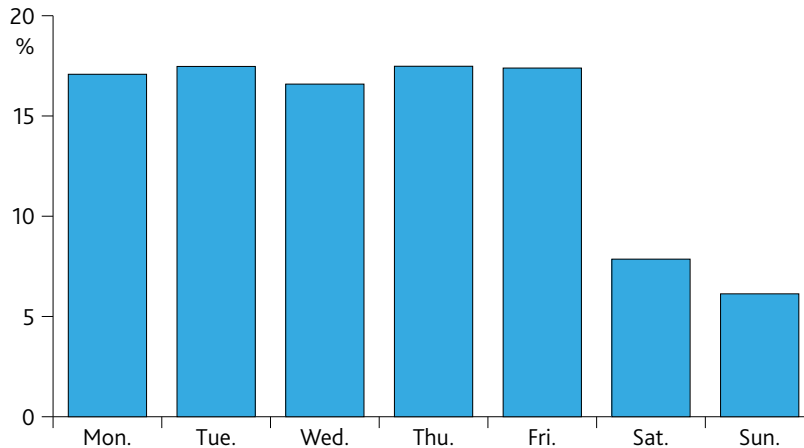


Figure 4. Average weekly distribution of Page posts by NHAs in the EU (in percentages)

Table 7. Average weekly users' engagement factors

Day	Likes	Comments	Shares
Monday	53.94	12.45	34.55
Tuesday	46.48	10.14	39.04
Wednesday	44.68	10.04	26.51
Thursday	46.16	13.19	17.52
Friday	51.96	12.83	26.06
Saturday	47.85	13.48	16.52
Sunday	53.86	11.40	18.67

As shown in Table 8 links are the dominant type of posts as almost half of all posts are of this type. About one-third of the posts contain photos. The share of video posts is 10.13%, statuses are lower than 5% and music only 0.05%.

Table 8. Facebook page posts by type posted by NHAs and average users' engagement factors

Type	% of posts by type	Likes	Comments	Shares
Link	48.83	40.04	7.94	16.07
Music	0.05	10	0	0.67
Photo	36.65	58.94	13.17	35.13
Status	4.34	18.54	7.43	7.04
Video	10.13	68.60	27.93	60.51

In terms of users' engagement, videos on average receive the most likes, comments, and shares. Videos are a good way to present wildlife and hunting activities. Photos and links also have a high level of engagement, with photos having more average likes, comments, and shares. Statuses and music are the least engaging (see Table 8). NHAs mainly post videos concerning wildlife, game management, hunting, shooting and similar content, which is, probably, the main reason for great interest among hunters. It is interesting that videos that have only a 10.13% share in total posts receive the highest level of engagement by the users. This is a clear

sign that NHAs should pay more attention to posting such content. Also, there is a clear difference between the percentage of photo and video posts during workdays and the weekend. The average workday percentage of photo and video posts combined is 44.29%, while during the weekend it is 62%. At the same time percentage of links drops from 51.59% on workdays, to 32.09% on the weekends.

Another assumption was that NHAs can influence the size of the Facebook community with quantity (number of posts). The number of posts varies from 6 to 636 during the examined period, with an average post per day ranging from 0.02 (Belgium and Italy) to 1.74 (Estonia and United Kingdom). The relationship between page activity (shown by the frequency of posting) and the number of Page likes (fans) was investigated using the Pearson correlation coefficient. There was a strong positive correlation 0,514** (**. Correlation is significant at the 0.01 level (2-tailed)) between the two variables. This shows a strong relationship between Page activity and the number of followers.

Discussion

Billions of posts users are uploaded to SNS every year that include photos, videos or text (Hausmann et al., 2018). In support of this fact, social media data is mostly free, contrary to traditional methods of surveying that require greater resources and costs. It was noticed that still a rather small number of tourism DMOs fully understand and effectively use SNS (Hamill and Stevenson 2012). DMOs at the national level should give more attention to using social media, since this could have a significant role in promoting and marketing a tourism destination (Baggio et al., 2014; Mariani, Baggio, 2012). Study on Finnish hunters (Sunı, Pesonen, 2017) shows that hunters seek new experiences, new landscapes and new forms of hunting. Also, this research showed that hunters' motivations for traveling abroad are learning about new cultures and nature. That leads to the conclusion that hunting tourism could be viewed nearly 'as much about traveling as it is about hunting'. Given this example of DMOs, the same can be said about NHAs that affect the EU hunters' population containing almost 7 million hunters.

Uploading and sharing posts on social media such as Flickr, Panoramio, Instagram, Twitter or Facebook has become increasingly prominent (Guerrero et al., 2016). This is a large potential for the NHAs. The rapidly growing number of posts from hunting grounds published on SNS in the last decades became a visual method for understanding wildlife and game habitat.

The results of this exploratory study present current practices of NHAs in the EU through the basic parameters of Facebook Page usage. The approach is based on technically low-demanding procedures of data collecting using manual and automatic data mining options freely provided by Facebook, and analyzing the given quantitative variables. This paper also tries to apply the use of Facebook metrics in the field of hunting management, hunting promotion, and tourism. The practical implications of this study are diverse, as examined NHAs can use presented ideas to improve their current practice of using Facebook Pages and compare it to similar practices of NHAs in the same region. The results of the study also show poor usage of Pages which is seen from a simple quantitative view. Lack or infrequency of content (posts) and Page activity are a clear sign that these Pages are poorly used. Also, a small percentage of „call-to-action“ buttons could indicate that NHAs do not realize its potential in further engaging with users by using this quick technical solution. The number of registered hunters also shows that there is a great potential for an increase in followers however current practice in Page management fails to seize this opportunity. The study showed that there is a moderate positive

correlation between the frequency of posting and the number of Page fans. Besides the total number of fans key indicator of social media success is the level of engagement (Hudson, 2014).

Weekly distribution of posting mostly corresponds to global frequency, where posting occurs more often on workdays than the weekends (Lee, 2014). Most of the recorded posts occur Tuesdays and Thursdays, however, posts are mostly equally distributed during workdays. However, the fact that posts are more frequent during those days does not result in more likes. Posts receive the most likes on Mondays and Sundays which could indicate that fewer posts, more free time and hunting activities result in a boost in engagement. Possible reasons for a drop in posts during Saturdays and Sundays could be attributed to the fact that most of the hunting activities are carried out during the weekend. While there is a drop in posts during the weekend, there is also a change in the type of posts. Photo and video posts increase during the weekend, whereas posts containing links drop. This also shows the fact that the hunting activities are more frequent on the weekend, hence there is a rise in the posts that visually represent the ongoing activities.

Unlike similar research (Mariani et al., 2016), this study showed no significant relationship between post length and users' engagement. Only statistically-significant correlation, weak, however, was found between length of statuses and engagement. Pictures and links are mostly used in communication with fans. Interestingly, even though videos create the most users' engagement only one in ten posts contain videos.

Consumptive wildlife tourism, in general, is highly specialized (Lovelock, 2008). Hunting tourism activities fall into the category of very specialized activities, so 'the preparation of the products requires a very good knowledge of the defined segment of tourism participants' (Tangeland et al., 2013). A segment of participants targeted by NHA Pages is European hunters. Results showed a moderate positive relationship between the number of registered hunters and the amount of Facebook Page followers by country. However, when looking at the total number of registered hunters and the total number of Page followers, a very small percentage actually follows some Page.

This study did not analyze the content of posts which could be an interesting aspect in revealing motives of engagement. Kwok and Yu's (2013) content analysis of hospitality companies showed that conversational messages get more users' „Likes“ than sales/marketing messages. Also, multimedia posts mostly receive „likes“ and conversational posts receive more „Comments“ (Zouganeli et al., 2011). As mentioned, trophy hunting has been the subject of numerous research from different angles (Lindsey et al., 2007; Macdonald et al., 2016a; Macdonald et al., 2016b; Mkono, 2018; Batavia et al., 2019). Since hunting is a sensitive subject users' engagement might be influenced by the types and characteristics of post content, which was similarly discussed by other authors (Božić, Jovanović, 2017; Sabate et al., 2014). Anyway, although hunting is still thought to be a controversial topic widely unresolved in the literature, hunting associations present some of the most numerous environmental organizations in almost every country. As such, they have a responsibility to educate and promote sustainable hunting in the media.

Conclusion

This article attempted to gain an understanding of how the new media affects NHAs, and hunting tourism in general. Social media remain an unutilized source of data for NHAs and wildlife researchers and managers. This study exhibited that posts on accessible social media content can reveal practices and patterns connected to participation in hunting activities. One of the advantages of using social media is relatively very quick data gathering and analysis of

the behavior of NHAs. Also, social media data on NHAs the amount and type of information greatly surpasses traditional survey methods. By using SNS NHAs can easily speak to hunters and non-hunters alike. This is important for maintaining the relationship with the target group, but also for educating and improving the image among non-hunters. Given the nature of SNS, there are great opportunities for NHAs, mostly for reaching the younger population that is considered to be losing touch with the hunting culture. Presented results change the perception of the role and importance of NHAs social networks' presence in hunting and wildlife activities. The findings should give encourage in using of these networks in a more systematic and dynamic way in order to increase their impact in local, regional and national and international contexts. The authors acknowledge that research results on issues of such changing nature such as SNS become out of date sometimes even before they are published. Therefore this research is just a starting point to understanding and addressing these points in a systematic way.

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