

Josef Navrátil / Kamil Pícha / Vivian L. White Baravalle Gilliam

## The interest of visitors to protected natural areas in 'green' accommodation

### Abstract

The development in tourism should be done within the framework of environmentally friendly tourism. A part of environmentally friendly tourism is the development of "green" hotels. The main objective of this study was to investigate the extent to which visitors to the protected natural areas are interested in "green" hotels. It was conducted on a sample of visitors to ten protected natural areas in the Czech Republic. The results reveal a low interest for this type of accommodation. Pro-environmental orientation of visitors is comparable to other areas. Relaxation is the most participated activity among these visitors. Non-parametric regression with the normal distribution of dependent variable and Log Function was used to identify predictors of such an interest. A higher degree of interest was identified among the environmentally oriented visitors. A higher degree of interest was also identified among bicycle tourists, gamekeepers, anglers (who are gamekeepers at the same time) and female anglers. A higher interest in environmentally friendly accommodation is generally higher among female tourists rather than among male tourists. Those categories have identified the main target segments (each distinct one from another) of the potential creation of the supply of such an accommodation in vulnerable areas.

**Key words:** tourism; environmentalism; involvement; gamekeeper; gender; Czech Republic

### Introduction

National parks and protected landscape areas belong to the most important spaces for recreation and tourism (Newsome, Moore & Dowling, 2013). As the overall degradation of the environment accelerates, its value increases beyond that for tourism-related uses (Monz, Marion, Goonan, Manning, Wimpey & Carr, 2010). However, tourism has become one of the most important threat to the natural environment (Williams, 2000) and the risk of degradation increases with the increased number of tourists (Marion & Reid, 2007). One of the more popular concepts for solving this issue is based on the framework for the consumption of "green" products (Nicholls & Kang, 2012) which is important particularly in fragile environments (Hall & Lew, 2009; Hall & Page, 2006; Holden, 2000). This concept has many aspects (Balmford, Beresford, Green, Naidoo, Walpole & Manica, 2009; Fredman & Sandell, 2009; Gössling, Hall & Weaver, 2009; Leslie, 2012a, 2012b; Newsome, 2014; Oian, 2013; Sharpley, 2009) and one of them is "green" accommodation (Goeldner & Ritchie, 2012). A number of researches are identified to the hotel industry managers' decision-making process related to introduction of environmentally friendly practices, products and services (Becken, 2013; Best & Thapa, 2013; Font, Garay & Jones, 2014; Kasim, 2007; Razumova, Ibanez & Palmer, 2015), of which the

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**Josef Navrátil**, PhD, Department of Biological Disciplines, Faculty of Agriculture, University of South, České Budějovice, Czech Republic; E-mail: josefnav@gmail.com

**Kamil Pícha**, PhD, Department of Trade and Tourism, Faculty of Economics, University of South Bohemia, České Budějovice, Czech Republic; E-mail: kpicha@ef.jcu.cz

**Vivian L. White Baravalle Gilliam**, Institute of Technology and Business, České Budějovice, Czech Republic; E-mail: vivian@mail.vstecb.cz

most important ones are visitor motivations and their opinions (Chang, Hsiao, Nuryyev & Huang, 2015; Chia-Jung & Pei-Chun, 2014; Manganari, Dimara & Theotokis, 2016; Rittichainuwat & Mair, 2012; Suki, 2015). Thus, the main objective of this paper is to assess the aspects of the involvement with "green" accommodation among visitors to the national parks and protected natural areas.

## Environmentally friendly practices and accommodation establishments

In line with the broad objective of this study, this section deals with key issues that are relevant to the environmentally-friendly accommodation in terms of demand and supply. Firstly, factors that influence introduction of such practices are identified, followed by the prevailing attitudes to and practices of tourism accommodation operators. Then, the factors affecting tourists demand for environmentally friendly practices are discussed. Finally, an overview of the "green" practices in the Czech hotels is given to provide context for the study.

### *Environmentally friendly practices in accommodation establishments*

The economical use of energy and the use of energy from the renewable sources are the crux of the environmental-friendly accommodation (Bohdanowicz, 2006; Manganari et al., 2016). Accommodation providers have a good understanding of energy as a substantial cost factor, as well as the importance of the implementation of energy-saving measures, savings potentials, and the implementation costs of environmentally friendly practices (Becken, 2013). On the other hand, many managers claim that the use of energy-efficient equipment is prohibitively expensive (Bohdanowicz, 2006). Thus, there is a substantial gap between the positive perceptions held by the operators and the levels of energy-saving measures actually implemented (Becken, 2013). However, the competition for "green customers" and the search for cost-saving technologies (Goeldner & Ritchie, 2012) are, nevertheless, the main drivers of the installation of energy-saving devices and the introduction of environmentally friendly practices in accommodation establishments. To this end, hotels often use a variety of certificates related to energy saving and environmental management policies that they possess in their promotional activities (Chan & Wong, 2006; Erdogan & Baris, 2007; Švec, Navrátil, Pícha & White Baravalle Gilliam, 2012; Teng, Horng, Hu, Chien & Shen, 2012).

The introduction of environmental practices varies. The use of renewable sources, such as biogas (Frantál, Kunc, Novaková, Klusáček, Martinát & Osman, 2013; Martinát, Dvořák, Frantál, Klusáček, Kunc, Kulla & Van der Horst, 2013), is currently a common energy solution of the accommodation establishments in developing countries. This is particularly true in the cases of Eastern, Southern and Southeastern Asia, and it is gaining popularity in the regions of the sub-Saharan Africa and Central America, including the Caribbean. It is rarely used in the Central and Eastern Europe (Alexandrescu, Martinát, Klusáček & Bartke, 2014; Frantál & Urbánková, 2014; Osman, Frantál, Klusáček, Kunc & Martinát, 2015) where scant attention to "green" practices is given by the hotel industry (Foret, Konečný & Klusáček, 2014; Ivanov, Ivanova & Iankova, 2014; Lluri, 2014; Nižić & Golja, 2009).

The introduction of environmentally friendly practices in accommodation establishments seems also to depend mostly on the hotel size and quality. The interest for the "greening" of hotels is more prominent among larger, chain-affiliated hotels (Bohdanowicz, 2005; Kasim, 2007). The main reason, apart from the savings costs (González-Benito & González-Benito, 2005), is a strategy to enhance the company's image and brand name (Chan & Hawkins, 2010). Nonetheless, the impact of introducing environmental management or some of the environmentally friendly ways of production is still not fully accepted, particularly in the case of small hotels (Dalton, Lockington & Baldock, 2007, 2008).

That is due to the managers' conviction that it is only a minority of guests appreciating or demanding the hotel's environmental programs (Best & Thapa, 2013; Bohdanowicz, 2005). The most common obstacles to the introduction of those environmentally friendly practices are: a belief that the introduction process is complicated and it only produces negligible results (Sloan, Legrand, Tooman & Fendt, 2009); the perception that the implementation and maintenance costs are too high (Chan, 2008), coupled with a perceived lack of professional advice, that results in the lack of knowledge and skills (Chan, 2008; Scanlon, 2007), acting as a disincentive to the spatial diffusion of the environmental sustainability innovations (Smerecnik & Andersen, 2011).

There are three kinds of behavior within hotels in relation to environmental practices and firm performance (Molina-Azorín, Claver-Cortés, Pereira-Moliner & Tarí, 2009). The first group consists of proactive hotels with the most developed environmental strategy that combine quantifiable environmental savings and utilize ecological orientation in their marketing campaigns. This group is made of large, higher quality hotels affiliated with hotel chains. Hotels with strong brand names and with their associated reputations "are seen to be operating with a corporate conscience that demonstrates a sense of environmental responsibility" (Warnken, Bradley & Guilding, 2004, p. 131). Such a reputation brings a competitive advantage to these hotels (Leonidou, Leonidou, Fotiadis & Zeriti, 2013). At the opposite end are small, independent hotels of a lower category (3 stars) that are yet to formulate their environmental strategy. What lies between there is the largest group of hotels, mostly independent large hotels of 3 stars, with a basic environmental commitment.

A relationship is also identified between the application of environmentally friendly practices and the implementation of quality management plan (Tarí, Claver-Cortés, Pereira-Moliner & Molina-Azorín, 2010). The adoption of the environmentally friendly practices is also influenced by the willingness of the hotel's management to take a risk and by the perception of the degree of competition in the market (Le, Hollenhorst, Harris, McLaughlin & Shook, 2006). In addition, introduction and implementation of environmental management or environmentally friendly practices also show the variations between cultures, countries (Bohdanowicz, 2006; Bohdanowicz & Martinac, 2007), and even regions within a country (Dalton et al., 2007; McNamara & Gibson, 2008), too.

### *The consumer demand for environmental friendly practices*

Visitors, although giving preferences to hotels implementing environmentally friendly practices, are often not willing to pay extra money for such services (Kim & Han, 2010; Manaktola & Jauhari, 2007). This is specific for the entire sustainable tourism market (Juvan & Dolnicar, 2014a, 2014b). In any event, the positive relation between the intention to stay in a "green" hotel and the real stay in "green" hotel was confirmed (Chen & Peng, 2012). Choosing the environmentally friendly supply in sustainable tourism market is the outcome of one's involvement, the pro-environmental orientation, and the personal characteristics. The same goes for "green" hotels as Han, Hsu and Sheu (2010, p. 331) pointed out "the [F]ormation of a favourable/unfavourable attitude toward staying at a green hotel is influenced by how one's important others (referents) consider the performance of eco-friendly behavior to be."

There are several scales developed to measure personal involvement (Zaichkowsky, 1994). Some are based on the concept of involvement as internal state of arousal or an individual's processing strategies. The Personal Involvement Inventory Scale (Zaichkowsky, 1994) is considered as one of the best scale to measure one's involvement. The opinion about the general topic is measured by the semantic differential (Goodrich, 1978) using ten bipolar adjectives and 7-point scales. The degree of involvement

on the topic is then a summary of points scored on the ten scales. Its advantages, over the other methods, are its one-dimensionality and the versatility of its use (Coppes & Braunisch, 2013). Those scale properties make it appropriate in tourism research (Beerli, Meneses & Gil, 2007), including the research in the field of responsible tourism (Krider, Arguello, Campbell & Mora, 2010), as previous studies confirmed the suitability of this tool in the field of tourism research (e.g. Alvarez & Asugman, 2006; Beerli et al., 2013; 2010; Seabra, Silva, Luís Abrantes, Vicente & Herstein, 2016).

The willingness to pay extra money for "green" hotel services was found in the group of visitors who are actively interested in problems of environmentally friendly tourism and the environmentally friendly use of energy sources in general (Kostakis & Sardianou, 2012). Thus, pro-environmental orientation is the other important factor affecting buying accommodation services in a "green" hotel. The identification of the degree of pro-environmental orientation of a visitor is risky, as there are many aspects of this orientation (Lee & Jan, 2015). Researchers usually develop their own scales (Goodwin & Francis, 2003). However the results of such studies are not fully comparable, as usually only part of their pro-environmental orientation is measured. The most widespread scale for the wide range of uses is the Environmental Paradigm Scale (Dunlap, Van Liere, Mertig & Jones, 2000). This scale deals especially well with the issue of multidimensionality of pro-environmental orientation (Dunlap et al., 2000). It utilizes the 5-point Likert-type scales applied to 15 statements regarding a broad spectrum of issues arising from the unsustainable uses of the environment by humans. This scale was successfully applied in tourism by Wolf-Watz, Sandell and Fredman (2011).

The recreational behavior of the visitors to natural areas differs significantly (e.g. Leslie, 2012b; Nicholls & Kang, 2012). Especially educated visitors (Munro, Morrison-Saunders & Hughes, 2008; Leung, 2012; Tomljenović & Kunst, 2014) with an interest in nature and/or history (Weber & Anderson, 2010) seem to be of crucial importance for such areas. However, the substantial portion of these visitors is members of the passive and non-engaged tourism segment (Lanfranchi, Giannetto & De Pascale, 2014) or members of the hotel-based tourism segment (Weaver, 2006). These types of visitors to the natural areas can be identified through their motives (Kibicho, 2006) or their actual behaviour (Becken & Gnoth, 2004). In addition, specific attitudes towards environmentally friendly tourism are held by anglers and gamekeepers (Arlinghaus, Cooke & Potts, 2013; Whatmough, Van Putten & Chin, 2011). These types of tourism belong to a wider group of activities called consumptive wildlife tourism (Macmillan & Phillip, 2008). Its development, as Barnes (2001) argues, contributes to the protection of natural resources of, both, animate and inanimate nature. From the marketing point of view, angling and hunting are principally the market niches (Curtin, 2013) as these activities are highly specialized activities. An important motivation of anglers and hunters is to spend some time in a pleasant natural environment (Lovelock, 2008). The development of angling and hunting often contributes towards nature protection (Lindsey, Balme, Booth & Midlane, 2012). Their impact on the environment is lower due, primarily, to their small numbers in comparison to leisure and recreational visitors to protected natural areas (Darroch, 2001). In the Czech Republic, in particular, the main focus is on the game-keeping where the aim is the breeding and protection of animals in relation to the protection of their biotope (Hanzal, 1994) rather than hunting, and the term gamekeeper is better suited than the term hunter in this situation (Kroupová, Navrátil, Pícha & Hasman, 2014). Overall, the most important consumptive wildlife tourism in the Czech Republic is angling in the fisheries of the big anglers' associations (Navrátil, Martinát, Pícha & Navratilová, 2011).

Gender is another important factor influencing pro-environmental behaviour (Gössling et al., 2009). Women have a higher degree of a sense of responsibility and pro-environmental behavior during tourism

activities (Dolnicar, 2006; Mustafa, 2015; Kim, 2012). This is also the case for women among hotel and restaurant managers (Del Mar Alonso-Almeida, 2013; Tsai, Wu & Wang, 2014). However, the willingness to pay extra money for "green" hotel services was found in the group of middle-aged male visitors (Kostakis & Sardianou, 2012).

### *Green hotels in the Czech Republic*

The use of renewable energy sources in the Czech Republic is at the very early state. At the moment there are only four hotels that possess the EU Ecolabel for Tourist Accommodations (<http://ec.europa.eu/ecat/>). These hotels are predominantly the expensive ones, oriented to the well-off foreign clients (four or five stars) and situated in Prague. It is true, however, that official certification is not necessarily a reflection of the hotel environmental practice. For example, the most spectacular promotion campaign on environmentally friendly accommodation is run by the Mosaic House Hotel located in Prague (MosaicHouse, 2013) which has not been certified.

In conclusion, the offer of a certified "green" accommodation is very limited in the countries of Central and Eastern Europe and introduced mostly in up-market hotels where bulk of visitors come from countries of Western Europe, driven to a large extent by the customer demand for environmentally friendly products, services and practices and partly by the policies of the hotel chain that they belong to. However, the issue of "green" accommodation in nature protected areas is becoming increasingly important given the increased visitor pressure and the uppermost objective of nature preservation for which these areas have been protected at the outset. As operators and managers of small hotels that are the most common type of accommodation facilities in the nature protected areas of the Czech Republic are reluctant to introduce an environmental program, they might react when faced with visitor demands. Therefore, the focus of this study is on the visitors to protected natural areas with a specific aim to identify factors that might predict visitor demand for environmentally friendly accommodation.

## Methods

To fulfil the aim of this study, cross sectional research design was used with the research being conducted on a sample of visitors to ten protected natural areas of the Czech Republic.

### Constructs and measures

There were three key constructs used in this study. The first construct was the involvement with environmentally friendly accommodation. It is defined as a motivational state that is personally relevant to the stimulus object (Zaichkowsky, 1994). The stimulus object in our study is the stay in a "green" hotel. It was made operational with the following question: "The offer of accommodation in an establishment complying with the requirements of one of the certified systems of ecological management and auditing (where the price is higher than 20% as compared to that of conventional hotels) is for me:" The involvement was measured by the revised Personal Involvement Inventory Scale (Zaichkowsky, 1994). All ten original bipolar adjectives were used: Important—Unimportant\*, Boring—Interesting, Relevant—Irrelevant\*, Exciting—Unexciting\*, It means nothing—It means a lot to me, It's appealing—It's unappealing\*, It's fascinating—It's mundane\*, It's worthless—It's valuable, It's involving—It's uninvolving\*, It's not needed—It's needed (the asterisk denotes the measures that were reverse coded), as well as original 7-point scales. The degree of the involvement of the respondent was calculated by the item summation of the responses on all ten bipolar adjectives.

The second construct was the pro-environmental orientation defined as "beliefs about humanity's ability to upset the balance of nature, the existence of limits to growth for human societies, and humanity's right to rule over the rest of nature" (Dunlap et al., 2000, p. 427). It was measured by the standardized one-dimensional New Environmental Paradigm Scale (NEP) (Dunlap et al., 2000). All 15 items and the 5-point scales were used. The pro-environmental orientation measure was calculated by all of the item summation.

The third construct was the behavior of the visitors ascertained through their activities. It was measured by using a scale that identifies the degree of involvement in a variety of activities during visit (Navrátil, Pícha & Navratilová, 2012). All 12 items (hiking, bicycle tourism, leisure-time and sport activities, wellness activities and spa procedures, nature observation, visits to historical sights, visits to museums or galleries, job related activities, games with children, relaxation, entertainment, and shopping) that were measured on 5-point scales, were used. The level of participation was measured on a scale from one to five, one being "I don't take part in the activity" and five being "I primarily take part in this activity". Finally, the affiliation of the respondents to groups of anglers and gamekeepers was also identified. Socio-demographic – age and gender, were also measured.

## Data collection and sampling

The questionnaire was used for data collection. It was available in Czech and it was successfully piloted on a sample of 25 respondents a month prior to the survey. It took about 15 minutes to complete.

The survey was conducted by personal interviews, as it is the only way how to obtain respondents from a broad spectrum of visitors. The anonymity of the respondents was ensured, as no personal data were collected. The interviews were conducted at the most popular sites within the area. The respondents were selected randomly (every tenth visitor). The interviews were conducted by students who were trained prior to the data collection. The survey was conducted during, both, weekdays and weekends. The population of this study was defined as all Czech visitors to the most popular protected natural areas of the Czech Republic from June to September of 2013. The study sites were: the Šumava National Park, the Šumava Protected Landscape Area (PLA), the Křivoklátsko PLA, the Beskydy PLA (in the Moravskoslezské Beskydy part and in the Javorníky part), the Třeboňsko PLA, the Blanský les PLA, the Železné Hory PLA and the Žďárské vrchy PLA and in the Novohradské hory Mountains Natural Park. The aim was to obtain 200 completed questionnaires at each area or 2,000 in total. Total usable number of responses was 1,939, as 61 were eliminated from the analysis because of the incompleteness. Profile of respondents can be found in Table 1.

Table 1  
The profile of the respondents (n=1,939)

Characteristics	%
Females	51.73
Age	
18-25	17.12
26-35	19.08
36-45	18.62
46-55	17.07
56-65	13.10
66-75	10.52
Over 75	4.49
Gamekeepers	6.86
Anglers	14.75

In terms of the data analysis, of all of the variables that do not have a bivariate character (gender, game-keepers, and anglers) were standardized prior to the analyses. The involvement with environmentally friendly accommodation was defined as dependent variable. In order to evaluate the impact of the independent variables on the dependent variable, the Generalized Models with normal distribution, and Log Function was used (Robinson, 1998). All of the computations were performed using STATISTICA 10 software (*StatSoft*, 2011).

## Results and discussion

The involvement of the respondents with environmentally friendly accommodation was not too high; it could theoretically vary between 10 and 70 for each respondent (with the theoretical mean at 40). The average value in our dataset is 36.6 (median=38, minimum=10, maximum= 70). So it is lower than the theoretical average of the normal distribution. Therefore the respondents proved a rather lower involvement. However, all the spectrum of the potential demand was registered in our set of respondents. This result confirms that obtained by Manaktola and Jauhari (2007). They also found on the case of the Indian lodging industry, that visitors are not willing to pay extra for ecofriendly services. Therefore, the reservations that hotel owners and managers have about the poor return on the investment in environmentally friendly practices, products and services through the increased prices appears justified (Bohdanowicz, 2005; Dalton et al., 2007).

The pro-environmental responses of the visitors in our sample varied from 9% to 88% (Table 2). The whole pro-environmental score is 63%. One fifth of the respondents (21%) exhibited a pro-human exceptionalism stance. Thus, only 16% neither agreed nor disagreed in the whole dataset.

The items with the strongest responses are almost identical to those from the original research on NEP (Dunlap et al., 2000). It is the case of NEP3, NEP5, NEP7, NEP9, and NEP13. In all these cases the value of agreement is close or above 80%. NEP11 had strong responses elsewhere (e.g. Dunlop et al., 2000; Wurzinger & Johanson, 2006); it only has 59% here. This value is comparable, as well as many others in our NEP study, with the study among inland and seaside tourists in Portugal (Do Valle, Guerreiro & Mendes, 2015). On the other side of responses is NEP6. This is the statement usually with the smallest percentage agreement with NEP beliefs (Dunlop et al., 2000; Wurzinger & Johanson, 2006; Imran, Alam & Beaumont, 2013; Do Valle et al., 2015).

Table 2  
Responses to new environmental paradigm scale

Item	Statement**	Agreement (%)	Average*
NEP1	We are approaching the limit of the number of people the earth can support.	69	2.18
NEP2	Humans have the right to modify the natural environment to suit their needs.	65	2.35
NEP3	When humans interfere with nature, it often produces disastrous consequences.	85	1.76
NEP4	Human ingenuity will insure that we do NOT make the earth unliveable.	28	3.17
NEP5	Humans are severely abusing the environment.	88	1.64
NEP6	The Earth will have plenty of natural resources, if we just learn how to develop them.	9	4.06
NEP7	Plants and animals have as much right as humans to exist.	85	1.64

Table 2 Continued

Item	Statement**	Agreement (%)	Average*
NEP8	The balance of nature is strong enough to cope with the impacts of modern industrial nations.	62	2.39
NEP9	Despite our special abilities, humans are still subject to the laws of nature.	78	1.91
NEP10	The so-called "ecological crisis" facing humankind has been greatly exaggerated.	46	2.74
NEP11	The earth is like a spaceship with very limited room and resources.	59	2.41
NEP12	Humans were meant to rule over the rest of nature.	72	2.08
NEP13	The balance of nature is very delicate and easily upset.	83	1.78
NEP14	Humans will eventually learn enough about how nature works to be able to control it.	51	2.59
NEP15	If things continue on their present course, we will soon experience a major ecological catastrophe.	67	2.15

\*On scale from 1 (completely agree) to 5 (completely disagree)

\*\* The even numbered items, appearing in italics, have been reverse coded.

Relaxation, followed by entertainment and nature observation, were the most frequent activities of the respondents (Table 3). Thus, the Czech visitors to protected natural areas are no different than in other parts of the world where, as Eagles and McCool (2002) note, large protected natural areas are perceived primarily as destinations for relaxation.

Table 3  
Recreational activities during visit to protected natural areas

Activity	%*
Relaxation	69.11
Entertainment	50.64
Nature observation	43.89
Leisure-time and sport activities	43.17
Hiking	37.60
Visits to the historical sights	32.13
Games with children	27.64
Shopping	27.18
Bicycle tourism	26.46
Job-related activities	23.62
Visits to museums or galleries	22.90
Wellness and spa activities	18.10

\*On scale from 1 (not participate) to 5 (participate first of all)  
per cent of respondents who assessed each activity by 4 and 5

As the literature review clearly indicates, there is a variety of visitors and their level of involvement with "green" accommodation varies. Thus, the main question posed in this research relates to ascertaining the predictors of involvement. To ascertain this, the Generalized Models (with a normal distribution, and Log Function) were used, with the involvement being the dependent variable and the pro-environmental orientation, visitor behavior, engagement in consumptive wildlife activities (angling, hunting), and gender being the independent variables (Table 4).

Table 4

**The model of dependence of the degree of involvement in eco-friendly accommodation and pro-environmental orientation, behavior, age, gender and consumptive wildlife activities**

Predictors	Estimate	S.E.	Wald
Intercept	-1.842	0.527	12.221***
Pro-environmental orientation	0.685	0.164	17.403***
Behavior variables			
Wellness and spa activities	0.110	0.115	0.910
Visits to the historical sights	-0.180	0.168	1.148
Job-related activities	-0.084	0.115	0.531
Visits to museums or galleries	0.448	0.189	5.644*
Shopping	-0.084	0.122	0.475
Entertainment	0.139	0.149	0.873
Relaxation	0.208	0.181	1.324
Nature observation	0.411	0.194	4.483*
Bicycle tourism	0.484	0.168	8.301**
Leisure-time and sport activities	-0.118	0.165	0.512
Hiking	0.107	0.183	0.338
Games with children	0.040	0.114	0.120
Age	-0.017	0.011	2.564
Female	0.633	0.258	6.003*
Gamekeeper	0.729	0.266	7.517**
Angler	0.372	0.260	2.042
Female+Gamekeeper	0.060	0.260	0.053
Female+Angler	0.588	0.260	5.100*
Male+Gamekeeper+Angler	0.517	0.263	3.852*
Female+Gamekeeper+Angler	0.175	0.261	0.453

+interactions among quoted binary independent variables (= test of synergies)

\* <0.05

\*\* <0.01

\*\*\*< 0.001

As expected, the involvement with environmentally friendly accommodation was predicted best by the pro-environmental orientation, as it explains the highest percentage of the variability of the dependent variable. It is in line with the results of previous studies by Han et al. (2010) and Kostakis and Sardianou (2012) in the context of green hotels in U. S. and Greece.

The activities that visitors to the protected natural areas are engaged in predict involvement with environmentally friendly accommodation to some extent. It was expected that those involved in hiking, cycling and nature observation would show higher level of involvement with environmentally friendly accommodation. However, the strongest relationship was found with cycling, followed by the engagement in nature observation. There are unexpected results. Firstly, there was a statistically significant relationship with visiting cultural/historical attractions, and the lack of such relationship with hiking. There are several possible explanation. Cycling tourists are highly segmented and there is a subsegment of those highly pro-environmentally oriented and, therefore, more likely to be found in protected natural areas (Ritchie, Tkaczynski & Faulks, 2010). In addition, cycling tourists are generally better off and therefore able to afford longer stay and pay more for their accommodation, especially when accommodation is environmentally friendly. Both, nature observation and visiting cultural/historical heritage fall, broadly, withing educational tourism and this could explain why both of them are statistically significant predictors of involvement with environmentally friendly accommodation. This

could be explained by the fact that preference for environmentally friendly tourism correlates with the efforts invested in self-education. Clark (1997), in a study of a small area of countryside near Lancaster in northern England, confirmed this relationship and so has Prah and Kolnik (2007) in geographical educational water trail in the Sotla river basin, Slovenia.

In line with the previous studies, there was a statistically significant relationship with gender, with females showing a higher level of involvement with environmentally friendly accommodation than males. This is generally attributed to the females' higher sense of responsibility and pro-environmental behavior during travel (Dolnicar, 2006; Kim, 2012). However, this pattern has not been identified each time and even the contrary has been identified in the case of the willingness to pay more for services of "green" hotels (Kostakis & Sardianou, 2012).

In terms of the consumptive wildlife activities, the results were mostly as expected. Gamekeepers had statistically significant relationship with involvement in the environmentally friendly accommodation, in line with their pro-environmental orientation, at least in Czech Republic. The same was the case only for female anglers. Although the number of gamekeepers and female anglers is not high, they are an important target group for "green" hotels.

## Conclusion

The higher setup costs and the possible lengthy return on the investment associated with the environmental initiatives could discourage owners and operators from building eco-friendly accommodation and the introduction of environmentally friendly practices. Although the economic benefits of environmental measures often outweigh the cost of their implementation, the costs involved in meeting all the criteria of eco-labels often require an increase in the prices of the provided services in order to assure the return on the investment. In defining the target markets for the eco-friendly accommodation, this study was built on an assumption that the visitors of the nature protected areas would be more inclined to environmentally friendly accommodation and would, therefore, create an important market segment and through their demand, encourage owners and operators to introduce environmental practices in their accommodation establishments. However, the visitors to protected natural areas of the Czech Republic showed below-average involvement with environmentally friendly accommodation, only fueling owner/operators objections that the return on the investments in case of the accommodation establishments is unsatisfactory (Bohdanowicz, 2005).

The results revealed that the involvement with environmentally friendly accommodation is predicted by the pro-environmental orientation, the engagement in specific activities such as cycling, nature observation and visits to cultural and historical heritage attractions, gender with females showing a higher level of involvement. In addition, of those engaging in consumptive wildlife practices, gamekeepers and female anglers showed greater involvement in environmentally friendly accommodation.

Thus, the results indicate that the main market segments for environmentally friendly accommodation in and around the protected natural areas is made of those who are already sensitized towards environmental problems, those engaging, broadly, in educational tourism and cycling and females. Gamekeepers and female anglers also make a small but lucrative market for such accommodation.

There are certain limitations to this study. Firstly, it is limited to the users of protected natural areas and might not be representative of the entire potential demand for environmentally friendly accommodation. Secondly, the results are also likely to be a reflection of a relatively small supply of this kind of accommodation and poor market awareness of what the environmentally friendly accommodation

should be and for what reasons it should be preferred. Equally important, in this study the environmentally friendly accommodation was defined as a uniformed subset of the accommodation sector. As tourists are not a homogeneous group, it is likely also that their interest in the environmentally friendly accommodation varies greatly. There are a number of sub-segments and it can be expected that each group prefers different partial aspects of this kind of accommodation. These aspects should be considered when targeting particular sub-segments of demand.

These limitations indicate the directions for further research in this area. Of importance is to identify which environmentally friendly practices tourists perceive as the most important. This means (among others) to study, if the green certification, a complex ecolabel, such as the EU Ecolabel for Tourist Accommodation (where a hotel should meet several tens of criteria), is the only way of how to attract potential guests or if environmentally sensitive tourism participants are only seeking some environmental friendly measures. While this study has focused on demand side, it also should be acknowledged that the environmentally friendly practices should be introduced in order to contribute to the sustainable tourism practices and, more broadly, to the environmental preservation generally. Whether tourists perceive it as desirable and whether it influences their accommodation preferences is important, but should not be a decisive factor in a decision to adapt environmentally friendly practices in their accommodation establishments.

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