

Walking trails in recreational and protected areas: an exploratory study of the tourist's perception of natural areas

Áurea Rodrigues, Elisabeth Kastenholtz and Apolónia Rodrigues

Abstract — Nowadays, there is a growing demand for leisure, recreation and tourism activities in nature, with hiking being one of the most popular activities. Walking on a trail through nature, besides providing contact with nature, fruition and relaxation, also constitutes an effective way of interaction between men and nature that could awake an increased environmental awareness (Siqueira, 2004). However, tourists that visit natural areas are not a homogeneous segment (Wight, 2001). Specific motivations and personal characteristics make people look for natural areas with different desires. This understanding is very important for those responsible for the planning and management of natural areas. In this context there are two sides to be considered: supply and demand. One of the most efficient ways to manage flows of visitors in natural environments focuses on the careful design of walking trails. However, for that development to be planned and managed in a sustainable manner it is necessary to know the hikers' profile. This paper presents the results of an exploratory survey of Portuguese and foreign hikers in Portuguese natural areas of different landscapes. Differences between the national and international visitor group could be identified as far as environmental preferences and nature perception is concerned, implying differentiated destination marketing strategies for protected areas.

Index Terms — Hiking, destination marketing, visitor survey, market analysis, natural areas

1 INTRODUCTION

According to UNWTO [23] tourism has become a major economic sector since the second half of the twentieth century and all indicators show that it will continue growing in the years to come. The relevance of the sector is reflected not only by its economic impacts,

but also by its consequences on a social, cultural and environmental level, namely by its potential to balance inter-regional development, to value and help preserve cultural and environmental heritage as well as to enhance the well-being of the local residents' population, aiming at a sustainable development of the destination.

The growth of tourism has led to a diversification of tourism products and destinations with increased demand for nature tourism. On the other hand, tourists are becoming increasingly sophisticated in their demands especially in terms of having meaningful experiences, including aspects of such as cultural authenticity, contacts with local communities and learning about fauna and flora, special ecosystems, natural life in general and its conservation. Hiking could be one of

Áurea Rodrigues, ISPGaya, Av dos Descobrimentos, 333, 4400-103 Santa Marinha, Vila Nova de Gaia, mail: aurea@netvisao.pt

Elisabeth Kastenholtz, University of Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, mail: elisabethk@ua.pt

Apolónia Rodrigues, Rede Europeia de Turismo de Aldeia, Genuineland, Rua de Aviz 90 | 7000 - 591 Évora, E-mail: genuineland@gmail.com.

the major activities that can be undertaken in a natural protected area. Consequently it is important for those responsible for the planning and management of natural areas to know the characteristics of hikers. This paper presents the results of an exploratory survey to Portuguese and foreign hikers in Portuguese natural areas with different landscapes in North, Central and Southern Portugal.

Most of the respondents prefer landscapes with water features. Comparing portuguese hikers with those of other nationalities we found some significant differences concerning their behaviour, environmental attitudes and behaviour in the holidays context. These results may contribute to the development of walking trails as touristic infra-estruturas within a perspective of sustainable management, based on the capacity of adaptation to the preferences of each group.

2 PROTECTED AREAS AND HIKING TOURISM

In all parts of the world, people have developed ways to seek a balance between the interest of individuals and the larger interest of society. Many societies throughout history have recognized certain geographical areas of special importance and some have protected those areas against the abuse of individuals through religious sanction [15]. Since the nineteenth century the industrialized countries and governments began to set aside areas of particular scenic beauty or uniqueness exclusively for conservation [9].

During the 20th century, the world's protected areas increased from 5 to 200 million hectares, and today represent 12% of the total land area of the globe (UNEP-WCMC, 2005 in [9]). According to CBD (Convention on Biological Conservation) [31] a protected area is "a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives". But the definition of the IUCN World Commission on Protected Areas [30] is more precise with respect to what is protected: "An area of land and/ or sea especially dedicated to the

protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means". In practice, protected areas are managed for a wide variety of purposes which may include: scientific research, wilderness protection, preservation of species and ecosystems, maintenance of environmental services, protection of specific natural and cultural features, tourism and recreation, education, sustainable use of resources from natural ecosystems, and maintenance of cultural and traditional attributes.

According to Green and Pane [5] there are over 1,388 different terms known to be used around the world to designate protected areas, each of which is defined within respective national legislation with respect to its objectives and legal protection. Most of them have been marked off, interpreted, musealized and labelled for touristy purposes and society. Many areas have become tourism products and had been sold as tourism attractions. Several studies [9], [6], [23], [29], [17], [32] state that the designation of protected area results in rapid increase in recreational use. Walking trails are a tool that can be used for managing the resulting visitor flows in natural areas.

This walking trail may be used in the context of leisure and recreation of the local population, but may also be considered part of a tourism product [14]. In this context it can be viewed as a relatively inexpensive infrastructure, which corresponds to the new or renewed trends in tourism demand.

The walking trail permits the tourist the development of an activity in direct contact with nature, thereby making it fit well into tourism forms based on nature as the main attraction, such as ecotourism. It may represent a challenge and thereby be integrated into adventure tourism. It may further permit direct contact with local communities and the existing heritage along the way and thereby be part of a cultural tourism offer.

The walking trail may thus complement other tourism activities and sustain the demand of tourism businesses, such as those

related to accommodation, restaurants, handicraft shops and enterprises offering sports or recreational activities. Tourism development around the hiking theme may correspondingly provide economic benefits for the local population, while simultaneously furthering the preservation of natural and cultural heritage, thereby fostering sustainable tourism principles. The number of pedestrians or hikers in Europe is relatively large. To name an example, about 30% of the Swedish population is used to walk through the forest and in the countryside and about 50% of the British also regularly walk in natural surroundings [13]. A study undertaken by Mintel [16] showed that the European market of adventure tourism is growing and that the core product being developed for this market in Europe is the walking trail or packages that include it as a main ingredient.

In Portugal hiking was first associated with the camping movement and has never assumed the relevance and popularity as in countries like France or Great Britain. The activity has been practised on a variety of trails, but it was only by 1997 that the first walking trail was officially registered in the country [4]. Portugal is actually a country where the “sun and beach” leisure and tourism activities prevail, but it also disposes of a series of nature resources that should be most adequate and interesting for hiking.

The discovery of this activity may actually, in a context of developing rural and natural destinations, represent a source of alternative income for the increasingly marginalized interior regions of the country, contributing to new dynamics and help to fix the young population, attracted to the more urbanized coastal zones. On the one hand, it may foster traditional trade in these areas, but also the development of companies developing recreational programs, restaurants and accommodation units. It may further be a source of direct employment and income, for example, through the employment of those responsible for designing, sign-posting and maintaining the trails, according to international norms, those who will undertake the field-

work needed to study the landscape and existing resources to integrate into these trails. Once designed and conveniently prepared, the trails need to be promoted, good quality information must be produced (e.g. maps), and interpretation facilities and activities developed and continuously provided.

The walking trail-based tourism product may be viewed as a very complex and heterogeneous product, aggregating elements quite diverse in nature. For once, there are the before-mentioned more commercial aspects of supply. However, on the other hand, the relevance of the so-called “free goods” which are not commerciable, like the landscape, natural and cultural heritage elements integrated in these trails must be stressed, since these resources constitute the main part of the product. These are elements, the value of which is difficult to assess and many of which pertain both to the private and public sector. Correspondingly, they depend frequently on an effective cooperation between diverse entities, such as municipalities, associations and private economic agents. In this context, the development of a management process based on partnerships is most important.

Being the walking trail an infrastructure that may cause economic, socio-cultural and environmental impacts, it is further important to foresee and possibly avoid any potential negative impacts, trying to maximize the positive outcomes. Market studies and those focusing on the identification of carrying capacities may be relevant contributions to this concern. In the present article, a market analysis is presented focusing on both the national and international effective market attracted to walking trails in Portugal.

3 AN EXPLORATORY STUDY ABOUT PEDESTRIANISM IN PORTUGAL

In the context of an exploratory study, 300 questionnaires were administered in the following way: 100 “non-hiking” Portuguese, 100 Portuguese hikers and 100 hikers from other nationalities. However, in this paper we

focus on analyzing the profile, attitudes and behaviors of the hikers interviewed, trying to identify differences between the domestic and foreign visitors of Portuguese walking trails. For this purpose, respondents were interviewed on several walking trails located in geographical areas with different landscapes in the North, Center and South of the country, namely in the Gerês National Park (North Portugal), the Serra da Estrela Natural Park, São Jacinto, Buçaco, Arouca (Central Portugal) and in Borba (the Alentejo).

The questionnaire aimed at obtaining information concerning:

- The respondents' socio-demographic profile (nationality, district of residence, habitat, gender, level of education, occupation);
- The respondents' general holiday behavior (spread of holidays along the year, activities undertaken during the holidays) and general holiday motivation;
- The respondents' environmental preferences and ecological sensitivity;
- The respondents' behavior related to the specific hiking trip (motivation for hiking, main source of information for choosing a trail, main means of transportation, constitution of travelling group, organization of trip, accommodation, distance of walking trail, pattern of expenditure, important features for visiting a walking trail);
- As well as factors restraining respondents from hiking.

Responses were obtained from a survey, with direct administration of questionnaires at the presence of an interviewer. In an attempt to avoid biases there was a concern about diversifying the walking trails included in the approach, trying to interview all hikers that were encountered on specific days on these trails. The approach may thus be considered a cluster sampling procedure, with clusters defined by space and time, which may be considered an appropriate approach for sampling tourists and visitors, given the lack of prior statistical information about the universe under study [11].

The data was then analyzed with the sta-

tistical program SPSS (version 11.0). A univariate analysis was undertaken, analyzing distributions and indicators of central tendency (means and standard deviations), whenever possible. Bivariate analysis was also undertaken for identifying relations between variables, using the following techniques: the Chi-Square test, in case of nominal variables and the non-parametric test Mann-Whitney, in case of ordinal variables.

Apart from this, a principal components analysis was carried out in order to identify the underlying dimensions of a series of items used to measure environmental sensitivity.

3.1 Global survey results

Respondents present, globally, the following **socio-demographic characteristics**:

- **Gender**: approximately balanced distribution between men and women;
- **Age**: respondents were in their large majority situated in an age range of between 25 and 54 years;
- **Level of education**: 63% owned a title of higher education;
- **Occupation**: mostly top or mid management (29.3%), students (19.6%) or service and industry employees;
- **Place of residence of Portuguese hikers**: mainly Central Region (56%);
- **Nationality of foreign hikers**: basically Europe (98%), namely French (54%), Dutch (11%), German (9%) and English (9%);
- **Habitat**: 58.5 % live in cities.

The main **holiday motivation** indicated was "escaping daily life" (49.5%).

Respondents further referred to the following **general holiday behavior**:

- **months of holidays**: holidays were most frequently spent in the summer months;
- **week-end-breaks**: all along the year;

When hiking respondents reveal the following behavioral patterns:

- **Main motivations** are linked to the enjoyment of nature: "to observe and enjoy the beauty of the landscape", "to breath pure

air” e “to know and interpret nature in an involving way”

- Respondents base themselves on **informal information sources** for collecting data on walking trails, specifically “recommendations by friends and relatives”;
- The main **means of transportation used** to travel to the walking path visited is the car (the own or a rented one);
- **Group constitution:** respondents tend to hike either with friends or in a couple;
- **Trip organization:** a large part of respondents did not undertake any previous planning of the hiking trip;
- **Accommodation:** hikers, staying overnight, reveal a preference for camping sites;
- **Pattern of expenditures:** large part of hikers spent some amount of money on the site visited, however to a limited degree, with expenditure levels being mainly “up to 10 euros” as well as varying between “10 and 25 euros” per day;
- **Distance of the visited trail:** respondents tend to prefer short-range walking routes (PR)
- **Factors motivating hiking on a specific trail:** hikers value particularly aspects such as: “quality and conservation of the landscape”, “existence of information about the trail”, “well-signed trail” and “silence”.
- **Factors that may constitute an obstacle to using a specific walking trail:** the main aspects identified as potential obstacles were associated with safety, namely the items: “to walk through very dangerous places”, “difficulty of assistance in case of accident” e “lack of security of the trail”;
- **Factors that might be improved in a walking trail:** respondents revealed also in this dimension a large concern about the trail’s safety, specifically reflected in the item “in case of disorientation or accident existence of control/ security”

Globally, respondents associated sensations such as serenity, relaxation, tranquility and fun with nature, revealing mostly positive feelings. However, some aspects revealed a

more pronounced dispersion in answers, as in the case of associating enigma, suspense or even fear.

It was further possible to identify a factorial structure reflecting diverse dimensions of environmental perception, based on a Principal Components Analysis of the total of 300 responses to a series of 24 Likert-type scales, indicating diverse items of environmental perception, identified in literature about environmental psychology [20], [10].

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Aurea Rodrigues is a Professor in Tourism at the Gaya Polytechnic Institute (Vila Nova de Gaia- Portugal). She holds a Degree in Tourism Management and Planning and a Master's Degree in Tourism Management and Development from the University of Aveiro and is at present lecturing at the ISPGaya, where she also coordinates the undergraduate programme in Tourism and also a PhD Student at University of Aveiro. Her research interests include rural, nature tourism, sustainable tourism, consumer behaviour in tourism..

Elisabeth Kastenholz is a Professor of Marketing and Tourism at the University of Aveiro (Portugal). She holds a Degree in Tourism Management and Planning from the University of Aveiro, an MBA from the University of Oporto and a Doctoral Degree in Tourism, also from the University of Aveiro. Her research interests include rural, nature and sustainable tourism, tourism destination marketing and consumer behaviour in tourism. She is at present the coordinator of the undergraduate programme in tourism at the University of Aveiro.

Apolónia Rodrigues is Coordinator of the European Network of Village Tourism | Genuineland and National Expert of Sustainability at the TSG, DG Enter, European Commission. She holds a Degree in Tourism Management and Planning from the University of Aveiro. Her research interests include networks, rural, nature tourism and sustainable tourism.