

## **BIKE USAGE AND CYCLE TOURISM: THE PATTERN OF PORTUGUESE ASSOCIATED BIKE RIDERS**

**Joana Maria de Oliveira Neves**

PhD in Management, Associate Professor, Universidade Lusófona de Humanidades e Tecnologias de Lisboa  
[jn.turismo@gmail.com](mailto:jn.turismo@gmail.com)

**José Paulo Esperança**

PhD in Economics, Full Professor, ISCTE-Business School  
[jose.esperanca@iscte.pt](mailto:jose.esperanca@iscte.pt)

### **ABSTRACT**

Cycling and other forms of sustainable tourism are expanding fast due to the rise of health and environmental concerns of many tourists.

Although more conventional operators and students of the tourism industry still regard these groups as members of budget conscious back pack travellers, there is a growing awareness that this view may be misplaced.

This study is the first comprehensive analysis and profiling of regular bike users. We use the data base of FPCUB, the Portuguese leisure and transport cycling federation to assess age, gender, residence location and professional pattern of bike users. Our results confirm that the typical biker is a male, in his mid-40s and of middle or high income.

### **KEYWORDS**

Cycle Tourist, Sustainable Tourism, Portugal, Pattern of Bike Riders.

### **1. INTRODUCTION**

Cycle Tourism can be considered a form of sustainable tourism, because it contributes to the reduction of pollution and traffic congestion. It can bring some benefits to the practitioners, such as better health or a personal valorization through cultural and leisure visits. Cycle tourism also promotes local businesses that protect the environment and cultural heritage, hence, improving the wellbeing of the visited communities. Overall Cycle Tourism is a relatively small market, albeit the fact that this market appears to become increasingly popular as a niche tourism segment. Keeling (1999, p. 13) covers several studies of European cycle tourism that this is a small but quickly expanding form of sustainable tourism: Cycling Holidays - where cycling is the main pursuit and the main form of travel - now account for 2-4% of total holiday trips in some European countries, and this is predicted to double or treble within the next decade to 6-12% of all European holidays. This is the dedicated cycling market, on short breaks or longer cycling holidays. An even larger market is Holiday Cycling, cycling as an extra pursuit whilst on holiday. This is estimated to be twice the size of the dedicated cycling market. Ireland estimates that already 7% of visitors cycle whilst on

holiday. The German figure quoted above is nearly 25%. It is relevant for the main players interested in the future of the tourism industry to acquire more knowledge about this type of traveller as well as, which types of tourist experiences they seek. The objective of this paper is to elaborate a profile of the members of the Portuguese Federation of Cycle Tourism. This research has some limitations: the study is focused on a specific sample, thus the results obtained, should be contrasted with those of other international cycle tourism organizations. Ascertaining the main characteristics of these travellers is a valuable contribution to the tourist professionals, since it enables them to develop infrastructures, for instance, with adequate safety measures, more effective signaling, informational products, or a more cyclist-friendly culture within the tourism industry. Cycle Tourism has enjoyed little attention from tourism researchers despite the relevance of this kind of tourism for a sustainable tourism. Yet this a rising practice together with other forms of sustainable tourism such as walking and horse riding. This may be a physical, cultural and even spiritual experience that attracts a rising number of practitioners. One example is the visit to Santiago de Compostela, with several well established paths such as the “French Route” that is over 1,000 km long attracting both walking and bike riding visitors. Wide acknowledgement of this new phenomena is being proved by the private sector, offering new organized tours, associations, providing new types of tours and competitions and even politicians, providing infrastructure, such as new bike paths and bikes for free use. Some cities, such as New York, Paris, Brussels and Barcelona have strongly invested on a bike friendly environment, as part of a goal of being defined as green cities. Cycle Tourism can use conventional roads or special bike paths or take advantage of simple, unpaved country roads including mountainous regions, if cycle tourists are equipped with BTT bikes. This can be an individual or collective experience, with the family or with a larger group of friends. An increasingly popular holiday consists of accessing a distant destination by train or airplane and then discovering the region, urban or countryside, only by bike. From the supply side, it is widely accepted that the Tourism Industry needs to develop and offer alternative tourism products, beyond the traditional sun & sea, because it must have the ability to satisfy expanding traveller needs. Tourism operators need to be able to differentiate their offer, within a rich mosaic of competition among destinations. Tourists from the 21<sup>st</sup> century are much more exigent, well informed, asking several times for destinations which bring them better well-being, health benefits, personal valorization and, above all, cultural and ecological experiences. An annual study about travel trends in U.S.A. made by one of the biggest online world tour operators – TripAdvisor, confirms this new trend. Those American travelers have expressed a strong preference for more green tourism experiences ([www.tripadvisor.com](http://www.tripadvisor.com)). The rising number of practitioners of cycle tourism is being matched by a whole new industry that includes all sorts of event organizers and local as well as national associations. This study is based on Portugal and the National Association of Cycle Tourism and Bycle Users - FPCUB – Federação Portuguesa de Cicloturismo e Utilizadores de Bicicleta. This is one of the largest Portuguese associations, with about 25.000 affiliates. This association promotes several activities, such as thematic cycling projects and BTT raids. It also organizes forest fire prevention campaigns and destination promotion activities to try to increase the awareness of cycle tourism as a form of sustainable tourism and cultural exchange. The cycle tourism seems to be an interesting offer in the context of attractiveness of some tourist destinations, starting to be seen as a vehicle for (re) discovery of nature, culture and heritage of places and more convivial interaction between environment, cycling and community residents. This means that cycle tourism can be understood as a support of maintaining ecological integrity and diversity of tourist areas and may also contribute to the feasibility of tourism in the long term – a very relevant fact given that the tourism industry is the world's largest industry and the fastest growing, despite the current global economic crisis. In this context it is relevant to enhance the knowledge about the "players" who act on the arena of cycle tourism and to what extent they should constitute an important niche in the

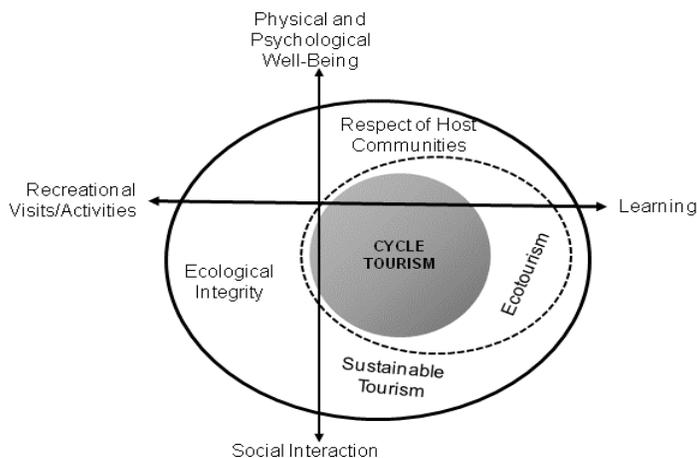
panorama of Portuguese tourism. This article is divided into four sections: the second reviews the literature, emphasizing the main theoretical framework of the relationship between cycle tourism, ecological tourism and sustainable tourism; section three addresses the methodology, specifying the data base that is explored next; the profile of FPCUB members, by their socio-demographic characteristics is given in section four; finally, section five presents the summary and conclusions, including suggestions for future research in the topic of sustainable and cycle tourism.

## 2. CYCLE TOURISM, ECOTOURISM AND SUSTAINABLE TOURISM

We can define cycle tourism as a new form of tourism which is part of respect for responsible tourism development, through an environmentally friendly tourism and a demand-oriented enjoyment of remarkable experiences connected to nature, of physical and psychological well-being and as personal improvement and social interaction as well. The cycle tourism can include the philosophy of ecotourism described by Sharpley (2006) and Eagles (1992). These authors highlight three key dimensions of ecotourism: (1) the environment that does not undergo significant changes with the enjoyment of tourists; (2) the development as a form of encouraging participation of local communities, and (3) the experience related to the fun, learning and interaction between Eco tourists, to the landscape context and cultural communities and to residents as well. The very definition of tourist experience (Li, 2000) involves multifunctional leisure activities such as fun and / or learning by one individual. The cycle tourism and ecotourism can thus be seen as an experiment that requires sensitivity, pleasure and cognitive development. Put another way, both show a relationship of fusion between the natural and cultural environment that defines an individual, where the experience is never forgotten and ultimately, can transform him significantly (Lequin, 2009: 197).

In turn, either the cycle tourism or the ecotourism make optimal use of environmental resources, helping to conserve natural heritage, respect the socio-cultural authenticity of host communities, and providing socio-economic benefits to all. Cycle tourism shares some similarities with other forms of eco-tourism such as horse based tourism. Helgadóttir and Sigurdardóttir (2008) underline the strong passion of horse riding tourists that makes them look for ideal conditions for the practice of this activity – horses as well as landscape and integration in the rural environment. The theoretical framework of cycle tourism is, therefore, based on a set of dimensions that facilitate an interpretive lens of architecture tourism product (Figure 1).

**Figure 1: Cycle Tourism Concept**



From the standpoint of cycle tourists themselves, adherence to this type of supply is associated with the possibility of holding a series of visits and recreational activities outside of their habitual residence, involving leisure cycling as a significant part of the visit (Keeling, 1999). In this context, the attraction for nature and landscape of the visited areas is closely tied to the enjoyment of their culture and heritage, using a means of movement focused on ecological concerns, revealing a kind of accountability by the concrete visitor in favor of minimizing negative impacts on destinations. This is a perspective based on new ideas, new values and practices, reflecting how individuals identify themselves with the visited area. Also the physical and psychological well-being resulting from this practice, appears not only in line with modern trends of the "cult of the body", the need to escape and relax, but also contributes to the preservation of natural resources and the perpetuation of several heritages (Farago, 2000). Like other ecotourism practices (Voase, 2002), a planning visit allows the cycle tourist to enjoy an experience of great autonomy accessing to imagery, as well as a variety of activities and challenges in loco. Moreover, cycle tourism also allows a high level of socializing and a greater spirit of cooperation among its practitioners, especially since this activity involves sometimes, intense physical effort, and long periods of travelling under diverse and sometimes challenging weather conditions. It also represents a privileged space for strengthening the relationship among travellers themselves, local communities or even with tourism professionals. Concerning the Learning, it is recognized as essential in the ecotourism experience, and this means knowledge, emotions and interpretation established among the places visited and the traveller himself (Weiler and Ham, 2001). The bike trip is in fact special to value the individual himself, his experiences and several images with full respect for socio-cultural authenticity of host communities, living cultural heritage and traditional values, contributing to inter-cultural understanding and tolerance. Cycle tourism is expanding fast, triggered by demand and supply side factors. Keeling (1999, p. 1) considers that infrastructure, especially dedicated bike lanes leading to better comfort and safety conditions play a major role in expanding bike use. He provides an overview of concerted efforts by several European governments to enhance the offer of good biking infrastructure: Denmark opened 2,000km of national cycle route in 1997, and now attracts tourists from Germany and elsewhere. Cycling accounts for 18% of all journeys in Denmark. In Germany there are nearly two hundred long-distance cycle routes and cycling is the fastest growing leisure pursuit. One in four Germans cycle whilst on holiday. In Münsterland, on the One Hundred Castles Route, cycle hire has increased tenfold in the decade to 1990, from 431 to 4,200 cycles available for hire. In Austria, the Danube Cycle Route runs for 250km from Passau on the German border to Vienna, largely traffic-free and largely downhill. This spectacular route attracts over 1.5 million cyclists every year, and in typical towns on route the majority of overnight visitors are cyclists. France has succeeded in attracting cycle tourists to its quiet lanes network. The Bourgogne area alone receives well over half a million cycling visitors per annum. Spain has seen the growth in use of "pilgrimage" routes, such as El Camino de Santiago in the North, and the "Vias Verdes" (Greenways). Holland has developed a network of national routes making use of its existing high-quality local cycle routes, and many other countries are now also developing cycle tourism. Knowledge of the profile of cycle tourism is limited. A few case studies provide useful hints about the participants in this activity. Cope and Doxford (1998) analyze the users of C2C (Sea to Sea) Cycle Route, a 140-mile cycle route on minor roads and traffic-free cycle paths running across Cumbria and Northumbria, from the Irish to the North Sea, for a two year period. They found that 73% of users were male, 70% aged between 26 and 55, most cyclists took between 3 and 5 days to cycle the C2C and 63% stayed overnight in bed and breakfast accommodations.

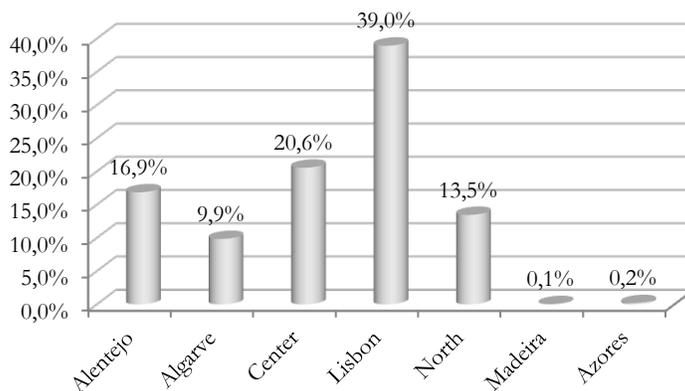
### 3. RESEARCH METHODOLOGY

This study is based on the data base of the FPCUB members in May 2010. FPCUB has its head-quarters in Lisbon, but has many delegations around the country. Both the head-quarters and those delegations organize many rides, often with police assistance. Legal permission has to be requested in advance. These activities face the competition of both ad hoc organizers of smaller events or professional firms who usually charge a fee to each participant. To protect the confidentiality of each associate member, the names were not disclosed. However, data provided by the individual files could still provide useful information on a number of key parameters including: residence; gender; profession; age and marital status. FPCUB provided complete information on 23 480 associates. Although it is one of the largest associations in the country, FPCUB does not count on the adhesion of all the Portuguese bike riders. The annual fee of €24 may prevent lower income and younger bike users from joining as they may be less keen on joining the events organized by the federation and the access to the insurance provided to all associates. This data base may be biased towards more motivated and frequent users who value joining an active organization and collective rides. So, these data may not be adequately extrapolated to the general population of bike users, for leisure and daily commuting. However, it provides relevant information on the more organized frequent bike riders. Personal interviews with both the President of FPCUB, José Manuel Caetano, and individual associates of FPCUB also confirm that they tend to share environmental concerns, and strong adhesion to what they regard as healthy life styles. The data base has not previously been object of a statistical analysis serving the sole propose of individual registration of the associates. After obtaining the information in Excel format, we excluded the members whose data were not complete. Next, we identified the information about the above parameters and compared it, when possible with the general information on the Portuguese population. Several striking differences could be identified.

### 4. MAIN RESULTS: PATTERN OF ASSOCIATED BIKE USERS

The first pattern identified is based on the postal codes of the associates' addresses. They are more concentrated in the great Lisbon, followed by the Centre region (Graphic 1).

**Graphic 1: Regional distribution by the main regions (NUT III)**



The comparison with the overall distribution of the Portuguese population can provide an interesting insight (Table 1):

**Table 1: Regional distribution**

DistributionbyRegion	% (Portugal)	% (FPCUB)	Difference
Alentejo	7,12%	16,9%	9,75%
Algarve	4,05%	9,9%	5,81%
Center	22,43%	20,6%	-1,85%
Lisbon	26,53%	39,0%	12,42%
North	35,24%	13,5%	-21,77%
Madeira	2,33%	0,1%	-2,27%
Azores	2,30%	0,2%	-2,10%
<b>Total</b>	<b>100,00%</b>	<b>100,0%</b>	
	<b>10,627,250</b>	<b>23,541</b>	

Besides a slightly larger concentration, there is a small bias towards the Southern part of the country, as Algarve and Alentejo have a larger share of FPCUB members relatively to its share of population. On average there are about 452 Portuguese per FPCUB associate. This ration lowers to only 190 and 185 in Alentejo and Algarve. By contrast, there are about 1,180 people per FPCUB member in the Northern region. The number of associates in the archipelagos of Madeira and the Azores is residual showing that there is very little influence of FPCUB in these distant regions although both enjoy some down-hill and other off road biking. It may be no coincidence that Lisbon and the Algarve region have above average incomes, especially as measured by the income at purchasing power parity (ppt) suggesting that organized bike riders tend to enjoy above average incomes (Table 2).

**Table 2: Regional income distribution**

	Averagemonthlyincome (€)	Per capita income at ppt
North	832,6	86,24
Center	826,8	83,76
Lisbon	1245,3	136,85
Alentejo	862,9	87,33
Algarve	848,6	103,65
Azores	864,3	83,62

Madeira 961,7 95,46

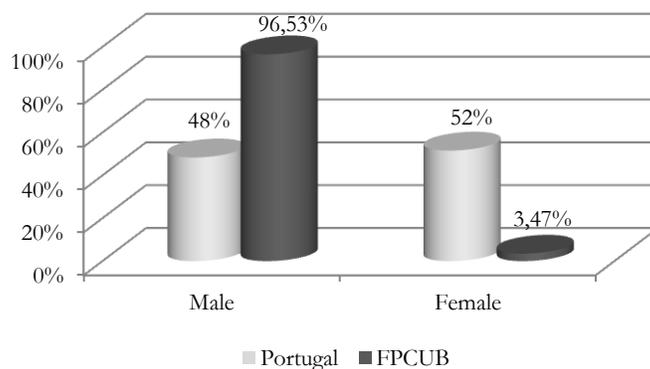
This income analysis can be complemented by the information on professional activities carried out by FPCUB associates (Table 3).

**Table 3: Professional activities**

Profession	#	%
Army	452	1,92%
Public administration officers and high ranking executives	788	3,35%
Scientists and intellectual workers	2057	8,74%
Technical and other skilled professions	1269	5,39%
Administrative personnel	2108	8,95%
Personal services, private security and sellers	2280	9,69%
Agriculture and forest workers	212	0,90%
Manufacturing workers	4376	18,59%
Machine operators	1893	8,04%
Unskilled workers	976	4,15%
Other	7130	30,29%
<b>Total</b>	<b>23541</b>	<b>100,00%</b>

Although manufacturing workers are the largest individual group, there are a high proportion of leaders of both the private and public sector and skilled professionals. This is consistent with the finding, by Oliveira and Pereira (2008), in the context of Madeira Island that more educated visitors tend to have a higher preference for scenic landscapes. Another interesting characteristic regard the gender of regular bike riders. This is definitively a male activity as is portrayed in Graphic 2.

**Graphic 2: Gender comparison between Portugal and FPCUB**



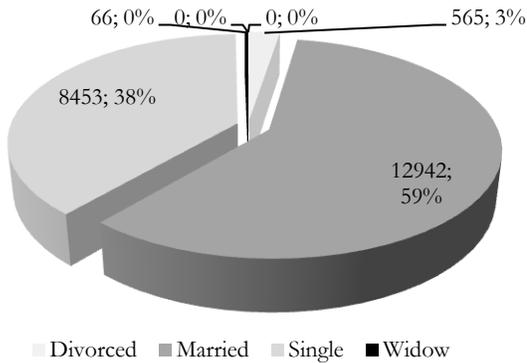
Although women are slightly more numerous in the Portuguese population, they make up less than 3.5% of the FPCUB associates. Anecdotal evidence suggests a higher proportion of women in bike rides, suggesting that the percentage of women riders may be higher but they tend to be less regular than men. This observation also has significant implications for bike tourism in general, as less female practice may hamper the rise of family tourism, a practice that is rising in many countries. It is also important to analyse the age pattern of federated bike riders (Table 4). Very few people, younger than 15 are associated, as they may still lack the physical conditions for relatively long rides – most of the FPCUB organized rides range in the 30-60 kms long, and some are challenging, such as the “LisboaAntiga de Bicicleta” that goes through the old parts of Lisbon where some of the steepest slopes in town can be found in a city that is also known for its seven hills.

**Table 4: Age comparison between Portugal and FPCUB**

Agegroup	% (Portugal)	% (Sample)	Difference
0 - 14 Years old	15%	0,9%	-14%
15 – 24 Years old	11%	5,5%	-6%
25 - 64 Years old	56%	84,4%	29%
65 - 74 Years old	9%	6,9%	-3%
75 +Years old	8%	2,4%	-6%
<b>Total</b>	<b>100%</b>	<b>100,0%</b>	

Some rides can be even longer as the traditional Sesimbra- Algarve that yearly takes over 1000 bike riders for more than 200kms in a single day. Some people in the 15-24 age groups do join these rides, but they may prefer shorter, high adrenaline off road rides. Were we find a relatively high proportion of associated riders is in the 25-64 age range, followed by a decline for older age groups. Although bike riding has been shown to be an easy sport that can be practiced till an advanced age, some older people may avoid the more organized type of this activity where a relatively fast pace may be the norm. These data alone do not allow for spotting a trend as we cannot compare with earlier observations. Although the FPCUB has been expanding the number of associates it would be useful to compare the age groups of more distant periods in order to detect the trend and extrapolate for the future. It would be important to measure the evolution of the 15-24 age groups to be able to predict the relative size of this activity in the future, given the demographic trends of the population in general. Finally, the civil status of the associated bike riders provides interesting information. Although bike riding can be done alone, organized rides are a social event in which conversation can easily involve people without previous acquaintance. Graphic 3 provides information on the civil status:

**Graphic 3: Civil status**



The high proportion of single associates, given that few of them are in the very young age groups suggests that married individuals may be under represented, suggesting that family life may reduce the time available for collective bike riding.

## 5. SUMMARY AND CONCLUSIONS

Despite the rising interest in sustainable tourism and the acknowledgement of the high expansion of bike tourism there is little knowledge of the demographics of this practice. Lack of specific data has made that much of our knowledge of the patterns of this activity is based on assumptions and extrapolations from fragmented data and a limited range of case studies. This study uses a large data set, obtained from the Portuguese federation of bike users and cycle tourism to present a pioneering pattern of federated bike users. Although cultural, economic and demographic specificities reduce the potential of extrapolation to other countries some significant patterns could be found and should be confirmed in replicating studies. The most striking observation is that women are much less active in collective biking than men. The second is that mature adults are the age group most attracted by an activity that harmoniously mixes environmental sustainability, contact with nature and landscapes and health concerns. We also found evidence that collective bike users tend to be more educated and wealthier than the average. Finally families may face some limitations in the practice of this activity. Long duration activities and asymmetric capacities – especially of younger children and less experienced wives – may reduce the participation of whole families in this activity and explain the relatively high proportion of single associates. Being based on federated bike users this study does not portray the full universe of bike riders. Many people practice bike riding and do bike tourism without being associated with FPCUB. This may affect some age (especially younger adults) and income groups (lower income) more than others. Still most of the above conclusions should hold for the population at large. Anecdotal evidence shows that lower income first generation car users value this means of transportation more. By contrast, highly educated professionals with an international experience tend to attach more value to bike riding for transportation and leisure. These findings are most valuable to tourism operators who have an opportunity to service an expanding market segment and to tourism offices that should provide information and organization fitting different needs and requests.

## BIBLIOGRAPHY

- COPE, A.M., AND DOXFORD, D. (1998), *Visitor Monitoring of the C2C Cycle Route 1997*, University of Sunderland School of Environment, United Kingdom.
- EAGLES, P. F. J. (1992), “The Travel Motivation of Canadian Ecotourists”, *Journal of Travel Research*, 31 (2), 3-7.
- FARAGO, F. (2000), *La Nature*, Armand Collin, Paris.
- HELGADDOTTIR, G., AND SIGURDARDOTTIR, I. (2008), “Horse-based Tourism: Community, Quality and Disinterest in Economic Value”, *Scandinavian Journal of Hospitality and Tourism*, 8 (2), 105–12.
- LEQUIN, M. (2009), “Fondements pour une Analyse Expérientielle de L’Écotourisme, Destinations et Territoires”, in Téoros, (eds.) *Tourisme Sans Limites*, Volume 2, Presses de L’Université du Québec, Canada.
- LI, Y. (2000), “Geographical Consciousness and Tourist Experience”, *Annals of Tourism Research*, 27 (4), 863-883.
- OLLENBURG, C. (2005), “Research Note: Worldwide Structure of the Equestrian Tourism Sector”, *Journal of Ecotourism*, 4 (1), 1–9.
- OLIVEIRA, P., AND PEREIRA, P. (2008), “Who Values What in a Tourism Destination? The Case of Madeira Island”, *Tourism Economics*, 19 (1), 155-68.
- SHARPLEY, R. (2006), “Ecotourism: A Consumption Perspective”, *Journal of Ecotourism*, 5 (1-2), 7-16.
- VOASE, R. (2002), “Rediscovering the Imagination: Investigating Active and Passive Visitor Experience in the 21<sup>st</sup> Century”, *International Journal of Tourism Research*, 4 (5), 391-399.
- WEILER, B., AND HAM, S. H. (2001), “Tour Guides and Interpretation”, in Weaver, D. B., (eds.) *Encyclopedia of Ecotourism*, Cabi Publishing, New York, 549-563.