African Journal of Business Management Vol. 6(8), pp. 2911-2918, 29 February, 2012
Available online at http://www.academicjournals.org/AJBM
DOI: 10.5897/AJBM11.1591
ISSN 1993-8233 ©2012 Academic Journals

Full Length Research Paper

Environmental factors affecting tourists' experience in South African national parks

Me. Liezel du Plessis[1]*, Peet van der Merwe[2] and Melville Saayman[2]

[1]Department Tourism Management, Tshwane University of Technology, Private Bag X680 Pretoria, 0001, South Africa.
[2]Potchefstroom Campus School for Business Management: Tourism Programme, North West University, South Africa.

Accepted 10 November, 2011

This study, the first of its kind involving South African National Parks, aimed to determine which environmental factors in these parks have a negative effect on tourists' experience, and whether tourists who visit parks frequently are more aware of environmental impacts than those who visit only occasionally. The findings will help to inform South African National Parks (SANParks) management about the impacts of tourism in the parks and how these affect tourists' experience. Data was obtained from 451 questionnaires completed in a survey on the SANParks official website. A factor analysis identified five environmental factors that had a negative impact on tourists' SANParks experience: pollution, tourism product offering, park violation, environmental management, and tourism impacts. An ANOVA test was then conducted to examine the relationship between the frequency of tourists' visits and the effect of these factors on their experience. It was found that the more frequent the visits, the more the environmental impacts of tourism were perceived. These findings should help to develop management strategies to reduce negative nature-based experiences.

Key words: Tourist experience, environmental impact, park management, ANOVA, factor analysis, South African national parks.

INTRODUCTION

Tourism, the world's largest industry (Mason, 2003; Narayan, 2005; Patterson et al., 2008; Awang et al., 2009), is all about selling experiences (Prentice et al., 1998; Buhalis, 2000; Ooi, 2003). Selling high quality and memorable experiences is vital to the tourist, who is the focus of these experiences. Millions of people travel specifically to engage in nature experiences, such as those provided by national parks (Shafer and Inglis, 2000; Deng et al., 2002). According to Li (2000) and Kozak (2002) the tourist experience has three stages: arranging and planning the proposed holiday, the on-site experience, and the return home. The destination can influence and manipulate this process and therefore the experience (Li, 2000; Buhalis, 2000). Trying to measure the tourist experience, however, is not straightforward, because the term 'experience' is multi-faceted. A tourist's experience when travelling to nature based destinations will be affected by the activities, the destination amalgam (facilities and services), the social context embedded in the activities, and the environment (Buhalis, 2000; Lengkeek, 2001; Deng et al., 2002; Kozak, 2002; Ooi, 2003). Urry (Ooi, 2003) further underlines the importance of visual sites (beautiful and unique natural attractions) in shaping the tourist experience.

The national parks in South Africa are natural attractions made up of several visual sites that provide tourists with unique nature-based experiences, if managed correctly (Borrie and Birzell, 2001; Cochrane, 2006; Tonge and Moore, 2007; DEAT, 2009). Apart from providing tourists with unique nature experiences, the primary mandate of South African National Parks (SANParks) is to conserve the country's biodiversity (Shaffer and Inglis, 2000; Smith and Newsome, 2002). South Africa's biodiversity is ranked third in the world, so its national parks are important for protecting its valuable

*Corresponding author. E-mail: duplessisl@tut.ac.za .Tel: +2712 382 3586.

and pristine natural areas (Spenceley, 2005; Retief, 2006). Government funding for SANParks in real terms is decreasing while the size of operations in terms of land under conservation and creation of tourist facilities is increasing, so this funding alone is insufficient to supply all the requirements. The government therefore has to generate more revenue through tourism (Phillips, 2009). As a result, the parks' management is being pressured to permit more tourists to visit national parks, and this of course increases the environmental impacts (Shafer and Inglis, 2000). These impacts affect not only the sustainability of the natural environment but also the experience of tourists who visit the parks (Chin et al., 2000; Hillery et al., 2001; Laven et al., 2005). Studies by Anwar and Sohail (2004), Alant and Bruwer (2004) and Deng and Bender (2007) further confirmed that the frequency with which tourists visit the parks affects the way they perceive these environmental impacts. This means that tourists who visit a destination for the first time or only occasionally will experience the quality of the destination differently from those who visit it more frequently.

Consequently, to sustain tourism in the national parks it is imperative for the park management to identify which environmental factors will have a negative effect on the experience of these tourists (Bresler, 2007). Identifying these environmental factors will help park management to develop appropriate environmental management strategies (Cole, 2001; Tonge et al., 2005). The SANParks management therefore has to cope with the dual task of protecting the biodiversity of the environment while providing tourists with a good quality and satisfying nature experience (Bushell and Griffin, 2006; Marion and Reid, 2007; Moyle and Croy, 2007). From a tourist's point of view, a positive nature experience will ensure a high level of satisfaction, return visits and improved loyalty to nature and the national parks (Hammit et al., 2004; McCool, 2006; Hui et al., 2007; Alegre and Cladera, 2008).

This study therefore aimed firstly to identify the environmental factors that affect tourists' experience when visiting South African National Parks and secondly to determine whether the frequency of their visits affects the way they perceive these factors. The second aim is important since research done by Saayman et al. (2008) showed that visitors to these parks are loyal. It is thus important to maintain high environmental standards to ensure that their experiences are optimal. Continual negative experiences could deter them from making future visits.

LITERATURE REVIEW

The tourist experience offered at national parks is a combination of the tangible and the intangible. Infrastructure and facilities are important tangible assets, but parks also enhance the quality of life and create unforgettable memories for tourists (Harmon, 2004). These consist of discovery (self-drive safaris, game viewing and bird watching), social dimensions (spending time with friends and family), adventure and physical challenges (guided walks, hiking and mountain biking) and most importantly nature experiences (solitude, remoteness and naturalness) (Priskin and McCool, 2006; SANParks, 2009b).

The increase in nature-based tourism and the number of tourists travelling to protected areas, such as national parks, is the result of a higher level of appreciation of the natural environment and the ensuing desire of tourists to engage in rich, high quality, nature experiences (Reynolds and Braithwaite, 2001; Bresler, 2007; Powell and Ham, 2007). Chhetri et al. (2004) explain that tourist experiences stem from a variety of sensory information found in natural areas. Tourists travelling to national parks already have positive feelings and perceptions because they are on holiday and will seek to match these expectations and emotions with just such a positive nature experience (Chhetri et al., 2004; McCool, 2006; Han and Patterson, 2007). Cole (2001) says a positive tourism experience is one where tourists perceive total satisfaction, which means a better quality of life. Providing this level of satisfaction is therefore an important component of nature-based tourism if return visits are to be secured and the tourism product sustained (Borrie and Birzell, 2001; Yu and Goulden, 2006). Providing high quality nature experiences is vital for managing national parks successfully (Buultjens et al., 2005; Marion and Reid, 2007).

Chhetri et al. (2004) and McCool (2006) define a tourist experience as a social-psychological phenomenon, influenced by expectations tourists carry with them, their standards, a variety of sensory information they receive in a natural area, and the attributes of the area that they encounter during their visit. Given that national parks are protected areas that preserve biodiversity and enhance conservation, visitors to national parks expect to experience and perceive good quality, natural environments. Negative environmental impacts that occur in national parks because of tourism or lack of management can adversely affect the experience (Smith and Newsome, 2002; Tonge and Moore, 2007). The tourist experience offered is one of the key selling features of any tourism product, for a product that does not provide a good tourism experience is considered, at best, tedious (Noe et al., 1997; Prentice et al., 1998; Yu and Goulden, 2006; Lemelin and Smale, 2006; Bresler 2007; Tonge and Moore, 2007). Laven et al. (2005) explained that when tourists perceive that the quality of the environment no longer meets their expectations because of the environmental impacts of tourism, they either adjust their standards of quality to match the existing state of the environment, or go elsewhere, that is, they are displaced. 'Displacement' is the term used to describe the situation where tourists no longer visit a particular attraction. This, of course, can be fatal for any wildlife destination

Table 1. Studies of environmental factors affecting tourists' experience.

Factor	Effect on tourist experience
Noise pollution (Buultjens et al., 2005; Bresler, 2007; Moore and Polley, 2007)	Disturbs the natural sounds of the environment Reduces satisfaction
Litter (Tonge and Moore, 2007; Moore and Polley, 2007; Cole and Hall, 2009)	Loss of amenity (losing natural beauty and a calm atmosphere) Interferes with the quality of the experience Reflects a violation of deeply held norms of western society
Poor general environmental condition (Shafer and Inglis, 2000; Smith and Newsome, 2002; Tonge and Moore, 2007)	Decreases the quality of the natural environment
Vegetation loss and trees damaged (Chin et al., 2000; Smith and Newsome, 2002; Deng et al., 2003)	The natural environment is perceived as less satisfying
Tourist crowding (Smith and Newsome, 2002; Buultjens et al., 2005; Yang and Zhuang, 2006; Moyle and Croy, 2007; Cole and Hall, 2009)	Reduces satisfaction because viewing space is limited Causes discomfort Reduces opportunities for solitude
Inadequate disposal of human waste (Moore and Polley, 2007)	Impacts on the experience negatively Leads to dislike of the area Causes discomfort

or product since national parks derive 60% of their income from tourism. It is also the most likely action tourists will take, especially in a very competitive environment (Laven et al., 2005).

Tourists' experiences of natural areas are affected by a variety of destination attributes, such as managerial, natural and social factors. Nevertheless, the ecological aspects perceived by nature-based tourists are rated the most important factor affecting their experience (Floyd et al., 1997). As a result, the environmental impacts of tourism and their effects on the experience of tourists have become a popular research topic, as Table 1 shows.

Table 1 makes it clear that factors such as waste, pollution, overcrowding and litter have a negative effect on tourists' experience. How bad the tourists perceive the effect to be is, however, influenced by their cultural backgrounds, demographics, travel motives, and the frequency of their visits or prior experience of the destination. Other factors that affect their perceptions are the length of stay, the quality of the environment, how they like the park to be managed, and how they are influenced by the media, or by word of mouth, that is, opinions expressed by friends and family (Murphy et al., 2000; Kozak, 2001; Smith and Newsome, 2002; Bushell and Griffin, 2006; Oom do Valle et al., 2008; Alegre and Cladera, 2008). Deng and Bender (2007) noted that the frequency of visits is an important factor in determining the effect that environmental impacts have on tourists' experiences of natural areas, since those who visit more often will be more likely to notice changes occurring.

Research conducted by Anwar and Sohail (2004) and Alant and Bruwer (2004) showed that first-time visitors to a natural area experience its quality more positively than those who have visited the same area more often. This is because first-time visitors tend to perceive everything as well organised and of a good standard if they have not been well informed about the product. As the number of their visits to a natural area increases, their perceptions change according to the knowledge gained during previous experiences, with the result that their image of the destination becomes more negative if there are negative environmental impacts (Hammit et al., 2004). Hinds and Sparks (2008) showed that that a higher frequency of visits to national parks leads to pro-environmental behaviour and more environment friendly tourism. This means that tourists who visit national parks more frequently will be more sensitive to, and therefore likely to notice, any negative environmental impacts caused by tourism, because they have developed an attachment to place and a sense of belonging. This, in turn, will increase their sensitivity to the environment and their ability to identify serious environmental impacts (Hammit et al., 2004).

METHODOLOGY

This was exploratory research, since it was the first of its kind involving South African national parks. The data was gathered via a quantitative survey hosted on the SANParks website from June to August 2009. A total of 451 completed questionnaires were

Table 2. Factor analysis.

Factor label	Components				
	Factor 1: Pollution	**Factor 2: Tourism product offering**	**Factor 3: Park violation**	**Factor 4: Environmental management**	**Factor 5: Tourism impart**
Mean values	1.96	2.55	1.44	1.84	1.92
Cronbach's alpha	0.763	0.760	0.789	0.744	0.607
Level of litter	0.768				
Litter and pollution from restaurants	0.670				
Level of noise in the park	0.636				
Waste management	0.623				
The overall experience of picnic and day tourist sites		0.724			
The overall experience of 4 × 4 and hiking trails		0.634			
Expansion of knowledge about plants and animals		0.604			
The general management of the environment		0.591			
The adequacy of tourist activities available		0.535			
The adequacy of tourist facilities		0.449			
Speeding of staff and delivery vehicles in national parks			0.904		
Speeding of tourists along tourist routes			0.888		
Overcrowding of tourists			0.652		
Absence of energy saving measures				0.957	
Absence of water saving measures				0.843	
Building structures that are not eco-friendly				0.461	
Erosion and trampling along tourist routes					0.321
Alien plant species present					0.427

received. The questionnaire was based on the studies listed in Table 1. Section A collected respondents' demographic details, section B, measured visitors perceptions of the environmental impacts caused by tourism and section C determined the degree to which these impacts affected the respondent's experience of the parks, using a five-point Likert scale (1 = very negative, 2 = negative, 3 = neutral, 4 = positive, 5 = very positive). The data was analysed using SPSS 16, a factor analysis was done to identify environmental factors that affected tourists' experiences, and ANOVA tests were run to discover whether their perception of environmental impacts was affected by the frequency of their visits.

FINDINGS

Factor analysis

The environmental aspects that affect tourists' experience in the parks were grouped into five factors using a principal components analysis, followed by a promax oblique rotation, as a data reduction strategy. The factors were labelled 'pollution', 'tourism product offering', 'park violation', 'environmental management', and 'tourism impacts' (Table 2). These factors explain 60% of the total variance. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.864, exceeding the minimum threshold of 0.600 (Field, 2006). The Cronbach's alpha coefficients were calculated on the five factors, and achieved scores ranging from 0.607 to 0.789, indicating that the reliability of measurement of each of the five factors is high, and therefore viable for use. The Likert scale responses (where 1 = very negative and 5 = very positive) showed that the lower the mean value of the environmental impact factor, the more negatively that factor was experienced.

Factor 1, 'pollution', had a mean value of 1.96, indicating that tourists see various kinds of pollution as affecting their experience negatively. This is confirmed in previous studies by Buultjens et al. (2005) and Tonge and Moore (2007). The value of this factor is the second highest of all the factors, indicating that the tourists' experience was less affected by this factor than by others. However, the low variation in mean values of the factors shows that it did have some negative effect. Factor 2, 'tourism product offering', had a mean value of 2.55 and is therefore considered to have the least impact

Table 3. Frequency of visits to national parks during the past three years.

Frequency of visits to national parks		
Group	**Percent**	**Times of visit**
	7	1 time
Group 1	10	2 times
	16	3 times
	11	4 times
	10	5 times
Group 2	8	6 times
	5	7 times
	5	8 times
Group 3	28	9+ times

on tourists' experience of all the five factors. Findings by Chin et al. (2000), Shafer and Inglis, (2000), Bresler (2007) and Powell and Ham (2008) all confirm this factor. Factor 3, 'park violation' had the lowest mean value of 1.44, identifying it as the factor causing the most negative impacts. This finding is confirmed by Shafer and Inglis (2000), Arnberger and Brandenburg (2007) and Klar et al. (2007). Factor 4, 'environmental management', had the second lowest mean value of 1.84, indicating that this caused the second most negative impacts. These findings are verified by Buultjens et al. (2005) and Li (2004). Factor 5, 'tourism impacts', had a mean value of 1.92, identifying it as the factor causing the next most negative impacts after Factor 4. Studies by Smith and Newsome (2002), Borrie and Brizell (2001) and Deng et al. (2007) in national parks confirm this factor.

ANOVA tests

An analysis of variance test (ANOVA) was conducted to examine the relationship between the frequency of respondents' visits and their perception of negative impacts and measure significant differences. For statistical analysis, the responses were grouped according to the number of visits to a South African national park over a period of three years: Group 1 are low frequency tourists, Group 2 are medium frequency and Group 3 are high frequency. Table 3 shows the groups, and Table 4 shows the results of the ANOVA test, comparing visit frequency with the factors that affected the respondents' experience. For the factors to prove a significant difference when compared to the visit frequency, the value of p must be (p) ≤ 0.05. Factor 1 (pollution), factor 3 (park violation) and factor 5 (tourism impacts) all showed a significant difference when compared to visit frequency. Factor 2 (tourism product offering) and Factor 4 (environmental management); however, showed no significant difference when compared to visit frequency.

To determine more specifically whether a low, medium or high frequency of visits to the parks plays a significant role, Tukey's and Tamhane's post hoc tests were done on Factors 1, 3 and 5. Both tests revealed similar results, but because Tukey's tests are predominantly used in the discussion of the multiple comparisons, these results were chosen for use in our analysis (Field, 2006). Table 5 shows clearly that each group of frequency variables are compared to the identified three impact factors. For each factor, the difference between the means of the groups is displayed, together with the standard error of that difference, the significant level of that difference and a 95% confidence interval (Field, 2006).

Table 5 shows that there is a significant difference between the higher and the lower frequencies of visits to national parks, indicating that the more frequent visitors are the more negative visitors. Findings show that these visitors are more sensitive to some specific environmental impacts, pollution (visual and noise), park violations (speeding and visitor crowding) and tourism impacts (erosion and visibility of alien plant species that occur in the area). Identifying the connection between perception of these factors and frequency of visits emphasizes the importance of removing or minimising these impacts so that visitors do not have a negative experience.

DISCUSSION

This study revealed that tourists with a high frequency of visits to the parks have an increased awareness of some factors in particular, these being pollution, park violations and tourism impacts. The findings also showed that not all environmental factors necessarily affect visitors' experience. This finding is supported by the research of Hammit et al. (2004), Oom do Valle et al. (2008) and Alegre and Cladera (2009). This has two implications. Firstly, park managers need to be aware of ongoing research to ensure that they understand what affects visitors' experience (especially the loyal ones) negatively. In this regard the Wild Card (a loyalty card that provides discount on entrance for visitors) can be a useful tool, since SANParks has a database of these card holders. Secondly, a blatant disregard of these factors will have severe consequences since replacing loyal visitors is an expensive marketing exercise. Greater awareness by visitors of the negative factors described here will put growing pressure on park managers and other conservation organisations to manage the environment more effectively.

Studies by Shaffer and Inglis (2000), Yang and Zhuang (2006) and Moyle and Croy (2007) have shown that the factor 'tourism product offering' is particularly important for tourists. The present study, however, together with that by Moore and Polley (2007), contradicts those findings since it shows that this is the factor that has the

Table 4. Anova test.

Factors		Mean square	F – ratio	Significance (p-value)
Pollution (factor 1)	Between groups	1.466	4.078	0.018
	Within groups	0.360		
Tourism product offering (factor 2)	Between groups	0.084	0.430	0.651
	Within groups	0.196		
Park violation (factor 3)	Between groups	4.070	12.691	0.000
	Within groups	0.321		
Environmental management (factor 4)	Between groups	0.168	0.501	0.606
	Within groups	0.336		
Tourism impacts (factor 5)	Between groups	1.364	3.347	0.036
	Within groups	0.408		

Table 5. Multiple comparisons.

Environmental impact factors	Frequency of visit (low/medium/ high)	Mean value	Difference between visit frequencies	Mean difference	Std. error	Sig. (p-value)	95% confidence interval	
							Lower bound	Upper bound
Pollution	1	2.063	1 vs. 2	0.10	0.07	0.292	-0.589	0.266
	2	1.96	1 vs. 3	0.22*	0.08	0.013	0.038	0.392
	3	1.84	3 vs. 2	-0.11	0.07	0.273	-0.282	0.059
Park violation	1	1.63	1 vs. 2	0.23*	0.07	0.002	0.072	0.386
			1 vs. 3	0.35*	0.07	0.000	0.181	0.516
	2	1.40	2 vs. 1	-0.22*	0.07	0.002	-0.378	-0.071
			2 vs. 3	0.12	0.07	0.167	-0.037	0.285
	3	1.28	3 vs. 1	-0.35*	0.07	0.000	-0.516	-0.181
			3 vs. 2	-0.12	0.07	0.167	-0.285	0.037
Tourism impacts	1	2.00	1 vs. 2	0.06	0.07	0.682	-0.112	0.235
			1 vs. 3	0.20*	0.08	0.031	0.015	0.393
	2	1.95	2 vs. 1	-0.06	0.07	0.682	-0.235	0.112
			2 vs. 3	0.14	0.07	0.156	-0.039	0.324
	3	1.80	3 vs. 1	-0.20*	0.08	0.031	-0.393	-0.015
			3 vs. 2	-0.14	0.07	0.156	-0.324	0.039

* The mean difference is significant at the 0.05 level

least effect on park visitors.

The findings also revealed that speeding by tourists and parks staff in the national parks had the biggest negative effect on the respondents' experience. This complaint was made by respondents at all levels of visit frequency. The study by Klar et al. (2007) also supports this finding. Speeding can lead to increased levels of wildlife mortality and a decrease in tourist numbers. The following are some ways that SANParks management might deal with the problem:

1. Tracking devices should be installed on all staff and contractor vehicles in order to record occurrences of speeding, and the offenders should face severe fines.
2. The staff members of SANParks should set a good example so that tourists will be more like to obey the regulations.
3. The possibility of providing alternative routes for staff and delivery vehicles, out of sight of tourists in the rest camps, could be explored.
4. Higher fines should be issued to tourists for speeding

in national parks.
5. Charts showing distances and travelling times within the parks should be given to tourists on arrival.

The responses to the survey also revealed that a lack of proper management practices such as resource-conserving measures (for example water saving) negatively affects tourists' experiences. This is confirmed by Moore et al. (2003) and Buultjens et al. (2005). The following are ways that SANParks management might improve their practices:

1. All leaking taps and water pipes should be repaired and water saving attachments installed on taps and showerheads. Low-flow toilets should be installed. The frequency of replacement of towels and bed-linen for tourists should be reduced as this would decrease both water and detergent use. Storm water runoff should be collected and captured for re-use in gardens and toilets.
2. Motion sensors should be installed in tourists' rooms to detect when there is no human activity so that appliances such as lights and air-conditioning can be turned off. This is commonplace in some urban establishments and SANParks could set an example to the tourism industry. Energy efficient light bulbs should replace traditional bulbs. Opportunities to make use of renewable energy resources should be explored and, where appropriate, implemented.
3. Tourists should receive environmental education such as guidelines encouraging them to save water and energy. Information about the environmental rewards of economical use of resources should also be made available.
4. New developments should adhere to guidelines that will minimise the environmental impact of structures on the environment. The building materials used for new developments should be from local producers.

Finally, it was revealed that pollution, in the form of waste and noise, also has a negative effect on the experience of park tourists. This corroborates findings by Spenceley (2005) and Littlefair and Buckley (2008). The management implications are:

1. Park management must introduce a "pollution deposit fee" which is payable upon the arrival of the tourist. This would be refundable on departure if tourists could show that they were removing their non-recyclable litter, such as plastic, for disposal outside the Park.
2. Management need to monitor the level of noise in SANParks by fining tourists who display no consideration for the rights of others, particularly after a specified time at night.

Conclusion

This study identified five environmental factors that have a negative effect on the experience of tourists visiting South African national parks, they include pollution, tourism product offering, park violations, environmental management, and tourism impacts. Three of these, pollution, park violations and tourism impacts, were particularly significant. A strong link was found between the frequency of visits to parks and the degree to which tourists experience negative environmental impacts caused by tourism. The study thus contributed to the field by:

(a) Measuring some negative environmental impacts of tourism and the effect they have on the experience of tourists visiting the parks, and
(b) Revealing for the first time the relationship between frequency of visits to the parks and the degree to which tourists' experiences are affected by negative environmental impacts.

A better understanding of the factors that affect tourists' experiences will help SANParks management to develop appropriate management strategies to improve visitors' experience of the parks. High frequency visitors in particular are plainly loyal to the parks, visiting on an annual or regular basis, so it is particularly important to ensure that they have a positive experience each time and will keep on visiting. Policies need to be in place giving clear guidelines as to how new developments should take place in order to lessen the impacts on the environment. This study should help SANParks management ensure the sustainability of the national parks by eliminating the factors that give visitors a negative impression.

REFERENCES

Alant K, Bruwer J (2004). Wine tourism behaviour in the context of a motivational framework for wine regions and cellar doors. J. Wine Res., 15(1): 27-37.
Alegre J, Cladera M (2008). Analysing the effect of satisfaction and previous visits on tourist intentions to return. Eur. J. Mark., 43(5/6): 670-685.
Anwar SZ, Sohail S (2004). Festival tourism in the United Arab Emirates: First-time versus repeat visitor perceptions. J. Vac. Mark., 10(2): 161-170.
Arnberger A, Brandenburg C (2007). Past on-site experience, crowding perceptions, and use displacement of visitor groups to a peri-urban national park. Environ. Manage., 40(1): 34-45.
Awang KW, Hassan WM, Zahari MS (2009). Tourism development: A geographical perspective. As. Soc. Sci., 5(5): 67-76.
Bresler N (2007). Wildlife tourism: creating memorable and differentiated experiences. Acta. Acad., 39(3): 16-182.
Borrie WT, Birzell RM (2001). Approaches to measure quality of the wilderness experience. In F Wayne and N Cole (eds.), Visitor use density and wilderness experience: Proceedings, Missoula, USA, June 1-3, 2000, pp. 29-38.
Buhalis D (2000). Marketing the competitive destination of the future. Tour. Man. 21(1): 97-116.
Bushell R, Griffen T (2006). Monitoring visitor experiences in protected areas. Int. J. Protect. Area Manage., 16(2): 25-33.
Buultjens J, Ratnayake I, Gnanapala A, Aslam M (2005). Tourism and its implications for management in Ruhuna National Park (Yala), Sri Lanka. Tour. Manage., 26(5): 733-742.
Chhetri P, Arrowsmith C, Jackson M (2004). Determining hiking experiences in nature-based tourist destinations. Tour. Manage., 25(1): 31-43.

Chin CLM, Moore S, Wallington TJ, Dowling RK (2000). Ecotourism in Bako National Park, Borneo: Visitors' perspectives on environmental impacts and their management. J. Sustain Tour., 8(1): 20-35.
Cole ND (2001). Visitor use density and wilderness experiences: A historical review of research. In F Wayne, N Cole (eds.), Visitor use density and wilderness experience: Proceedings, Missoula, USA, June 1-3, 2000, pp. 11-20.
Cole DN, Hall TE (2009). Perceived effects of setting attributes on visitor experiences in wilderness: Variation with situational context and visitor characteristics. J. Environ. Manage., 44(1): 24-36.
Deng J, King B. Bauer T (2002). Evaluating natural attractions for tourism. Ann. Tour. Res., 29(2): 422-438.
Deng J, Bender MY (2007). Visitors' perception of tourism development in West Virginia. In C Le Blank, C Vogt (eds.), North Eastern Recreation Research Symposium proceedings, Bolton Landing, NY, United States, April 15-17, pp. 181-188.
Deng J, Qiang S, Walker GJ, Zhang Y (2003). Assessment on and perceptions of visitors' environmental impacts of nature tourism: A case study of Zhangjiajie National Forest Park, China. J. Sustain Tour., 11(6): 529-548.
Field A (2006). Discovering statistics using SPSS, Sage, California.
Floyd M, Jang H, Noe FP (1997). The relationship between environmental concern and acceptability of environmental impacts among visitors to two US national park settings. J. Environ. Manage., 51(4): 391-412.
Hammit WE, Backlund EA, Bixler RD (2004). Experience use history, place bonding and resource substitution of trout anglers during recreation engagements. J. Leis. Res., 36(3): 356-378.
Han J, Patterson I (2007). An analysis of the influence that leisure experiences have on a person's mood state, health and wellbeing. Ann. Leis. Res., 10(3/4): 328-351.
Harmon D (2004). Intangible values of protected areas: What are they? Why do they matter? George Wright Forum. 21(2): 9-22.
Hillery M, Nancarrow B, Griffin G, Syme G (2001). Tourist perception of environmental impact. Ann. Tour. Res., 28(1): 853-867.
Hinds J. Sparks P (2008). Engaging with the natural environment: The role of affective connection and identity. J. Environ. Psychol., 28(2): 109-120.
Hui TK, Wan D, Ho A (2007). Tourists' satisfaction, recommendation and revisiting Singapore. Tour. Manage., 28(4): 965-975.
Klar N, Herrmann M, Kramer-Schadt S (2007). Effects and mitigation of road impacts on individual movement behaviours. Wildlife, 73(5): 631-638.
Kozak M (2001). Repeaters' behaviour at two distinct destinations. Ann. Tour. Res., 28(3): 784-807.
Laven DN, Manning RE, Krymkowski DH (2005). The relationship between visitor-based standards of quality and existing conditions in parks and outdoor recreation. Leis. Sci., 27: 157-173.
Lengkeek J (2001). Leisure experience and imagination: Rethinking Cohen's modes of tourist experience. Int. Soc., 16: 173-184.
Li Y (2000) .Geographical consciousness and tourism experience. Ann Tour. Res., 27(4): 863-883.
Littlefair C, Buckley R (2008). Interpretation reduces the ecological impacts of visitors to World Heritage Site. J. Hum. Environ., 37(5): 338-341.
Marion JL, Reid SE (2007). Minimising visitor impacts to protected areas: The efficacy of low impact education programmes. J. Sustain Tour., 15(1): 5-27.
Mason P (2003). Tourism impacts, planning and management. Butterworth-Heinemann, Amsterdam.
McCool SF (2006). Managing for visitor experiences in protected areas: Promising opportunities and fundamental challenges. Int. J. Prot. Area Manage., 16(2): 3-9.
Moore S, Polley A (2007). Defining indicators and standards for tourism impacts in protected areas: Cape Range National Park, Australia. Environ. Manage., 9(3): 291-300.
Moore SA, Smith AJ, Newsome DN (2003). Environmental performance reporting for natural area tourism: Contributions by visitor impact management frameworks and their indicators. J. Sustain Tour., 11(4): 348-375.
Moyle B, Croy G (2007). Crowding and visitor satisfaction during the off-season: Port Campbell National Park. Ann. Leis. Res., 10(3/4): 518-531.
Murphy P, Pritchard MP, Smith B (2000). The destination product and its impact on traveller perceptions. Tour. Manage., 21(1): 43-52.
Narayan PK (2005). The structure of tourist expenditure in Fiji: Evidence from unit root structural break tests. Appl. Econ., 37: 1157-1161.
Oom Do Valle P, Correia A, Rebelo E (2008). Determinants of tourism return behaviour. Tour. Hosp. Res., 8(3): 205-219.
Ooi C (2003). Crafting tourism experiences: Managing the attention product, paper presented at the 12th Nordic Symposium on Tourism and Hospitality Research, Stavanger University College, Stavanger, 2-5 October.
Patterson TM, Niccolucci V, Marchettini N (2008). Adaptive environmental management of tourism in the province of Siena, Italy using the ecological footprint. J. Environ. Manage., 86(2): 407-418.
Phillips G (2009). Current status of South African National Parks. Paper presented at the Third Annual International Conference of Tourism Competence Network (ICNT), North-West University, Potchefstroom, South Africa, 22-24 October.
Powell RB, Ham SH (2008). Can ecotourism interpretation really lead to pro-conservation knowledge, attitudes and behaviour? Evidence from the Galapagos Islands. J.Sust.Tour. 16(4): 467-489.
Prentice RC, Witt SF, Hamer C (1998). Tourism as an experience: The case of heritage parks. Ann. Tour. Res., 25(1): 1-24.
Priskin J, Mc Cool S (2006). The visitor experience: An essential component of protected area stewardship. Int. J. Prot. Area Manage., 16(2): 1-2.
Retief F (2006). The quality and effectiveness of Strategic Environmental Assessment (SEA) as a decision-aiding tool for national park expansion: The greater Addo Elephant National Park case study. Koedoe, 49(2): 103-122.
Reynolds PC, Braithwaite D (2001). Towards a conceptual framework for wildlife tourism. Tour. Manage., 22(1): 31-42.
Saayman M, Fouche M, Kruger M (2008). Executive summary of research profiles of selected national parks. Institute for Tourism and Leisure Studies, North-West University, Potchefstroom, South Africa.
SANParks (South African National Parks. (2009). Official website, viewed 25 November 2009, from www.sanparks.org/
Shaffer CS, Inglis GJ (2000). Influence of social, biophysical, and managerial conditions on tourism experience within the Great Barrier Reef World Heritage Area. Environ. Manage., 26(1): 73-87.
Smith AJ, Newsome D (2002). An integrated approach to assessing, managing and monitoring campsite impacts in Warren National Park, Western Australia. J. Sustain Tour., 10(4): 343-359.
Spenceley A (2005). Nature-based tourism and environmental sustainability in South Africa. J. Sustain. Tour., 13(2): 136-170.
Tonge J, Moore S, Hockings M, Worboys G, Bridle K (2005). Developing indicators for the sustainable management of visitor use of protected areas in Australia, viewed 1 August 2009, from www.crctourism.com.au/WMS/Upload/Resources/bookshop/Tonge_Visitor%20Use%20PAs.pdf.
Tonge J, Moore SA (2007). Importance-satisfaction analysis for marine-park hinterlands: A Western Australian case study. Tour. Manage., 28(3): 768-776.
Yang R, Zhuang Y (2006). Problems and solutions to visitor congestion at Yellow Mountain National Park, China. Int. J. Prot. Area Manage., 16(2): 47-52.
Yu L, Goulden M (2006), A comparative analysis of international tourists' satisfaction in Mongolia. Tour. Manage., 27(6): 1331-1342.