

**The third criterion of ecotourism: Are ecotourists more concerned about sustainability than other tourists?**

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## **The third criterion of ecotourism: Are ecotourists more concerned about sustainability than other tourists?**

Ecotourism can be defined by three core criteria: nature, learning and sustainability. The ecotourist market has been segmented by the nature and learning criteria only. It has been assumed that ecotourists are environmentally concerned and therefore sustainability is a factor in their decision-making. However, little empirical research has confirmed this assumption. This study surveyed 243 respondents participating in an ecotourism experience in Australia. It identified ecotourists according to the nature and learning criteria as per previous segmentation studies. Pro-environmental attitudes were measured as an indication of their support for sustainability. Results revealed no significant differences in pro-environmental attitudes between those identified as ecotourists and those considered non-ecotourists. Whilst demand exists for nature and learning experiences, compliance with the sustainability criterion seems to be no more a factor in ecotourist decision-making than for mainstream tourists. Implications are that market segmentation research should consider all relevant criteria when segmenting a market for a particular product to ensure supply matches demand. However, demand for certain products can be created by innovative marketing practices. This would enable the ecotourism industry to respond to the market's demand for nature and learning, but also influence the behaviour and structure of the market with regard to sustainability.

**Keywords:** core criteria of ecotourism; product differentiation; market segmentation; ecotourist market; pro-environmental attitudes; sustainability

## **Introduction**

Despite a variety of definitions of ecotourism since its emergence in the 1980s, it is now generally agreed by academics, government and the tourism industry that ecotourism can be identified by three core criteria: nature, learning, and sustainability (Beaumont, 1998; Blamey, 1995; Weaver, 2008). The sustainability criterion incorporates environmental, social and economic elements and therefore includes criteria referred to specifically in some definitions, such as conservation and community benefits. However, because of ecotourism's focus on nature the emphasis tends to be on environmental sustainability. The three core criteria have been used to differentiate ecotourism from other tourism products and accordingly ecotourism products are expected to comply with the three criteria. Those seeking eco accreditation or certification must comply with stringent requirements regarding these criteria. Compliance with the environmental sustainability criterion has led many ecotourism operators to implement extensive environmentally friendly practices and management systems, and has tended to put some of them at the upper end of the price scale.

By contrast, ecotourist market segmentation research has identified the ecotourist as a tourist with motivations and behaviour related only to the nature and learning criteria of ecotourism (e.g. Ballantine & Eagles, 1994; Eagles, 1992; Juric, Cornwall & Mather, 2002; Kwan, Eagles & Gebhardt, 2008; Saleh & Karwacki, 1996; Wight, 1996). There has been a long-held view that because ecotourists seek nature and learning about the natural environment they are also environmentally aware and concerned (Beaumont, 2001). Hence, it has been assumed that sustainability of their ecotourism product is also a key factor in their holiday or activity decision-making process. However, there has been little empirical research to confirm this assumption and some writers suggest that ecotourists are no more concerned about sustainability or the environmental credentials of their ecotourism product than mainstream tourists (Fennell, 2001; Sharpley, 2006; Wheeler, 2005). According to Sharpley (2006), there is little evidence that the ecotourist as a distinct market actually exists. There is

certainly demand for tourism products that fall under the 'ecotourism banner' (p. 9), but it is unlikely that this demand is driven by pro-environmental values and concern for sustainability of the tourism experience. Tourists are simply interested in natural places and experiences for the benefits of enjoyment and learning, physical activity and adventure.

To date, relatively few studies have explored ecotourists' environmental concern or support for sustainability. Some have examined the environmental concern of ecotourists based on their values, attitudes or behavioural intentions towards various environmental premises (e.g. Blamey & Braithwaite, 1997; Kerstetter, Hou & Lin, 2004; Luo & Deng, 2008; Weaver, 2002; Zografos & Allcroft, 2007). Relatively few have included specific questions related to ecotourists' support for sustainability (e.g. Kerstetter et al., 2004; Kwan, Eagles and Gebhardt, 2010; Perkins & Grace, 2009; Weaver, 2002). In addition, as Sharpley (2006) notes, little of this research has been undertaken in the actual ecotourism context and this has resulted in diverse findings.

This paper reports on research that was undertaken in context by surveying participants taking part in an activity or experience classified as ecotourism according to the three criteria of ecotourism. The aims were to:

- 1) identify ecotourists based on the nature and learning criteria of ecotourism as per previous segmentation studies;
- 2) measure the pro-environmental attitudes of those so identified using an attitudinal scale to determine their level of concern for the environment and, as such, a measure of their support for the third criterion, sustainability; and
- 3) compare the level of support for sustainability of those identified as ecotourists with those identified as non-ecotourists.

This would then identify the level of demand for a 'pure' ecotourism product that complies with the three core criteria of ecotourism.

This paper first briefly reviews theoretical marketing concepts relating to product differentiation and market segmentation. It then reviews literature that demonstrates how a product differentiation approach using the three core criteria of ecotourism definitions has been used to market ecotourism. This is followed by a review of previous research that has segmented the ecotourist market using just two of these criteria, nature and learning. The paper then reviews studies that have explored the support for sustainability of so-called ecotourists, leading to a description of the methods used in the current research, followed by the results, a discussion of the findings and implications for both theory and practice.

### **Matching supply and demand – product differentiation or market segmentation?**

Matching supply and demand is one of the key concepts in tourism planning and development. According to Gunn and Var (2002), it is crucial for achieving sustainable tourism development, as mismatches can result in dissatisfied tourists, economic loss by tourism operators, and impacts on social and physical environments. Two concepts associated with this process – product differentiation and market segmentation – were introduced to the marketing literature by Smith (1956). Prior to this time, the emphasis of marketing was simply on ‘promoting, pricing, and distributing products for the mass market’ (Sheth, Sisodia & Sharma, 2000, p. 55). Hall (2007, p. 124) notes that product differentiation is a process that ‘attempts to bend demand to match supply’. This concept has been used in marketing to describe the process of differentiating products by individual corporations from their competitors. This can be done in various ways and can include attributes such as price, quality, style and design (Holloway, 2004; Kotler, Adam, Brown & Armstrong, 2006). In tourism this approach has been used to differentiate individual products that provide benefits, and therefore appeal, to certain markets (Holloway, 2004). It could also be applied to the differentiation of one form of tourism from another, and in this case differentiating ecotourism from other forms of tourism.

Market segmentation works in reverse by attempting to shape supply to match demand (Hall, 2007). Segmentation involves portioning heterogeneous markets into smaller, more homogeneous market segments that can be distinguished by different consumers' needs, characteristics or behaviour (Kotler, Adam et al., 2006). For segmentation to be purposeful, each segment needs to be measurable, accessible and substantial. Segmenting the tourist market allows the industry to define a particular market and understand that group's motivations, needs and demands (Hall, 2007). It has been argued that this is more effective for matching supply and demand, as the organisation or industry can then tailor their product accordingly and can target their promotional activities towards the appropriate market.

Segmentation has been measured using a variety of variables under four major segmentation bases: geographic, demographic, psychographic and behavioural (Kotler, Bowen & Makens, 2006). Tkaczynski, Rundle-Thiele and Beaumont (2009) reviewed 115 tourism segmentation studies and found that, although the majority used a combination of two or more segmentation bases, demographic was the dominant base used to segment the market. Use of demographic data has been criticised for failing to predict actual behaviour and, increasingly, psychographic variables (which include motivations, values, attitudes and preferences) and behavioural variables (which include travel patterns, spending and activities) have been accepted as being more predictive of actual tourist activity and behaviour. According to Hall (2007), psychographic segmentation is particularly relevant when dealing with products that emphasise social values. Ecotourism could be considered one such product where psychographic and behavioural variables can identify specific motivations and needs related to the values associated with ecotourism and would therefore be more predictive of actual behaviour.

Accepted thinking in mainstream marketing has been that consumers' motivations, preferences and needs are static and, once they have been identified, organisations can adapt their product accordingly. Jaworski, Kohli and Sahay (2000, p. 45) refer to this as a 'market-

driven' approach to market orientation that is based on 'understanding and reacting to the preferences and behaviors of players within a given market structure'. However, rather than simply adapting to existing customer preferences, they suggested that businesses can attempt to reshape the market by adopting a 'driving markets' approach that seeks to 'influence the structure of the market and/or behavior(s) of market players in a direction that enhances the competitive position of the business' (p. 45). According to Schindehutte, Morris and Kocak (2008, p. 8), the market-driven approach recognises 'observed' customer needs whereas the driving markets approach focuses on 'latent' customer needs. The former approach is therefore 'customer-led' (reactive) or 'customer-leading' (proactive) (Narver, Slater & MacLachlan, 2004) whilst the latter approach has the potential to create new customers or markets by businesses engaging in entrepreneurial activity, innovation and product development (Kumar, Scheer and Kotler, 2000). Jaworski et al. (2000) suggest that the two approaches can be complementary; the market-driven approach can be used to understand and respond to existing market structures whilst the driving markets approach can be used to influence the structure or behaviour of those markets. In this way, the two approaches can be used to co-construct the needs and behaviour of existing and potential customers.

### **Differentiating the ecotourism product from other forms of tourism**

Ecotourism, by default or design, has differentiated its product from other tourism products by focusing on three core criteria – nature, learning and sustainability. Evidence suggests that ecotourism emerged as a result of a paradigm shift in western society from the dominant western environmental paradigm to a more environmentally concerned 'green' paradigm (Weaver, 2008). It was believed that a growing cohort of 'green consumers' were interested in nature and wanted their tourism product to be environmentally friendly and sustainable, and ecotourism could provide this product. However, early definitions of ecotourism focused on nature and learning in the natural environment and took a descriptive approach, simply describing what ecotourists do (e.g. Boo, 1990; Ceballos-Lascurain, 1987; Valentine, 1992).

As the literature and research on ecotourism progressed, new definitions appeared that were normative in nature and included an element of environmental responsibility and a number of criteria to which a product must adhere to be called ‘ecotourism’ (see Beaumont, 1998). However, rather than being demand-led or even industry-led, this approach appears to have been instigated by academics and government policy-makers. Many specified a large number of criteria to which a product must adhere to call itself ecotourism, including a number of elements associated with sustainability, such as conservation, non-consumptive use of wildlife and natural resources, respect for the integrity of and benefits for local communities.

Eventually, these definitions were simplified to the three core criteria – nature, learning and sustainability, which became the accepted criteria for differentiating ecotourism from other forms of tourism (Beaumont, 1998; Blamey, 1995; Weaver, 2008). As noted above, sustainability was considered to include environmental, social and economic elements but, because of ecotourism’s focus on nature, the emphasis was on environmental sustainability. The ecotourism industry also adopted these criteria and when eco accreditation was introduced in Australia in 1996, detailed and stringent requirements under each of these criteria were specified (Ecotourism Australia, 2010). Ecotourism was therefore differentiated from other tourism products by reference to these three criteria and ecotourism products were expected to comply with them. Many ecotourism operators implemented extensive, and sometimes expensive, environmentally friendly building design and management systems such as onsite waste treatment plants and renewable energy sources to comply with the sustainability criterion. On this basis, the industry assumed that there was a market that sought this ecotourism product and would pay for it accordingly.

### **Segmenting the ecotourist market by motivations and behaviour related to nature and learning**

By contrast, the ecotourist market has been segmented according to only two of the three ecotourism criteria, nature and learning, and this has been undertaken on the basis of psychographic and behavioural variables. Early research to identify the ecotourist market focused on the motivations of participants of commercial ecotours. Eagles (1992) compared three studies of Canadian ecotourists on international tours with a survey of mainstream Canadian tourists and found significant differences between the two groups. Ecotourists' primary motivations were visiting tropical forests, wilderness or undisturbed nature, and learning about nature. By contrast, mainstream tourists were motivated by warm climates, being with family and friends, and familiarity.

Based on these conclusions, Ballantine and Eagles (1994) formulated a model for distinguishing ecotourists from other tourists on the basis of two motivational criteria – an 'attraction travel' motivation to visit wilderness or undisturbed natural areas and a 'social travel' motivation of learning about nature. The studies of commercial ecotourists analysed by Eagles (1992) also found that ecotourists desired intense and lengthy levels of contact with nature, leading them to add a time dimension of at least one-third of the tourist's vacation participating in firsthand nature experiences. To test this model, Ballantine and Eagles (1994) undertook a survey of 120 Canadian tourists who took part in safaris and nature tours in Kenya. Their results confirmed the earlier findings, with 84 per cent meeting all three criteria. However, as these studies were all based on participants of 'known commercial ecotours', some doubt was cast on their applicability to ecotourists who visit natural areas independently.

Kusler (1991) suggested that independent ecotourists comprise the largest number of ecotourists but are less visible statistically than those on organised ecotours. They are generally domestic tourists with families who camp or seek low cost accommodation. Accordingly, basing an ecotourist segmentation model on the motivations of commercial ecotourist groups might exclude this large segment. Saleh and Karwacki (1996) undertook

research of independent tourists visiting a Canadian national park on a day visit or camping excursion. A factor analysis of the important motivations of visitors indicated that their major travel motivations were to view a natural setting and to learn more about the environment, which accorded closely with those of commercial ecotourists in the earlier studies but at a lower cost.

More recently, Kwan et al. (2008) analysed the motivations of ecotourists staying in ecolodges in Belize at three different price levels – budget, mid-price and upscale. Motivations were divided into two categories of attraction motivations and social motivations based on the Ballantine and Eagles (1994) model. The top motivations for all three groups in each motivation category were similar to earlier findings, with ‘tropical forests’ and ‘wilderness or undisturbed nature’ rating the highest attraction motivations and ‘learn and explore nature’ the highest social motivation.

Other studies have obtained similar findings, with the primary motivations of ecotourists being pull factors associated with natural aspects of their destination such as to see the natural environment, travel to wild places or appreciate nature (attraction travel motivation) and a push factor or benefit sought by ecotourists of to learn about nature (social travel motivation) (e.g. Blamey, 1995; Diamantis 1998 cited in Wight 2001; Forestry Tasmania, 1994; Wight, 1996).

Using the Ballantine and Eagles (1994) model as a basis, Juric et al. (2002) incorporated these motivations into a seven-item Ecotourism Interest (EI) scale, which they found was predictive of participation in ‘eco-friendly activities’ such as walking in the bush, overnight tramping or trekking, and whale watching, and was not related to non-ecotourism activities such as wine tasting, gambling, and shopping. The assumption implicit in the language used in this study is that bushwalking, overnight trekking and whale watching are ‘eco-friendly activities’ and that tourists who undertake such activities are therefore environmentally responsible and seeking sustainable experiences.

## **Ecotourists' environmental concern and support for sustainability**

To date, only a small number of studies have explored the environmental concern of ecotourists and these studies have been based on a variety of premises related to ecological values, attitudes or behavioural intentions. Relatively few have included questions that specifically refer to sustainability of the ecotourism product or experience.

Blamey and Braithwaite (1997) surveyed a large sample of the general Australian public and adopted a 'social values' approach. Based on the nature and learning motivations of ecotourists as reviewed above, they identified potential ecotourists by an affirmative response to a question that asked respondents if they would like to spend part of their next holiday increasing their understanding and appreciation of nature. 'Postmaterialism' was used as a measure of 'green' values on the basis that individuals with postmaterialist values are more likely to favour environmental protection and adopt environmentally responsible behaviour. Their results indicated that the majority of potential ecotourists did not hold strong green values, with less than 20 per cent identified as postmaterialists.

By contrast, a Chinese study of nature-based tourists revealed a positive correlation between ecotourism motivations and environmental attitudes based on the New Ecological Paradigm (NEP) scale (Luo & Deng, 2008). The NEP scale was factor analysed to reveal three factors labelled as 'humans over nature', 'limits to growth' and 'ecocrisis'. The results indicated that nature-based tourists with ecotourist motivations of being close to nature and learning about nature scored higher on the limits to growth and ecocrisis factors, demonstrating a propensity to stronger pro-environmental attitudes.

Zografos and Allcroft (2007, p. 50) identified Scottish ecotourists according to their predisposition to engage in an ecotourism experience defined as 'responsible travel to natural areas that conserves the environment and sustains the wellbeing of local people'. This in itself identified ecotourists as those seeking a sustainable experience rather than those with motivations of visiting a natural area and learning about nature. Accordingly, it is not

surprising that using the New Ecological Paradigm (NEP) scale Zografos and Allcroft (2007) found that nearly 80 per cent of their potential ecotourists held ecocentric views.

A Taiwanese study identified 40 per cent of visitors to a wetland area as ecotourists based on a clustering of factors related to education, nature and health motivations (Kerstetter et al., 2004). When behavioural intentions were analysed, those identified as ecotourists were more likely than other tourists to purchase local products, maintain local environmental quality, help others learn about the wetlands, and join the local conservation associations. This was an indication of environmental responsibility and sustainable behaviour.

Weaver (2002) surveyed former patrons of two rainforest ecolodges in Queensland, Australia. Using a number of Likert-scaled statements as a basis for a cluster analysis of respondents, he identified 7.5 per cent of his sample as 'hard-core ecotourists'. This was based on their higher mean scores on a variety of items, including those related to nature and learning motivations. These respondents also scored higher on a number of socio-environmental values statements, as well as sustainability statements such as wishing to enhance visited sites, supporting local economies, donating money for conservation and picking up litter.

Perkins and Grace (2009) surveyed two groups of tourists, one at a mainstream tourist attraction and the other at an ecotourism destination, in Queensland, Australia. Rather than simply comparing the two groups as mainstream tourists and ecotourists, they used rank ordering of holiday package preferences, three mainstream and three ecotourism, to differentiate potential ecotourists from mainstream tourists. In addition, they used the Ecotourism Interest (EI) scale developed by Juric et al. (2002) to identify ecotourists by their motivations. Sustainability was measured by three statements to which respondents indicated their level of agreement. Findings revealed that higher scores on the ecotourism holiday preferences and on the EI scale were positively associated with support for 'green' accreditation of tourism products, considering such accreditation in travel choices and

considering their environmental impacts in making travel choices, whilst higher scores on the mainstream holiday preferences were negatively associated with these statements. This led the authors to conclude that not only are ecotourists motivated by a desire to see and learn about nature but they are also concerned with sustainability of the ecotourism product or destination. However, correlations were only moderate and it is not known what percentage of ecotourists as identified by the EI scale supported these sustainability criteria.

A recent study by Kwan, Eagles and Gebhardt (2010) of ecolodge guests in Belize measured their importance and performance ratings of a number of ecolodge attributes, including five relating to sustainability such as benefits to local communities, sensitive design and minimal negative impact, renewable energy use, recycling activity, and water conservation. For all sustainability variables, performance means were higher than importance means, indicating that these aspects were more important to the ecolodge operators than to their patrons. In particular, use of renewable energy and benefits to local communities were considered low priority by respondents.

These studies have measured environmental concern and support for sustainability in varying ways. As results also vary, it is difficult to draw any conclusions as to what level of environmental concern and support for sustainability exists among ecotourists and how this compares to mainstream tourists. The aim of this study, therefore, is to identify ecotourists according to the first two criteria of ecotourism, nature and learning, as used in previous segmentation studies, to measure the environmental attitudes of such ecotourists using an attitudinal scale as a measure of their support for the third criterion, sustainability, and to compare their level of support for sustainability with those identified as non-ecotourists. The study was conducted in context in that participants included in the survey were taking part in an activity that could be classified as ecotourism according to the three criteria of ecotourism.

## **Method**

This research was conducted in Lamington National Park in Queensland, Australia. A total of 243 domestic and international visitors were surveyed at the commencement of their visit. The survey included commercial visitors staying at the two ecolodges in the park or visiting the park for a day by coach and independent visitors travelling by their own vehicle for a camping excursion or day visit. The respondents were all taking part in activities or experiences classified as ecotourism according to the three core criteria of ecotourism. The setting was a national park and hence was considered a natural setting; all visitors had access to environmental education or interpretation provided either by the national park management authority or the commercial operators; and both the park and the operators were attempting to achieve 'sustainability best practice' in their operations (Weaver, 2008, p. 16).

Convenience sampling was used on the basis that only visitors in the study area at the time were approached, but various methods were adopted to minimise sampling bias and ensure a certain amount of randomness as recommended by Veal (2005). For example, with independent day visitors, the researcher approached each vehicle that arrived after completion of the previous questionnaire. Guests staying at the ecolodges were approached on a 'one-per-room' basis on the day of arrival. A response rate of 72 per cent indicated that non-response or self-selection bias was minimal.

Respondents completed a self-administered questionnaire which included questions relating to their motivations for the visit, natural area involvement, and environmental attitudes. A list of seven attraction motivations and seven social motivations, based broadly on the Ballantine and Eagles (1994) survey was included. The list of motivations differed slightly according to the different visitor types: commercial or independent, day or overnight. Respondents were asked to identify as many of these motivations as applied to their present visit. Four of these motivations, which were common to all questionnaires, were used as a basis for identifying the respondents as ecotourists as per the Ballantine and Eagles (1994) model. However, for this study the model was modified slightly to fit more realistically with

the area and experiences of the groups that were surveyed, as set out in Table 1. As the area was not a wilderness area, three attraction motivations were used to indicate respondents' desire to visit a 'relatively undisturbed' natural area. To determine their levels of natural area involvement, respondents on vacation were asked to indicate the number of days they had or would spend visiting natural areas, which was calculated as a proportion of the number of days of their total vacation. Respondents on a day visit were asked to estimate how often they visited natural areas per year using five different numerical categories.

[Insert Table 1 here]

Rather than simply identifying ecotourists from non-ecotourists, an ecotourist classification was formulated, as shown in Table 2, to identify different levels of compliance with the ecotourist motivations and natural area visitation as defined in Table 1. On this basis, only those classified as 'complete ecotourists' complied with all of the criteria of the model and therefore could be considered 'true' ecotourists on the revised Ballantine and Eagles (1994) model.

[Insert Table 2 here]

Environmental attitudes were measured using a scale based on the Ecological Social Paradigm (ESP) developed by Olsen, Lodwick and Dunlap (1992). The ESP scale was designed to overcome the limitations of earlier worldview or paradigm scales by including four indicators of ecological beliefs drawn from the New Environmental Paradigm (NEP) scale of Dunlap and Van Liere (1978) and four indicators of ecological values drawn from the Alternative Environmental Paradigm of Cotgrove (1982). The emphasis is on human relationships with the total ecosystem rather than on specific environmental concerns. The original ESP scale contains eight sets of opposing statements and for each set respondents are asked to indicate where their own personal belief or value lies on a five-point Likert scale between the two statements. For brevity and to avoid response bias, the scale was reduced to eight single statements, four pro-ESP and four anti-ESP, with each category comprising two

belief statements and two value statements (see Table 3). Respondents evaluated the statements on a five-point scale from strongly agree to strongly disagree. Overall scores were calculated and categorised as non ESP holder, weak ESP holder, moderate ESP holder, or strong ESP holder. On this basis, respondents categorised as strong ESP holders were considered to have strong pro-environmental attitudes.

[Insert Table 3 here]

## **Results**

Results set out in Table 4 indicate that only 15.6 per cent of respondents were classified as ‘complete ecotourists’ and could therefore be considered ecotourists according to the revised Ballantine and Eagles (1994) model. Half the respondents were classified as ‘peripheral’ or ‘strong ecotourists’ and therefore had at least one of the relevant ecotourist motivations. However, one-third of visitors were classified as ‘not an ecotourist’ and were therefore visiting the area for other than ecotourist motivations of seeing or learning about nature and did not accord with the time dimension regarding natural area visitation.

[Insert Table 4 here]

As illustrated in Table 5, 36.8 per cent of ‘complete ecotourists’ had strong pro-environmental attitudes as measured on the modified ESP scale. This represented only 5.8 per cent of the total number of respondents. Another 50 per cent had moderate pro-environmental attitudes. However, no significant differences were found among the different ecotourist classification groups in terms of pro-environmental attitudes. Although the percentage of those defined as ‘not an ecotourist’ with strong ESP attitudes is slightly lower than the other groups, there is no real difference between those defined as ‘complete ecotourists’ and the three non-ecotourist groups.

[Insert Table 5 here]

## **Discussion**

All of the respondents in this research could be considered ecotourists on the basis that they were taking part in an activity that included the three core criteria of ecotourism. The setting was a national park and therefore a natural setting; all visitors had access to environmental education provided by the national park or commercial operators; and both the park and the operators were attempting to achieve 'sustainability best practice' as identified by Weaver (2008, p. 16). However, when the participants were differentiated according to their motivations and level of involvement based on the nature and learning criteria of ecotourism as per previous ecotourist segmentation studies, just under 16 per cent of visitors were considered ecotourists. This of itself is an interesting finding in that many researchers have assumed that anyone taking part in an ecotourism activity is an ecotourist (Lemelin, Fennell & Smale, 2008) and therefore has motivations related to the nature and learning criteria of ecotourism.

Just over one-third of those identified as ecotourists had strong pro-environmental attitudes and another half had moderate attitudes. This tends to indicate that ecotourists have quite high levels of environmental concern. However, when compared with the other groups there was very little difference in pro-environmental attitudes between those identified as ecotourists and those considered non-ecotourists. This lends support to both Wheeler's (2005) and Sharpley's (2006) views that ecotourists are no more concerned about environmental and sustainability issues than mainstream tourists. Again, one cannot assume that because a tourist takes part in an ecotourism activity they are concerned about the environment or have factored environmental sustainability into their decision-making process.

In addition, less than six per cent of respondents had motivations related to nature and learning, high levels of involvement in nature experiences and strong concern about the environment or sustainability, and therefore complied with the three core criteria of ecotourism. This tends to indicate that the level of demand for 'pure' ecotourism products or experiences that comply with the three criteria is relatively low.

These findings coincide with Kwan et al.'s (2010) results and have implications for the ecotourism industry. Whilst there is demand for ecotourism products, as noted by Sharpley (2006), this demand is driven by motivations related to nature and learning rather than any overt demand for sustainability of the ecotourism product or experience. However, compliance with the sustainability criterion of ecotourism has led many ecotourism operators to implement extensive environmentally responsible practices and management systems, particularly in order to obtain eco accreditation, and has tended to place some of them at the upper end of the price scale. As identified by Kusler (1991) and Saleh and Karwacki (1996), the largest number of tourists interested in nature and learning tend to be independent visitors to protected areas who camp or seek low cost accommodation. Kwan et al. (2008) also found that the nature and learning motivations were the same for tourists staying at budget, mid-price and upscale ecolodges. Accordingly, if visitors have the choice of satisfying their demand for nature and learning experiences at a lower cost they may be more inclined to make their holiday decisions on this basis rather than choose a recognised sustainable product at a higher cost. A recent trend of some upscale eco resorts and lodges to divert their focus from a pure ecotourism product to one also offering services such as health and beauty, conferences and events, wine and gourmet, and adventure activities may be explained by these results. In other words, because many tourists interested in nature and learning are unable or unwilling to pay the high costs of these facilities, the operators have diversified into ancillary services to maintain their higher spending clientele and financial viability.

The theoretical implications are twofold. First, using a 'market driven' approach researchers should consider all relevant criteria when attempting to segment a tourist market. If a tourism product is differentiated by certain core criteria, then segmenting the market on the basis of motivations and behaviour related to only some of the criteria may lead to false conclusions about the level of demand for that product. Having a better understanding of the market will enable operators to develop an appropriate product that meets their demands and

to target their key market more effectively in promotion and advertising. As noted by Tkaczynski et al. (2009, p. 173), '[t]his is the concept of identifying leveragable markets'. Based on this premise, a further implication of the findings for the industry is the possibility of developing budget ecotourism products that focus on nature and learning, rather than sustainability aspects, to tap this larger market segment.

Secondly, a 'driving markets' approach would consider ways that the market could be stimulated into reorienting their needs and motivations. Perhaps this is the approach being taken by the ecotourism operators that have diversified their products and this concept would warrant further research. However, if the environmental values of ecotourism are to be maintained, an alternative option for the industry may be to try to stimulate demand for the sustainable design and management features of their ecotourism products by creating that need in their clients. The increasing levels of concern among the population about the impacts of climate change could be used in innovative marketing techniques to construct a demand for a sustainable but more expensive product. By focusing on social responsibility issues in promotional activities as has been done with other environmentally-friendly products, this approach could both change the behaviour of the existing market and add previously untapped markets into the mix that are willing to pay for a sustainable option. The two approaches can then be used to respond to the existing market's demand for nature and learning and to influence the behaviour and structure of the market with regard to sustainability.

### **Limitations and future research**

Limitations of this research are that sustainability was measured on the basis of an attitude scale which tapped the respondents' worldviews on environmental matters. Although there is evidence from the psychological literature that attitudes influence behaviour, the relationship is not always consistent (Eagly & Chaiken, 1993). Hence, it would be preferable for future research to focus on actual behaviour regarding sustainability in ecotourists' holiday decision-

making. Research is currently in train that seeks to identify ecotourists' overt demand for sustainable practices when choosing an ecotourism holiday or experience.

## **Conclusion**

This research was conducted of tourists undertaking an ecotourism activity but, on the basis of their motivations and activity related to the nature and learning criteria of ecotourism, found less than one-fifth were actually ecotourists. Whilst the majority of those ecotourists had moderate to strong pro-environmental attitudes, other non-ecotourists had similar levels of pro-environmental attitudes. In addition, less than one-tenth of visitors had motivations, behaviour or attitudes that complied with the three core criteria of ecotourism. The results tend to confirm Sharpley's (2006) doubts about the existence of a distinct ecotourist market. Whilst there is demand for tourism products that provide nature and learning experiences, compliance with the sustainability criterion of ecotourism is not a factor in ecotourists' decision-making processes any more than it is for mainstream tourists. As ecotourists may make their decisions on nature and learning considerations alone, they may prefer lower cost ecotourism products that provide these benefits rather than a recognised sustainable product at a higher cost. This may explain the diversification of some eco resorts into ancillary services, such as health and beauty, conferences and events, wine and gourmet, or adventure activities, to retain their high spending clientele.

Implications for future segmentation research are to include all relevant criteria when identifying a market for a particular product so that demand can be adequately assessed and products developed and promoted appropriately to their target market. On this basis and using a 'market driven' approach, an option for the industry may be to develop budget ecotourism products that focus more on nature and learning than sustainability and can therefore cater to this larger market. However, an alternative implication is that a 'driving markets' approach could be adopted to stimulate demand for a sustainable but more expensive product that accords with the values of ecotourism. Using the two approaches, the industry can respond to

the 'observed' needs and desires of its current market for nature and learning, as well as stimulate the 'latent' needs of tourists, as part of the concerned global community, for environmental sustainability.

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Table 1 Criteria used to identify ecotourists compared to Ballantine and Eagles (1994) model

<b>Ballantine and Eagles (1994) criteria</b>	<b>Criteria used in this study</b>
<ul style="list-style-type: none"> <li>• A social travel motivation of learning about nature</li> <li>• An attraction travel motivation of visiting wilderness/undisturbed areas</li> <li>• At least one-third of vacation participating in firsthand nature experiences</li> </ul>	<ul style="list-style-type: none"> <li>• The social travel motivation ‘to learn about nature’</li> <li>• The attraction travel motivations ‘to visit a natural area’, ‘to visit a [natural] World Heritage area’ or ‘to visit a national park’</li> <li>• One-third or more of vacation spent visiting natural areas or, if not on vacation, visits natural areas more than 10 times per year</li> </ul>

Table 2 Ecotourist classification

<b>Classification</b>	<b>Description</b>
Not an ecotourist	Respondent did not tick the ecotourist social motivation or any of the ecotourist attraction motivations
Peripheral ecotourist	Respondent ticked one of the ecotourist social or attraction motivations
Strong ecotourist	Respondent ticked the ecotourist social motivation and either ticked one of the ecotourist attraction motivations or spent one-third or more of vacation visiting natural areas or, if not on vacation, visits natural areas more than 10 times per year
Complete ecotourist	Respondent ticked the ecotourist social motivation, at least one of the ecotourist attraction motivations, and spent one-third or more of vacation visiting natural areas or, if not on vacation, visits natural areas more than 10 times per year

Table 3 Ecological Social Paradigm (ESP) statements used in this study

<b>Pro-ESP statements</b>	<b>Anti-ESP statements</b>
<p><b>Beliefs</b>                      The earth is like a spaceship, with limited room and resources.                      Modern industrial countries are very seriously disturbing the balance of nature.</p>	<p><b>Beliefs</b>                      People must learn to control nature in order to survive.                      Because we are human, we are exempt from the laws of nature that apply to other species.</p>
<p><b>Values</b>                      Nature should be preserved for its own sake.                      Environmental protection should be given priority over economic growth.</p>	<p><b>Values</b>                      The environment should be changed to meet people's needs.                      Natural resources should be used primarily for the benefit of the present generation.</p>

Source: Adapted from Olsen, Lodwick & Dunlap (1992).

Table 4 Ecotourist classification of respondents

<b>Ecotourist classification</b>	<b>Number</b>	<b>Per cent</b>
Not an ecotourist	81	33.3
Peripheral ecotourist	105	43.2
Strong ecotourist	19	7.8
Complete ecotourist	38	15.6
Total	243	99.9

Note: Percentages do not add to 100 due to rounding.

Table 5 Pro-environmental attitudes by ecotourist classification

Ecotourist classification	Pro-environmental attitudes (per cent)		
	Non/weak ESP holder <sup>a</sup>	Moderate ESP holder	Strong ESP holder
Not an ecotourist	30.9	43.2	25.9
Peripheral ecotourist	23.8	36.2	40.0
Strong ecotourist	36.8	31.6	31.6
Complete ecotourist	13.2	50.0	36.8

Chi-square = 8.886, df = 6, p = 0.1801

<sup>a</sup> As few respondents scored in the non ESP holder category, this category was combined with the weak ESP holder category.