THE ROLE OF CERTIFICATION IN ADVANCING THE SUSTAINABLE TOURISM AGENDA

A case study of the *ECO* certification scheme in the Wet Tropics World Heritage Area (WTWHA)

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2013

For the degree of Doctor of Philosophy
in the School of Earth & Environmental Sciences & in the School of Business
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The research presented and reported in this thesis was conducted within the guidelines for research ethics outlined in the National Statement on Ethics Conduct in Research Involving Human (1999), the Joint NHMRC/AVCC Statement and Guidelines on Research Practice (1997), the James Cook University Policy on Experimentation Ethics Standard Practices and Guidelines (2001), and the James Cook University Statement and Guidelines on Research Practice (2001). The proposed research methodology received clearance from the James Cook University Experimentation Ethics Review Committee (approval number H3579).

Signature _____ Date _____

STATEMENT ON THE CONTRIBUTION OF OTHERS

Publication Details

Chapter #	Details of publication(s)	Nature and extent of the intellectual input of each author
	Already published	
4	**Esparon, M**., Stoeckl, N., & Gyuris, E. (*2013*). *ECO* certification in Queensland's Wet Tropics World Heritage Area: Is it good for business? In C. Tisdell (Ed.), Handbook on Tourism Economics: Analysis, New Applications and Case Studies. Singapore: World Scientific.	I analysed the data and wrote the chapter. Professor Natalie Stoeckl and Dr Emma Gyuris assisted in designing the study, interpreting the results and editing.
5	**Esparon, M**., Gyuris, E., &. Stoeckl, N. *(2013):* Does *ECO* certification deliver benefits? An empirical investigation of visitors' perceptions of the importance of ECO certification's attributes and of operator performance, Journal of Sustainable Tourism, DOI: 10.1080/09669582.2013.802325	I analysed the data and wrote the chapter. Professor Natalie Stoeckl and Dr Emma Gyuris assisted in designing the study, interpreting the results and editing.
	Appendix **Esparon, M**, Stoeckl, N, & Gyuris, E (2013). *ECO certification and tourism operators: marketing and operational issues.* Tourism Issues: tourism sciences review, 16. pp. 59-78.	I analysed the data and wrote the chapter. Professor Natalie Stoeckl and Dr Emma Gyuris assisted in designing the study, interpreting the results and editing. Statistical advice was provided by Dr Rabiul Beg.
	Planned publication	
6	**Esparon, M**., Stoeckl, N., & Gyuris, E. Does the importance ascribed to different attributes correspond with willingness to pay? A valuation of the multi-faceted *ECO* certification scheme. *Journal of Tourism Economics.* To be submitted to the journal in September 2013	I analysed the data and wrote the chapter. Professor Natalie Stoeckl and Dr Emma Gyuris assisted in designing the study, interpreting the results and editing.

RESEARCH FUNDING & EDITORIAL SUPPORT

Agency/Institute	Total $ (AUD)
School of Earth & Environmental Science	1000
Skyrail Rainforest Foundation	5,000
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	10,500
Joint scholarship James Cook University & Marine and Tropical Sciences Research Facility	70,000
GRAND TOTAL	**86,000**

Editorial support

Professor Natalie Stoeckl

Dr Emma Gyuris

Statistical support

Professor Natalie Stoeckl

Dr Rabiul Beg

Assistance with data collection

Ms Rie Hagihara

Mrs Jenny Panchal

ECO-certified and non-*ECO* certified tourism businesses in and around the WTWHA

Use of services

Cairns Domestic Airport

Skyrail

Kuranda Village

James Cook University (JCU)

Other assistance

Mrs Robyn Yesberg (School of Business, JCU)

Ms Glen Connolly (School of Earth & Environmental Sciences, JCU)

Cheryl Fernandez (School of Business, JCU)

ACKNOWLEDGEMENTS

As I look back on my PhD journey, I can't help but feel immense gratitude for I know the thesis I submit today would not have been possible without the support I have received. I was told at the start of this journey to expect a roller coaster ride, indeed it has been just that, but throughout it all, I was blessed to have had a loving and supporting network. The most heartfelt of gratitude goes to my supervisors **Professor Natalie Stoeckl** and **Dr Emma Gyuris**, who always believed in me. Because of your invaluable contributions, unwavering support, guidance, undivided time and attention, I have been able to see this thesis to fruition. To Natalie, I will be forever indebted for your kindness, for guiding my enthusiasm, for giving me opportunities beyond this PhD. Thank you for your encouragement during the times I doubted. I am very fortunate to have you as a mentor. To Emma, your sincere and constructive feedback greatly enriched my writing. I am very appreciative of your attention to detail. To both of you, thank you for gently pushing me to be the best I can be. It has been a pleasure to have progressed under such high-calibre supervisions. Thank you!

It is said that *"ability is nothing without opportunity"*. Indeed, I am grateful for the organisations that have supported me throughout my candidature. I wish to thank **James Cook University** and the **Marine and Tropical Sciences Research Facility (MTSRF)** for providing me with a scholarship. I acknowledge the support of the **Commonwealth Scientific and Industrial Research Organisation (CSIRO)** for their assistance via a top-up scholarship. Through research funding obtained from the **Skyrail Rainforest Foundation** and the **School of Earth and Environmental Sciences**, I was able to travel and undertake my data collection. I am immensely grateful to all the **tourism operators** who took part in this study by either filling out the survey or by distributing it to their clients. Thank you to all the **visitors** who took the time from their holiday to complete my surveys. A special thank you to **Rie Hagihara** and **Jenny Panchal** who assisted me with my data collection and to **Cheryl Fernandez** for her help in editing my thesis. I am also thankful to **Professor Peter Valentine** who began this journey with me. Thank you for the opportunity.

Thank you also goes to the **Graduate Research School (GRS)** for their support especially through the provision of several workshops which have been very useful throughout my tenure. To the **academic and professional support staff of the School of Business (SOB)** and the **School of Earth and Environmental Sciences (SEES)**, I am grateful for your support and encouragement. To **Mrs Robyn Yesberg**, especially, I appreciate all your help. To my fellow **PhD colleagues** who understood and shared in my experiences, thank you. We made it!

To my partner **Steven Lagrenade**, who stood by me through all the happy and challenging moments. Thank you for your unswerving support, patience and understanding.

To my **family**, who have always encouraged me and prayed for me in every undertaking I had. The sacrifices I make for being away from you, makes it worthwhile knowing that you are proud of me. To **mum**, my never-ending support, thank you for everything.

Above all, I thank my source of strength, I thank **God** for I know, although I worked hard for it, that all these opportunities, all these wonderful people who were there to support me, all was because He made it possible.

I am excited about what's ahead, and I look forward to making a contribution.

ABSTRACT

With the tourism industry expected to double in size over the next decade and given the wide evidence of its negative consequences, many are concerned that future tourism development will be unsustainable. A key tool to help mitigate tourism's negative environmental and social externalities is the certification of tourism products. Certification requires tourism businesses to meet a variety of criteria related to different dimensions of sustainability. It is thus heralded as a key measure in advancing the agenda for sustainable tourism. However, despite the many claimed benefits, to date there is no concrete evidence to substantiate any of those claims, particularly that which claims certification provides economic benefits to businesses: and it is that which formed the focus of this research. Specifically, this study sought to improve our understanding of consumer demand for certified sustainable tourism products (be it tourist demand for certified tourism products, or tourism operator demand for endorsement by a certification provider.

To fulfill this aim, I hypothesised that: 1) certification is multi-faceted requiring a multi-attribute examination; 2) tourist demand depends on their perceptions of certification and its different attributes; and 3) operator demand depends on their perceptions of different attributes of certification and the (perceived) ability of certification to raise revenues (it also depends upon the ability of certification to lower costs, but that complex problem is left as a task for future research). I focused on five objectives, each of which is directly linked to an identified research gap. They are to:

1. Determine if visitors are willing to pay a premium for certified products and to see how an increase in price would impact on operator revenues
2. Improve our understanding of visitors' perceptions about the importance of different attributes of certification (linked to dimensions of sustainability) and about the performance of tourism operators on those attributes.
3. Improve our understanding of tourism operators' perceptions about the importance of different attributes of certification (linked to dimensions of sustainability) and about their performance on those attributes
4. Examine the alignment between visitor and operator perceptions on the importance of and performance in different attributes
5. Determine if tourists are willing to pay more for some attributes than for others and if visitors are willing to pay more for attributes which are deemed 'important'

The theoretical background of this research is based on the Lancasterian view of utility which explicitly notes that products have multiple attributes and that it is the attributes of a product (rather than the products per se) that yield utility. As such, if one want to understand the demand

for a product (be it certification, or a certified product), one must understand the demand for its attributes.

Information was provided via specific analysis of the *ECO* certification program, chosen principally for its coverage of multiple domains (attributes) of sustainability. Data were collected from a sample of 610 visitors and 48 operators to the Wet Tropics World Heritage Area (WTWHA), an area known to contain some of the largest concentrations of visitors and operators and with easy, year-round access. The attributes focused on were those which: a) the *ECO* certification program assessed; and b) were associated with a priority of the Wet Tropics Management Authority. These were: Natural area focus (*Nature*), Interpretation (*Interpretation*), Environmental sustainability (*Environment*), Contribution to conservation (*Conservation*), Working with local communities (*Community*), Cultural component (*Culture*), Customer satisfaction (*Customer*) and Responsible marketing (*Marketing*).

A dichotomous choice contingent valuation (CV) approach was used to address objective 1. Specifically, I asked visitors: a) if they would prefer a certified operator at the same price; and b) if they would be willing to pay more for a certified operator. With no difference in price, visitors showed a preference for *ECO*-certified operators and many visitors were willing to pay more for certification, but, for every price scenario presented, the percentage (%) of visitors not willing to pay a premium exceeded the percentage (%) price increase, implying that a price rise would decrease revenues. Evidently, for operators to sign up for *ECO* certification and to then charge a price premium (to possibly cover any administrative or operational costs associated with that decision) may not make financial sense, unless operators are able to 1) reduce costs and/or 2) attract new customers.

In the case of the latter, the financially well-off, well-educated, female and the young visitors were found as potential market segments when marketing certified products. These groups of visitors were statistically more likely to express a willingness to pay (WTP) for certified products than others. Moreover, it was found that being *'informed'* about certification *per se*, is not necessarily effective in determining WTP. Instead, it is consumer perceptions about the effectiveness of certification that is most significant.

Furthermore, to attract new customers, operators must understand what consumers most care about and whether this matches with the requirements of certification. But, as noted above, certification is not a simple *'product'*: it is complex and multi-faceted, encompassing various domains (attributes) of sustainability. Hence to address objective 2, tourists were presented with the list of attributes above, and asked about their perceptions of the importance of those various

attributes and their perceptions about the performance of tourism operators on those same criteria. Responses were elicited on a five-point Likert scale. Data were analysed graphically, using non-parametric statistical tests and using a modified version of Importance-Performance-Analysis (IPA).

Results indicate a strong alignment between visitor perceptions about what is *'important'* and items assessed by the *ECO* certification scheme, although key attributes that are held to be particularly important the Wet Tropic Management Authority, were ranked (relatively) low in importance (e.g. *Conservation, Environment* and *Culture*).

As to the perceived performance of operators on these attributes, visitors consistently judged the performance of *ECO*-certified operators to be '*better*' than their non-*ECO* certified counterparts. However, these observations may not necessarily denote actual performance, further validation of these observations is required. Moreover, many attributes are *'invisible',* in the sense that efforts made by operators on these attributes are unknown to the visitor. Accordingly, an accurate assessment and depiction of performance cannot be made – although having information about perceptions of performance is nonetheless enlightening.

Important findings also emerged from the comparison of importance and performance. Where significant differences between these two measures existed, *ECO*-certified operators' performance scores exceeded importance scores. This suggests that customers are more satisfied with *ECO*-certified products than they are with the non-*ECO* certified products. As such, *ECO*-certified operators seem to be effectively competing on non-price factors, a highly desirable outcome in extremely competitive industries such as tourism.

The commercialisation of certified products also depends on operator support, hence the significance of objective 3 which sought to understand operator views on the importance and of their (self-assessed) performance on the various attributes. This was assessed using a similar approach to that used for tourists to also enable examination of the alignment between these two different views (objective 4). The same attributes (*Nature, Marketing* and *Community*) where deemed to be the most important to both visitors and operators, indicating that both *'value'* the same things. *ECO*-certified operators self-scored their performance higher than non-*ECO* certified operators across the majority of attributes – however, no significant differences in performance were found. Nevertheless, according to visitors, *ECO*-certified operators out-performed their non-certified counterparts on many attributes and these differences were statistically significant.

Tourist WTP for these attributes was also explored (objective 5) using a modified Contingent Valuation approach (developed using insights from choice modeling that allowed a fine grained analysis of product attributes). Across all three products, visitors were more likely to express a high WTP for *Community*, *Environment* and *Nature*. Significantly, visitors' perceived importance of specific attributes aligned well with their stated WTP for the same attributes. From a purely commercial perspective, this identifies the attributes on which operators need to focus most to maximize their benefit from visitors' WTP profile. It also increases the confidence of my conclusions about attributes that are most/least important to visitors.

In line with the aims of this research, it can thus be concluded that despite a WTP for *ECO*-certification, certified operators may not necessarily see an increase in revenue, should they decide to raise prices above their non-certified counterparts. In fact, raising price will impact negatively on revenues since the quantity of customers lost far exceed any potential increase in prices. The wider implication of this finding is that certification schemes may not be able to self-finance. Therefore, a convincing argument for certification as a public good would provide *prima facie* support for regulation. The next step is to confirm the public good benefits of certification and this requires information on the environmental and social indicators of performance.

Visitors in this research clearly indicated that they perceive certification to be contributing positively to sustainability and in many instances, considered the performance of *ECO*-certified operators to be '*better*' than the alternative. Moreover, the study found that when attributes of certification are considered to be important, visitors are willing to pay for them. The implications of these findings are that consumers have a strong desire for products that are authentically sustainable, they expect certification to make a '*difference*' – if they believe certification really can make a *'difference'*, they are WTP for it. Accordingly, it is vital that certification programs are able to demonstrate credible evidence of its positive impacts if consumers are to fully support it as a measure of sustainability. If this cannot be done, visitors may not choose to purchase certified products, and operators may not choose to be certified. Consequently, the potential benefits of such an important *'tool'* for managing the sustainable growth of the industry may never be realised.

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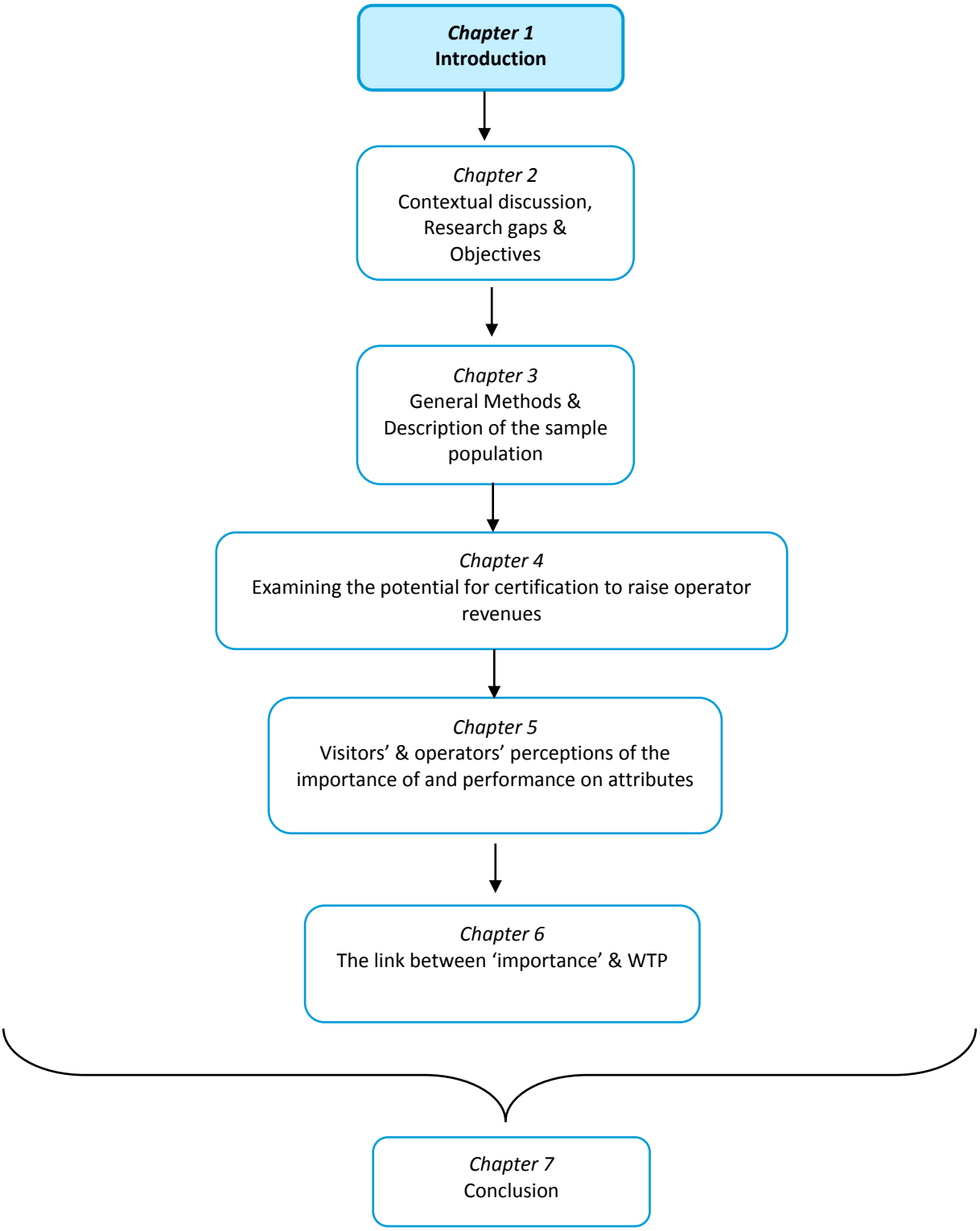
Thesis Outline



CHAPTER 1
INTRODUCTION

Chapter outline

Synopsis

This chapter sets the context of my research. It opens with a discussion of the opportunities and challenges for a sustainable tourism industry, highlights specific sectorial impacts and describes proposed strategies for improvement. Certification is then emphasised as a key tool in helping to mitigate some of tourism' negative externalities. The chapter then explores how effective certification is, differentiating between the established realities and the claimed benefits. A discussion about why tourism businesses may or may not want to have their products certified is provided. The chapter ends by outlining the overarching aim of the thesis.

1.1 Opportunities and challenges for sustainable tourism

No longer the sole prerogative of the wealthy (1995, p. 463), tourism has developed into an important global leisure activity supporting the growth of an entire industry.[1] Rising incomes, more leisure time, improved opportunities and improved technologies, especially in transport and communication, are seen as key contributors to this movement (Tisdell & Wilson, 2001; Holloway, Humphreys, & Davidson, 2009). For several years now, tourism has been acknowledged as one of the world's largest and fastest growing industries and its importance for economic development is well recognised (OECD, 2008; Cerina, Markandya, & McAleer, 2011).[2]

Tourism interacts with various sectors of the economy, for instance agriculture and manufacturing, either directly or indirectly and in doing so, boosts demand for goods and services from those sectors (OECD, 2008). Even in times of economic instability, (e.g. the 2008 global financial crisis), terrorist attacks (e.g. September 11), epidemics (e.g. Severe Acute Respiratory Syndrome (SARS) and major natural disasters (e.g. the 2004 Indian Ocean tsunami), the industry proved to be resilient by quickly resuming its position in global growth (World Tourism and Travel Council, 2009). It is perhaps these dynamics that entice governments worldwide to make tourism an important priority for socio-economic policy (Mavromatis & Buhalis, 2004; Bolwell & Weinz, 2008; Gao, Huang, & Huang, 2009).[3]

Most of the positive impacts of tourism that have been extensively researched in the literature are financial (Stoeckl, 2008),[4] but the non-monetary impacts of tourism are also important. Tourism provides opportunities for visitors and hosts to celebrate cultural and natural heritage, it can promote conservation, improve the provision of services (e.g. to remote areas) and strengthen national pride to name a few (Ignjic, 2001; Eagles, McCool, & Haynes, 2002; Black & Crabtree, 2007b; Bushell & McCool, 2007; Buckley, 2008).

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[1] The tourism industry encompasses many sectors such as travel, accommodation, attraction, tour, events and conferences, food and beverage, etc.

[2] Economically, the tourism industry surpasses others on a number of measures including: gross output, value added, capital investment, employment, and tax contributions. In 2008 alone, the industry employed over 225 million people, generated 9.6% of total gross domestic product (GDP), 10.9% of total exports and 9.4% of total investment (World Tourism And Travel Council, 2009).

[3] This is especially true for areas with little or no opportunities for economic development (Forstner, 2004).

[4] Two reasons may explain why this is so: 1) they are easily quantifiable or 2) it may simply be a deliberate act to positively show that tourism is of net benefit to host destinations (Archer & Cooper, 1998).

However, just as there are examples of the good tourism outcomes, so too are there examples of the bad and an honest accounting of the industry demands an examination of its negative impacts too. Tourism can adversely affect the natural environment and the well-being and culture of host communities: from resource consumption, pollution and generation of wastes, to disruption and commoditisation of cultures, and alienation between members of the community (Yoon, Gursoy, & Chen, 2001; Kuvan & Akan, 2005; Moscardo, 2008; Sharpley, 2008).

Moreover, being a global phenomenon, tourism's impacts do not accrue solely at the destination. Tourism involves the movement of people from one place to another, with air travel being the principal mode of transportation. As such, the travel sector is an important part of the tourism Industry. Air travel is associated with significant carbon dioxide (CO_2) emissions that affect climate change (Becken & Simmons, 2008; Lebe & Zupan, 2012)[5] and numerous investigations provide corroborative evidence that air travel is responsible for the largest share of the overall tourism footprint (Hoyer, 2000; Gossling et al, 2005, 2002; Peeters & Shouten, 2006; Hunter & Shaw, 2006; Esparon, 2007; Patterson et al, (2007). This is indeed a challenging issue to tackle: unless seen to be practical and cheaper, suggestions about *'switching'* to alternative modes of travel[6] are not embraced lightly (DEFRA, 2009, Miller, et al., 2007). That said, there have been many actions taken to address such problems, for example: by building *'cleaner, greener'* aircrafts; by airlines reducing fuel consumption; or through the establishment of carbon offsetting schemes.[7]

Unlike the travel sector, the accommodation sector avoids the front line of environmental concern largely because it consumes a relatively small amount of non-renewable resources generating less gross environmental pollution (Kirk, 1995; Timothy & Teye, 2009). Nonetheless, this sector forms an integral part of any tourism activity. Indeed, one could argue that if there were no place to stay in a *'host'* destination visitors would not travel there. Cumulatively therefore, the accommodation sector is capable of placing substantial strain on the environments in which it operates (Ito, 2007).

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[5] A trip to Fiji from London, for example, generates roughly 4.5 tonnes of CO_2, equating the total annual energy usage of an average household in UK (Bennet, 2006 in Leslie, 2012) Similarly, Moreo, DeMicco, & Xiong (2009), estimated that for every 4000 miles that it carries a single passenger, the average airliner emits one tonne of carbon dioxide.

[6] Commonly referred to as *'slow travel'*, the concept promotes alternative travel (e.g. travelling by train instead of by air), it does, however, involve longer journey times (Dickinson & Lumsdon, 2010). Although seen as a positive step in a bid to reduce emissions, the current trend of 'get there quick' seems to be more popular, and factors such as time, cost, ease of access and established behavioural patterns will always serve as barriers (Leslie, 2012).

[7] Carbon offsetting schemes seek to offset the GHG carbon dioxide (Gossling, et al., 2007; Lovell, Bulkeley, & Liverman, 2009). Although proclaimed as an important mitigation tool, critics question the extent to which the revenues raised actually infiltrate sustainability projects (e.g. Kirkup, 2008, Johns and Leslie, 2008). Moreover, studies such as those of Defra (2009) and Brouwer et al., (2008) depict low awareness and few interests, which ultimately impedes on the potential success of such schemes.

For example, the accommodation sector is known to be an intensive resource consumer (notably of water and energy) and also generates significant amounts of waste (Robinot & Giannelloni, 2010; Jhawar, et al., 2012). In 2005, it was estimated that the accommodation sector was responsible for 21% of tourism's carbon dioxide emissions (WTO, 2009). Some researchers believe the accommodation sector is amongst the most vulnerable to climate change because of its fixed assets (e.g. Su, Hall, & Ozanne, 2012). Consequently, the accommodation sector can no longer be ignored when discussing the environmental impacts of tourism (Wu & Teng, 2011, p. 7579).

Most successful in evading criticism are the tour operators. This may be partially due to less research conducted in this sector, compared to the travel and accommodation sectors. Based on their product offering, tour operators are generally categorised as specialist or mass market operators. Specialist tour operators are small to medium independent companies offering *'authentic'* products: they specialise in a particular geographic area or type of holiday and market their products directly to the visitor. They are a rapidly expanding sector of the industry, reflecting the increasing fragmentation of the market where tourists seek something *'different'* (Curtin & Busby, 1999). Specialists usually market themselves as having sound environmental policies, are more responsive to local community concerns and their volumes are lower. As such, their environmental and social impacts are generally considered negligible (Budeanu, 2001; Tzschentke, Kirk, & Lynch, 2008a). However, not everyone supports this view, with many labeling such types of operations as *'destructive'*: for example, they bring tourists into direct contact with people in remote locations which can then lead to the commoditisation of cultures. They also expose fragile sites of ecological and cultural significance (e.g. protected areas) to the threat of degradation. Hence specialist operations may be small, but, they are not totally benign: individually, they may have a relatively small impact, but collectively the impact may be large.

Mass tour operators on the other hand, offer standardised products and are usually vertically, horizontally and/or diagonally integrated companies, offering packaged holidays. They have large operations with offices throughout the world. Their size gives them bargaining and buying power, as such, they are able to enjoy economies of scale. However, in doing so, they can generate significant environmental and social costs – if only because of their sheer size. Destinations often become substitutes for each other, since brochures accentuate common attractions, namely beaches and entertainment. Tourists thus base their choice on price, rather than the unique attributes of the place, its people and its ecology. As such, the sustainability of the entire tourism industry depends to a large extent on the mass tourism operators: not only are their impacts likely to be substantial, but they are in a good position to educate and encourage consumers and producers to have more responsible tourism actions (Budeanu, 2001).

Before progressing further, a few distinctions must be made. Whilst the term *tour operator* generally encompasses both specialist and mass operators, within this study, a tour operator is defined as **a small operator offering tours only**. Furthermore, in this study, the term *tourism operator* is used initially to define all types of operators – the term is subsequently sub-divided to distinguish three individual types of operators approached in this study: accommodations, attractions and tours.

1.2 The sustainable tourism agenda

That there are potentially negative environmental impacts of tourism is particularly problematic in environmentally and culturally rich and vulnerable areas, such as protected areas, formally defined as:

> *"an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources, managed through legal or other effective means"* (UNEP-WCMC, 2006).

The concept of protected area is based on the assumption that protection continues in perpetuity (Dudley, 2004). In practice, however, *'protected'* status does not guarantee protection and many protected areas are protected in name only. Whilst there has been much growth in the number of protected areas since the early 1980s (IUCN, 2009), there is also evidence that such growth does not mean the quality of sites is increasing. In fact, just as the number of designated protected areas has increased, so too has the number of protected areas that are in danger (Figure 1.1). Currently, there are 38 properties on the *List of World Heritage in Danger* (UNESCO, 2012).

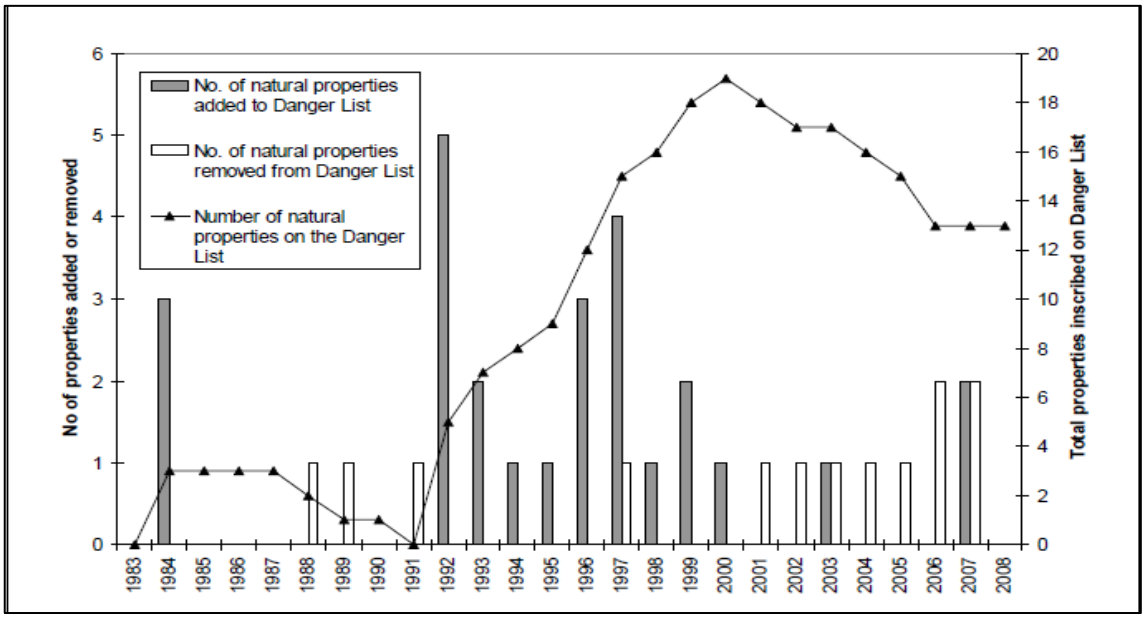

Figure 1.1 Numbers of natural world heritage properties included on the list of world heritage in danger
Source: (IUCN, 2009)

Degradation comes in many forms, including poaching, illegal logging, grazing, mining, habitat degradation, dam construction, road construction and unsustainable tourism development (Dudley, Hockings, & Stolton, 1999; IUCN, 2009). Central to this thesis, is the fact that poorly managed tourism was a critical factor in the inclusion of the Galapagos Islands on the danger list in 2007. Although this is no longer the case (UNESCO, 2010a),[8] it nevertheless highlights the vulnerability of such areas when no effort is in place to tackle the mounting pressures of tourism. The Belize Barrier Reef Reserve System is another example in which tourism played a significant role in its inscription on the danger list in 2011. Unlike the Galapagos Islands, this world heritage area remains on the danger list (UNESCO, 2012). Clearly, there is a need to ensure that tourism develops sustainably, particularly in areas such as these.

Whilst it is not my intention to produce an in-depth discussion on sustainable development, no analysis of sustainable tourism can be undertaken without first considering the *'mother'* concept (Weaver & Lawton, 1999). The notion of sustainable development has captured the attention of academics and developers for many years and it is likely to be on-going. Since gaining recognition in the 1980s (WCED, 1987), sustainable development has become a buzzword in tourism research and is now one of the most publicised and the most critiqued notion – to the point of being considered *'vague'* and *'void'* of analytic content (Isaacs, 2000; Hussen, 2004). A lack of universal definition about the term has led to a multiplicity of tailor-made meanings (>100) and applications in varying *'shades of green'* (Banerjee, 2002; Page & Dowling, 2002). As it stands, discussions about the term sustainable development remains patchy and disjointed (Liu, 2003).

Notwithstanding the problems of defining a meaning for sustainable development, the notion has nevertheless provided a platform on which different stakeholders can interact, negotiate and reflect upon their actions and resultant consequences of those actions on the broader natural and social environments (Saarinen, 2006). Fundamentally, the notion argues for development that:

> *"meets the needs of the present without compromising the ability of future generations to meet their own needs"* (WCED, 1987, p. 43).

This means that sustainable development is not a fixed state of harmony (Liu, 2003), but rather, a dynamic process of change geared to enhance the potential of both current and future generations in meeting their needs and aspirations (WCED, 1987). Some authors (e.g. Ham & Weiler, 2002) note it implies economic growth, together with the protection of environmental quality, each reinforcing

[8] Significant effort has been made on the part of the Ecuadorian government to strengthen conservation measures, especially in dealing with introduced species inadvertently brought to the island by tourists (Goodstein, 2007; UNESCO, 2010a).

the other. Put simply, one cannot exist without the other. However, Liu & Jones (1996, p. 217) maintain that:

> *"development does not necessarily entail 'growth' - instead, in realising specific social and economic goals, development may call for 'stabilisation, increase, reduction, change of quality or even removal of existing products, firms, industries, or other elements"*.

In practice however, ambiguity about the meaning of the phrase means that almost any action can be justified as being *'sustainable development'* (Beeler, 2000). Such flexibility, although helpful in achieving popularity, unfortunately hinders any effort made to achieve consistency (Bell & Morse, 1999).

In the context of tourism specifically, the meaning of the term sustainable development can be quite challenging because definitions must be shared and agreed amongst three key stakeholder groups in tourism development decisions (Figure 1.2):

1. Land management agencies, that provide the outdoor recreation opportunities as well as manage the scenic backdrops for tourism development;
2. The tourism industry (particularly tourism operators), that facilitate various leisure opportunities and provide a range of services; and
3. The local residents, who may benefit from tourism development, but who also may pay certain costs associated with impacts on quality of life, physical infrastructure and services (McCool, Moisey, & Nickerson, 2001, p. 125).

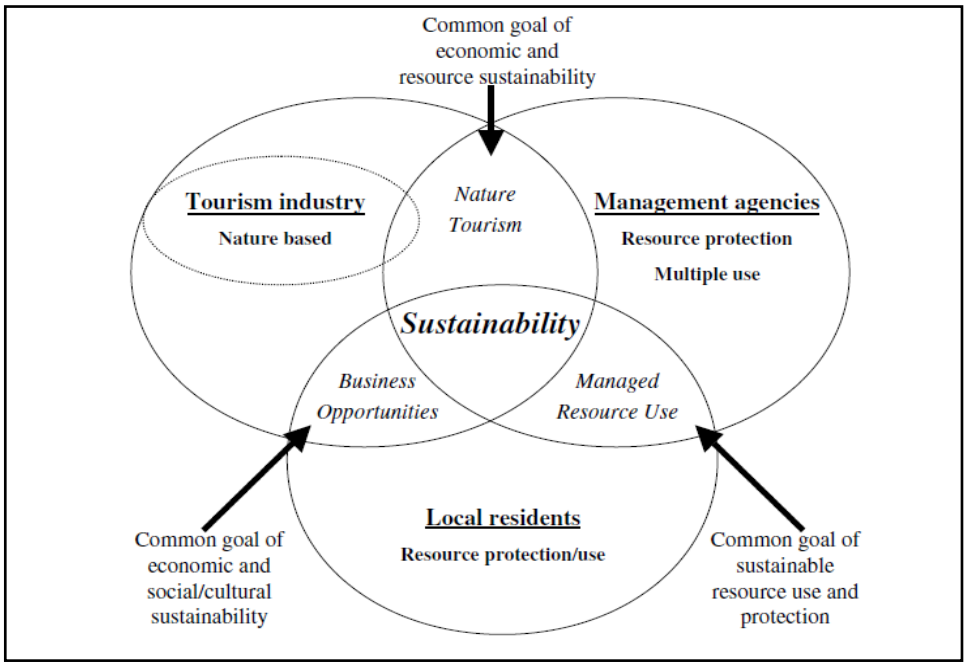

Figure 1.2 Major participants in tourism development and their shared goals and opportunities for social, natural resource and economic sustainability
(Based on Horochowski & Moisey, 1999 in McCool, et al., 2001)

Notwithstanding the significance of the other two stakeholders, this thesis is focused on the tourism industry and the discussion is confined mainly to tourists and tourism operators and the products they buy and sell respectively. However, before I progress further with the discussion, it must be noted that overlaps in meanings across these three stakeholder groups and indeed, different stakeholders within each group, are laden by contrary objectives, interests, mandates, perceptions and value systems (Liu, 2003). Thus, perfect agreement is rare, as no matter what the consensus, there will always be both winners and losers from tourism development decisions (Johnston & Tyrrell, 2005). Nevertheless, it is important that a sincere attempt is made at integrating the needs and concerns of all groups. Otherwise, the long-range objectives and sustainability of tourism will fail, especially if one group is continually subordinated to the others (Bramwell & Lane, 2000; Department of the Environment and Heritage, 2004).

Accordingly, when defining sustainable tourism, one needs to be aware of the many conflicting goals of the many stakeholders involved. Moreover, additional details regarding what needs to be sustained, for whom it is to be sustained and the level at which it is to be sustained – although challenging - are important issues to consider (Pezzey, 1997; Johnston & Tyrrell, 2005). Despite the fairly young history (25 years or so) and vibrant debate on sustainable tourism, to date, there is still disagreement about what should be sustained. For instance, *Is it the number of visitors? The size of industry profits? The number of tourist jobs?* or *The quality of environmental resources?* Part of the reason for this disagreement is that tourism is not a homogenous good: it depends on the nature of the destination, the type of product it offers, the kind of tourists it attracts and the stages of its lifecycle (Liu, 2003). Besides, interpretation of what is *'sustainable'* is likely to change overtime as interest in and the commitment of stakeholders to different issues changes (Dredge, et al., 2006).

Despite these varied views, it seems that four features must be in place in order for tourism to be sustainable (Beioley, 1995, cited in Hobson & Essex, 2001) and they are:

1. **Tourism must respect the economic well-being and social and cultural concerns of the host community;**
2. **Tourism must respect the character of the local environment and operate within its capacity to regenerate itself;**
3. **Tourism should reduce its impact on the wider global environment in terms of depletion of natural resources and pollution; and**
4. **Tourism should provide a meaningful and satisfying experience for the visitor.**

It is these features that form the basis of my research and to ensure that all are considered, I adopt the following definition of sustainable tourism development for use within this thesis:

> *"Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems"* (WTO, 2001).

1.3 Promoting sustainable tourism

Since not all tourism operators operate sustainably, several international organisations[9] have argued that both the tourism product and the tourist, need to develop in more environmentally and socially friendly ways (Leslie, 2012). There is also a growing call for the development of mechanisms which reduce the negative impacts of tourism but which allow the industry to continue (Moscardo, 2008).

In accordance, several initiatives have been developed to put the tourism industry on the path to sustainability. They come in many forms, ranging from command-and-control, to economic instruments, to voluntary measures. Examples of the first two include but are not limited to: zoning (to control tourism development or to limit tourist access to sensitive areas); taxing of energy use and waste treatment services (to prompt tourism enterprises to save scarce resources and reduce pollution); and public provision of traffic management infrastructures (to reduce congestion and pollution in tourist areas) (Bramwell, 1998; Taylor, Pollard, Rocks, & Angus, 2012). However, it is voluntary approaches that have received the most attention. Credited to their perceived success is the fact that voluntary measures are less likely to face resistance and may thus be less politically challenging to implement (unlike for example, taxes or regulatory standards) (Rivera, 2002; Kotchen, 2012).

Traditionally, taking steps to protect ecological and social values has been a relatively low priority of businesses (Miller, 2001a). Yet, many tourism enterprises have now voluntarily adopted initiatives to address the concerns of ecological and social sustainability (Dodds & Joppe, 2005). As a result, voluntary approaches have become an increasingly popular means of attempting to ensure long-term dedication and improvement in tourism enterprises (Foxlee, 2002; Ayuso, 2006; Font, 2007; Ito, 2007).

An early example of such an effort is the *'Tour Operator's Initiative for Sustainable Tourism Development'* (TOI). Backed by key organisations such as the United Nations Environment

[9] For example, United Nations World Tourism Organisation (UNWTO) and the United Nations Environment Programme (UNEP).

Programme (UNEP), United Nations Educational Scientific and Cultural Organisation (UNESCO) and United Nations World Tourism Organisation (UNWTO), the TOI addresses both community and industry concerns about the intricacy of tourism impacts. Importantly, the TOI helps tourism operators understand that moving towards sustainable tourism is not a threat – it is rather a means of securing growth and prosperity in the future (Tepelus, 2005). Indeed, the *tourism operator's* initiative claims that a strong positive reputation as a company that cares about sustainability issues, including improvements to the quality of the tourism experience delivered to clients, can result in increased customer satisfaction and loyalty, strengthened brand value and greater publicity and marketing opportunities (TOI, 2013).

The central objectives of TOI are:

1. To advance the sustainable development and management of tourism; and
2. To encourage tour operators to make a corporate commitment to sustainable development, in their own operations and in their relations with their business partners.

These objectives spans five key areas of the business: product design and management, supply chain management, internal management, communication with customers and cooperation with destinations (Schwartz, Tapper & Font, 2008). Of these, supply chain management has received the most attention, given this is the crux of where impacts occur (Font & Cochrane, 2005). Essentially, the goal is for tourism operators to work with partners to ensure that the products and services offered meet the tourism operator's specifications, be it on product designs, planning, operations, logistics, delivery and contractual procedures. Examples of how this can be done include: introducing minimum environmental criteria into partner's contracts (such as water and energy saving measures) or providing technical assistance to partners to improve their environmental performance.

Such aspirations are encouraging, however, in reality, achieving them is not straightforward. Firstly, tourism related supply chains are diverse and fragmented: they include collections of accommodations, transports, excursions, activities, food, bars, restaurants, handicrafts and other services such as waste disposal and infrastructures that support tourism (Schwartz, Tapper & Font, 2008) (Figure 1.3). These all form part of the holiday product that is expected by tourists when they purchase holidays and satisfaction depends on performance at all the links in the supply chain. As such, each individual tourism-based business is not always in direct control of the environmental and social impacts of the entire tourist *'product'*. Secondly, market demand for more sustainable tourism is ambiguous. This is discussed in more detail in Chapter 2, however, suffice to say here is while there appears to be demand for more environmentally and socially friendly practices,

generally, tourists tend to shop around for the lowest price. Thus, consumer loyalty to any cause (not just sustainability) is not often seen in the tour operating industry (Van Wijk & Persoon, 2006). Moreover, tourism is susceptible to tough market conditions impacting on businesses: events such as the 2008 global financial crisis, for example, undermine the profit margins of tourism operations as tourists refrain from holidaying. Such uncertainties in the market mean that the likelihood of sincere sustainability engagement among tourism operators may be low.

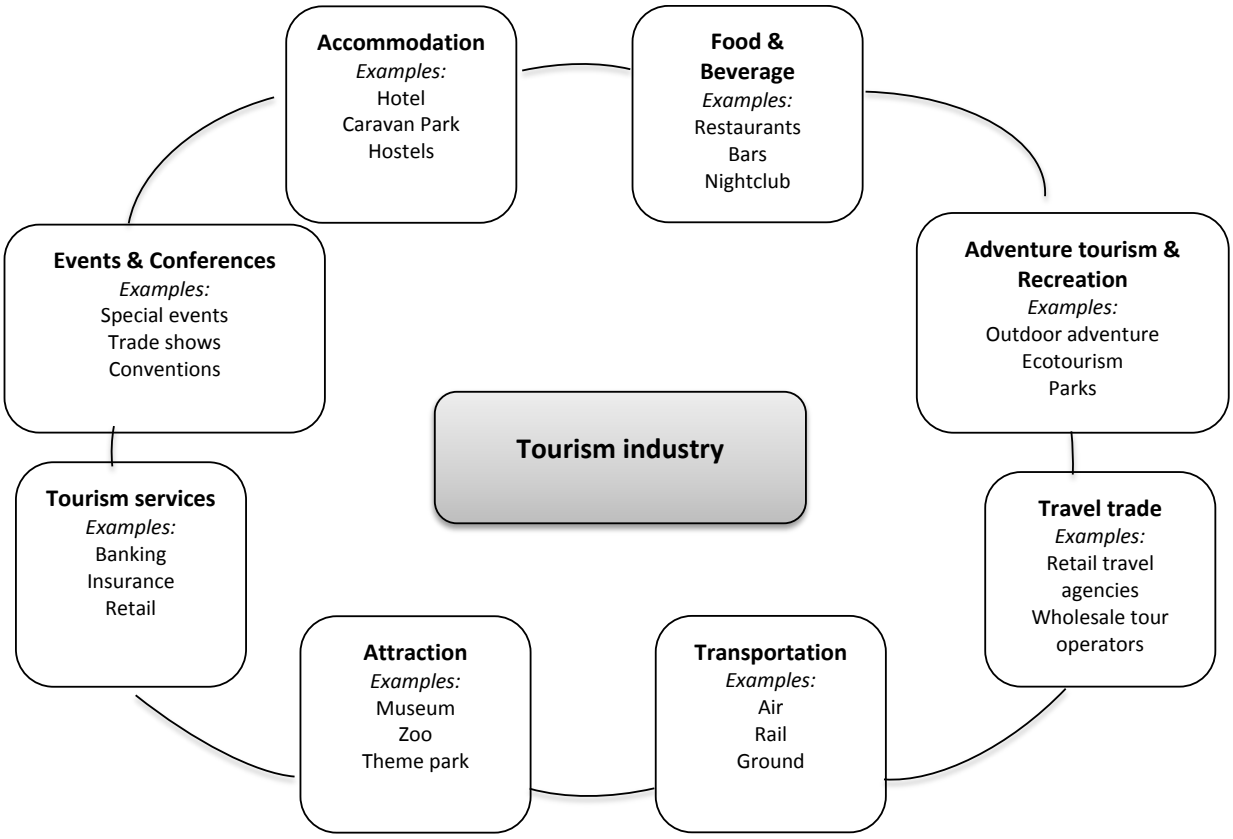

Figure 1.3 Complexity of the tourism industry

The TOI is not the only initiative seeking to promote sustainable tourism; numerous other voluntary measures exist. These include codes of conduct, best environmental practices, environmental management systems (EMSs), environmental performance indicators, self-regulation and certification. But businesses are not obliged by law to adopt them (for whatever reason) and consumers are not obligated to conform (e.g. to codes of conduct) (Black & Crabtree, 2007a). At least partially for this reason, these initiatives range in their degree of effectiveness in achieving sustainable outcomes, with codes of conduct claimed as the least effective[10] and certification held up as providing the most promise (Melo & Wolf, 2005).

[10] Codes of conduct are public statements that aim to show commitment to basic principles of environmentally sound (and sustainable) business performance (Ayuso, 2007). They are generally characterised as having: a variety

1.4 Certification's role in sustainable tourism development

1.4.1 Certification in general

Formally defined as *"a process of providing documented assurance, in the form of a logo or seal, that a product, service or organisation complies with a given standard"* (Hone & Rome, 2001), certification is broadly promoted as being able to improve the triple bottom line performance of firms whilst promoting more sustainable consumption (Font, 2007). The use of certification in the marketplace is not a new phenomenon: the concept dates back to the 15th century and in tourism specifically, the practice began in the early 20th century (Toth, 2002). Traditionally, certification programs covered aspects of quality of the tourist product, namely that of lodging and restaurants, as well as some aspects of health, hygiene and safety, or at assessing professionals. However, with the advent of the environmental movement and more importantly, the publication of the *Agenda 21* that called for environmental and social responsibility of all sectors of society globally, certification programs began to see a change in focus to include coverage of a broad range of sustainability factors (although recognition of sociocultural aspects lagged behind those of environmental) (Bien, 2007). Today, the range of products endorsed by certification programs has expanded significantly and for a number of industries, certification is now viewed as a way to promote sustainable development (Honey & Stewart, 2002).

Whilst this thesis focuses primarily on certification, it must be noted nonetheless, that certification is just one of several unified routes by which a product, process, service, or system is assessed for conformance against a set of standards (Figure 1.4). These routes, known as *conformity assessment*, are crucial in facilitating suppliers, consumers and regulators discern the *'good'* vs. the *'bad'*. For a comprehensive account of the overall system, please refer to Toth (2002) and Font (2002).

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of authors; a targeted audience; and as conveying desirable messages or instructions on environmental and cultural factors so as to influence appropriate behaviour. They endeavour to regulate as well as educate (Black & Crabtree, 2007) and since they advocate for responsible behaviour, they also have an ethical facet (Malloy & Fennell, 1998). Still, the use of codes of conduct has been met with much scrutiny and opposition, in particular, in regards to its use and effectiveness. The voluntary nature of codes of conduct means that there are rarely any checks on compliance. It is proclaimed as a type of self-regulation, yet there is no evidence of formal penalties for non compliance. A report by UNEP (1995), concluded that most codes are poorly executed and scarcely monitored to validate its effectiveness although some researchers (e.g Curtin, 2003) suggest that *'spot checks'* and consumer complaints could help alleviate the problem of monitoring and compliance.

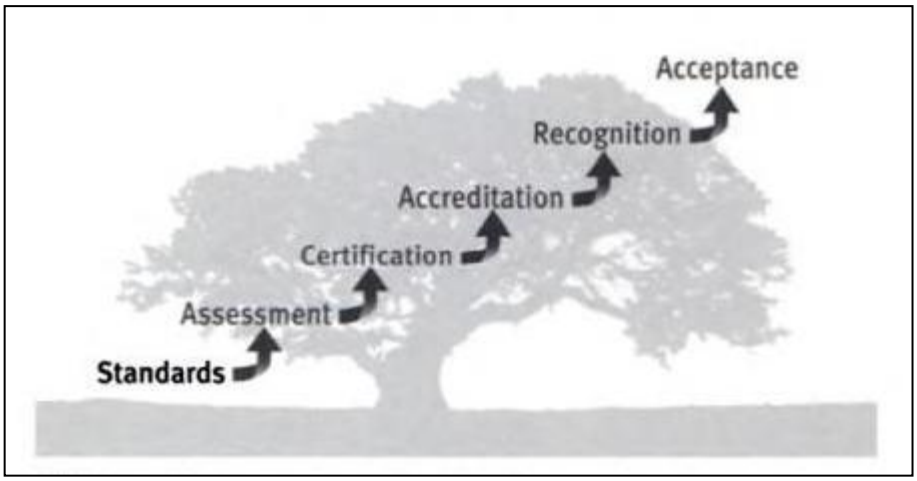

Figure 1.4 Essential components of conformity assessment systems
Source: Toth, 2002

1.4.2 Certification in other industries: Lessons for tourism

Certification schemes have not just propagated in the tourism industry. Increasingly, a number of industries are adopting such schemes, including forestry, fisheries, manufacturing, agriculture and mining to name a few. According to Honey and Rome (2001), the foundation to this phenomena lies in an *"increasingly militant anti-globalisation movement"*. Sensing opportunity (consumer demand) and challenge (consumer boycott), some industries therefore have embarked on the provision of environmentally and socially responsible products. To date, the forestry and fishery certification schemes are the most well-known and arguably, the most successful. Both of these initiatives emerged out of similar concerns over resource depletion and insufficient governmental action in the early 1990s (Gulbrandsen, 2005). Reasoning that tourism programs can learn from the successes and challenges of these two industries, the following subsections provide a brief overview of them.

1.4.2.1 The Forestry Stewardship Council

The *Forestry Stewardship Council* (FSC) is the governing body certifying companies and organisations interested in responsible forestry. It is an international association of members consisting of a diverse group of representatives from environmental and social groups, the timber trade and forestry profession, Indigenous people's organisations, responsible corporations, community forestry groups and forest product certification organisations from around the world, with the aim to improve forest management worldwide (Forestry Stewardship Council, 2012). It is famous for its unique governance structure built upon the principles of participation, democracy and equity (Forestry Stewardship Council, 2010). In addition, the FSC structures all of its international activities to include balanced representation from the global north and the global south.

With a reputation as the toughest of the timber certifications, FSC and its supporters have succeeded in creating demand for certification and labelling. By 2000, it was operating in 40 countries and today this figure has more than doubled, spanning over 107 countries and rising. The most up to date figures (as at October 2012) reveals that more than 166 million hectares of forest worldwide are certified to FSC standards, equivalent to more than 20,000 *Chain-of-Custody Certificates* (CoC) and more than 1000 certificates of a combination of CoC and *Forest Management* (Forestry Stewardship Council, 2012).[11]

1.4.2.2 The Marine Stewardship Council

Fisheries products on the other hand, are certified by the *Marine Stewardship Council* (MSC). The MSC's *Principles and Criteria for Sustainable Fisheries* are at the heart of the program that aims to promote solutions to the issue of overfishing. They establish a series of indicators against which a fishery can be assessed to substantiate a claim that the fish sold and used in various products come from a sustainable and well-managed source (Sainsbury, 2008). However, getting certified can be a lengthy process: it begins with a pre-assessment by an MSC-accredited certifier and ends with a full assessment by an evaluation team nominated by the certifier. The evaluation team made up of a fishery stock assessment expert, an ecosystem expert, and a fisheries management expert awards performance scores based on its own performance indicators and scoring guidelines for each fishery (Gulbrandsen, 2005).

As with FSC, MSC also involves a diverse range of stakeholders including general conservation and marine conservation NGOs, consumer advocacy groups, academics and fisheries experts, fishermen's groups, seafood processors, distributors, retailers and developing nations' interests. Compared to other seafood rating systems, MSC has the highest level of scientific involvement and like FSC, it also offers traceability. Similarly, it too has successfully captured large demand for its products. To date, a total of 289 fisheries are engaged in the program. Of these, 179 are already certified while 110 are in the process of being assessed. An additional 40-50 fisheries are in confidential pre-assessment (Marine Stewardship Council, 2012). More than 15,000 seafood products are sold globally and these products can be traced back to the certified sustainable fisheries.

[11] Forest management certification is awarded to forest managers or owners whose management practices meet the requirements of the FSC Principles and Criteria. Chain-of-Custody certification applies to manufacturers, processors and traders of FSC certified forest products. It verifies FSC certified material and products along the production chain. A third type of certification is also provided: Controlled Wood. It is designed to allow organizations to avoid the categories of wood considered unacceptable. FSC Controlled Wood can only be mixed with FSC certified wood in labelled FSC Mix products (Forestry Stewardship Council, 2012).

1.4.2.3 Lessons for tourism

The achievement of FSC and MSC proves that with the right components in place, a successful certification scheme is feasible. Some of the factors deemed critical include:

1. Industry wide support – this is driven by the commitment of major producers and retailers of forest and seafood products, as well as from many leading social and environmental NGOs (Conroy, 2001). Since tourism has some major global retailers (e.g. travel agencies, hotel chains) whose products are sold worldwide, means that the ability to specify the conditions that those products meet is possible. For example, travel agencies could choose to book their clients only in those properties or on tours where a minimum set of conditions are met (although the internet is arguably reducing the relevance and need for travel agents, thus reducing this effect). As Conroy (2001) argues, this presents great opportunities for an industry leader to distinguish itself by implementing a set of travel standards that embrace sustainability better than its competitors.
2. Rigorous science to *'back-up'* claims (Honey, 2005; Gulbrandsen, 2005);
3. Extensive stakeholder participation – the establishment of a comprehensive network of stakeholders, particularly at the time of inception of the scheme, means that stakeholders feel connected and committed, hence strengthening the schemes' credibility (Honey, 2005). Font (2007) stresses only consensus-based standards can lead to a successful certification programme; and
4. Partnering with renowned and respected environmental organisations such as Greenpeace, WWF, and Friends of the Earth, as well as with companies with reputations of responsible practice – doing so engenders trust, not only among consumers but also with providers who may be sceptical of government (Honey & Rome, 2001).

While tourism can learn from the successes of the FSC and MSC, important challenges (some unique to tourism) must be highlighted. Firstly and as mentioned earlier, tourism is not a homogenous product. It encompasses a number of products/services, such as accommodations, tours, attractions, restaurants, bars, handicrafts, etc. Hence a holiday is multifaceted and complex and it is a non-trivial exercise to work out how best to define a tourism *'product'* so that it can be certified. In contrast, buying a *Fair Trade* coffee, for example, means that only the beans are certified, not the coffee shop or the transportation (Goodwin, 2012). That said, this problem is not unique to tourism: similar issues are associated with products from FSC wood or MSC seafood.

Secondly, unlike timber, seafood or coffee, tourism is not a physical commodity. The actual consumption of a tourism product occurs at locations different from the purchaser's residence, in different destinations, across different natural and cultural environments and has to satisfy an array of interests including leisure, business, medical, adventure, wellness, sports, eco, wildlife, etc. (Sirakaya, McLellan, & Uysal, 1996). Therefore, the issues that arise vary considerably from one destination to another and from one interest to another – making it more difficult, in particular, to achieve extensive stakeholder participation and consensus.

Thirdly, tourists themselves have a significant impact on the sustainability of the activity according to their behaviour (Goodwin, 2012). Whether or not they choose to hire a taxi or walk when at a destination; whether or not they turn off lights or take long showers, will all affect the impact of their visit in a host community.

Lastly, and perhaps more importantly, some forms of tourism (particularly long-haul travel) is a high involvement product. Unlike low involvement products (which tend to be packaged, relatively inexpensive and purchased frequently, thus requiring minimal information or planning), high involvement products carry high risks. A high involvement product (e.g. a house or car) generally involves a higher price, is purchased somewhat infrequently and necessitates an extensive amount of information searching and problem solving by the consumer (Radder & Huang, 2008). In the context of tourism, planning a holiday involves a relatively high level of perceived risk of the decision choice, investing a significant amount of time searching for information about the destination (for example about, attractions, safety, accommodations etc.) and a significant amount of money – although prior experiences may result in lower involvement and lower risk (Sirakaya & Woodside, 2005; Havitz & Dimanche, 2009). That coffee and fish are low, rather than high involvement products means that tourism certification can learn from, but are likely to need to be different to, these other certification programs.

1.4.3 Tourism certification programs

In the tourism industry, certification has gained much popularity to the extent that there are now numerous programs offering logos or seals of approval which are intended to denote socially and/or environmentally superior tourism practices (Honey & Rome, 2001). These schemes may be offered globally (e.g. Green Globe 21), regionally (e.g. Quality Tourism for the Caribbean (QTC), nationally (e.g. *ECO* certification in Australia) or to states or provinces (e.g. SmartVoyager in the Galapagos Islands). Although the vast majority of these schemes centre on accommodations (Honey, 2007), significant efforts have been made to diversify into other segments of the tourism industry, covering destinations (e.g. Costa Rica (CST), attractions (e.g. beaches (Blue Flag), protected areas (PAN Parks), services (e.g. boating & tours) or individuals (e.g. tour guides (ROC).

The vast array of certification programs share many commonalities: voluntary enrolment; standards and criteria; assessment and auditing; logo; membership and fees (Honey, 2007). However, the schemes differ significantly according to how operators are assessed. Some schemes are process-based (i.e. they use internally generated management systems for overseeing and improving measures and practices), others are performance-based (i.e. they use a set of externally determined environmental, socio-cultural and economic criteria) (Honey & Stewart, 2002).

Process-based schemes are essentially environmental management systems (EMS), aimed at helping businesses find an efficient way to incorporate and integrate environmentally-responsible procedures into their service process. These schemes seek to categorise and manage environmental impacts and risks, identify environmental opportunities, train staff and improve the business' image and competitiveness (Fematour, 2000). Advocates of process-based systems promote them as being flexible and applicable across a variety of industries and sectors. However, critics maintain them to be too general to accurately measure the environmental impacts of diverse enterprises, consequently undermining the ability of the business to perform sustainably. Indeed, process-based systems can permit a business to gain certification for simply setting up a management system, even if its performance record is less sustainable than that of other businesses (Honey & Rome, 2001).

Unlike process-based methods, performance-based programs focus on measures of achievement (i.e. outcome), not intent and may thus be better able to promote sustainable development (Honey & Rome, 2001). Other benefits of performance-based programs include: they are less expensive than the alternative; they enable comparisons to be made between companies and between products; they involve a range of stakeholders, hence addressing aspects of importance to a variety of people; they measure performance within and beyond the business on all aspects of sustainability; and importantly, the provision of different levels of certification allows for competition and continual progress.[12] With these advantages, performance-based standards are often preferred (Honey & Stewart, 2002), although many advocate for a mixture of the two (Honey & Rome, 2001; Hansen, 2007).

Within the tourism industry, certification schemes also differ in the types of tourism they assess – e.g. mass tourism, sustainable tourism and ecotourism. Firstly, *mass tourism certification programs* target large sectors of the tourism industry, which during development, failed to adopt ecotourism

[12] Such is the case with the *ECO* certification scheme for example, by which operators must adhere to additional requirements for improvements in the products offered in order to obtain an advanced certification. Another similar example of such schemes include the Audubon Green Leaf *ECO*-Rating Program, where lodging facilities have to meet environmental best practices standards that are required for their rating of one to five Green Leafs.

principles (e.g. hotel chains, package tours/cruises). Early programs focused on quality, health and safety; the newer green programs also emphasise environmentally friendly and cost-saving procedures. In this regard, mass-tourism schemes generally satisfy the needs of businesses solely by providing cost-saving changes, technical assistance and mass market advertising: the primary objective is not sustainability. These mass tourism certification schemes also often fail to consider social equity issues and environmental protection beyond the business' immediate footprint. In this regard, they are perceived to be unsuccessful in the quest for long-term sustainable development (Honey & Rome, 2001).

Sustainable tourism certification programs, on the other hand, consider issues beyond the business and involve consultations with an array of stakeholders - businesses, consumers, host governments and communities. As such, these programs tend to do *'better'* in satisfying, although not entirely, the needs of different stakeholders. A major advantage of this type of certification is that it can be made to suit particular sectors or geographic areas. The flaws are that such programs do not effectively cater for businesses operating in or near natural areas, may be somewhat expensive for small and medium size businesses and often lack the necessary funding for promotion to consumers (Honey & Rome, 2001).

Ecotourism certification programs encompass those businesses that describe themselves as following the principles of ecotourism. As with sustainable development, a multitude of definitions of the term ecotourism have been proposed. However, for the purposes of this study, the definition provided by Ecotourism Australia is adopted:

> *"Ecotourism is ecologically sustainable tourism with a primary focus on experiencing natural areas that foster environmental and cultural understanding, appreciation and conservation"* (Ecotourism Australia, 2011).

Businesses certified under the ecotourism certification programs adopt standards beyond eco-efficiency (i.e. those that are both cost-saving and environmentally better) by contributing towards the preservation of protected areas and ensuring that the benefits of tourism reach the local community. Essentially, the external impacts of the business are considered to be just as important as the internal impacts. Similar to sustainable tourism certification programs, ecotourism certification programs can be tailor-made to suit particular conditions of the area, businesses, services or products. Moreover, those devising the programs must consult with a variety of stakeholders and some researchers claim that these schemes thus work better with small and medium enterprises (Maccarrone-Eaglen & Font, 2002). Unfortunately, most of these programs suffer from a lack of funds for auditing and marketing, thereby failing to meet the needs of the businesses they certify and/or the needs of other stakeholders (Sharpley, 2001).

1.4.4 The 'reality' of eco (or environmental) tourism certification programs

With eco-certification, firms are alleged to be able to minimise their resource consumption and pollution of the environment, deliver social and economic benefits to the local community and improve their financial viability, thus rendering benefits to certified businesses, to consumers, governments, local communities and to the local (and global) biophysical environments (UNEP, 1998; Font & Buckley, 2001; Honey, 2002; Bien, 2007). But – as discussed in more detail in Chapter 2 - not all of those alleged benefits have transpired.

First, eco-certification schemes were originally developed and are generally supported because they are thought to improve the environmental performance of tourism operators (Rotherham, 2005), by establishing environmental performance goals (Darnall & Sides, 2008; Berghoef & Dodds, 2011)[13]. However, any such causal link remains unsubstantiated (Rotherham, 2005; Darnall & Sides, 2008) and sceptics argue that many firms join programs to disguise their poor environmental performance (Rivera & De Leon, 2004). This sceptical view is associated with certification programs lacking due diligence in third-party appraisals (Jhawar, et al., 2012).

Overall, relatively little research has been done on this topic. The few studies that have attempted to assess the link between certification and environmental performance suggest that certification is ineffective in bettering environmental performances of firms. For example, Rivera, et al., (2006) found no evidence of superior environmental performance by certified ski areas in comparison to their non-certified counterparts. Results like this, dampen the belief in such programs and may even render them meaningless (Jhawar, et al., 2012). Moreover, some believe that the vast majority of businesses who join certification schemes are those who already employ superior environmental practices (the '*sustainable pioneers'* or '*low-fruit hangers'*, as they are known), although there are some businesses that have become more informed through certification (Font, 2007). Therefore, how much of any observed improvement in environmental performance that is attributable to certification and how much would have occurred in its absence remains unclear (UNEP, 2006; Font, 2007).

Second, certification is said to benefit consumers because it provides a guarantee of quality and reliability. This is said to occur because certification allows *'responsible'* enterprises to be identified, so that consumers who want to purchase more environmentally and socially friendly

[13] Most programs focus on operational issues but as discussed in the preceding section, some also address conservation initiatives. While operational issues (such as energy conservation, water management and waste minimisation) often address global or regional issues (while saving costs), conservation initiatives often address local issues and sometimes incur costs (Synergy, 2000; Rogerson & Sims, 2012)

products and services are able to make appropriate choices (Bakas, 2005; UNEP & WTO, 2005; Chamorro & Banegil, 2006; Zhang, Joglekar, & Verma, 2012). In other words, certification is claimed to give tourists confidence in products and services and a logo represents a business commitment to environmental standards (Waltz, 2008), thus readdressing problems associated with information asymmetry and free-riders.

But to date, no research has found conclusive evidence that consumers are more satisfied with certified products than with non-certified products (a gap this research helps to fill). Rather, it seems that the proliferation of certification programs and logos in the market confuses consumers (Synergy, 2000; Font & Tribe, 2001; Lebe & Zupan, 2012). Such confusion is perceived as a strong barrier to the purchasing of certified products (Budeanu, 2007). Interestingly, it seems that even experienced eco-travellers do not recognise certification labels when they see them (Waltz, 2008). With so many competing programs and the absence of an agreed set of standards, consumers may be challenged to select a program that they can trust. It is not surprising therefore, to find that consumers are not drawn to certified products (Chafe, 2005), that certification has little meaning for consumers: they find it annoying rather than helpful (Budeanu, 2007) and when making travel plans, researchers have found that labels are not a decisive factor in visitor choices (Puhakka & Siikamaki, 2011; Vail, 2011; Rogerson & Sims, 2012).

Related to point two, is the claim that certification helps consumers differentiate between the genuine and the *'opportunist'* (i.e. the green washers), serving as a guarantee against false claims of sustainability. As argued by Kuehnel (2011), green washers focus on a narrow set of attributes (mostly financial) with no genuine concern for environmental issues: they often lack a long-term focus on the environmental and social aspects of operations. Because certification imposes costs on a business (e.g. time, fees, investments in green technology, etc.), it may thus reduce fraud (Hamilton & Zilberman, 2006). In other words, some researchers believe that the fact that certification is costly to acquire, makes it a valuable resource (Barney, 1991; Bonroy & Constantatos, 2011). But not everyone is convinced that certification helps prevent green-washing. For example, Rivera, et al., (2006) suggest that there is evidence of opportunistic behaviours on the part of ski areas with certification and Rogerson and Sims (2012) argue that many businesses see certification as a way to improve their *'green'* reputation without actually implementing beyond compliance practices (Rogerson & Sims, 2012).

Third – and most relevant to this thesis – certification schemes are purportedly able to improve the market for certified businesses (Font & Epler Wood, 2007), based on intuitive claims of increased consumer demand for environmentally and socially friendly products and services (Goodwin & Francis, 2003; Smith, 2007; Bergin-Seers & Mair, 2009b, 2009a; Bonroy & Constantatos, 2011; Lebe

& Zupan, 2012; Leslie, 2012; Millar, Mayer, & Baloglu, 2012 Taylor, Rosemann, & Prosser, 2000). Yet several studies have found that certification does not attract visitors as promised. This is perhaps at least partially because credible *'green'* reputations are rare and difficult to create because they are met with strong suspicion (Rivera, 2002, p. 342) – an issue linked to the ideas discussed in the preceding paragraphs. For example, Robinot and Giannelloni (2010) draw attention to the sceptical attitude of French customers to the claimed ambition of hoteliers to reduce their environmental impact. Specifically, the idea of discouraging customers from using fresh towels everyday in an apparent bid to lessen the amount of detergent used (hence reducing pollution), is met with doubt as it is viewed by customers as simply a means of lowering costs and thus raising company profits. Clearly, an inability to *'prove'* the tangible environmental benefits of certification hinders progress in building operator and customer confidence in either partaking in such schemes or in buying certified products.

But even if certification schemes were able to instil confidence in their systems, simply *"adding a certification logo to a business and advertising it is not going to increase occupancy"* (Bien, 2005, p. 17); the schemes need to be marketed appropriately. Indeed, it seems that low consumer awareness may partially explain why many programs fail to achieve their full potential (Carlsen, Jago, Harris, & de Silva, 2006). Even long standing programs such as Green Globe 21 (GG21), *ECO* certification (formerly the Nature and Ecotourism Accreditation Program (NEAP)) and Costa Rica's Sustainable Tourism Program (CST) have all been unsuccessful in attaining global market diffusion (e.g. Newton, et al., 2004; Font, 2005). This failure is compatible with the overall perception that the majority of certification programs are ephemeral, unknown, regrettably vague and misleading. In the case of the CST program, for example, Newton, et al., (2004) found that half of the certified hotels failed to advertise their certification credentials. Coupled with the fact that only a modest amount of promotion of certified hotels were being done by the CST program, it is not surprising then to find low consumer awareness and poor uptake by tourism operators. A similar conclusion was drawn by Vail (2011) who found that a large majority of Australian and German residents were unaware of their countries' tourism certification programs. This is concerning, as market recognition cannot be guaranteed if locals (and even international tourists) are unfamiliar with a national scheme (Jarvis, Weeden & Simcock, 2010).

Associated with this *'failure'*, is the conventional manner of directly promoting certification to consumers (i.e. a business-to-consumer (B2C) approach). There seems to be a consensus within the literature that the B2C communication is not strong enough to influence the consumer. Marketing, in general, requires significant resources which certification providers mostly lack (Font & Carey,

2005; Rome, Crabtree, Bien, Hamele, & Spenceley, 2006).[14] Moreover, the majority of certification programs are run by NGOs or government agencies, who often lack the skills and experience required to effectively target consumers (Bien, 2005; Font & Epler Wood, 2007). Because of these shortcomings, a business-to-business (B2B) approach in promoting certification programs and certified businesses and/or products – predominantly through sustainable supply chain management - appears to be a more effective avenue to pursue (James, 2000; Dodds & Joppe, 2005; Goodwin, 2005; UNEP, 2005b; Font, 2007; Grundey, 2009). Although not sufficiently developed, promising signs of acceptance and collaboration by aggregated distribution and communication media (e.g. tourist boards, tour operators, internet retailers, media, trade and consumer fairs) have been reported.[15] Importantly, this can be done within manageable costs. Whilst tourism businesses may have less control over marketing messages or the type of tourists attracted than they otherwise would have in a B2C approach, they may nevertheless benefit from having reduced costs of direct marketing and assured quality (Wesseler, 2009).

Those points aside even if it were possible to establish the credibility of a certification program and to also develop systems for marketing the scheme and its logo, businesses may still find that certification does not increase demand for their product. Some studies have found evidence of demand for certified products,[16] however, such findings need to be interpreted with caution since customers seldom have just one motivator to purchase a product (Font and Epler Wood, 2007). This is discussed in detail in Chapter 2, suffice to say here, that there are good reasons for being sceptical of claims about the demand for certified tourism products.

In sum, the plethora of certification schemes worldwide might lead one to believe that certification is extremely important and popular (Deng-Westphal, 2012). But the evidence to date contradicts

[14] As noted by Font (2007, p. 394), hardly any certification programs can claim self-financing status (i.e. the ability to pay all the fixed and variable costs through revenues generated from certification applicants), with the majority of schemes depending on government and/or NGO funding.

[15] For example, the *ECO* certification scheme is said to have already tapped into this market by promoting smaller certified tourism products at trade fairs and conferences organised nationally as well as internationally (Rome, et al., 2006). The scheme has also been successful at securing the support of the Great Barrier Reef Marine Park Authority (GBRMPA), an influential government protected area management agency, in jointly marketing certified products at promotional events and on their website. This collaboration is further enhanced via an extended permit term of 15 years (in comparison to the normal permit term of six years) to *ECO*-certified operators to operate in the GBR marine park (GBRMPA, 2011). Such government support is deemed essential for local and global market outreach. Elsewhere, benefits (which are not as widespread) include preferential treatment being given to certified operators by leading inbound tour operators, for example, in Costa Rica (Font, 2006).

[16] For example, GG21, 2004, cited in Font & Epler Wood, 2007 found that 8% of Green Globe participants noted an increase in customers as a direct result of being Green Globe certified.

this observation: instead, there seems to be a lack of demonstrated consumer demand for certified products (be it tourist demand for certified tourism products, or tourism operator demand for endorsement by various certification schemes). Given this lack of evidence, many of the earlier supporters of certification now question its efficacy and relevance: for example, Goodwin (2012) argues that it not surprising that none of the schemes have effectively created consumer demand given the consumer benefit is unclear. He further argues that certification does not make commercial sense. Many others support his view. For example, Weaver (2009) acknowledges the adoption of certification is *'miniscule'* and Dodds and Joppe (2005) draw attention to the small percentage (only 1%) of tourism operators who have adopted certification and maintains that consumer awareness remains low. Font (2007, p. 389) notes that the rate of growth is slow, and draws attention to the fact that perhaps it is because certification is *"not known, understood, or wanted"*.

1.5 Why would businesses want to have their product(s) certified?

For years, the conventional perspective of the firm was that improving the environment will hurt its performance since it generally involves added costs (Miller, 2001a; Clemens, 2006; Erdogan & Tosun, 2009), but contemporary views have proven otherwise. Several studies have showed that the adoption of *'sustainable'* practices can improve a firm's financial bottom line (Russo & Fouts, 1997; Clemens, 2006; Lynes & Dredge, 2006; Moreo, et al., 2009; Bonilla-Priego, et al., 2011).[17] For example, studies by Bohdanowicz (2006) and Tzschentke, et al., (2004) have found that by installing energy saving devices, businesses have been able to make savings on their energy bills in the order of 10-25% and 20-30% respectively. Investment in sustainable practices may thus, in some cases, help improve a firm's financial position (Simpson, Taylor, & Barker, 2004; Stoeckl, 2004; Ayuso, 2007) – partially because it may help lower costs and partially because it may help increase demand. According to Craig (2002) appearing to do the right thing will help create a positive corporate image, organisational legitimacy and satisfied customers.[18]

[17] Common measures employed by firms to minimise their impact and hence reduce their expenses ranges from: *energy related practices* (e.g. fitting energy saving devices, solar panel, improving insulation), to *waste related practices* (e.g. recycling, less packaging, waste water management), to *green purchasing activities* (e.g. using natural cleaning alternatives, purchasing ethical & environmentally friendly products, buying local produce), to *water reduction activities* (e.g. rain water tanks, water saving faucets, towel & bed linen reusing), to *transport related activities* (e.g. car-pooling, offset programs, purchasing of fuel efficient vehicles), to *conserving biodiversity activities* (e.g. garden planting, local project involvement), and several others (e.g. monitoring consumption, environmental training, involvement of local community) (Beeton, Bergin-Seers, & Lee, 2007; Ito, 2007; Tzschentke, et al., 2008a; Tzschentke, Kirk, & Lynch, 2008b).

[18] The scope of what is implemented, nevertheless, depends largely on the level of investment, and the way in which costs and the benefits accrue over time. Firstly, some measures (e.g. water saving faucets) are inexpensive to acquire, while others (e.g. solar panels) can be costly and thus may not be installed (Fematour, 2000). Secondly, the

Although there is a substantive body of literature looking at the link between firms' profitability and the adoption of certification, the majority of this literature focuses on quality certification schemes, that are, for the most part, process-based (such as the ISO and its derivatives).[19] Moreover, most of these studies are in industries other than tourism, looking at final consumer goods sold in retail shops (e.g. Bjørner, Hansen, & Russell, 2004) as well as primary inputs and intermediate goods (e.g. Yamamoto, Takeuchi, & Shinkuma, 2012). While some studies have established that there is a positive relationship between the implementation of certification and profitability (Haversjo, 2000; Heras, Casadesus, & Ochoa, 2001; Nicolau & Sellers, 2002; Wayhan, Kirche, & Khumawala, 2002; Naser, Karbhari, & Mokhtar, 2004; Kawthar & Vinesh, 2011),[20] others have found no evidence to support this correlation (e.g. Khanna & Damon, 1999; Tsekouras, Dimara, & Skuras, 2002; Martı´nez-Costa & Martı´nez-Lorente, 2003; Conca, Llopis, & Tarı´, 2004; Corbett, Montes-Sancho, & Kirsch, 2005).

Studies such as these, which link profitability with implementation of certification are lacking in tourism, and in order to build a business case for the industry, there is a need to showcase examples where success includes profit and returns on investment in certification (Dodds & Joppe, 2005).[21] Given the non-mandatory nature of certification, information on its ability to generate economic benefits for firms is a necessary condition for the effective update of such programs (Rivera, 2002) – albeit, as discussed previously, some researchers maintaining that certification does not make commercial sense (e.g. Goodwin, 2012).

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introduction of responsible practices often has upfront costs (i.e. for which the cost is certain and immediate) and maintenance spending (i.e. for which the costs are uncertain in the future) (Stabler & Goodall, 1997; Ito, 2007). Hence costs must be weighted against benefits (which may be uncertain and occur over variable time frames). As such, environmental concerns often become secondary to the needs of obtaining immediate earnings (Wheeler, 1992; Vernon, et al., 2003) - although some businesses have found that making changes for better environmental management do not necessarily imply major investments in new technologies: instead, what is required is more efficient management of resources and costs (Lebe & Zupan, 2012).

[19] These focus mainly on company results, through for example, improvement in operations, efficiency and the costs of company's internal activities.

[20] When interpreting the findings, notably those identifying an immediate link between the adoption of certification and profitability (i.e. better financial performance), Heras et al., (2001) highlighted some important considerations for researchers:

- the multitude of variables that influence or can influence business' financial performance; and
- the characteristics of the samples used: these must be analysed in greater detail as higher profits may not necessarily be attributed to the adoption of certification, but rather, to the fact that certified firms belong to activity sectors that enjoy greater profitability levels.

[21] Participation in certification programs can be costly, especially for small businesses. Meeting performance standards and paying for application fees and other transaction costs, means that operators have to incur substantial monetary and non-monetary costs (Blackman et al., 2012).

The more general literature on what drives firms to implement sustainable measures demonstrates that the underlying causes operate at different levels. They can be intrinsic, (i.e. individually based, such as the operator's ethical stance) or extrinsic, (i.e. externally driven, such as fear of negative public relations). Most studies that have been conducted on this issue focus on accommodations. Table 1.1 lists some of the regular incentives and obstacles encountered.

Most apparent from these studies, is that monetary incentives are often of primary concern when making decisions about the implementation of sustainable practices - although for some tourism operators other issues are paramount. For example, in his study of the motives for environmentally friendly initiatives in one of Majorca's hotels, Ito (2007) concluded that ethical reasons appeared to be the most significant driver. Other research reveals similar findings (e.g. Smith, 1990; Tzschentke, et al., 2004; Pizam, 2009). For several companies, the ethical or altruistic stance adopted is due to the personal sense of obligation felt by the owner or manager (Choe, Lehto, & Day, 2009), however, more commonly, the degree of morality shown is a function of the responsibility that consumers expect companies to have (Miller, 2001a).

In short, profits may not be an issue if ethical incentives are more important i.e. the best possible technology or practices would be installed irrespective of the price tag (Ito, 2007). But, despite the greatest of intentions, financial limitations or prospects may weigh more than ethical decisions in many cases (Wheeler, 1992; Miller, 2001a, 2001b; Crane & Matten, 2004; Clemens, 2006).

Table 1.1 Commonly identified incentives and obstacles for the implementation of sustainable strategies

Incentives	Obstacles
• Financial gains • Ethical stance/moral obligation • Response to customer demand • Improved image • Marketing advantage • Competitive advantage • Fear of negative PR • Demonstrate role of leadership • Prestige & pride • Favorable impression to investors	• High costs (investment & running costs) • Lack of time & knowledge • Fear of risking customer satisfaction, comfort & privacy • Fear of jeopardizing standards • Difficult to involve staff • Lack of support • Size • Free-riders

Sources: (Brown, 1996; Stabler & Goodall, 1997; Harris, 1998; Lowe, 1998; Bramwell & Alletorp, 2001; Hobson & Essex, 2001; Miller, 2001a; Vernon, Essex, Pinder, & Curry, 2003; Schaper & Carlsen, 2004; Tepelus, 2005; Bohdanowicz, 2006; Chan & Wong, 2006; Ayuso, 2007; Tzschentke, et al., 2008a; Bonilla-Priego, Najera, & Font, 2011; Levy & Park, 2011)

Evidently, it is not *"out of malice against the environment and society, but through clear economic reasoning"* that firms fail to adopt sustainable practices (Miller 2001a, p. 591). In other words, businesses will adopt a course of action if it is cheaper or more beneficial than the alternative. Stoeckl (2004) supports this view noting that external benefits of voluntary schemes are irrelevant

to the profit maximising firm: they are interested in assessing whether private benefits outweigh their (private) costs.

1.6 Chapter summary and aim of thesis

For several years now, tourism has been acknowledged as one of the world's largest and fastest growing industries (OECD, 2008; Cerina, Markandya, & McAleer, 2011) and its importance for economic development is well recognised. However, the impacts of tourism can be both good and bad so there is a need to ensure that tourism develops sustainably, particularly in and around protected areas.

Certification is said to be the most effective measure in minimising the negative impacts of the tourism industry. It is claimed to provide benefits to tourists in the form of guaranteed quality, to the environment via reduced externalities and to tourism businesses in the form of a competitive edge, hence increased profits. But the evidence to date shows that this is not the case. Specifically, there is limited support that certification increases demand for certified tourism products. Although many factors are important in the decision to adopt certification (such as the intrinsic values of the tourism operator), it is the monetary factor that holds the most weight. In view of that, many tourism operators will want to be able to see some financial benefits from joining certification schemes: businesses are first and foremost profit-driven and no business can remain viable unless there is a sustainable market for its product. As such, some businesses will only consider certification programs if it will help increase profits (Primeaux & Stieber, 1994; Alberini & Segerson, 2002). Certifiers may thus need to demonstrate economic benefits to promote participation beyond that which would otherwise occur (Kollman & Prakash, 2002; Rivera, 2002). This is especially crucial in competitive markets such as tourism (Jhawar, et al., 2012) as illustrated by the following quote:

> *"the question is not whether to operate in a sustainable manner, but to determine how to make certain that sustainable practices also make business sense. In conducting a green business one needs to examine how to make money and to develop new and different ways to save or create money. If a particular process or concept doesn't save money or make money then there's not much point in pursuing it"* (Cornell University, p. 5, cited in Rogerson & Sims, 2012).

Conceptually, a business' demand for certification will depend, at least in part, upon:

1. The owner/manager's attitudes or *'values';* and
2. The owner/manager's perceptions of the impact which certification will have upon their business' bottom line (i.e. their costs and revenues).

   Importantly, these perceptions will depend upon:

   a. The perceived impact of certification on costs; and

b. The perceived impact of certification on revenues – which is inextricably linked to consumer demand for certified products.

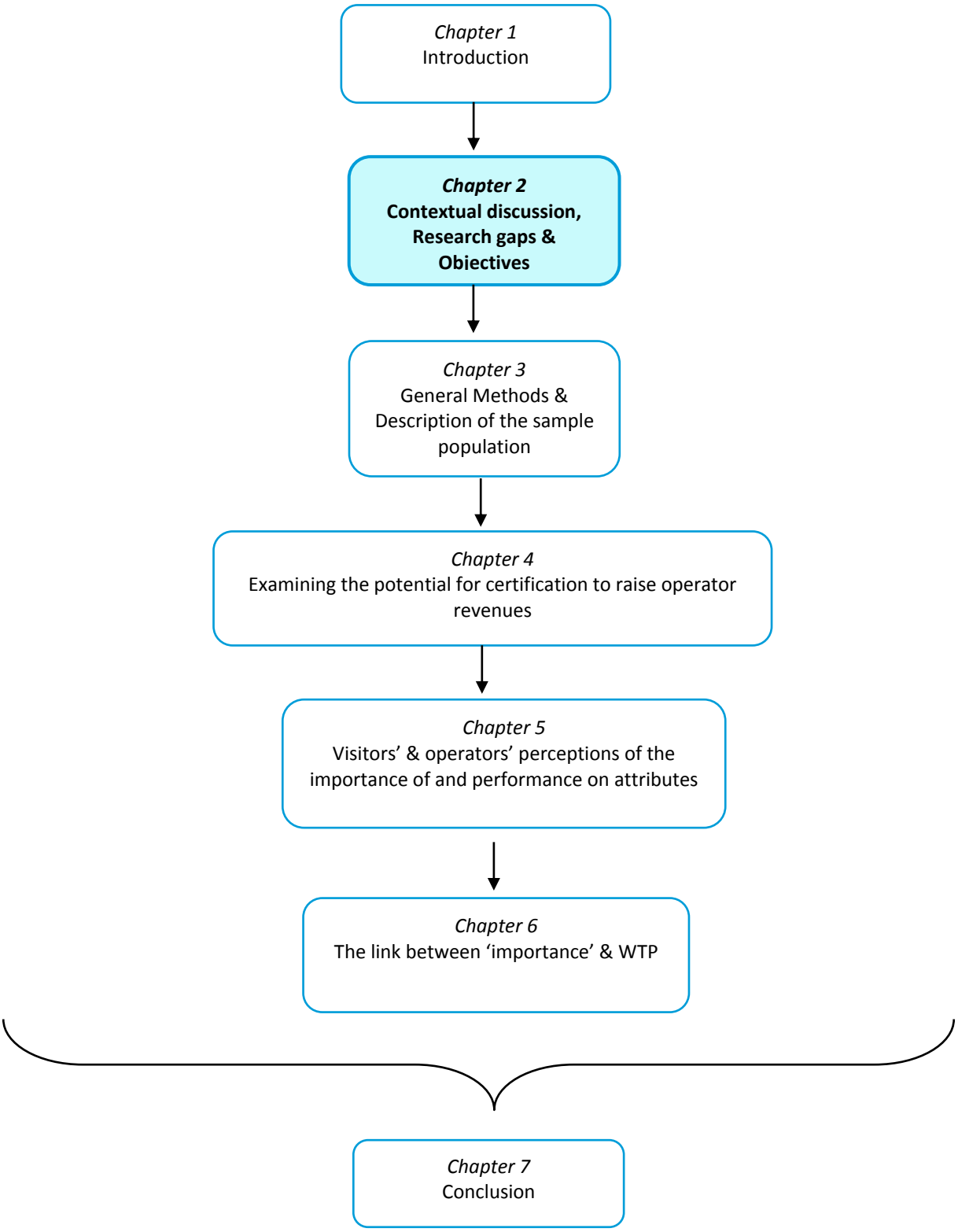
As such, those seeking to promote the uptake of certification must meet the needs of two key consumer groups, namely:

1. Tourism operators (businesses) who must decide whether or not to purchase *'certification'* from certifiers; and
2. Tourists who must decide whether or not to purchase certified products from operators.

The overarching aim of this thesis is thus to **improve our understanding of the demand for tourism certification,** by investigating the attitudes and perceptions of these two groups.

Details of how that will be done are discussed in the following chapter.

Thesis Outline



CHAPTER 2
CONTEXTUAL DISCUSSION, RESEARCH GAPS & OBJECTIVES

Synopsis

The preceding chapter identified the fact that many tourism operators will want to see some financial benefits for joining certification and that these financial benefits are at least partially dependent upon tourist demand for certified tourism products. This chapter thus takes a closer look at literature which considers tourists' demand for certified products. Specific research gaps are identified from which corresponding research objectives are developed. The chapter concludes with a summary of identified gaps, the study's hypotheses and an overview of the thesis structure.

2.1 Introduction

As discussed in chapter 1, there have been claims that certification may help to reduce some of the negative side-effects of tourism, but uptake has been slow – and much of this has been attributed to low demand. As such, the aim of this thesis is to **improve our understanding of the demand for tourism certification.**

The fact that certification encompasses two key *'layers'* of consumers (operators who must decide whether or not to become certified and tourists who must decide whether or not to purchase certified products), adds complexity to the task, since it means we need to learn more about the demand of each group. But the discussion of the previous chapter makes it clear that tourism operators will be more likely to engage in certification if, amongst other things, they believe it can raise profits. Profits are a function of costs and revenues (Figure 2.1). There are two main types of costs: fixed costs which are constant regardless of the amount of volume (e.g. rent, rates); and variable costs which vary with the amount of volume (e.g. wages, electricity). Revenues are incomes that a company receives from the sales of goods and services to consumers, and are a function of price and quantity. Total profit therefore equals total revenue minus total cost, meaning that a proper analysis of the financial benefits of certification necessitates detailed information on the way in which certification affects businesses' production and cost functions, in addition to their revenues. While I appreciate the significance of the production/cost side of this equation, for the purposes of this study, I chose to focus on revenues only, leaving the equally important investigation of the likely impacts of certification on operator costs as a topic for future research.

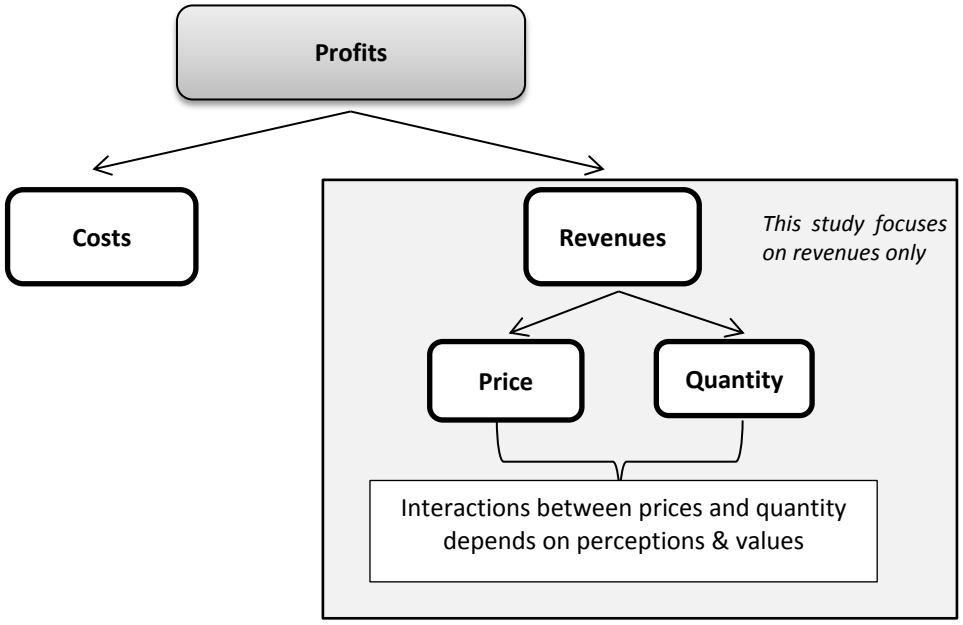


Figure 2.1 The profitability framework

Since focusing on revenues, it is clear that tourist attitudes are paramount – if visitors do not choose to consume certified products, certification will not increase demand, so operators have a reduced incentive to seek certification. As such, a key issue to consider is whether or not there is demand for sustainable tourism products in general, and certified tourism products in particular. This issue is the focus of the discussion in section 2.2, which helps identify the first significant research gap and associated research question to be investigated in this thesis.

Products are rarely, if ever, simple *'things'*. Instead, products are comprised of attributes (concrete or abstract) which are viewed differently by various consumers. Concrete attributes are objective/tangible and can be measured (e.g. price), whereas abstract attributes are subjective/intangible and difficult to measure (e.g. design). When buying a product, consumers have to compare multi-attributed products. Both price and non-price attributes, therefore, play a vital role in the consumer decision-making process: consumers evaluate products on the basis of attributes they find important (Akpoyomare, Adeosun & Ganiyu, 2012). Accordingly, if businesses can highlight attributes that consumers perceive to be important, their products will be more able to satisfy consumer wants (Sanchez, Callarisa, Rodriguez & Moliner, 2006; Zhang, Rau & Zhou, 2007). As such, product attributes provide a basis for differentiation, development of new products and strategic positioning of products in the marketplace (North, de Vos & Kotze', 2003). In the context of certification, an understanding of Lancaster's *Theory of Characteristics* is thus necessary if wanting to improve our understanding of the demand for tourism certification. Section 2.3 thus focuses on this issue, identifying the remaining research gaps and associated research questions that are considered in this thesis. Key points are summarised in section 2.4.

2.2 Tourist demand – and willingness to pay – for sustainable tourism products

In order to understand demand for certified tourism products, one needs to first understand demand for sustainable tourism products in general. Existing literature shows that there is an increased understanding of sustainability evidenced by an increase in *'green'* purchasing behaviours (Prosser, 1994; Goodwin & Francis, 2003; Liu, 2003; Smith, 2007; Bergin-Seers & Mair, 2008; Bergin-Seers & Mair, 2009b, 2009a; Bonroy & Constantatos, 2011; Lebe & Zupan, 2012; Leslie, 2012; Millar, et al., 2012). Apparently driving this movement is dissatisfaction with existing products: tourists, as consumers, are becoming *"more experienced, more critical, more quality conscious and seek new experiences as well as good value for money"* (Liu, 2003, p. 463). For example, when it comes to advertising messages about a business' environmental performance, consumers expect reliable proof (Lebe & Zupan, 2012).

Moreover, there is growing realisation of the increasing pressure of tourism on (notably environmental) resources. This can be at least partly attributable to the increased attention given to climate change throughout the media over recent years, coupled with a profusion of green messages in promotions.[22] Consequently, some tourists are searching for companies with good reputations, ones which are *'responsible'* and dedicated to sustainability (perhaps because they want to have *'guilt-free'* holidays) (Goodwin, 2011). Hence, there is a strong desire from some groups of tourists for products that are authentically sustainable. Evidently, the opportunity to participate in the collective effort to cope with an environmental externality is important (International Ecotourism Society, 2005; Dolnicar, Crouch, & Long, 2008; Han, Hsu, & Lee, 2009; Bonroy & Constantatos, 2011).

The perception that demand for *'green'* holiday experiences has increased is demonstrated in several studies. For example, Mintel (2007) found that 80% of respondents would be more likely to purchase a holiday from tourism enterprises with a sustainable tourism policy. Seventy-one percent of respondents of that same study were strongly of the view that visitors should not damage the environment. These findings are supported by several other studies (ETC, 2002; Ecotrans & FUR, 2003; Fairweather, Maslin, & Simmons, 2005; Edgell, 2006).

The *'green'* or *'environmentally responsible'* tourists, as they are known, will enquire about the environmentally sustainable practices of the providers for their holidays (Miller, 2003; Clausing, 2008; Bergin-Seers & Mair, 2009a, 2009b; Vail, 2011).[23] They are likely to maintain their general environmental behaviours, even when on holiday (Bergin-Seers & Mair, 2009a; Han, et al., 2010),[24] by for example, switching off air-conditioning or by taking a shower instead of a bath or most commonly, re-using towels/linens (Fujii, 2006; Goldstein, Cialdini, & Griskevicius, 2008; Shang, Basil, & Wymer, 2010). Moreover, there is a large body of research, dating from as far back as the 80s (e.g. Millman, 1989) to the present (e.g. Kafyri, Hovardas, & Poirazidis, 2012; Oom do Valle, Pintassilgo, Matias, & André, 2012) about visitors' willingness to pay (WTP) more for

[22] According to Bowen & Clarke (2009) around 17 million pounds were spent in the UK between September 2006 and August 2007 on advertising containing the words *'CO_2', 'carbon' , 'environmental', 'emissions'*, *or 'recycle'*, representing a 38-fold increase in spending from 2003.

[23] For example, Bergin-Seers & Mair (2009b) found that tourist sought environmental information about tourism products across different stages of their holiday: while booking (29.3%), prior to departure (25.8%) and after arrival at their holiday destination (44.9%).

[24] The most beneficial way of predicting or understanding the environmental behaviour of tourists, is by determining the environmental behaviour of consumers at home (Dolnicar, et al., 2008).

environmentally and socially friendly practices. The general perception from most of these studies is that consumers appreciate and reward businesses that exhibit environmental and social accountability (Choe, et al., 2009; Rogerson & Sims, 2012).

However, an alternative body of research cogently argues that little progress has been made in influencing demand for more sustainable tourism products and services and in altering tourist' behaviour (Dalton, Lockington, & Baldock, 2008; Leslie, 2012). This literature notes that, to some degree, the *'talk'* is still louder than actions (Choe, et al., 2009) and that environmentally friendly tourists have not yet risen as a real force in the market (Puhakka & Siikamaki, 2011, p. 14). In fact, much of this research argues that the market for sustainable tourism products is static: consumer demand for sustainable tourism remains largely passive since consumers tend to be inconsistent in applying their values to purchasing (Font & Epler Wood, 2007; Rogerson & Sims, 2012; Temperini, Gregori, Cardinali, & Perna, 2012).[25]

Evidently, a significant group of consumers, the *'peripherals'*, or the *'environmentally unconcerned'*, are merely seeking to have fun for several reasons: first, visitors may lack an understanding of sustainable tourism (Miller, Holmes, Rathouse, Scarles, & Tribe, 2010; Jhawar, et al., 2012) and may suffer from *'cognitive ambivalence'* (Valor, 2008).[26] Second, visitors' general environmental behaviours whilst at home do not always spill over to equivalent behaviours when on holiday. Because tourism is founded on enjoyment and relaxation (self-reward within) and not about sacrifice (Hares, Dickinson, & Wilkes, 2010), many tourists will not trade-off comfort for environmentally sound conduct (outward looking concern) (Puhakka & Siikamaki, 2011). While on holiday, one in five tourist confess to not considering the environment and do not maintain their green habits as they would normally do when at home (Barr, Shaw, Coles, & Prillwitz, 2010; Barr, Shaw, & Coles, 2011; Mintel, 2011; Miao & Wei, 2013). Pro-environmental behaviour is thus more pervasive in a private lifestyle and home setting (Muller and Sonnenmoser, 1998). Maio & Wei's (2013) study supports these findings: they found performance on *'reduce', 'recycle', 'reuse'* and *'green consumption'* to be significantly higher while at home than when on holiday.

Several factors help explain such disparities in behaviour. It is a matter of motivation: just like tourism operators are intrinsically and extrinsically driven to adopt sustainable practices (Chapter

[25] The TUI Netherlands is a clear example whereby sustainability did not work as a selling proposition. Despite dedicating a brochure with all vacations with proven sustainability credentials, thanks to a meager booking, the brochure lasted only one season (Font & Epler Wood, 2007).

[26] The effort required to find the information in order to behave more responsibly, is deemed too much.

1), so too are consumers intrinsically and extrinsically driven to purchase sustainable tourism products. In this context, an intrinsically motivated behaviour is performed for the sole pleasure and satisfaction derived from its practice. It is a matter of personal choice and interest and is dependent on a person's pro-environmental knowledge, awareness, motives, values, attitudes, emotions, responsibilities and priorities (Kollmuss & Agyeman, 2002, Han, Hsu, Lee & Sheu, 2011). An extrinsic motivated behaviour on the other hand, is performed for instrumental reasons, the goal being to bring about positive change or to avoid negative ones (e.g. institutional, economic, social and cultural incentives, and constraints) (Green-Demers, Pelletier & Menard, 1997).

As discussed in chapter 1, monetary gains (extrinsic motives) have the most dominant influence on tourism operators' behaviours with respect to environmental/sustainability decisions. But it appears that intrinsic motives hold more weight in explaining disparities in tourists' pro-environmental behaviour. These motives can be divided into three key categories: normative, hedonic and gain (Lindenberg & Steg, 2007). Briefly, normative motives influence responsible actions. They describe situations in which people feel morally obligated to display pro-environmental behavior, simply because this is the *'appropriate'* thing to do (e.g. showing exemplary behavior, such as switching off lights when not in use and recycling). In contrast, hedonic motives are self-oriented and short-term: they are about improving the way one feels in a particular situation (e.g. avoiding effort, seeking direct pleasure, seeking direct improvement in self-esteem, seeking excitement). Gain motives are concerned with the guarding and improvement of (or prevention of decrease in) one's resources (Lindenberg & Steg, 2007). As with hedonic motives, gain motives are more self-oriented but operate on a medium to long-term timeframe.

Although distinct, these three types of motivations rarely operate independently and are, instead, mixed (Frederick, Loewenstein, & O'Donoghue, 2002; Oesch and Murnighan, 2003). According to Carmer (2003), the main goal is often gain (i.e. saving money), but people rarely act entirely selfishly. Instead, they seem to be somewhat restrained by normative concerns. In short, it is quite rare that only one goal is active at any one time.

Research has shown that consumer behaviour is dynamic and situated (Gatersleben, Steg & Vlek, 2002; Lindenberg & Steg, 2007; Miao & Wei, 2013) and thus goals change to suit the situation and/ or setting. Going back to the discussion of pro-environmental behaviours at home and on holiday, disparities in behaviour is therefore, a matter of situation. When on holiday, a conflict in motives arises as people try to increase their pleasures. Non-environmental motives, such as personal comfort, convenience and cost (hedonic motives) tend be more prevalent (Stern, 2000). Behaving in an environmentally friendly manner may be possible, but only if such factors are not jeopardised. For example, the reuse of towels may not be practiced, if such an act is perceived to

reduce the level of personal comfort. Maio & Wei (2013) empirically tested these behaviours, and found strong evidence that people do as a matter of fact, display less pro-environmental behaviour when they travel, with hedonic motives as the underpinning factor.

Becken (2007) holds the view that people do distinguish between their everyday life and their holidays: they do so by temporarily suspending their environmental attitudes and behaviour when on holiday (Weaver, 2008). Instead, a *laissez-faire* attitude is often adopted, as accentuated by the following quote:

> *"When on holiday, our behaviour may change not simply because we have time available but because we are removed from the norms and strictures of our everyday lives - we are 'free'. We may give little thought to whether such behaviour is socially or environmentally acceptable in our chosen holiday destination, and indeed, if we are aware, we may rationalize that we have paid and 'they' have taken our money, so we are entitled to enjoy our holiday as we wish"* (Cooper, 1992, p. 39).

Evidently, there is a perception, which is further affirmed by Kamp (2003) (in Leslie, 2012) that people just do not want to think about the effects that their trip has had on the environment. In his study of Ecuadorian tour operators seeking to meet environmental and social standards, Epler Wood (2004) found that environmental and social impacts were of low priority to 50% of the tour operators' clients, while 70% of clients failed to express any concern or interest in eco-social issues when selecting their products. Ultimately, thinking about environmental or social concerns is perceived as an infringement on their *'relaxation and escapism'* experience, hence it is convenient to adopt the *'have a good time'* and the *'tomorrow we shall be gone'* ideologies, as bluntly encapsulated by Leslie (2012, p. 29).

Third, and related to the lack of change in tourists' behaviour in their pursuit of leisure, most tourists want to *'get there faster'*: as a result, it is not surprising to find that most of them would not be willing to reduce nor forgo their air travel (DEFRA, 2009; Hares, et al., 2010). In fact, air miles travelled globally show an upward trend and so does travel to exotic destinations which are often far away (Budinoski, 2011). Interestingly, despite wide evidence linking air travel with greenhouse gas emissions, hence climate change, many tourists remain unconvinced and challenge the idea of travel having a greater impact than the overall holiday activities (Miller, et al., 2007). This finding is further supported by DEFRA (2009), who found that more than half of respondents rejected the responsibility of causing air pollution because of their air travel and also by Barr et al., (2010) who discovered that a person's general environmental behaviour is irrelevant when deciding to travel by air.

Fourth, and of particular interest to this study, although some studies have found that visitors are willing to pay a premium for *'sustainable'* tourism products and services, very little of this

'willingness' is actually translated into practice (Font & Epler Wood, 2007; Manaktola & Jauhari, 2007; Li & Ouyang, 2009; Oom do Valle, et al., 2012). Many studies have recorded the views of respondents about how they would like to behave, but stated responses do not necessarily depict actual behaviour when booking holidays (Goodwin & Francis, 2003). In short, tourists' claimed environmental values and actual values are habitually at odds. For example, although many hotel customers are cognisant of the importance and reliability of renewable energy, Dalton, et al., (2008) found that very few were willing to pay a premium for a room with renewable energy. Similarly, Needham (2011) found that 71% of travelers reported that they were willing to pay more for an environmentally friendly hotel, yet only 12% were willing to pay a premium of 10-20%.

Tourists' lack of WTP is further illustrated by many protests exhibited across the globe at the mention of *'green'* or *'eco'* taxes (Leslie, 2012). A striking example of such outcry was observed in the Balearic Islands, with the introduction of an environmental tax (ecotax). Described as *'unconstitutional'*, the tax was implemented in May 2002 with the purpose of collecting revenues to alleviate environmental problems, rehabilitate the surroundings and create suitable infrastructures capable of supporting the growing number of visitors to the islands (Palmer & Riera, 2003; Aguiló, Riera, & Rosselló, 2005; Garin-Munoz & Montero-Martin, 2007; University College Dublin, 2008).[27] However, the unpopularity of such a tax and a 7% and 20% decrease in demand resulted in its abolition a year later.[28]

Events like these are signs that it is difficult to change the *'established behaviour'* of tourists: although tourists declare their '*willingness'* to act sustainably, not everyone is prepared to make a financial sacrifice in accordance to their professed aspirations. Some researchers (e.g. Mintel, 2007; Swarbrooke & Horner, 2007) are of the opinion that positive responses to questions about WTP are provided as feel-good-tokens to appear as if they support the *'right'* things. As Temperini, et al., (2012 pg 103) asserted, consumer *"attitudes have yet to mature"*. This is even more challenging during economic recessions (Key Note, 2012).[29] As so cogently argued by Thøgersen, Haugaard, & Olesen (2010), only a small minority are prepared to adapt to change and try new developments in responsible travel. Maximisation of their holiday experience and minimisation of costs, are first and

[27] It was a direct tax levied on stays by individuals in tourist accommodations.

[28] Although the tax was blamed for a reduction in number of visitors to the islands, Garin-Munoz & Montero-Martin (2007) could not find any significant effect of the tax on the volume of tourist arrivals.

[29] Whilst it is generally argued that during times of recession people tend to hold back (in this case on travel and recreation) and save money, research conducted by Keske & Loomis's (2012) on the effects of recession on mountain recreation showed otherwise: they found that overall, there was no reduction in visitor spending nor visitations during the recession.

foremost objectives and only after these have been satisfied, will travelers consider their sustainability practices (Goodwin & Francis, 2003; Sanders, 2005; Swarbrooke & Horner, 2007).

Still, while some may be willing, the ability to pay is also a vitally important determinant: *'green'* or *'sustainable'* options are often expensive. Those on a lower income may find it difficult to make such purchases, however willing they may be (Leslie, 2012).

Finally, contributing to the low responsiveness in demand for *'green'* tourism is consumers' lack of conviction about businesses' *'green'* or *'sustainable'* claims. Evidently, many consumers believe that these claims are simply a facade, served to *'green wash'* consumers and directed solely for the purposes of good public relations (Honey, 2002; Liu, 2003; McLaren, 2003; Dalton, et al., 2008; Valor, 2008; Leslie, 2012). The *'green'* or *'sustainable'* claims are further troubled by accusations of hidden trade-offs and suffer from a lack of evidence about the *'benefits'* (Kuehnel, 2011; Leonidou, Leonidou, Palihawadana, & Hultman, 2011).[30]

Possibly the most targeted sector of the tourism industry is ecotourism (McLaren, 2003), whereby it is constantly misrepresented in promotions as merely any sort of tourism involving nature, even if in practice it is detrimental to the environment (Coyle, 2005). Not only does this type of green washing undermine consumer confidence but it is equally frustrating to businesses providing genuine ecotourism or green products. Such a situation aggravates the *'free-rider'* issue hence limiting the adoption of sustainable measures by tourism operators.

Clearly, the key problem facing consumers is that they do not know about (and in many cases cannot observe) the environmental performance of a tourism operator prior to making a purchase decision. More formally, information asymmetry occurs when one party (usually the seller) has more or better information than the other (the consumer) (Akerlof, 1970). That is, the provider of the good knows more about the characteristics of the product than the consumer. In contrast to search or experience attributes (e.g. price and taste respectively) (Janssen & Hamm, 2012), some

[30] *The hidden trade-off* – A claim suggesting that a product is 'green' based on a narrow set of attributes without attention to other important environmental issues. For example, a hotel states that it uses solar panels for water heating, but the property has no water conservation program. They are therefore, depleting the communities' water table making the tourism operation unsustainable in the long-term.

No proof – An environmental claim that cannot be substantiated by easily accessible supporting information or by a reliable third-party certification. For example, a hotel claims to serve organic food. However, it does not state from where it is sourced (Kuehnel, 2011).

product attributes are not easily identifiable or observable.[31] Termed credence attributes, these are essentially *'hidden'* for a variety of reasons, including a lack of technical expertise on the part of consumer, to the high costs of acquiring such information, to the fact that there is no tangible link between the credence attributes and consumption of the product/service (Bougherara & Grolleau, 2005 pg 4). Because these attributes are not visible to the tourist, even after purchase, (notably those of an environmental nature, e.g. reduced energy and water consumption or biodiversity) (Font & Epler Wood, 2007), consumers are unable to tell whether their choice of providers/product is making a difference to their holiday's impact on the environment (Font, 2007). If they are unable to tell the difference, they are unlikely to be willing to pay for it. Hence, asymmetric information gives rise to market failure (Akerlof, 1970). This failure is not because the good or attribute is not *'valued'* but because of an imbalance between the information available to operators and that which is available to visitors provides opportunities for fraudulent eco-friendly claims that, in essence, spoil the market for all (Hamilton & Zilberman, 2006; Janssen & Hamm, 2012).

Certification (specifically those of a third-party nature) is thought to help redress this market failure because it facilitates the communication of information about credence attributes by signalling and distinguishing genuine eco-friendly products or services from conventional or bogus ones (Bougherara & Grolleau, 2005; Yamamoto, et al., 2012; Žnidaršič, Marič, & Ferjan, 2012). In this sense, the tourist is able to give credence to the operators' promise of a genuine eco-friendly product/service. In other words, certification is thought to be able to mitigate the information asymmetry by confirming that a tourism product or service is being provided in accordance with certain standards and upholds the preservation of natural and/or social resources (Coyle, 2005; Hansen, 2007).

In sum, there are many factors influencing the purchase of sustainable tourism products, including certified sustainable products. Table 2.1 summarises some of the incentives and obstacles identified thus far.

[31] There are nonetheless clear exceptions. For example, the Blue Flag which certifies beaches globally allows visitors to visibly distinguish the cleanliness of the beach or the ocean water. These two attributes are meaningful to the visitor and are importantly unambiguous (Font & Epler Wood, 2007).

Table 2.1 Commonly identified incentives and obstacles for the purchase of *'sustainable'* tourism products (including certified products)

Incentives	Obstacles
• Dissatisfaction with existing products • Realisation of the increasing pressure of tourism on resources • Desirability for *'guilt-free'* holidays • Desirability for authentically sustainable tourism products • Participation in the collective effort to cope with an environmental externality • Appreciation for businesses that exhibit environmental and social accountability • Guarantee of quality and reliability	• Lack of understanding of sustainable tourism • Conflicting motives in different settings • Difficulties changing *'established'* behaviour • High costs • Hidden trade-offs • Lack of evidence of benefits • Lack of marketing • Asymmetric information, greenwashing and an inability to differentiate the genuine amongst a plethora of products/schemes

Source: (Prosser, 1994; Goodwin & Francis, 2003; Liu, 2003; Smith, 2007; Bergin-Seers & Mair, 2008; Bergin-Seers & Mair, 2009b, 2009a; Bonroy & Constantatos, 2011; Lebe & Zupan, 2012; Leslie, 2012; Millar, et al., 2012; Gatersleben, Steg & Vlek, 2002; Lindenberg & Steg, 2007; Miao & Wei, 2013).

Of course, whether or not tourists are willing to pay for a *'logo'* that helps reduce that asymmetry remains to be seen. There have been attempts at measuring visitors' expressed willingness to pay (WTP) for certified tourism products and evidence of pro-certification values have been found, but the evidence is certainly not conclusive. For example, two-fifths of visitors to Mexico stated they would pay an average premium of $US30 to $US60 for certified accommodations (Munoz & Rivera, 2002), while the British tourists were willing to pay an additional $US9 to $US11 (International Ecotourism Soceity, 2005). Elsewhere, in a survey of almost 500 Danish visitors staying in Green Key certified accommodations, 69% expressed a WTP extra for hotels with ecolabeling, with 34% of them expressing WTP $0.25-$5.00 more to stay in a certified hotel. Remarkably, 2% were even willing to pay $25 more (cited in Chafe, 2005). Similar findings are supported by Puhakka and Siikamaki's (2011) study. In Queensland, Australia, visitors indicated that they were willing to pay a 5% premium to use certified businesses (Enhance Management, 2000). But such investigations in the tourism industry are limited, unlike similar investigations in other industry sectors (e.g. the food sector (Krystallis & Chryssohoidis, 2005; Aryal, Chaudhary, Pandit & Sharma, 2009), and the forestry sector (Aguilar & Vlosky, 2007; Manaktola & Jauhari, 2007). Moreover, most of these tourism-based investigations have used only qualitative data, and although the balance of evidence suggests that visitors are willing to pay a premium for certified products, these assertions need to be interpreted with caution.

One reason for caution is related to the problem of social desirability bias, where respondents feel the pressure to appear socially and environmentally responsible, outwardly expressing a WTP while in reality being more focused on comfort, quality and price of the product (Jarvis, Weeden, & Simcock, 2010; Chao & Lam, 2011). Additionally, many researchers have demonstrated that very little expressed *'willingness'* is actually translated into practice (Manaktola & Jauhari, 2007; Li & Ouyang, 2009; Vermeer, et al., 2010; Oom do Valle, Pintassilgo, Matias, & André, 2012). Thus,

whilst certification claims to be able to raise profits by attracting clients who are willing to pay a premium for certified products and services, those claims have yet to be substantiated.

Moreover, although some studies have found positive WTP for certification, to the best of my knowledge, none of these studies have considered the likely impact that any given change in price or an associated change in quantity demanded would have on operator revenues. To explain in more detail, note that raising either price or quantity will (all else constant) increase revenues. But the law of demand tells us that the higher the price, the lower the quantity demanded, hence, price and quantity will (almost) always move in opposite directions. When price goes up and quantity goes down, revenues may thus either go up or down. Specifically, revenues will increase if the price increase is greater, in percentage terms, than the corresponding reduction in quantity (Frank & Bernanke, 2007). This is linked to the concept of the *elasticity of demand*. Briefly, the price elasticity of demand for a good is the percentage change in the quantity demanded that results from a one percent change in its price. If demand is elastic the percentage change in quantity will be larger than the corresponding percentage change in price (i.e. an increase in price will reduce quantity demanded, hence reduce revenues) (Frank & Bernanke, 2007). The opposite is true if the demand for a product is inelastic (i.e. only when the demand is inelastic, does a higher price raises revenues) (Figure 2.2).

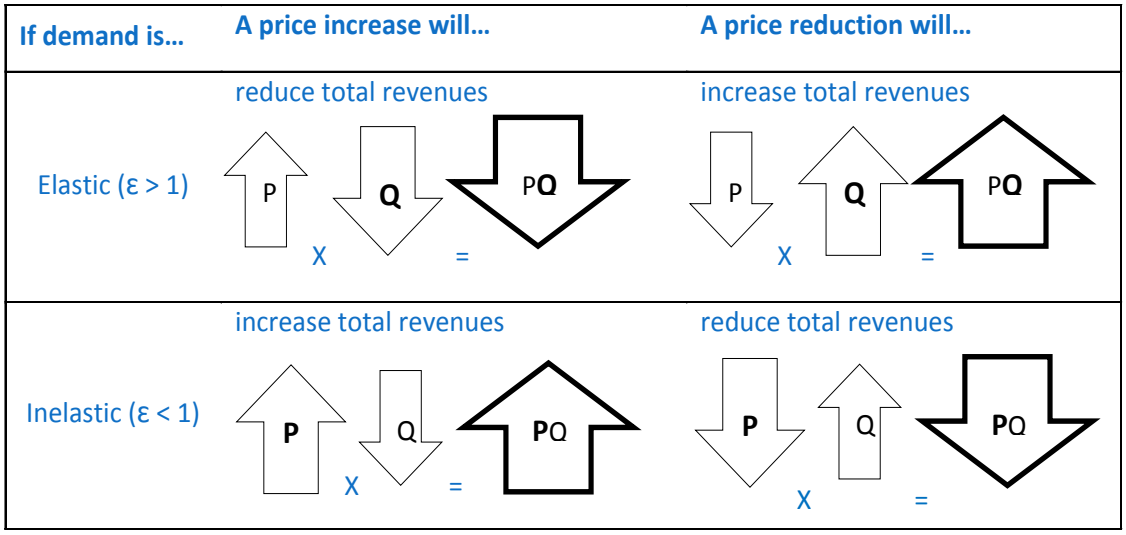


Figure 2.2 Elasticity and effect of a price change on total revenues
Source: Frank & Bernanke (2007)

While there have been many studies estimating the price elasticity of demand, only a few have specifically looked at the price elasticity of demand for certified products. Most of these studies have been in other industries, such as agriculture (e.g. Niemi, 2009) and forestry (e.g. Brown & Zhang, 2005). For example, Niemi's (2009) study found that the demand for *Fair Trade* coffee was price inelastic, while that for conventional and *Utz* certified coffee was elastic. But to the best of

my knowledge, nobody has looked at the potential of tourism certification to raise operator revenues; there is thus a very limited understanding about the demand for certified tourism products, or about the elasticity of demand for certified products in the tourism industry. Based on this gap in literature, I developed my first objective:

Objective 1: Determine if visitors are willing to pay a premium for certified products and to see how an increase in price would impact on operator revenues

As noted above, there are countless studies estimating the price elasticity of demand for different products. Simplistically, these studies collect data on: quantities purchased, the price of the good purchased, the price and availability of complementary and substitutable goods, the size of the market, and characteristics of consumers (e.g. income – which influences ability to pay - and other factors such as gender and education, thought to serve as a proxy for *'tastes'* and preferences). These studies also often need to collect data relating to supply so as to be able to control for differences when interpreting price/quantity relationships. As such, these thorough econometric investigations require an enormous amount of data to generate robust, unbiased estimates. In the end, inclusion of all variables is dependent on the availability of data and the cost of generating new data (Keat & Young, 2006); unless relevant data are publically available (not so in this case), it can be very expensive to collect all that is required for a rigorous analysis.

Fortunately, there are other options – specifically stated preference techniques originally developed in the environmental economics literature. Rather than relying on observed market data, these techniques rely on stated responses to hypothetical situations thus focusing on just a few key variables, while holding all else constant (in essence, creating an economic test-tube). Normally used to assess the value of non-market (or environmental goods), there are a suite of different stated preference techniques including Choice Modelling (CM), Conjoint Analysis (CA) and Contingent valuation (CV) (See Bateman, et al, 2002 and Haab & Mcconnell, 2002 for an overview). Most pertinent to this discussion is CV - a technique commonly employed to value changes in the quality of a good, with money as the metric (Carson & Hanemann, 2005).

The approach relies on *'individual response to contingent circumstances'* (Dharmaratne & Brathwaite, 1998). Using surveys, respondents are presented with hypothetical *'what if'* questions (scenarios) and asked to state their WTP or willingness-to-accept (WTA) a good (Greiner & Rolfe, 2003), rather than inferring them from observed behaviours in the marketplace. Because it creates a hypothetical marketplace in which no actual transactions are made, contingent valuation has been successfully used for commodities that are not regularly exchanged in markets, or when it is difficult to observe market transactions under the desired conditions. As such, it is ideally suited to

this situation, where resource and data limitation are likely to make it difficult to estimate the demand for certification using *'observed'* data and more typical econometric approaches.

The CV method is credited for its simplicity, low cost and its economy of data (Carson, Flores & Meade, 2000). But, like other techniques, CV is not perfect. Of note, is its ability to generate high estimates of WTP (Greiner & Rolfe, 2004; Seip & Strand, 1992) thus leading some researchers to question its reliability (e.g. Hausman, 1992; Diamond & Huasman, 1994). Nonetheless, Duffield & Patterson (1991) argue that the differences between real (i.e. observed) WTP and CV estimates are negligible and predictable enough and a wide panel of experts associated with the National Oceanic and Atmospheric Administration (NOAA) (Arrow et al. (1993, p.3) support this conclusion. That said, it is important to remember that estimates of WTP may overstate *'real'* values – an important point that I come back to when interpreting results in chapter 4.

Despite having critiques, CV has been widely recognised as a very useful technique for eliciting demands for non-market goods. Characteristically, contingent valuation methods use open-ended questions (basically asking people how much they are willing to pay), payment cards (where respondents are provided a list of dollar values and asked to select their maximum WTP), or dichotomous choice questions (e.g. referendums, asking respondents to say yes or no to a question about whether they would be WTP $x). The open-ended approach has been subject to criticism in its ability to deliver reliable and accurate estimates of WTP. This is because it may be very difficult for respondents to come up with their true maximum WTP *'out of the blue'* for a change they are unfamiliar with or have never thought about valuing before (Bateman et al., 2002, p. 138). Hence, open ended CV studies often have large non-response rates and protest answers. For reasons such as these, the technique has been progressively abandoned. With a payment card approach (PC), respondents are able to consider a range of possible WTP bids that may represent their maximum WTP (Cameron & Huppert, 1991). This lowers effort on the part of the respondent, since even a fairly detailed set of thresholds can be visually scanned quite quickly, and there is no need for prompting by an interviewer (Cameron & Huppert, 1989). But it can suffer from both interval and anchoring effects (Farr, Stoeckl & Beg, 2013; Green, Jacowitz, Kahneman, & McFadden, 1998).

The dichotomous choice (DC) format has the advantage of being simple for respondents hence minimising strategic responses (Hoehn & Randall, 1989). It works by offering respondents one of several price trade-offs (bid) at random, and asking them to indicate (Yes or No) if they would be WTP or WTA that amount for the trade-off. Sometimes a *'don't know'* option is also included to avoid forcing respondents into artificially choosing one of the answers (Bateman et al., 2002). The researcher then ascertains the relationship between the price level and the proportion of *'Yes'* responses (Prayaga, 2011). In essence, it uses the approach of *'take it or leave it'* (Zakaria, 2011).

Because of its simplicity and the fact that respondents face a familiar task similar to a real referenda, the dichotomous choice minimises strategic responses (Hoehn & Randall, 1989), and it is this particular form of the CV that has been endorsed by the National Oceanic and Atmospheric Administration (NOAA) Report (Arrow, et al., 1993). It is, thus, the technique chosen here.

Like all techniques, the DC CV it is not without flaws – in fact, the dichotomous choice approach requires a large sample size (with different groups of respondents asked different prices) for precision (Bateman, Langford, Jones, & Kerr, 2001) and is criticised for the inconvenience of providing the researcher with only limited information. To mitigate this, some researchers, for example Hanemann, et al., (1991) proposed adding a follow-up (open-ended) question. For example, consider a respondent who states he is not willing to pay $10 for the proposed plan. Using a follow-up question, the respondent is then asked if he would be $5. If the respondent answers *'no'* to both questions, it is assumed that his WTP amount falls between 0 and $5. If the respondent answers 'no' to the initial question, but 'yes' to the follow-up question, then it is assumed that his WTP amount falls between $5 and $10. If, on the other hand, the answer is 'yes' to the initial question, then the price trade-off offered in the follow-up question will be greater. Although there has been a suggestion of introducing another follow-up question, the consensus is that it is not necessary, given that most of the statistical efficiency gains in the estimation of mean WTP come from the initial follow-up question (Spash, 2008). Importantly, many DC CV studies perform sophisticated econometric analyses to estimate mean (or median) WTP, regressing, for example, WTP against several other variables, such as income. However, the focus of this study is not mean WTP, but rather the revenue implications of an increase in price. Thus, there is no need for such level of sophistication. What is required is information about whether revenues will increase if the percentage increase in price is greater than the percentage decrease in quantity, which will determine the elasticity of demand for certified products. Accordingly, in this study, respondents will be given a DC question about WTP for *ECO*-certified products, with one follow-up question that thus reduces the need to obtain a very large sample (although this was not an open-ended bid and it had a higher price). Further discussion of the associated survey design and analysis of data are held over to chapters 3 and 4 respectively.

2.3 The complexity of demand

As noted in the introduction to this chapter, Lancaster (1966) long acknowledged the significance of attributes in consumer decision-making. Unlike previous economic theories of consumer choice, Lancaster recognised that a product constitutes many properties or characteristics and it is the perceived utility of those characteristics that drives consumer choice, not the goods *per se* (Lancaster, 1966). Fundamentally, the theory argues that a rational consumer will always maximise

his/her utility by selecting the most preferred product from the set of alternative products based on the attributes this product contains, subject to budget constraints. Lancaster further postulates that in general, a product will possess more than one characteristic, and many characteristics will be shared by more than one product (i.e. while a product may be unrelated in some cases, in others it may be related because of its characteristics, e.g. aesthetics). He also suggests that products in combination may have characteristics different from those pertaining to the products separately (Lancaster 1966).

The fundamental assumptions of this theory are based on:

1. The nature of preferences: it is assumed that the indifference curves for characteristics have the properties of the familiar indifference curves for goods;
2. The nature of supply: it is assumed that the consumer has to pay more to get more of a characteristic and that he or she can get more by paying more; and
3. The nature of quality: it is assumed that quality is in the mind of the consumer, that individuals see the same objective characteristics in a good, but value them differently (i.e. any product contains the same amount of any characteristics for all consumers, but each consumer may derive a different level of utility from consuming those characteristics) (Bowbrick, 1994, p. 2).

Two additional assumptions were included (Lancaster 1971, p.21):

4. People always act in accordance with their preference; and
5. There is perfect knowledge

The efficiency frontier depicted in Figure 2.3 is the crux of the Lancaster model. For simplicity, it considers two characteristics *A* and *B,* and three goods *X, Y, Z.* Lancaster assumes each good gives rise to a vector of the two characteristics and the consumption technology consists of activities, consuming each of the goods separately, and in linear combination. The budget-constraint consumer may obtain point *c, d,* or *e* by spending his total income on *X, Y* or *Z* respectively. The points inside and on the triangle *cde* represents the bundles of characteristics which are attainable by linear combinations of X, Y and *Z.* Lancaster maintains that an efficient consumer will choose combinations on *cde,* the *consumer efficiency frontier* (CEF). The CEF varies as price changes. For example, as the price of *Z* increases, the characteristics vector which the consumer may obtain by spending all of his income on *Z* will move towards the origin. If the price of *Z* increases so that a point left of *cd* (e.g. *g*) becomes the new vector, no combination using *Z* would be used and *cd* would become the efficiency frontier, independent of the individual's utility function. Individual preference will thus determine consumer's equilibrium point on the objective efficiency frontier (See Lancaster 1966, 1971 and Hendler, 1975 for more details).

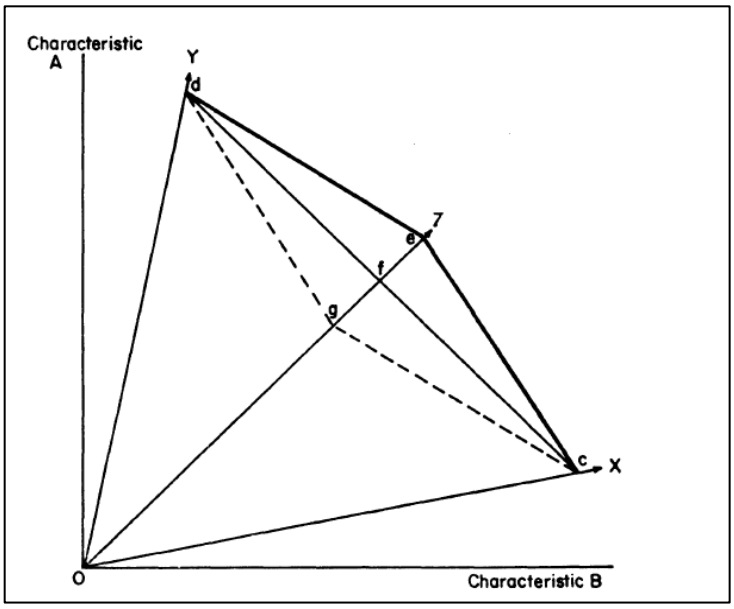


Figure 2.3 Efficiency frontier
(Lancaster 1966)

In other words, Lancaster established that consumers do not acquire products for the sake of the products themselves, but for the utility that is produced by the characteristics of the product attributes. Thus, it is the characteristics of a good from which utility is derived (Lancaster, 1966). A product comprises attributes, some of which *'extend beyond the physical product'* (e.g. environmental and community impacts) and ultimately, a consumer purchases a product based on his/her attitude towards which attributes he/she deems important (Thompson, et al., 2010). The same reasoning applies to certification and its attributes. Demand for and/or satisfaction with certified products (tourists) or with a certification scheme (tourism operators) will therefore depend upon the attributes of the certified product and certification scheme.

Lancaster's theory, including many other economic theories (e.g. *Rational Consumer Theory*) relies upon the assumption that consumers actively search for and use information in order to make informed choices. This implies that the consumer is an intelligent, rational, thinking and problem-solving being who stores and evaluates all inputs to make a reasoned decision (Solomon, 2004; Swarbrooke & Horner, 2007). That is, a consumer is able to make trade-offs that enables him/her to compute utilities of every alternative and choose the option that maximises utility. But, this assumption is based on perfect information (Kucukkurt, 1981; Bettman, Johnson, & Payne, 1991). In real markets, such perfect rationality does not exist. Instead, there is imperfect knowledge, imperfect perception and uncertain beliefs. Consumers do not know their own utility functions, they do not know what characteristics will meet their needs, they do not know which goods have which characteristics, they do not know the prices of all characteristics, they cannot calculate optima and there is information overload. As such, many adopt satisfying rather than optimising

criteria (Simon, 1955) and many adopt heuristics like habitual purchases or searching behaviour (Bowbrick, 1994, p. 173).

These non-rational elements of decision-making behaviour are known as *Naturalist Decision-Making*. This concept recognises that although consumers have the power to be rational, in reality, optimal actions are rare and individuals instead employ analogous past situations and experiences to satisfy, or to find the first satisfactory solution (Simon, 1955). Put simply, a search for answers would cease before an optimal solution can be found as consumers opt to *'satisfy'* rather than *'maximise'*. This logic stems from Simon's *Theory of Bounded Rationality* (Simon, 1955) and arises largely because of a lack of information. Equally important factors enabling such non-rational behaviours are a lack of time and limited cognitive ability to process all the available information (Osborne, 2011).

In other words, consumers are often faced with challenging decisions to guide their choices. Faced with an often large number of alternatives that are constantly changing, with new technologies and the vast amount of advertising, all of which can be confusing to the consumer, purchasing decisions are by no means *'simple'*. Most of the time, the consumer is not completely certain about how a product might perform. Whilst in some cases the characteristics of an attribute may be known with reasonable certainty (e.g. size of an engine), in other cases, the characteristics are unobservable and thus uncertain (e.g. reliability of a second-hand car). Moreover, a good or a service may offer multiple benefits that may be synergistic or antagonistic.

Adding to the complexity of purchasing decisions is the nature of the purchase. For example, buyers have a different approach to purchasing small, routine items like toothpaste (low involvement products), than they do if they are purchasing a home or buying a personal computer (high involvement products) (Glowa, 2001). Even though both require that the consumer compare utilities across competing goods, the amount of information sought and the cost of making an error increases as the price of the good increases. Hence, choosing and buying products involves a broad range of decisions and a variety of decision-making processes.

The same logic can be applied to tourism products and services, despite the fact that tourism products are quite different from other goods or services (Decrop, 2006). As noted in Chapter 1 (sub-section 1.4.2.3), the experience of purchasing a holiday will differ from the experience of purchasing an everyday food item in a supermarket. The former will probably be more time consuming and its selection will be more meticulously considered, since the purchase of a holiday normally entails a high price and the choice is irreversible (Swarbrooke & Horner, 2007). Additionally, the actual consumption of a tourism product occurs at locations different from the purchaser's residence (Sirakaya, McLellan, & Uysal, 1996).

That said, the tourism product will, nevertheless, comprise different *'attributes'*. Based on that logic, any attempt therefore, to attract consumers who are willing to pay for certified products (Objective 1), will be most effective if we understand whether consumers care about certification in the first instance (related to objective 1), and whether they care about its specific attributes. Presumably, some will care more than others about particular attributes so strategic marketing can be done to target particular consumer groups.

To date, previous studies have treated certification as a simple and one-dimensional rather than as a complex and multifaceted *'product'*. Yet, we know that certification aims to encompass various domains of sustainability (i.e. financial, environmental and social) with each domain comprising several criteria (from here on referred to as attributes) used for the assessment and granting of certification status. Moreover, we know that even *'standard'* goods have a number of characteristics, and as pointed out by Lancaster (1966), it is not a good *per se*, but it is the bundle of characteristics of a good that entices consumers to choose a product.

Currently, there is no information about what attributes of certification matter most to tourists; neither is there information about what attributes of certification matter most to tourism operators. An understanding of whether tourists (or operators, for that matter) *'care'* about the attributes measured by certification and whether or not this is meaningful in the purchasing decision is also lacking, despite previous studies establishing tourists' interest in being informed about certification (e.g. Bjork, 2004; Kangas, 2007; Han, Hsu, Lee, & Sheu, 2010). This is confirmed by the more recent study of Puhakka and Siikamaki (2011) who found that 70% of respondents indicated a *'willingness'* to know more about certification. Knowledge of at least the main attributes may help consumers make a suitably informed decision with some degree of confidence (Lebe & Zupan, 2012 pg.141).

Also missing from the research literature on certification, is information about tourists' perceptions of the performance of tourism operators on these attributes. This information is valuable because it can provide certified operators with cues about whether they are fulfilling the expectations of their customers as well as enabling comparisons between businesses. This is a long-term take on certification's role on businesses' financial viability. The fact that previous research has identified consumer perceptions of business performance as a key determinant of satisfaction (Wang, 2007; Iwarere and Fakokunde, 2011) such information is thus critical given the repercussions of poor performance (such as the loss of reputation or loss of revenue (Iwarere, 2010) which can severely impact the business.

Moreover, when assessing how satisfied consumers are with a product's attributes and which aspect(s) of the business need improvement, it is best to consider both the importance of

attributes and the perceived performance of firms on those attributes simultaneously (Martilla & James, 1977; Graf, Hemmasi, & Nielsen, 1992; Ainin & Hisham, 2008). Doing so ensures that key questions are not overlooked (*e.g. is the effort given to different attributes mirroring the importance customer attaches to each?*). As such, discrepancies with a given product or service can be identified. Nevertheless, it seems that to date, no effort has been made to assess tourist perceptions of both the importance of and operator performance on certification's attributes. These knowledge gaps thus provide a focus for objective two:

Objective 2: Improve our understanding of visitors' perceptions about the importance of different attributes of certification (linked to dimensions of sustainability) and about the performance of tourism operators on those attributes.

Discrepancies between importance and performance are often assessed using importance-performance analysis (IPA). As the name suggests, IPA is able to measure aspects of importance (i.e. what are the significant attributes) together with those of performance (i.e. judgments about performance in those attributes), hence assisting in understanding customer satisfaction (Ainin & Hisham, 2008). This information is gathered through the use of questionnaires, whereby respondents rate the performance of each attribute of a target product for its importance to a purchase decision (Oh, 2001). Graphically, the two data sets are plotted on a two dimensional grid with importance on the one axis and performance on the other and the data are then mapped into a four quadrants matrix where quadrants include:

Quadrant I: High importance and high performance (Keep Up The Good Work)

Items in quadrant 2 represent high importance as well as high performance. In other words, customers perceive the attributes as important to their purchase decision as well as perceive the company (or product) to be performing well. This category is labeled as *"Keep up the good work".* Both ratings meet or exceed service quality standards. Thus representing strengths of the existing system and should continue to be maintained. Furthermore, when consumers are pleased with the work performed, this offers *"opportunities"* that the firm can promote.

Quadrant II: Poor performance but high importance (Concentrate Here)

In quadrant 1, the attributes are perceived to be very important to customers, but performance levels are fairly low. This sends a direct message that improvement efforts should "*Concentrate Here"*. Consequently, existing systems require urgent corrective action and thus should be given top priority, otherwise they be *"threats"* to survival. Concentrating constructive action in this area will ultimately produce maximum results.

Quadrant III: Poor performance and low importance (Low Priority)

Quadrant 3 indicates *"Low Priority*". Performance scores do not meet the service quality standard, however, respondents do not place a high level of importance on the service. It is said that managers should not be overly concerned. Accordingly, while such attributes do not pose a threat, there may be grounds for their discontinuation. It is also argued that this low priority could become a *"weakness"* that another firm might exploit.

Quadrant IV: Low importance but high performance (Possible Overkill) (Figure 2.4)

In the final quadrant, low importance and high performance is represented as *"Possible Overkill".* Performance scores meet or exceed service quality standards, nevertheless, a low level of importance is assigned to this particular service. This indicates insignificant strengths and a possibility that the resources invested may be better diverted elsewhere. Conversely, one could argue that this could also be "*strength"* on which to build new customers (Ainin & Hisham, 2008; Kinley, et al., 2002; Oh, 2001; Wade & Eagles, 2003).

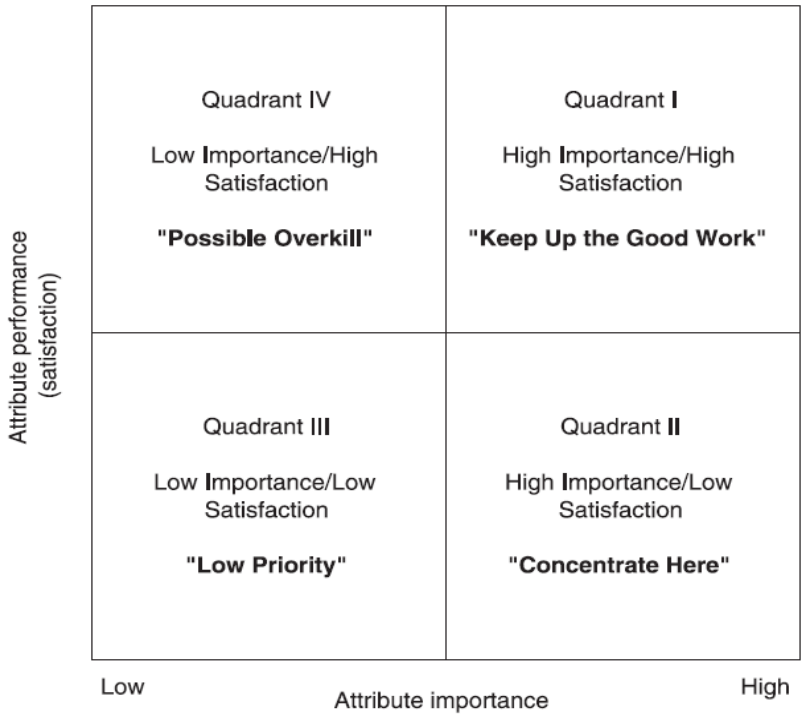


Figure 2.4 Importance-Performance Matrix
Soure: Matzler, Bailom, Hinterhuber, Rentzl &Pichler, 2004

In sum, the results of the IPA can highlight aspects of the operators' performance that requires them to devote more attention to as well as identify areas that may be consuming too many resources for the benefits gained.

Since its inception in marketing research in the late 1970s, the technique has become a prominent managerial tool largely applied to identify the strengths and limitations of brands, products and

services in various domains (Chu & Choi, 2000).[32] In tourism specifically, there have been numerous studies related to destination image (Edward & George, 2008); hotels (Chu & Choi, 2000); escorted tours (Duke & Persia, 1996); visitor centers (Mengak, Dottavio, & O'Leary, 1986) tourist shopping villages (Murphy, Moscardo, Benckendorff, & Pearce, 2011) and national parks (Tonge & Moore, 2007) to name a few. But perhaps most relevant to this research, are the studies of Overdevest and Rickenbach (2006) and Araújo (2008) that looked at forestry certification systems in the US and Brazil respectively. While they focused on forest certification instead of tourism, they nevertheless provided useful insights into the overall performance of certification schemes.

Importantly, this thesis intends to use a modified version of IPA to analyse data. While IPA is deemed as a useful tool in understanding consumer satisfaction and praised for its simplicity and ease of application – indeed, decisive factors for its wide acceptance – Oh (2001) cautioned users on interpreting them as indicators of validity. For instance, the decision of where to place the axes in the four-quadrant grid is *"a matter of judgment",* given the objective is relative rather than absolute measurement of importance and performance level of attributes (Martilla & James, 1977). That said, how does one interpret points which overlap either of the two axes or are two close to the intersection of all quadrants? If, for example, the axis is set at 4 and an attribute has a value of 4.1, one cannot interpret with confidence that it accurately fits this category. Thus, a small change in an attribute may result in a significant change in inferred priority (Bacon, 2003, Eskidsen & Kristensen, 2006). As shown by Tarrant and Smith (2002), this problem is further exacerbated with smaller sample sizes (smaller than 400).

Adjusting the cross-hairs can provide greater insights by allowing for measurement of satisfaction at a higher standard and a more narrow indication of where to prioritise (Bruyere et al, 2002). However, here too, one can misinterpret the results and there are tradeoffs with this decision: for example, a point might fall in the *"Keep up the Good Work"* quadrant based on traditional placement of the crosshairs, but could end up in the *"Possible Overkill"* quadrant based on an upward adjustment of the performance axis, prompting managers to lessen current maintenance towards the particular attribute because of a perceived expression of low importance. If this was to go ahead, it could have an adverse impact on users who deemed the attribute to be important.

[32] For example, its ease of applicability is evident in banking (Yeo, 2003); dentistry (Nitse & Bush, 1993); health care (Dolinsky & Caputo, 1991); information systems (Ainin & Hisham, 2008); organizational change (Graf, et al., 1992); and education (O'Neill & Palmer, 2004) among others.

Furthermore, some researchers have expressed concerns about its lack of statistical analysis and rigor which ultimately weakens the predictive power of the IPA model (e.g Hammitt, Bixler, & Noe, 1996, Tarrant & Smith, 2002). To address some of the concerns of the IPA grid, researchers have extended the original IPA method by adding more information. For example, Lambini (2007) added additional cross-hairs, Slack (1994) modified the original 2x2 matrix into a 9x9 matrix and Bacon (2003) included an iso-rating or iso-priority line (an upward sloping 45 degree line). In this thesis, the IPA analysis is thus done in two ways: using the 'original' 2x2 matirx approach, Bacon's (2003) diagonal line approach, and also performing a series of non-parametric tests to determine if differences between score are statistically significant; details are provided in relevant chapters.

While it is essential to gauge tourists' perceptions of certification, information about tourism operators' perspectives is also important. As discussed in Chapter 1, tourism operators are also *key* consumers of certification. Yet, to the best of my knowledge, there has been no research about operators' perception of the importance of specific components of certification and of their self-assessment of performance on these attributes. If operators are unable to recognise the value of individual attributes, then it is likely that certification as a concept will not interest them nor stimulate them to subscribe to a scheme or to operate more efficiently to achieve the required standard. In addition, there is no research about operator perspectives that links both importance and performance: such information may enable operators to recognise opportunities for continuous improvement. Objective three of this research is thus to:

Objective 3: Improve our understanding of tourism operators' perceptions about the importance of different attributes of certification (linked to dimensions of sustainability) and about their performance on those attributes

Clearly having information about either visitor or operator perceptions is important; but having information about both and then checking to see how much they align is something that to the best of my knowledge has not been done. This knowledge is vital to ensure a balanced achievement in operator performance and tourist satisfaction – and to ensure correspondence between the goals of the certifier, those of the operator, and finally those of the tourist, since all are crucially and interactively involved in this 'market'. Previous research has shown that operators' views of product quality, for example, are often very different from those of their customers (Morgan & Vorhies, 2001) but suggest that when businesses and customers share the same values, then businesses can enjoy higher prices and profits (e.g Furtwengler, 2010). The spill-over effect of this is enhanced financial viability, which, as identified in Section 1.4, certification promises and which operators pursue. In consideration of the above gap, my fourth objective is:

Objective 4: Examine the alignment between visitor and operator perceptions on the importance of and performance in different attributes

To briefly summarise progress thus far, objective 1 will provide information about the WTP for certification in general while objectives 2, 3 and 4 will provide information about consumers' (specifically both the tourists and tourism operators) perceptions of the different attributes of certification and the alignment between the two. Still absent from current discourse, but equally important, is knowledge about tourists WTP for individual attributes of certification. Also missing is an understanding about whether those facets of certification deemed most important to tourists are also those which they are willing to pay most for, hence *'closing the loop'*. Such information would enable researchers to understand what domains of sustainability bear particular resonance to tourists and importantly, how they prioritise the different attributes of certification. Knowledge about tourists' preferences and WTP for the specific attributes might thus provide certification providers and tourism operators with information which may be used in their product differentiation and for attracting higher premiums. Thus the final thesis objective:

Objective 5: Determine if tourists are willing to pay more for some attributes than for others and if visitors are willing to pay more for attributes which are deemed 'important'

A number of techniques allow the valuations of multiple attributes. These methods include choice modelling, conjoint analysis and hedonic pricing – the former two being types of stated preference approaches (like the CV, discussed above) and the latter being a type of revealed preference approach.

Briefly, the hedonic pricing method (HPM) (Rosen, 1974), builds upon the Lancaster's (1966) *Theory of Characteristics*. The HPM identifies price factors according to the premise that price is determined both by internal characteristics of the good being sold and external factors affecting it (Rosen, 1974). Therefore, the price of a marketed good will be affected by certain external environmental or perceptual factors that can raise or lower the *'base'* price of that good (Monty & Skidmore, 2003), and the total value of that good will be dependent upon the quantities of each of the various utility bearing attributes that constitutes it (Rosen, 1974). According to Tajima (2003), variables of the pricing model can be adjusted so as to accurately represent the characteristics of the research subject.

Applications of this technique are prominent in the housing market, where the price of a house will be determined by factors such as scenic views, house appearance, proximity to facilities, etc. The HPM has also been used to value markets for automobiles, computers, and environmental services such as air pollution and noise. In tourism specifically, such analyses are relatively few. Of the few

studies that have employed the hedonic pricing method, most have focused on the accommodation sector, specifically on hotel room pricing, trying to find out how different attributes explain variations in room rates (e.g. Hartman, 1989; Israeli; 2002; White & Mulligan, 2002; Thrane, 2007). For example, Chen & Rothschild (2010), investigated the impact of different attributes on the rates charged for hotel rooms in Taipei and found that hotel location, availability of LED TV and the presence of conference facilities significantly influenced both weekday and weekend room rates. According to Thrane (2007), the use of hedonic pricing method facilitates the identification of attributes for which an extra payment is required, those for which there is a discount and those which are irrelevant in the determination of the room rates. This information is critical to the consumer, and can also be used by accommodation providers as a basis for strategic pricing. In short, the HPM is a popular technique that is relatively straightforward and uncontroversial to apply, given it is based on actual market prices.

But whilst the HPM seems appropriate for this study (particularly given its link to attributes) its use is impractical here because it requires attributes to vary across products of different prices, and certification is *'sold'* as a bundle so attributes do not vary across products. To explain with reference to the broader literature: bundling goods together and selling them as a package is a common marketing strategy (Herrmann, Huber, & Coulter, 1997; Simon & Dolan, 1998; Kotchen, 2012) and part of this approach is deciding whether to offer products as a pure or mixed bundle. With respect to pure bundling, consumers must buy the complete bundle or nothing at all, while with mixed bundling, consumers have the option of purchasing individual items or the complete bundle (Pierce & Winter, 1996; Chalip & McGuirty, 2004). In the context of certification, mixed bundling is unfeasible. Although firms may provide products that incorporate the desired attributes at different levels of quality, certifying the exact level of the attribute in every product runs the risks of being too costly and creating information overload for consumers (Bonroy & Constantatos, 2011). In practice, for each attribute, a quality level is defined by the certification provider and used to denote satisfaction of quality of at least that level. Certified products are thus pure bundled. While bundling makes it easier for businesses and the certification scheme, it does nonetheless, prevent consumers from selecting certified products with varying levels of different attributes. Moreover, many attributes associated with certification are *'invisible'* (the information asymmetry problem). As such, there are no observable data on (certified tourism product) attribute variations – meaning that HPM cannot be used in this instance; another valuation method must be used instead.

As noted above, choice modelling (CM) is another means of attempting to assess the *'value'* of attributes. CM has grown in popularity since its introduction in the early 1980's and is now a well-established method within the field of health economics (Bech & Gyrd-Hansen, 2005),

environmental economics (Adamowicz, Louviere, & Williams, 1994), transport (Arentze, Borgers, Timmermans, & DelMistro, 2003; Sinclair, 1998) and econometrics (Louviere, Hensher, & Swait, 2000). It is becoming increasingly popular in recreation and leisure tourism studies (Haab & Hicks, 1997; Hanley & Wright, 2003). Not only does it include a variety of ways to elicit consumer's preferences, it also allows one to estimate willingness-to pay (WTP) (Caussade, Ortuzar, Rizzi, & Hensher, 2005). In CM, respondents are asked to choose their preferred product from choice sets of hypothetical scenarios characterised by a number of attributes and attribute levels (Bech & Gyrd-Hansen, 2005; Dellaert, Borgers, & Timmermans, 1995; Kuhfeld, 2010; Zwerina, Huber, & Kuhfeld, 1996). The question is put in a behavioural form such as *"Which would you choose, given these options?"* and the alternative which yields the highest overall utility is selected (Louviere et al., 2000; Rolfe, 2006b).

Compared to other stated preference techniques, proponents argue that CM enables the elicitation of preferences for the components of a good rather than merely for the good as a whole (Bech & Gyrd-Hansen, 2005). Also, a choice, which may or may not actually exist in real markets, is made possible (Haaijer, Kamakura, & Wedel, 2001; Hensher, Stopher, & Louviere, 2001; Morely, 1994). Furthermore, a well-designed experiment which includes appropriate variables and values can be used to address particular policy issues (Rolfe & Bennett, 2009). With such technique, one is able to construct the preference functions of individuals (i.e. substitution or trade-offs between attributes) and use this information to predict potential switching to new offerings/alternatives (Hensher et al., 2001; Kanninen, 2002; Rolfe & Bennett, 2009; Roman, Espino, & Martin, 2009).

Related to CM, is conjoint analysis (CA), where respondents are presented with alternative descriptions of products differentiated by attributes and levels and are asked to indicate their preference. It shares four common characteristics with CM:

1. Identification of key attributes underpinning preferences for goods at assigned levels;
2. Experimental designs combining attribute levels into profiles to be assessed by a sample of respondents;
3. Analysis of respondent's evaluations using statistical models which are able to decompose preference into components of each attribute level; and
4. Use of simulation methods to predict preferences or choices (Novotorova, 2008).

However, unlike the latter where only one option is chosen, conjoint analysis elicits preferences by asking respondents to either rank or rate the various alternatives, in terms of desirability. In this sense, all options are considered (Elrod & Chrzan, 2007).

A major disadvantage of either the ranking or rating approach is that it does not allow for simultaneous evaluations of a number of alternatives as is the case in CM. Evaluations based on

ratings for example, (*'extremely important'* to *'not at all important'*) would be able to isolate price as the most important attribute, however, they would be unable to provide information about what price levels are likely to generate price resistance (Novotorova, 2008; De Pelsmacker, Driesen & Rayp, 2005). That said, rating or ranking scales require respondents to provide the intensity of their preference for competing alternatives. The main advantage in the use of these scales is thus the increased information they provide. They provide ordinal measures of preferences and respondents are able to profess their indifference among alternatives by assigning same rating (Karniouchina, Moore, Rhee & Verma, 2007; Elrod, Louviere & Davey, 1992; Huertas-Garcia, Garcia & Consolation, 2012). As to which of the techniques is *'better'* (i.e. between choice experiment and conjoint analysis), Moore, et al., (1998) advised it's a matter of personal choice, software availability, and comfort with designs and analysis. But the general consensus in the literature is that when dealing with market share predictions, the choice modelling approach can produce much better results; if interested in individual preference predictions, the conjoint approach seems more appropriate.

Most pertinent here, however, is the fact that both CM and CA increase in complexity as the number of attributes investigated increases. In full-fledged attribute–based choice and rating studies, *Statistical Design Theory* (Louviere, et al., 2000) is used to combine levels of the attributes into a number of alternative scenarios or profiles to be presented to respondents. Where a *full factorial design* is employed, every setting of every factor (main effects) appears with every setting of every other factor (interactions). Whilst this allows for the full effects of the attributes upon choices to be estimated, they (unfortunately) produce an impracticably large number of combinations to be evaluated (Bateman, et al., 2002). Fortunately, this can be overcome with the use of *fractional factorial design* that ultimately condenses the number of scenario combinations presented to the respondent - however, this is to the detriment of the estimation power.

In consideration of the issues associated with objective 5, employment of either CM or CA is thus deemed infeasible – primarily because of the number of different attributes, discussed in chapter 3, (each of which should, presumably, be assessed at different levels) associated with certification. Consequently, a decision to adopt a simpler approach (hereafter termed a *modified CV*) was made, one that captures elements of both CM and CV. Details of this approach are discussed in chapter 3 when outlining the questionnaire design.

2.4 Chapter summary and thesis outline

Certification is complex and multifaceted, requiring a multidimensional investigation of its merits (or otherwise). Its success depends, in part, on the extent to which it is able to satisfy the needs of

its two key consumers: tourists and tourism operators. However, to date, there is limited evidence that it is able to do so. Five key research gaps were identified, which my research objectives seek to fill. They include:

1. No previous research on the link between WTP for certification and operator revenues *(Objective 1*);
2. A lack of understanding of the importance of individual attributes that make up certification to tourists and their perception of the performance of operators on those attributes *(Objective 2*);
3. A lack of understanding about operator views on the importance of attributes and about their perceived performance *(Objective 3*);
4. No examination of the alignment of visitor and operator perceptions of importance and performance of certification components *(Objective 4*); and
5. No knowledge about visitors' WTP for individual attributes of certification *(Objective 5*).

I propose a novel way to address these gaps – by specifically looking at perceptions of particular attributes that make up certification. I adopt an attribute-level approach, grounding my research in Lancaster's *Theory of Characteristics*. In sum, my underlying hypotheses are that:

1. Certification is multifaceted requiring a multi-attribute examination
2. Tourist demand depends on their perceptions of certification and its different attributes
3. Operator demand depends on their perceptions of different attributes of certification and the (perceived) ability of certification to raise revenues (it also depends upon the ability of certification to lower costs, but that complex problem is left as a task for future research).

While I have chosen to focus on certification, I do recognise that it is but one of many attributes of a tourism product (e.g. price, location, facilities, etc.). Not considering other attributes by no means implies that they are unimportant, but this emphasis (on certification alone) facilitates an in-depth examination of its own attributes: information that could prove vital to those wanting to advance the positioning of certified products and/or develop business and consumer support for certification.

The rest of this thesis is structured as follows:

Chapter 3 sets out the general methodology. Specifically, it describes the case study area (Wet Tropics World Heritage Area and surrounding areas). A description of the steps taken to select the *ECO* certification scheme for analysis is provided next, followed by a detailed description of the scheme and justification of attributes to be analysed in chapters 5 and 6. Descriptions of the different types of questionnaires that were developed are then given, followed by details of the

pilot testing and final survey implementation. The chapter concludes with an overview of the characteristics of respondents.

Results for this thesis are presented in three *'data'* chapters. **Chapter 4** is based on a book chapter that has already been published in *Handbook on Tourism Economics: Analysis, New Applications and Case Studies.* It explores the claim that certification will provide businesses with a competitive edge by attracting clients who are willing to pay a premium for certified products – effectively focussing on objective 1. Using insights from existing literature in conjunction with the primary data collected in the survey of tourists, the chapter sets out to determine whether this is the case. It presents investigations into the likely impacts of price changes on operator revenues. It then examines whether certified operators might be able to supplement their existing customer base with new customers, who might be more likely than others to pay a premium for certification, considering factors such as: visitor characteristics; knowledge of certification and its requirements; and perception of the contribution certification makes to sustainability.

The first part of **Chapter 5** is based upon a journal article that has already been published in the *Journal of Sustainable Tourism.* It takes, as a starting point, the hypothesis that for visitors to be willing to pay a premium, they must first care about certification. Thus, the chapter explores visitors' perceptions of the importance of eight core attributes of *ECO* certification and their perceived performance of operators on those attributes – thus focussing on objective 2. The aim of this chapter is to determine if the *ECO* certification scheme is focusing on what matters – from the perspective of the consumer (i.e. the visitor). The chapter also considers whether the perceived importance of attributes varies across different visitor groups, compares the perceived performance of *ECO*-certified versus non-*ECO* certified operators and highlights areas of consumer satisfaction and areas that may need improvement. A discussion of the findings is then given.

The chapter then extends the above examinations (beyond those considered in the journal article), to include operator perceptions. The analysis mirrors those of the visitor study by also looking at aspects of perceived importance and performance (self-assessment) in different attributes – providing information about objective 3. Findings from both studies are then used in conjunction to see if operator and visitor views align, thus giving insights for objective 4.

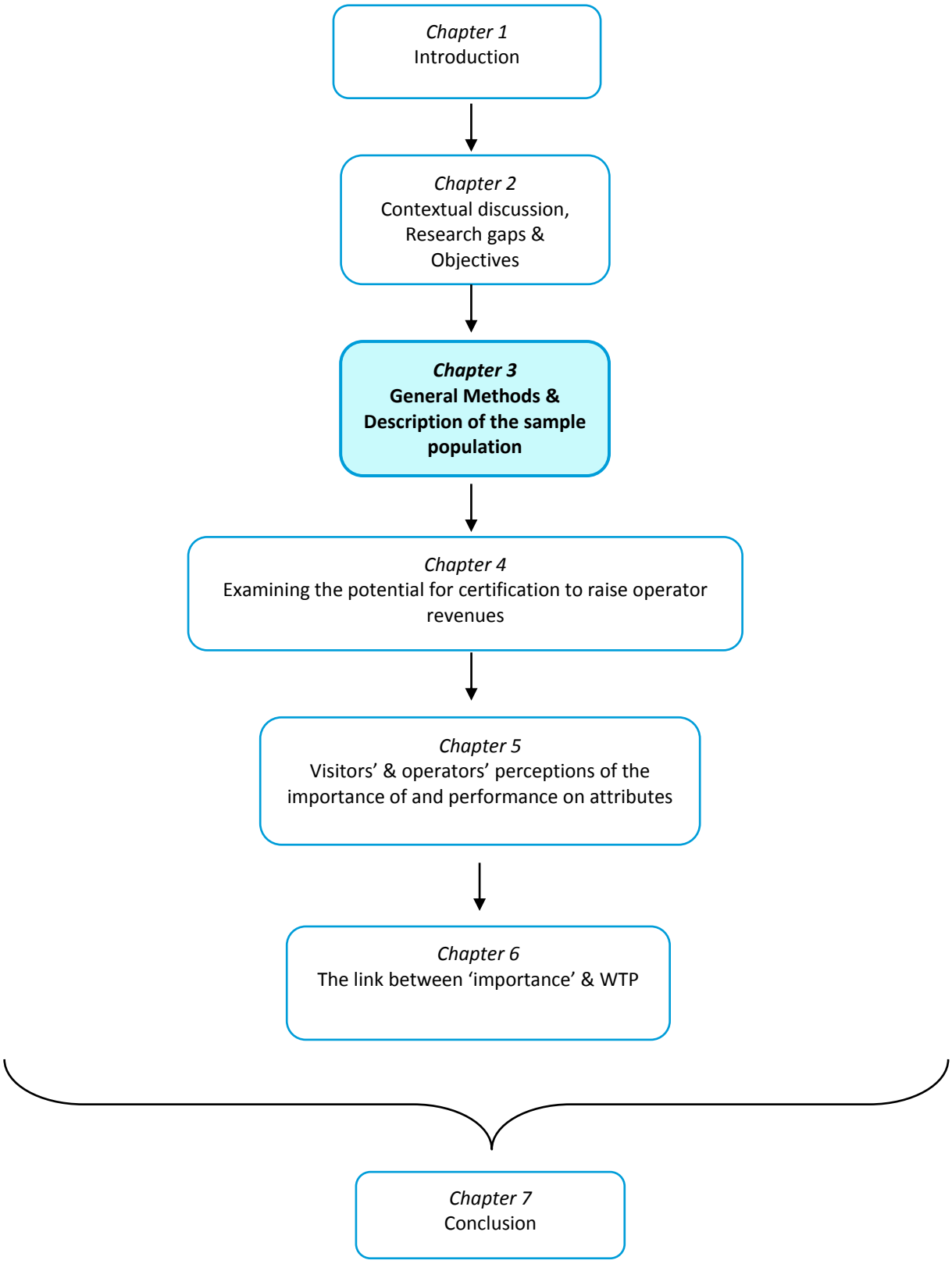
The final data chapter, **Chapter 6** extends the previous analyses of visitors' perceived importance by looking at visitors' WTP for the different attributes – thus focusing on objective 5. The principal aim of this chapter is to establish whether WTP matches the perception of what is important. In doing so, the chapter is careful not to *'value'* attributes, since as found in Chapter 5, there is imperfect information, which means that private estimates of *'value'* would not – unless by

'*accident*' – equal to social estimates of value. A discussion of the findings and its implications concludes the chapter.

An overall discussion of the key findings of this thesis and their implications are provided in the final chapter. **Chapter 7** also highlights major contributions of the study, its limitations and presents areas of interest for further research.

Appendix 7 presents data collected from operators about their actual performance on some key indicators of customer satisfaction, environment and the community. Although this was not the primary aim of this research, it does provide some insights on differences in performance between those with and without certification, in a bid to understand if certification improves performance.

Thesis Outline



GENERAL METHODS & DESCRIPTION OF THE SAMPLE POPULATION

Synopsis

The main aims of Chapter 3 are to describe: (a) the case study area; (b) the questionnaire design; and (c) the implementation of the survey. It starts with a discussion of the study site and the process for selecting the *ECO* certification scheme. The attributes to be used for assessment are then identified, with a particular emphasis on issues relevant to the region. It then gives a general overview of the theories underpinning the questionnaire design (more details about specific methodologies are given over to later chapters). Next, a description of the pilot phase and survey implementation is presented. The chapter concludes with an overview of the characteristics of respondents and comments on the representativeness of the sample.

PART A

3.1 Overview of the case study area

Chapter 1 emphasised the need for the tourism industry to develop sustainably, particularly in susceptible areas such as protected areas. As discussed, although granted *'protected'* status, these areas are not guaranteed protection, and evidence to date shows that many are in danger (UNESCO, 2012). In view of that, it was thus decided to examine the sustainability of tourism (with a focus on certification) in a protected area context. The Wet Tropics World Heritage Area (WTWHA) of Queensland, Australia and its surrounding areas, a region of world significance and known to contain some of the largest concentrations of visitors and operators and with easy, year-round access, was the logical choice as my field study site. A description is provided below.

Geographically, the WTWHA extends from near Cooktown in the north to near Townsville in the south and borders the Great Barrier Reef World Heritage Area (GBRWHA) along a considerable part of the coastline (Figure 3.1). Ecologically, the area is significant enough to have merited special protection: world heritage status was granted in 1988 (Wet Tropics Management Authority, 2009b; UNESCO, 2010b). It contains a distinctive and diverse assemblage of flora and fauna - the highest concentration of primitive flowering plant families in the world and various threatened plant and animal species find a home within these boundaries (Wet Tropics Management Authority, 2009b).[33] Covering almost 900,000 ha, the WTWHA includes six national parks and Australia's most extensive remaining area of wet tropical rainforests is protected here.

The WTWHA contains over 200 visitor sites and 150 managed walks and attracts approximately five million visitors annually (Wet Tropics Management Authority, 2009b). Such coexistence between a thriving tourism industry and this complex ecosystem makes it of special interest to the wider-world (Vogel, 2009). Furthermore, the region accommodates the highest concentration of ecotourism operators in Australia and arguably in the world (Tony Carters and Associates, 2010) – making it of special interest to this investigation.

Most visitors to the region are domestic tourists (>80%), particularly during the Australian winter months. However, the region is becoming increasingly popular with overseas visitors as well. Day trips tend to be most common among visitors who arrive in Cairns and then either drive themselves

[33] The WTWHA contains: 40% of Australia's bird species, 35% of Australia's mammal species, 60% of Australia's butterfly species, 20% of Australia's reptile species, 21% of Australia's cycad species, 29% of Australia's frog species, 65% of Australia's fern species and 30% of Australia's orchid species. As regards the flowering plants specifically, 16 out of the world's 28 lineages of primitive flowering plants grow in the WTWHA and within these families, there are at least 50 flowering plant species found only in the Wet Tropics (Wet Tropics Management Authority, 2012).

to the WTWHA (in their own cars or hire cars) or participate in a commercial tour (Driml & Common, 1996).

Businesses of different types and sizes operate in the area, ranging from easy walks in the rainforest to 4WD tours into the most secluded areas of the rainforest (tours), rural farm stays to luxury resorts (accommodations) and award winning drawcards like Skyrail as well as many wildlife parks (attractions) (Cairns Unlimited, 2011).

The area is also culturally rich with more than 20 Aboriginal traditional owner groups having ongoing traditional connections to land in and near the Wet Tropics (Ignjic, 2001) and its cultural values have been recently added to the National Heritage Listing. Indigenous tourism ventures encompass storytelling, tour guiding, camping, cultural centres, traditional dance and the production and sale of arts and crafts (Ignjic, 2001; Zeppel, 2002).

Tourism makes the Wet Tropics one of two most significant money-earning world heritage areas (WHA) in Australia (Gillespie Economics, 2008).[34] Visitors to the WTWHA are estimated to contribute: $2,058.0 million in annual direct and indirect output or business turnover; $927.1 million in annual direct and indirect value added; $606.8 million in annual direct and indirect household income; and 13,351 direct and indirect jobs (Gillespie Economics, 2008). Importantly, it seems that the natural features and scenery are the major attractions for visitors (Driml & Common, 1996; Driml, 1997; Bentrupperbäumer & Reser, 2002). Evidently, there is value in maintaining the WTWHA not only for its ecological assets but also for its ability to generate considerable regional incomes.

[34] In this particular study, the WTWHA was ranked second behind the Sydney Opera House. However, the Great Barrier Reef World Heritage Area, another significant WHA in Queensland, was excluded from the study due to its spacial complexities and governance arrangements (Gillespie Economics, 2008).

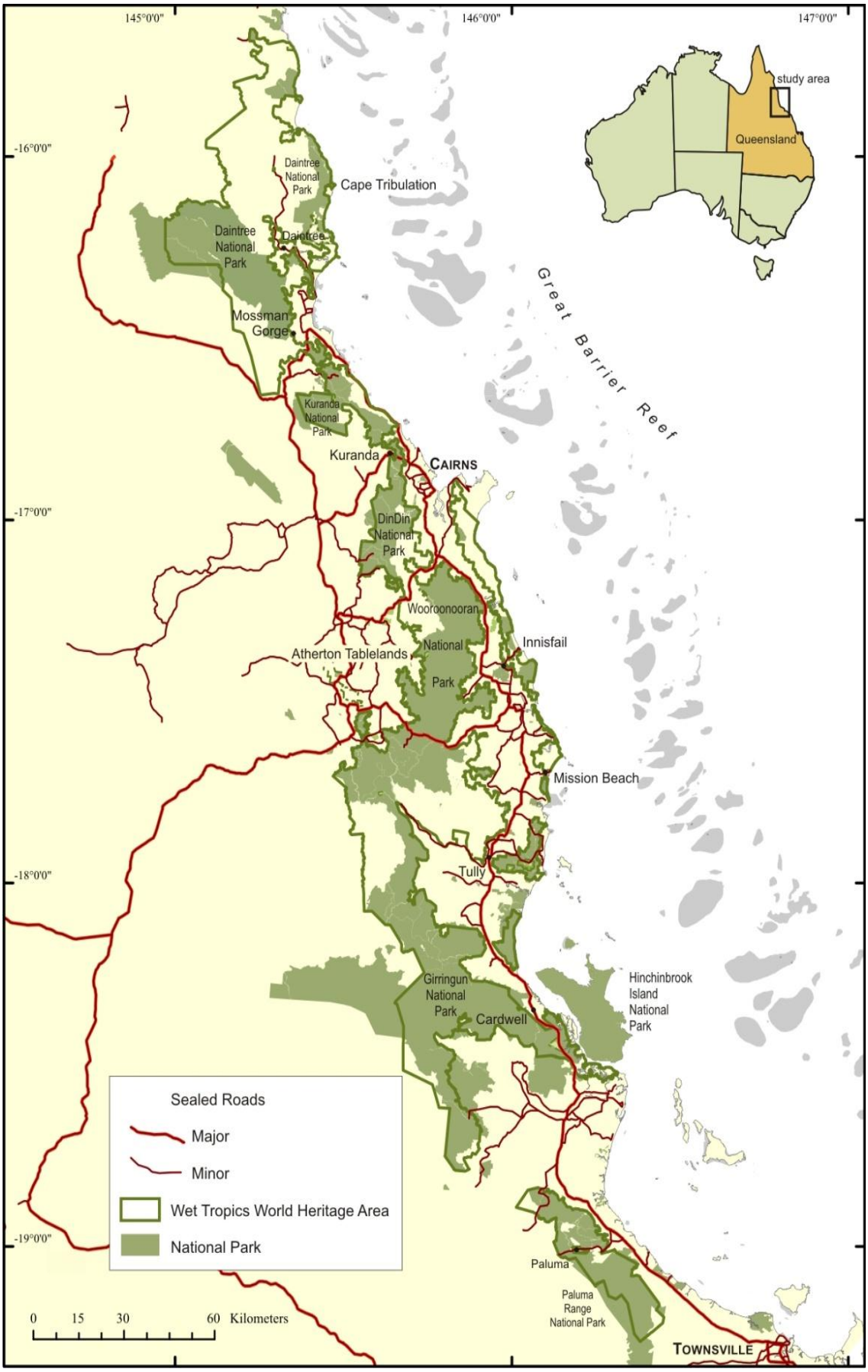


Figure 3.1 The Wet Tropics World Heritage Area (WTWHA) and environs

Unfortunately, the tourism that makes this area *'famous'* can also produce negative consequences that, if not addressed promptly and appropriately, could impact on the values that world heritage status seeks to protect. In fact, several sites have already began to show degradation from heavy use and studies such as those of Turton (2005); Worboys & Gadek (2004), Talbot, et al., (2003), Bentrupperbäumer & Reser (2002) and Butler, et al., (1997) conclude that such adverse consequences are largely linked to: visitor use of walking tracks and trails; damage to tracks and soils from vehicles; trampling; disturbance to wildlife; damage to river banks; and use of day areas, camping areas and water holes. Even *'responsible'* tourism has been linked to some of these impacts (Vogel, 2009).

These issues have prompted the Wet Tropics Management Authority (WTMA), in consultation with several other organisations (e.g. Queensland Parks and Wildlife Service (QPWS), the tourism industry and conservation groups) to develop policies and best practice manuals/guidelines to help tourism operators minimise the associated environmental and cultural impacts of their operations. Examples of these include the *Wet Tropics Nature Based Tourism Strategy* (Wet Tropics Management Authority, 2000) and the *Wet Tropics Walking Strategy* (Wet Tropics Management Authority, 2001) - both of which discuss tourism and recreation issues in the WHA and highlight the necessity to develop a visitor monitoring system for ongoing evaluation of the environmental and social conditions of sites visited. These are further strengthened with the *Wet Tropics Conservation Strategy* (Wet Tropics Management Authority, 2004) which outlines actions to achieve conservation and rehabilitation of degraded sites. The most recent publication, *Strategic Plan: 2008-2013* sets out WTMA's directions over the next five years, emphasizing the required actions to ensure that goals and associated objectives are met. Several researchers have also investigated best practices in the region (e.g. Zeppel & Carmody, 2004; Carmody & Zeppel, 2006; Vogel, 2009).

Whilst protected area agencies such as WTMA, strive to ensure compliance to the values of such areas, the long-term maintenance of tourism in protected areas, indeed in any tourism setting, can only be realised with persistent and sustained commitment to action from various stakeholders (Horobin & Long, 1996). As already discussed, certification has been identified as a key tool. However, there is a multitude of certification schemes globally and in order to be able to provide detailed information of how it is supposed to help, I decided to focus attention on just one certification scheme. I now describe a vital step in my research design that helped me chose the scheme on which to focus.

3.2 Selecting a certification scheme for analysis

In the preceding section, I described my field study site (i.e. the WTWHA and surrounds) as one containing a large number of visitors and tourism ventures. In addition to offering a variety of

activities, products and services, tourism operators also choose to differentiate themselves through various certification schemes. While it would have been possible to do a study of certification without focusing on a specific scheme, doing so would have limited our understanding of the specifics of certification. Recall from Chapter 2 that a key gap in the literature is the lack of in-depth investigations of certification – most of all previous work has treated certification as if it were a simple, homogeneous product. So I decided to focus on a specific scheme, seeking to learn more about the individual attributes of certification and thus obtaining a baseline to help compare with other schemes and importantly, guide future efforts.

A process comprising three stages was followed before a final certification scheme was chosen using three criteria:

1. Is the scheme relevant to the study area?;
2. Is the scheme relevant for my definition of sustainable tourism (that is, encompassing the multiple domains of sustainability)?; and
3. Is the scheme applicable to all types of tourism products or businesses represented in the study area?

Firstly, cognisant of the fact that there are several schemes nationally and globally, I narrowed my search to schemes available to tourism operators in my study area. This search generated a list of 19 certification programs, comprising:

- Audubon Green Leaf Eco-Rating Program
- Carbon Reduction Institute No CO^2/ Low CO^2
- Climate Action Australia Certification Program
- Green Star Accreditation – AAA Tourism Queensland ecoBiz
- Ecotourism Australia *ECO* Certification Program
- EarthCheck (Rebranded and previously known as Green Globe)
- Green Key
- National Australian Built Environment Rating System (NABERS)
- Sustainable Tourism *ECO*-certification Program (STEP)
- Respecting Our Culture (ROC)
- Savannah Guides
- Green Star Accreditation
- STAR Ratings Australia
- TQUAL Accreditation
- Tourism Accreditation Australia Limited (TAAL)
- Australian Tourism Accreditation Program (ATAP)

- National Accommodation, Recreation and Tourism Accreditation (NARTA)
- Gumnut Award
- Camping with Confidence - Australian Campsite and Outdoor Activity Provider Accreditation Program (Tourism Queensland, 2010; Queensland Tourism Industry Council, 2011).

Secondly, fundamental to my choice of certification scheme were the four underlying domains of sustainability (Section 1.2). To reiterate, for tourism to be sustainable it must:

1. Respect the economic well-being and social and cultural concerns of the host community;
2. Respect the character of the local environment and operate within its capacity to regenerate itself;
3. Reduce its impact on the wider global environment in terms of depletion of natural resources and pollution; and
4. Provide a meaningful and satisfying experience for the visitor (Beioley, 1995, cited in Hobson & Essex, 2001).

Hence, the second and most important phase was consideration of the criteria used to assess businesses, operators, products or services. I performed a targeted search for each of the above listed scheme, using a combination of:

1. Their official webpage;
2. The Web of Knowledge™ database to search for published articles relating to or associated with these schemes; and
3. The Google search engine for grey literature reports obtained from governmental agencies or industry such as Tourism Queensland.

I then screened the schemes against those four sustainability domains. Only those programs that addressed the four principles were considered. They included: Audubon Green Leaf Eco-Rating Program; Ecotourism Australia's *ECO* Certification Program; EarthCheck; Sustainable Tourism Eco-certification Program (STEP); Respecting Our Culture (ROC); and Gumnut Award.

Typically, most schemes focused on accommodations only, however, since a variety of tourism businesses operate in the WTWHA, it was important that the chosen scheme, covered all types of operations. *ECO* certification and EarthCheck were the only two schemes that satisfied that final criterion. Ultimately, I chose the former because more firms in this area were members of it than of EarthCheck. In the section below, I provide more details about the chosen scheme.

3.3 The *ECO* certification scheme

The *ECO* certification program is run and operated by Ecotourism Australia. Supplementary to the above selection criteria, the scheme stood out for its market acceptance. It has been described as one of the most long standing schemes in the world (Wood & Halpenny, 2001; Buckley, 2002) and has been used as a blueprint for the development of other certification schemes (Thwaites, 2007). According to its promoters, the program is now being exported worldwide as the *International ECO Certification Program®* with over 15 countries seeking to implement the scheme in their own countries and in their own languages. However, some researchers, for example Newton, et al., (2004), feel that the scheme has failed to achieve global reach.

Nationally, *ECO* certification has been attributed with improving standards and professionalism in Australia's ecotourism sector (Thwaites, 2007). In comparison to EarthCheck which has 330 members nationally, of which 30 are located in Queensland (A. Russ, personal communication, December 12, 2012) *ECO* certification has 485 subscribed operators with an overwhelming majority in Queensland. Between 2009 and mid 2012 the number of *ECO*-certified operators has grown significantly (Table 3.1).

Table 3.1 Number of operators offering *ECO*-certified products in Australia between 2009 and 2012

	Accommodations	Tours	Attractions	Total 2009	Accommodations	Tours	Attractions	Total June 2012
NATIONALLY	79	232	42	353	122	314	49	485
Australian Capital Territory (ACT)	0	1	0	1	1	0	1	2
New South Wales (NSW)	15	19	4	38	23	48	7	78
Northern Territory (NT)	4	15	2	21	7	28	4	39
South Australia (SA)	9	27	5	41	10	27	4	41
Tasmania (TAS)	2	6	1	9	7	11	3	21
Victoria (VIC)	8	32	8	48	13	41	6	60
Western Australia (WA)	7	28	4	39	15	46	7	68
Queensland (QLD)	34	104	18	156	46	113	17	176

Compiled from Ecotourism Australia's website

Note: The total number of operators include both marine and land-based. In this study, only land-based operators within and around the WTWHA were targeted.

3.3.1 ECO certification levels

The *ECO* certification scheme can certify any tourism experience that is nature-based or has a nature focus, and this suits the location of the study – WTWHA. Businesses have a choice of three levels of achievement (Table 3.2), based on their level of commitment to sustainability, dedication/applicability to social and cultural responsibilities and the level of interpretation and education involved in the product(s) they offer (Ecotourism Australia, 2009). Each level requires satisfaction of all core criteria. At least 75% of advanced criteria must be met for Advanced certification.[35]

Table 3.2 The three levels of *ECO* certification

Logo	Description
	Nature tourism: Tourism in a natural area that leaves minimal impact on the environment.
	Ecotourism: Tourism in a natural area that offers interesting ways to learn about the environment with an operator that uses resource wisely, contributes to the conservation of the environment, and helps local communities.
	Advanced Ecotourism: Australia's leading and most innovative ecotourism products, providing an opportunity to learn about the environment with an operator who is committed to achieving best practice when using resources wisely, contributing to the conservation of the environment and helping local communities.

(Ecotourism Australia, 2011)

An important distinction of *ECO* certification is that it is product specific which means that operators need to address the criteria as it applies specifically to each product, rather than the entire business or the operator. Hence, it is strictly products, not operators or businesses which are certified. However, **for the purposes of this study, I use the phrase '*certified operator*' to refer to an operator with a certified product and a 'non-certified operator' as one with no product which is certified.**

[35] The scheme is said to assure travellers that certified products are genuine, are of high quality and are backed by well managed commitment to sustainability (Ecotourism Australia, 2010). The credibility of the program is said to be maintained through a comprehensive and independent third party audit process. For further insights about the program, including its inception, key metamorphoses, successes and challenges, readers are encouraged to read Thwaites (2007).

3.4 Overview of experimental design

To satisfy the aims and objectives of this research, I adopted a quantitative approach. In particular, I collected primary data using questionnaires specially designed for visitors and operators. However, because *ECO* certification is product specific, it meant that I had to design the questionnaires to suit each respective product. As such, for each target group (i.e. visitor and operator), three questionnaires were developed. Specifically, there was one for visitors staying at accommodations, one for visitors on guided tours and another for visitors at paid-for attraction venues. Similarly for operators, three different questionnaires were developed. This also meant that information at the product level could be gained and comparisons be made. The surveys were all similar in terms of what was asked, except that each was tailored to match a specific type of product (Appendices 1-6 contain the full surveys).

Figure 3.2 summarises my experimental design and depicts the linkages between the different versions of the questionnaire. The sections that follow provide detailed descriptions of each of the steps in this design. Note that although not the primary focus of my research, I took the opportunity to also include questions that would help understand whether certification improves performance. Details about this supplementary objective are presented in Appendix 7.

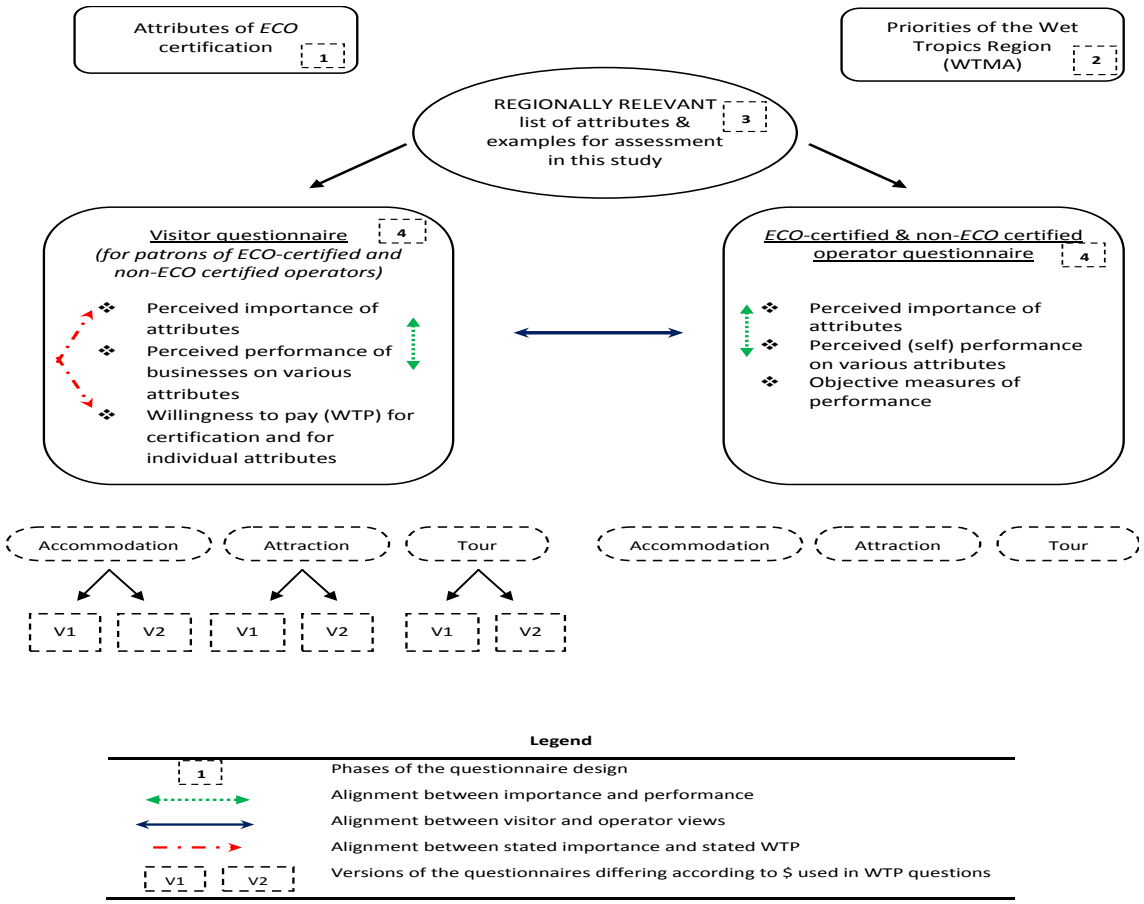


Figure 3.2 Experimental design

3.5 Questionnaire design

3.5.1 Identification of attributes for assessment

Four of my five objectives focus on *'attributes'* – specifically seeking to improve our understanding of:

1. visitor perceptions about the importance of different attributes of certification and about the performance of tourism operators on those attributes;
2. operator perceptions about the importance of different attributes of certification and about their performance on those attributes;
3. the alignment between visitor and operator perceptions on the importance of and performance in different attributes; and
4. visitor WTP for different attributes.

As such, a core part of this research entailed identifying appropriate attributes for assessment. The *ECO* certification program assesses products against several key criteria, each covering a different domain of sustainability. Although the scheme includes two additional criteria: (1) *business management and operational planning*; and (2) *business ethics*, these were not considered in this study. This is because they are aspects of the scheme directly related to the operator (i.e. operational requirements), which have to be met anyway before an operator is able to operate. For example, the criteria *business management and operational planning* encompasses:

- Legal compliance (e.g. regulations, licenses and permits including vessel surveys that are required to operate a nature tourism or ecotourism business); and
- Insurance details (public liability insurance, and other business insurance necessary in the event of an accident affecting the business operation);

Business ethics includes codes of conduct which the operator must follow. For example, the operator:

- Is committed to complying with the National Privacy Principles contained in the Privacy Act;
- Shall endeavour to treat all customers equally; and
- Will adhere to industry codes of practice where they apply (Ecotourism Australia, 2009).

While they could be incorporated in the operator survey, I decided not to, as I wanted to examine the alignment between visitor and operator perceptions (Objective 4). This required that the same attributes be used in both surveys.

In Table 3.3, I show how the remaining criteria identified in the *ECO* certification scheme match the principals of sustainability that were outlined in section 1.2 (recall from section 3.2, a key criteria in the selection of a certification scheme was coverage of all four principles of sustainability). This

table is complemented by Figure 3.3, which illustrates specific subcategories of the eight core criteria that are used by the *ECO* certification scheme.

Table 3.3 Alignment of *ECO* certification's criteria with the sustainability domains

Sustainability domains/principles		*ECO* certification criteria		Description
Economic sustainability	1. Provide a meaningful and satisfying experience for the visitor	1.	Responsible marketing	Be marketed and promoted honestly and accurately so that realistic expectations are formed
		2.	Customer satisfaction	Consistently meets consumer expectations
Environmental sustainability	2. Respect the character of the local environment and operate within its capacity to regenerate itself	3.	Natural area focus	Focus on giving visitors the opportunity to personally and directly experience nature
		4.	Interpretation	Provide opportunities to experience nature in ways that lead to greater understanding, appreciation and enjoyment
	3.Reduce its impact on the wider global environment in terms of depletion of natural resources and pollution	5.	Environmental sustainability	Represent best practice for environmentally sustainable tourism
		6.	Contribution to conservation	Positively contributes directly to the conservation of natural areas
Social sustainability	4.Respect the economic well-being, and social and cultural concerns of the host community	7.	Working with local communities	Provides constructive ingoing contributions to the local community
		8.	Cultural component	Be sensitive to, interpret and involve the culture(s) existing in the area

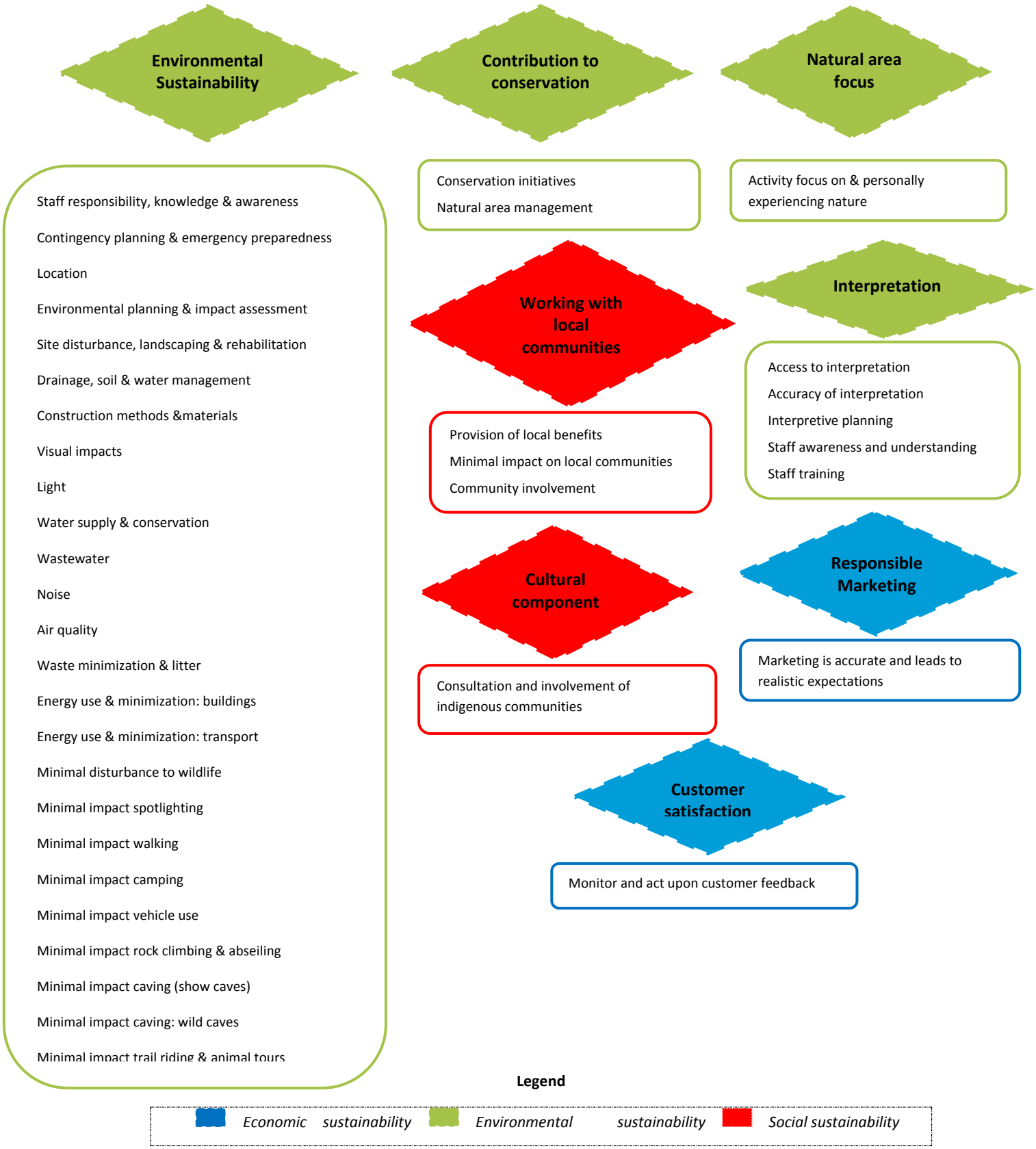


Figure 3.3 Core criteria (diamonds) and subcategories (rectangles)

3.5.1.1 Deriving regionally relevant variables for analysis

As depicted in the preceding figure, the *ECO* certification scheme assesses products across a variety of criteria that encompass a multiplicity of subcategories. *Environmental sustainability* alone, includes notions of staff responsibility, air quality and minimal impact spotlighting. It was not practical to focus on all of these, as doing so would be a laborious task for participants in the survey. I therefore set out to identify one *'example'* from each criterion for detailed analysis.

To help narrow down the list, I matched the priorities of the Wet Tropics region to the criteria of *ECO* certification (where applicable) to come up with regionally relevant examples on which to focus for assessment. In other words, examples chosen to exemplify or characterise each criterion were the ones that most closely matched the priorities of the Wet Tropics Management Authority (WTMA) for the region. In the following sub-section, I outline the priorities identified by WTMA and highlight the chosen examples.

3.5.1.1.1 Priorities of the Wet Tropics region

According to WTMA, the most pressing issues for the region are: climate change; regional population growth; vegetation clearing and fragmentation; and pests, weeds and pathogens (Wet Tropics Management Authority, 2009a, p. 85). The first and the last two on that list are covered by *ECO* certification, hence I focused on them. WTMA stresses that the most important management interventions are those that build ecological resilience in and around the area, particularly on-ground work to improve forest health. Also important is finding ways to reduce emissions of greenhouse gases (Wet Tropics Management Authority, 2009b).

These priorities relate, almost entirely, to *Environmental sustainability* and *Contribution to conservation* (core criteria). In the case of the former, it made sense to focus on the subcategories *energy use & minimisation (building & transport)* (highlighted in bold in Figure 3.4) as emissions associated with energy use are big contributors to climate change (Karl & Trenberth, 2003). As regards the latter, the subcategory *conservation initiatives* was selected (highlighted in bold in Figure 3.4). While WTMA is the main stakeholder mandated with the task to *"protect, conserve, present, rehabilitate and transmit"* the values of the World Heritage Area (WHA), assistance from other stakeholders is imperative. Many operators use the area as part of their product offerings. Seeing that they have a huge stake in the area, it makes sense therefore that they contribute towards its conservation – either financially or otherwise in the rehabilitation of degraded areas, reduction in the size of populations of feral animals and weed infestations.

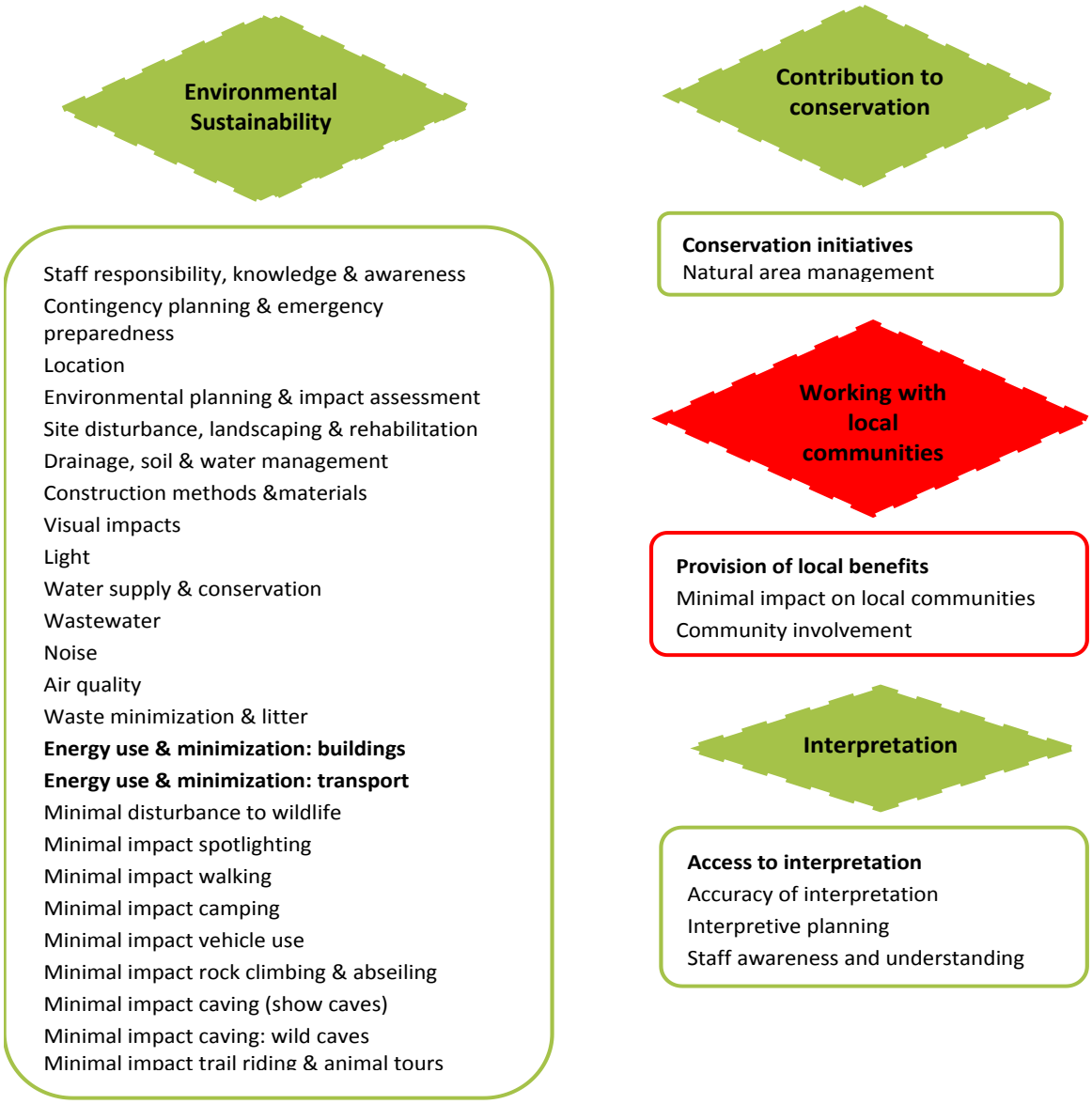


Figure 3.4 Chosen subcategories used as example within each criterion

As to the other core criteria consisting of two or more subcategories (i.e. *Working with local communities* and *Interpretation*), in each case, I chose the first subcategory: *Provision of local benefits*[36] and *Access to interpretation* (highlighted in bold in Figure 3.4). In both cases, I sought examples which could easily be validated, either by checking a tourism operator's website or on site. The phrase *provision of local benefits* was interpreted as meaning that basic products (e.g. food) and services (e.g. repairs and maintenance) were purchased locally or that local residents

[36] The phrase *minimal impact on local community* (second subcategory) was interpreted as meaning that locally sourced and produced resources which were in short supply were used sparingly – contrary to the first subcategory, this was thought to be more difficult to verify. There was no need to go through the process of elimination of subcategories for *Responsible marketing* and *Customer satisfaction* as they both had only one.

were employed in some aspect of the operation. Table 3.4 contains the final list of examples used to depict the domains assessed by the *ECO* certification scheme. As demonstrated, the examples used were largely similar across all three surveys (the development of which is explained in the next section) but were tailored to suit the appropriate product (e.g. accommodations, tours and attractions).

From this point forward:

1. the term *'attribute(s)'* will be used to differentiate the criteria (and associated examples); and
2. the eight core attributes used in this study will be referred to as follows:

Natural area focus - *Nature*

Interpretation - *Interpretation*

Environmental sustainability - *Environment*

Contribution to conservation - *Conservation*

Working with local communities - *Community*

Cultural component - *Culture*

Customer satisfaction - *Customer*

Responsible marketing - *Marketing*

Table 3.4 Regionally relevant list of examples describing core attributes

ACCOMMODATIONS	ATTRACTIONS	TOURS
NATURAL AREA FOCUS *e.g. The establishment is based around activities that help customers to personally experience nature*	**NATURAL AREA FOCUS** *e.g. The attraction is based around activities that help customers to personally experience nature*	**NATURAL AREA FOCUS** *e.g. The tour is based around activities that help customers to personally experience nature*
INTERPRETATION *e.g. The establishment provides materials that explains the environment*	**INTERPRETATION** *e.g. Materials that explains the environment (e.g. brochures, signage) are provided at the attraction venue*	**INTERPRETATION** *e.g. Pre-tour materials such as brochures that explains the environment are provided*
ENVIRONMENTAL SUSTAINABILITY *e.g. The establishment uses renewable energy sources to provide power*	**ENVIRONMENTAL SUSTAINABILITY** *e.g. The attraction venue uses renewable energy sources to provide power*	**ENVIRONMENTAL SUSTAINABILITY** *e.g. Vehicles used on tours utilise energy efficient fuel*
CONTRIBUTION TO CONSERVATION *e.g. The establishment donates funds to rehabilitate degraded areas*	**CONTRIBUTION TO CONSERVATION** *e.g. A proportion of money raised from visitation to the attraction is donated to fund the rehabilitation of degraded areas*	**CONTRIBUTION TO CONSERVATION** *e.g. The tour operator donates funds to rehabilitate degraded areas*
WORKING WITH LOCAL COMMUNITIES *e.g. The establishment purchases many goods and services locally, thus contributing to the local* economy	**WORKING WITH LOCAL COMMUNITIES** *e.g. Goods sold and services needed at the attraction venue are purchased locally, thus contributing to the local* economy	**WORKING WITH LOCAL COMMUNITIES** *e.g. The tour operator purchases many goods and services locally, thus contributing to the local* economy
CULTURAL COMPONENT *e.g. Indigenous people are consulted about the nature and scope of the operation*	**CULTURAL COMPONENT** *e.g. Indigenous people are consulted about the nature and scope of the operation*	**CULTURAL COMPONENT** *e.g. Indigenous people are consulted about the nature and scope of the operation*
CUSTOMER SATISFACTION *e.g. Forms are placed in rooms so customers can provide feedback*	**CUSTOMER SATISFACTION** *e.g. Visitors to the attraction are provided with forms so they can provide feedback*	**CUSTOMER SATISFACTION** *e.g. The tour operator provides visitors with forms they can provide feedback*
RESPONSIBLE MARKETING *e.g. Marketing material representing the establishment does not feature images of places that are not part of the product being offered*	**RESPONSIBLE MARKETING** *e.g. Marketing material representing the attraction does not feature images of places that are not part of the product being offered*	**RESPONSIBLE MARKETING** *e.g. Marketing material representing the tour does not feature images of places that are not part of the product being offered*

3.5.2 Development of questions for both visitors and operators

Having determined which attributes were to be examined, the next task was to design questions that would allow me to assess (a) their importance; (b) perceptions of performance and (c) – for visitors only, WTP for them (discussed in section 3.5.3.2). Respondents were thus presented with a table comprising an example based on the selected subcategory within each of the eight core attributes, and they were asked to rate perceived importance and perceived performance on a 5-point Likert scale. The Likert scale was chosen because it is a commonly employed method of gauging the strength of preference, and is used to make comparisons between individual statements and compared across different respondents and the different issues. These scales are relatively quick and easy to complete with response rates of 84-91% reported in interview or telephone surveys, and a wider range of 49-96% in postal studies (Ryan et al., 2001). While the debate continues over the optimal number of categories presented to respondents, the general perception is that the internal consistency of these scales is optimised with five or seven response categories (Preston & Colman, 2000; Bearden, Netmeyer, &Mobley, 1993; Peter, 1979).

Figure 3.5 and Figure 3.6 show excerpts from two surveys; full copies are provided in the appendix and details about each of the specific questions relating to importance and performance are provided in Chapters 5. However, the key point to be made here is that, central to the questionnaire design was ensuring the close **alignment of importance and performance**. Hence the same attribute used to gauge importance was used to gauge performance (one row was used for each attribute).

Moreover, objective 4 of the study sought to examine the alignment between visitor and operator perceptions on different attributes. Therefore, the same attributes (and examples) that were used in the visitor surveys were also used in the operator surveys (Figure 3.5 and Figure 3.6). Ensuring the correspondence of questions about importance and performance ensures that data can be simultaneously analysed using IPA (discussed in chapter 2).

ATTRIBUTES OF *ECO* CERTIFICATION	**11. How important to you, are each of the following attributes of *ECO* Certification?**						**12. How well do you think the tour you went on today performed based on these attributes?**					
	Not Important at all				**Very Important**	**Not Sure**	**Not well at all**				**Very well**	**Not Sure/ Unable to judge**
	1	**2**	**3**	**4**	**5**		**1**	**2**	**3**	**4**	**5**	
INTERPRETATION *e.g. Pre-tour materials such as brochures that explain the environment are provided*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. The tour operator purchases many goods and services locally, thus contributing to the local economy*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Figure 3.5 Importance and performance – VISITOR SURVEY (Tour)

ATTRIBUTES OF *ECO* CERTIFICATION	11. How important to this business, are each of the following attributes of *ECO* Certification?						12. How well do you think THIS BUSINESS performs on these attributes?					
	Not Important at all				Very Important	Not Sure	Not well at all				Very well	Not Sure/ Unable to judge
	1	2	3	4	5		1	2	3	4	5	
INTERPRETATION *e.g. Pre-tour materials such as brochures that explains the environment are provided*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. The tour operator purchases many goods and services locally, thus contributing to the local* economy	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Figure 3.6 Importance and performance – OPERATOR SURVEY (Tour)

3.5.3 Development of questions specific to visitors

3.5.3.1 WTP for certification in general

Objective 1 specifically seeks to determine if visitors are willing to pay a premium for certified products and to see how an increase in price would impact operator revenues. As discussed in chapter 2, WTP is commonly used to establish evidence on consumers' preferences to various products marketed (Mubyazi et al, 2011). It refers to the maximum amount a person is willing and able to pay for a product. WTP is often assessed in contingent valuation (CV) studies. There are several different versions of CV studies; the dichotomous choice format being that which has been endorsed by the NOAA (Arrow, et al, 1993) and that which was used here.

Although useful in providing information about preferences, CV studies are often criticised because they measure *'intended'* rather than *'actual'* behaviors, and chapter 2 provided several examples of studies were tourists indicated support (in terms of WTP a premium) for *'sustainable'* tourism, with little of this *'willingness'* being *'real'*. As such, it is important to interpret responses to WTP as representing upper bounds, not definitive descriptions of real behaviour. Moreover, it is clear that when deriving WTP values, more reliable results can be obtained if one ensures that the trade-offs/scenarios being presented to respondents are as realistic as possible. In view of that, a literature search was conducted on current costs of FULL DAY tours, Bed & Breakfast (B&B) accommodations and PAID attractions in the region. From this, an average price was determined which was then used as the BASE PRICE (choice 1 – base price, no certification). Additional pay options varied from 10% to 50% of the average price for similar accommodations/attractions/tours (choice 2 – higher price with certification). These premium increments were in line with previous, related research (Vlosky, Ozanne, & Fontenot, 1999; Gil, Gracia, & Sanchez, 2000; Xia & Zeng, 2006; Aguilar & Vlosky, 2007; Thompson, Anderson, Hansen, & Kahle, 2010). Two versions of each survey were developed: both versions included all the core attributes,

however, version one (V1) comprised price increments of 10% and 25% (Figure 3.7) while version two (V2) comprised price increments of 30% and 50%.[37]

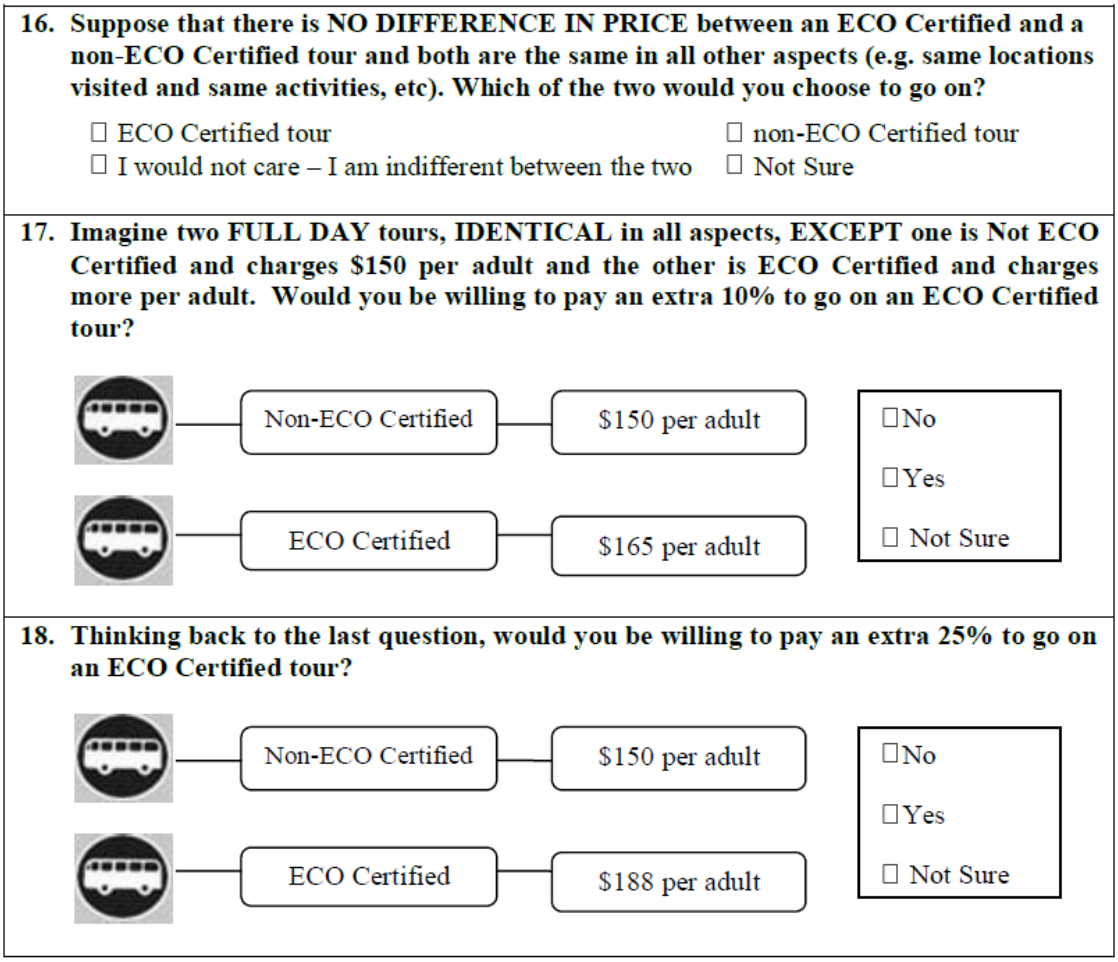


Figure 3.7 Excerpt of Version 1 of the Tour survey

As was also emphasised in chapter 2, many dichotomous CV studies perform sophisticated econometric analyses to estimate WTP functions. Given the objective of this study is to look at the link between WTP and revenues, this level of sophistication is not required. The focus is more on the percentage of *'Yes'* versus the percentage increase in price, linking to the concept of elasticity of demand for certified products.

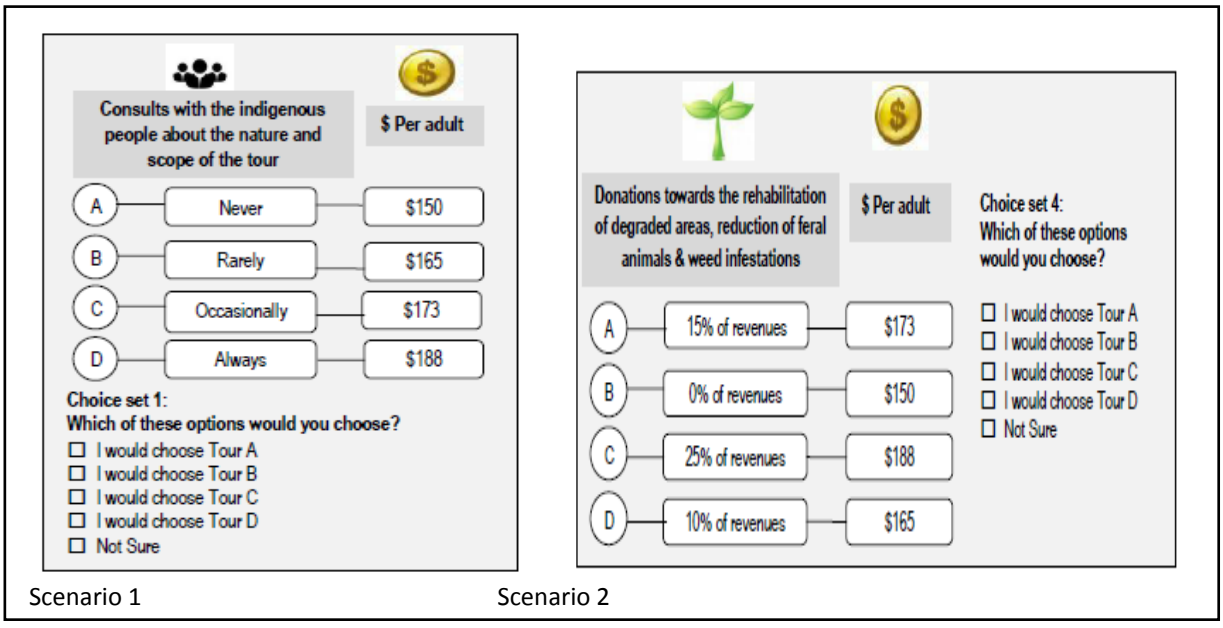
[37] Splitting a questionnaire is common practice when the questionnaire would otherwise be excessively long (Raghunathan & Grizzle, 1995; Rodrigues & Beltrão, 2001). It has several advantages, namely reduced interview time, which yields to lower survey costs and respondent burden is low. Moreover, the quality of responses is said to improve while non-sampling error is reduced (Ghosh & Vogt, 2000).

I pre-tested the questionnaires with colleagues and a sample of visitors, the aim being to ensure that respondents understood the questions (see section 3.6 for details of the pre-test), minor adjustments were made to design and layout for clarity, the final version being that which is displayed above.

3.5.3.2 WTP for individual attributes

To examine if tourists were willing to pay more for some attributes than for others (objective 5), respondents were presented with several hypothetical scenarios, each examining the WTP for a specific attribute. Full details are given later, but to begin with an overview, respondents were presented with six scenarios (choice sets), each focusing on a specific attribute. *Customer* and *Marketing* were not included in this part of the survey because I considered them to be of little relevance to tourists (compared to other attributes) and I wanted to minimise the length of the questionnaire (thus increasing response rates), while still generating useful information.

Each scenario consisted of four alternatives (A, B C and D) which were IDENTICAL in all aspects EXCEPT two: price and quality of one particular attribute. For example, in scenario one, the firms differed in how often they consulted with the Indigenous people (*Culture*) (more consultation meant higher price), while in scenario two, they differed in how much they donated towards conservation initiatives (*Conservation*) (again, more contribution was associated with higher price). See Figure 3.8 for an example.



Scenario 1 Scenario 2

Figure 3.8 Excerpt of choice sets - Tour survey version 2

These questions were thus designed with a dual purpose:

1. To elicit the WTP for individual attributes (with emphasis being on people's WTP for *'big'* improvements and not necessarily on coefficients); and
2. To cross validate the strength of preference of each individual attribute, i.e. my aim here was to see if what visitors said was important (as per Figure 3.5), was commensurate with their WTP).

Now for the specifics:

It is not uncommon for researchers to attempt to design *'overly complex'* experiments (i.e. including more alternatives, attributes, levels and labels), in order to make the choice sets realistic (Arentze, Borgers, Timmermans, & DelMistro, 2003; Caussade, Ortuzar, Rizzi, & Hensher, 2005). This practice has led to several investigations about task complexity and in particular about what is acceptable to give to each respondent.[38] Evidently, greater complexity can be detrimental rather than desirable. I thus decided to err on the side of caution, aiming for simplicity.

Only six choice sets were presented in total to respondents. Each choice set focused on a specific attribute of *ECO* certification. As explained earlier, the type of example used to describe the attribute was meticulously considered to reflect issues pressing to the region of interest and also factors relevant to each particular tourism product.

When it comes to how many alternatives to present in each choice set, Caussade, et al., (2005) suggest that offering more than two alternatives which include a *status quo* option, is best. When given just two alternatives, respondents tend to choose the same option consistently, disregarding changes in the attributes. Carson, et al., (1994) commented that the *'average'* questionnaire deals with up to four alternatives. For example, Caussade, et al.'s (2005) study found that designs with four alternatives displayed the highest scale parameters, followed by those with five, and three alternatives. Rolfe & Bennett (2009) gave support to these findings. Despite other commentators asserting that increasing

[38] Several studies have tested the effects of task complexity and found evidence of cognitive burden, giving rise to respondent fatigue and/or serial non-participation - all of which affect the respondent's ability to choose (e.g. De Palma, Myers, & Papageorgiou, 1994; Mazzotta & Opaluch, 1995; Pullman, Dodson, & Moore, 1999; Swait & Adamowicz, 2001; DeShazo & Fermo, 2002; Arentze, et al., 2003) Consequently, imposing strict limitations on the complexity of experiments has now become common practice. These days, experiments tend to include fewer attributes or the number of choice alternatives per choice sets presented to participants are less. Conversely, there are also many studies that provide evidence to refute this belief. For example, Hensher et al., (2001), found that the more choice sets, the less likely respondents will choose the same alternative in each choice set. This is because the more choice sets (in that particular case up to 32), then the more occasions respondents have to choose amongst the different alternatives. Additionally, issues of missing data seemed insignificant. These findings corroborate those of Stopher & Hensher (2000) who also found that 32 profiles have only a marginal effect on consistency. Brazelle and Louviere (1998) (cited in Pullman, et al., 1999) tested the effects of up to 120 choice task and again, found little indication of a decrease in response rates as the number of choice task increased, nor did they found major evidence of fatigue. Similar conclusions were drawn from Louviere et al.,'s (1993) and Malhotra, Jain & Lagakos's (1982) studies.

the number of alternatives increases the probability that a respondent may find an option that matches his/her preferences better, thus leading to a more precise selection (Caussade, et al., 2005), I decided that each choice set would have four alternatives.

Along with the four alternatives, respondents were given a *'not sure'* option. Provision of a *'not sure'* option enables respondents to better select their preferred choice. This is because, in conjunction with the other options on offer, they act as a multiple choice format question, giving respondents a better chance to express their NO vote (Rolfe & Bennett, 2009). This option also ensures that respondents are not forced into making a decision, hence leading to less biased results (Janssen & Hamm, 2012).

When designing choice experiments, it is important to ensure that one of the choice options remain constant between the choice sets. Doing so *'grounds'* the choice tasks (Rolfe, 2006a). Commonly known as the base alternative, it serves to reflect the current situation (a *status quo*) with no improvements, and no additional cost (Carlsson, et al., 2003). This too, was considered in the design.

In all six choice sets, the base alternative was pegged to the basic core criteria of the *ECO* certification scheme. Price increments were associated with successive improvements in performance, based on the more advanced certification criteria under the scheme. For example, in the case of *Interpretation,* the basic requirement was the provision of brochures, while improvements ranged from brochures and displays; brochures, displays and audio-visuals; to all of the above integrated with appropriate activities (e.g. quizzes, games).

Also, the literature clearly indicated that price range influences the perception of attribute values (Cooke & Mellers, 1995). As explained by Hensher (1993) (cited in Morely, 1994, p. 9), when determining the range of prices, differences need to be large enough to impact on the stated choices, yet not beyond the range of what could be experienced and considered believable by the respondents. But whilst choosing prices that are too close together will render the price effect to be minimal (Kuhfeld, 2010), Caussade, et al., (2005) conclude that narrow ranges place less cognitive burden on respondents. In all cases, one needs to settle on a price range that makes sense for the product. Accordingly, a split sample approach was used, and as explained in Chapter 3, the attributes varied identically across both versions of the survey but each version used different price increments (10%, 15%, 25%; and 30%, 40%, 50% in versions 1 (V1) and 2 (V2) respectively). These price increments were chosen to provide a reasonably wide, yet feasible, spread of possibilities.

Several studies have also examined the effects of swapping or cycling alternatives in choice experiments (conceptually equivalent to the *factorial design approach*) (e.g. Huber & Zwerina, 1996; Sandor &

Wedel, 2001).[39] Neither method would have been applicable in this study as the aim was to *'force'* respondents to pay for improvements in environmental and social attributes.

There appears to have been no studies on the effects of changing the order in which alternatives are presented, hence doing so presents some uncertainties. However, cautious of the fact that respondents may choose the same option consistently thereby disregarding changes in the attributes, the order in which the alternatives were presented was changed (although I ensured that the level of improvement matched the corresponding price increase each time). For example, in choice set one, alternatives were increased from low (*status quo*, i.e. no improvements) to high (most improvement), while in choice set two, the reverse was done (i.e. from high to low). As to the other choice sets, the order was rotated randomly.

Finally, a budget constraint reminder was included to alert respondents of their available budget prior to making their choice. Such reminders are believed to increase the reliability of the experiment (e.g. Hensher, Barnard, & Truong, 1988; Morely, 1994; Bishop, et al., 2011). Although some studies have found limited evidence of budget reminders (e.g. Loomis, Gonzalez-Caban, & Gregory, 1994), the use of a budget constraint reminder can be justified when new information is introduced, particularly in instances whereby the respondent faces a novel and previously unconsidered decision, as is the case in this study (Bateman, et al., 2002, p. 333).

3.6 Expert and sub-sample testing

I piloted the draft survey instruments in two phases using two different test populations. One consisted of fellow PhD students and academic staff of the School of Business (SOB). All academic staff had substantive and practical knowledge about questionnaire design, administration and analysis. Several of the PhD students also had experience in developing questionnaires. The key inputs requested from this academic group were on issues of appropriateness, scientific merit, relevance of the data and analytical issues. Technical problems were spotted and adjusted accordingly. As a result, clarity of the questions was greatly improved.

The second group test population comprised of a sub-sample of the targeted respondents – i.e. tourism operators and visitors to the Wet Tropics and surrounds. These test groups were approached after all input from the academic staff was received and the draft survey amended. In the sections below, I provide more details on how I went about trialing the sub sample populations.

[39] *Swapping* involves switching two attribute levels among alternatives within a choice set while *cycling* is a combination of cyclically rotating the levels of an attribute and swapping them.

3.6.1 The operator survey

A total of 10 operators were contacted and asked to complete the questionnaire (five with and five without *ECO* certification). My objective was to assess the degree of clarity of the questions. Operators did not seem to have any issue with the IPA questions.

3.6.2 The tourist survey

With the sample of tourists, my main goal was to determine whether the proposed questionnaire and procedures were adequate for the larger study and identify and address non-response problems as early as possible. Because at this stage of testing it is important to get input from a diverse group of the target audience as possible (Dillman, Smyth, & Christian, 2009), I chose to poll a sample of visitors at the township of Kuranda.

Kuranda is a well-known and much frequented tourist destination of visitors to the WTWHA. Hundreds of visitors come to the area every day on Kuranda's Historic Scenic Railway, via the Skyrail Rainforest Cableway, or by car or bus (Tourism Kuranda, 2010).

Tourists were intercepted at several locations in Kuranda over two and a half days – at the visitor centre, at the historic railway station, outside Skyrail cableway station and at the scenic lookout of Barron Gorge. The use of some of these locations required prior agreement of the owners and/or administrators of these locations. Visitors were randomly approached and their informed consent was obtained. During the pilot study, the surveys were conducted as semi-structured interviews and were found to take less time than was first predicted (i.e. around 10 minutes rather than 15).

The overall impression was that the items were clear and easy to understand. It did not seem like participants were biased when prompted about their WTP for *ECO*-certified products nor on their preferences. This is despite a rich literature indicating that the presence of the interviewer leads to more socially desirable answers (Saris & Gallhofer, 2007; Dillman, et al., 2009). On the contrary, many were quite outspoken about why they should not be paying extra for such products. This gave me enough confidence in the respondents' WTP answers for the actual surveys afterward.

3.6.2.1 Issues encountered and modifications to the survey delivery

Aside from ensuring that the survey instrument was comprehensible to participants, it was equally important to get a representative sample according to the types of visitors as well as the types of questionnaires (as discussed in 3.4, three types of questionnaires were developed). With reference to the survey type, no issues were encountered concerning the accommodation and attraction surveys. However, I experienced difficulties in obtaining a good enough sample of the tour market due to the limitations of a tight tour schedule. Several of the visitors approached indicated that they had to go and

catch the tour bus, or still had a lot to see before the tour bus departs and thus did not have time to participate in the study.

As regards the type of visitors, most respondents were travelling either alone or as a couple. Two groups had particularly high non-response rates - those touring with relatives and families with small children. Quite simply, they could not afford to leave their children unattended while they completed an interview. Also, for reasons described in the preceding paragraph, only a small number of participants travelling as part of a tour group agreed to participate.

3.7 Survey execution

The difficulties encountered in the pilot phase of the visitor survey clearly indicated that I would not be able to obtain responses from some types of visitors if seeking to use face-to-face interview. Therefore, I decided to use self-administered questionnaires to reach my target population indirectly, through the operators of accommodations, attractions and tours.[40]

In the case of the former, a database of operators was compiled from several tourism websites, including Ecotourism Australia and Queensland Parks and Wildlife Services (QPWS). At the time of the study, there were 50 land-based *ECO*-certified tourism operations. Therefore, I set out to include customers of all *ECO*-certified operations (comprising of 16 accommodations, 24 tours and 10 attractions) and a matching number of non-*ECO* certified operations – chosen randomly from the database. Operators were contacted with an initial email that explained the objectives of the research and that asked for help distributing the questionnaires (which included reply-paid envelopes) to their customers. This process systematically followed Dillman's *'Total Design Method'* (TDM) although some modifications were made to suit this study (Table 3.5). To motivate participation of operators (notably those without *ECO* certification), they were provided with summary results obtained from their customers.[41]

[40] Because interviewers are not present to help respondents navigate the survey and understand the meaning of the questions in self-administered surveys, questionnaire layout and the design and wording of individual questions are extremely important in ensuring that respondents give accurate and precise answers (Dillman, et al., 2009). Hence, the next challenge was ensuring that people would be motivated to respond to the mail-out surveys. To facilitate the success rate of the surveys being completed, the visual quality and layout of the questionnaire were improved. For example, enough answer spaces were left for open-ended questions to minimise the likelihood of respondents evading to answer just because they cannot find places to write down their ideas, hence reducing non-response error (Salant & Dillman, 1994; Saris & Gallhofer, 2007). These modifications also help mitigate measurement error which occurs when a respondent's answer is inaccurate or imprecise (Dillman, et al., 2009).

[41] That, together with the provision of reply-paid envelopes served to minimise coverage and non-response errors. Coverage error deals with the likelihood that all elements of the population had at least some chance (probability) of being sampled (Larson, 2011). Non-response error stems from not getting everyone who was sampled to respond to the survey request. It occurs when the people selected for the survey who do not respond are different from those who do respond in a way that is important to the study.

Table 3.5 Step by step approach to survey method

Dillman's 'Total Design Method'	Amendments made to suit this study
Step 1: To all members of the sample – a personalized, *prenotice letter* sent a few days prior to the questionnaire. It notes that a questionnaire for an important study will arrive in a few days and that the person's response will be greatly appreciated.	*Step 1:* A personalised, *prenotice email* was sent to operators informing them about the importance of the study. In it their help was requested in distributing the surveys to their clients. A copy of the questionnaire was attached, so that they could see the types of questions asked.
Step 2: About a week later, again to all members of the sample – a questionnaire mailing that includes a detailed cover letter explaining why a response is important, the questionnaire, a prepaid postage envelope and a token of incentive if one is to be provided.	*Step 2:* About 1-2 weeks later, visitor questionnaires were mailed to participating operators (i.e. those who agreed to help after having received the email). Additional documents included a detailed cover letter explaining why the research was important and prepaid postage envelopes.[42]
Step 3: 4-8 days after the questionnaire goes out, again to all members of the sample – a follow up postcard thanking those who have responded and requesting a response from those who have not.	*Step 3:* 2-3 weeks after the initial email, a follow up email was sent, this time requesting a response from those who had not yet responded.[43]
Step 4: 3 weeks after the first questionnaire goes out, to all those who have not yet responded – a new cover letter informing people, "We have not yet heard from you" with a replacement questionnaire and stamped returned envelope.	*Step 4:* 3-4 weeks after the first batch of questionnaires was sent to operators for distribution, another follow up email was sent thanking operators for their participation, updated them about number of surveys received and requested permission to send another batch of surveys.
Step 5: A final contact made by a different mode of delivery 2-4 weeks after previous mailing. The different mode of contact distinguishes each type of final contact from regular mail delivery. A "special" contact has been shown to improve overall response to mail surveys (Dillman et al., 1974; Heberlein & Baumgartner, 1978).	*Step 5:* A final attempt at those operators who had not yet responded was made via phonecalls.

(Adapted from Salant & Dillman, 1994; Dillman, et al., 2009)

I also decided to supplement the sampling process after the category five cyclone *YASI* hit the region in early 2011. Many homes were badly damaged forcing residents to move in to local motels and caravan parks and many construction workers moved into the region to help with repairs. As such the accommodation establishments were filled up – not with tourists, but with residents and temporary construction workers, so there were few tourists in the region. This had the most adverse effect on the

[42] As explained in section 3.5.3, each type of questionnaire had two versions. An equal number of both versions were sent to each operator for distribution, so as to increase the probability of both versions being filled out. In all cases, visitors voluntarily chose to participate. At accommodations, the survey and information page were placed in the rooms, at attractions they were either at the entrance or exit of the venue and on tours they were distributed at the end of the tour.

[43] Operators are very busy especially during the peak season. Some tour operators for example conduct tours over several days, hence it is best to give them some time to respond.

participating tour operators and attractions.[44] So I supplemented my sample by collecting data from tourists at the local (Cairns) airport – using only my questionnaires relating to attractions and tours. However, I was cognisant of the fact that respondents would not necessarily be aware of whether the product they experienced while on tours or while visiting an attraction would be *ECO* certified or not. Accordingly, to avoid issues of recall, my sample at the airport was only asked about the importance of attributes, not about the performance of products. Recognising that these different sampling approaches may impact responses, I used statistical tests to check for consistency of responses across these sub-samples before analysing data (see section 5.3).

For convenience reasons, the same operators contacted for distribution of the visitor survey were also approached to take part in the operator survey. This is because they already had an idea about the overall study and also because many had shown earlier interest in participating in the study. Here too, the approach adopted mirrored Dillman's TDM. As I mentioned previously, a summary of the preliminary findings of the visitor study was also given to maintain participation.

[44] To highlight the severity of situation, only four surveys were received since *YASI*.

Part B
Description of the sample population

3.8 Visitor survey

3.8.1 Sample size and response rate

Data collection was conducted from January 2010 to June 2011. In total, 42 operators agreed to distribute the surveys. They comprised 20 operators offering *ECO*-certified products (six accommodation establishments, three attraction venues and 11 tour operators) and 22 operators offering non-*ECO* certified products (eight accommodation establishments, seven attraction venues and seven tour operators). The number of surveys sent to each operator for distribution was dependent on their size/capacity and ultimately on how much they were willing to distribute. In total, 1500 surveys were sent to operators for distribution with 469 returned, yielding a response rate of 31% for this group. An additional 141 surveys were produced from the airport sample. Altogether, the study generated 610 visitor questionnaires (comprising of 77% and 23% of the mail-out and airport samples respectively. Table 3.6 provides specific details as to how many surveys were received across each of the three products according to certification status and information requested.[45]

Table 3.6 Number of visitor surveys completed across all three products by certification status

	Accommodations	Attractions	Tours	
***ECO*-certified products**	n =102	n = 73	n = 93	Importance + Performance + WTP
Non-*ECO* certified products	n = 109	n = 33	n = 59	
Airport	n = 0	n = 108	n = 33	Importance + WTP
TOTAL	211	214	185	610

The majority of surveys received were from attractions (n=214), followed by accommodations (n=211) and tours (n=185). In my experimental design, I aimed to get a balance between the two versions of the survey and as illustrated in Figure 3.9, this was reasonably achieved across all three products.

[45] To avoid issues of recall, my sample at the airport was not asked about the performance of products.

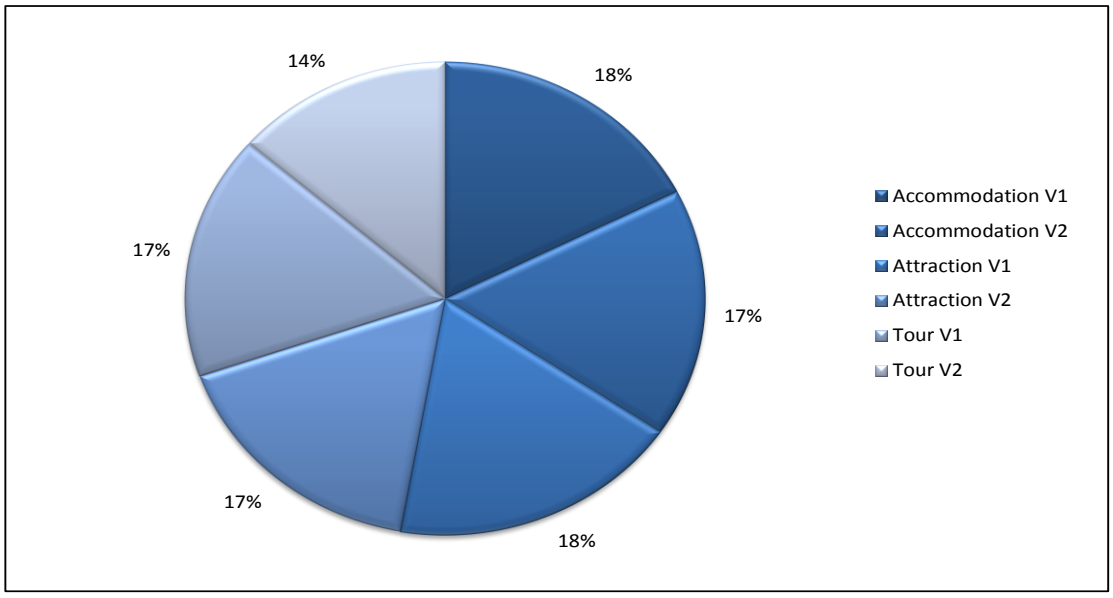


Figure 3.9 Proportion of the two versions of the questionnaire received across sectors

3.8.1.1 Accommodation type

Of those who received the accommodation survey, (n=211) 42% stayed in eco-lodges while 37% stayed in caravan parks. Very few respondents were at hotel/motel (1%) (Figure 3.10). This apparent bias is due to the marked decline of the number of traditional hotel/motel type accommodation with increasing distance from Cairns CBD in favour of eco-lodges, caravan parks, Bed & Breakfasts etc. It would be interesting if further research could replicate the current study and encourage more participation from the hotel/motel sector.

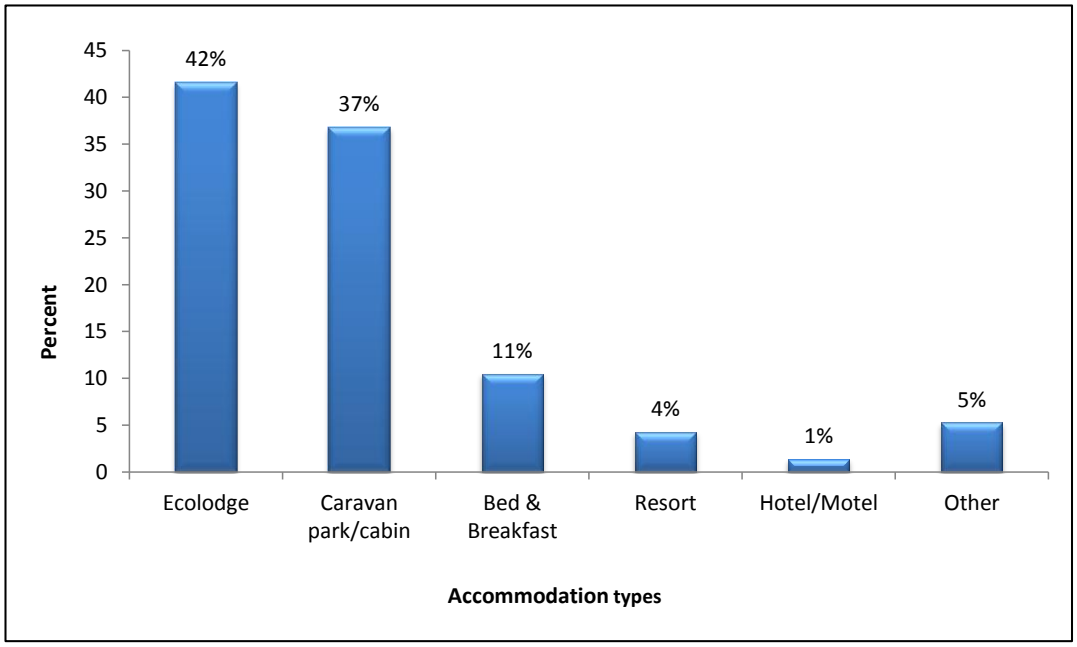


Figure 3.10 Accommodation used by respondents

3.8.2 Characteristics of visitor sample

Most respondents were domestic visitors (65%) with the balance made up from 26 countries (Figure 3.11). Of the domestic visitors, 41% were intrastate travellers, the rest being those holidaying from interstate. Most of the latter group were from New South Wales (24%) and Victoria (18%).

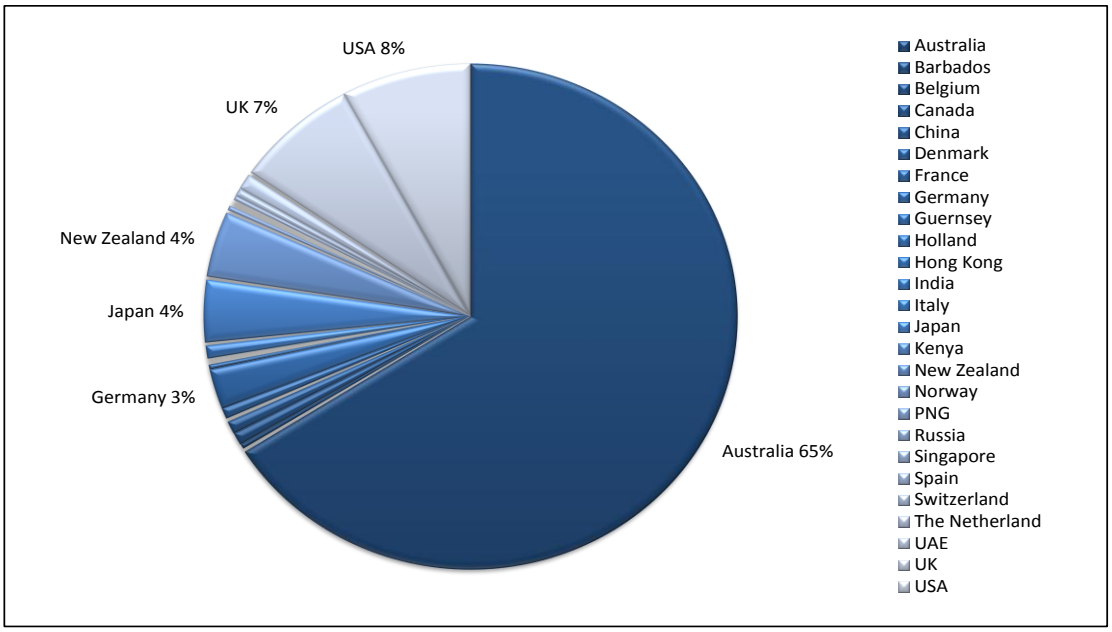


Figure 3.11 Country of origin

A higher proportion of females than males responded to the questionnaires (60% and 40% respectively) and the largest proportion of respondents were aged between 50-59 (21%) and 40-49 (20%) (Figure 3.12).

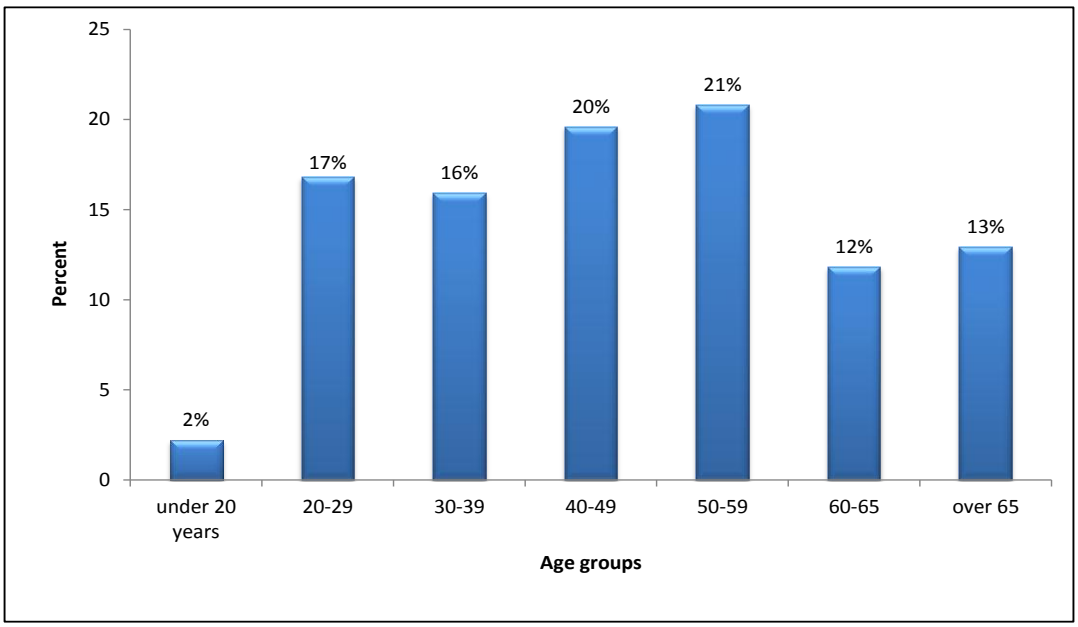


Figure 3.12 Age groups of survey respondents

While 37% of respondents reported an annual household income of AUD$>100,000, 34% of respondents had an annual household income below the Australian average of $60,000-$69,000 as defined by the Australian Bureau of Statistics (2006) (2006 census) (Figure 3.13).

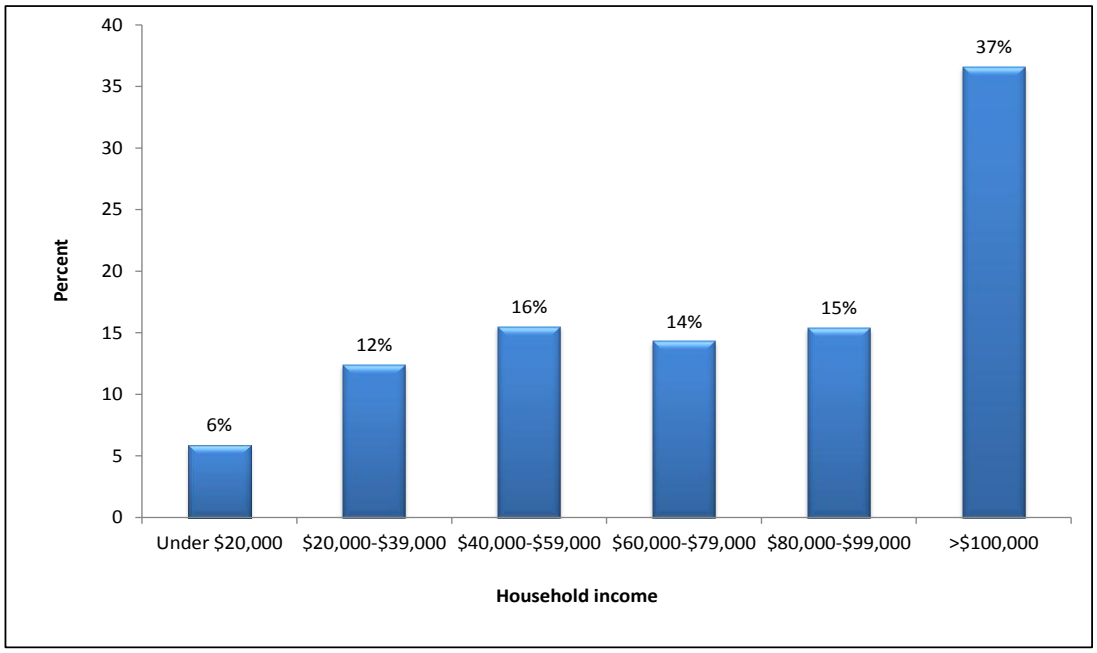


Figure 3.13 Household income of survey respondents

A clear majority of respondents were travelling as a couple (48%). Others were travelling either as a family (adults and children) (17%) or alone (13%) (Figure 3.14).

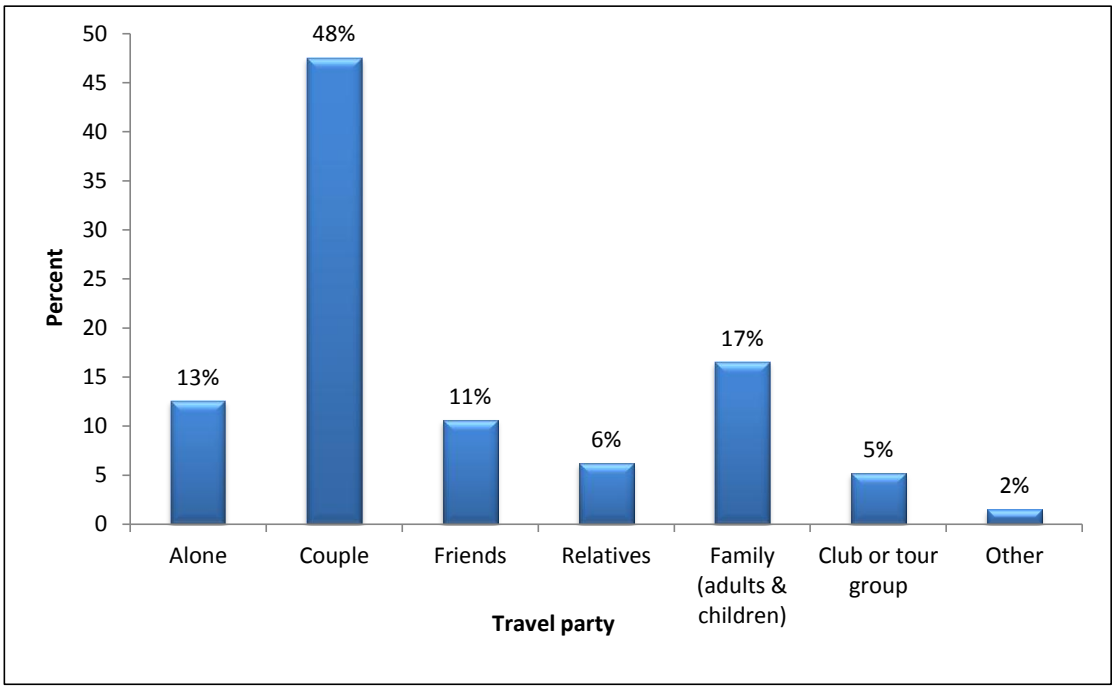


Figure 3.14 Travelling party of survey respondents

Respondents were well educated, with more than half (55%) of respondents having a university degree. Others (27%) had trade certificates or diplomas (Figure 3.15).

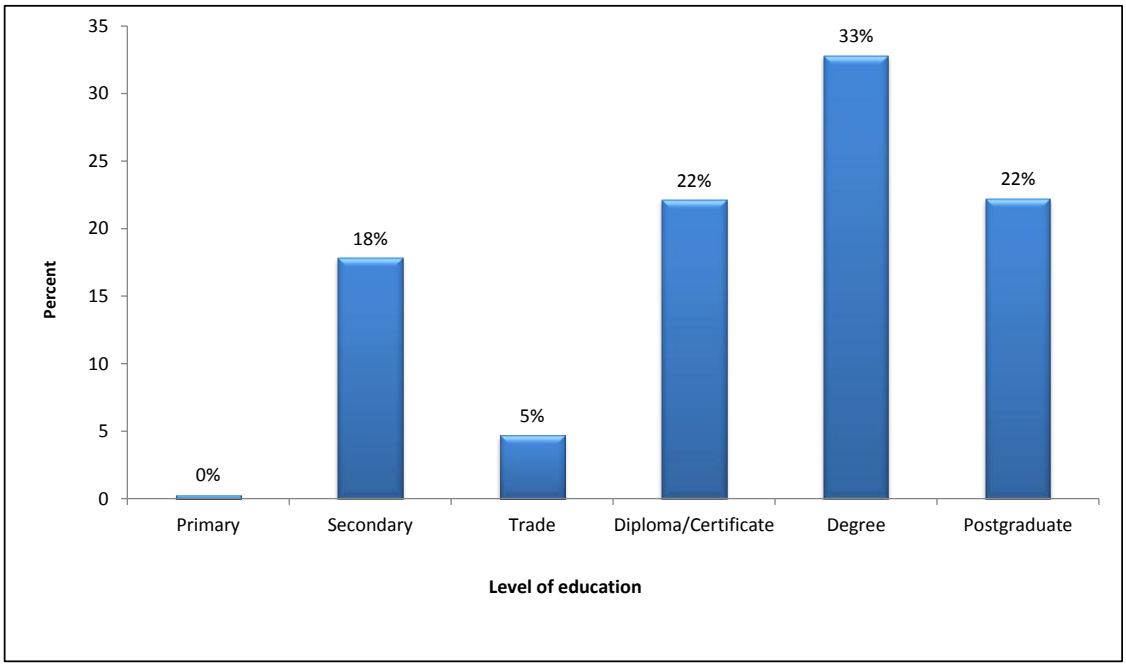


Figure 3.15 Level of education of survey respondents

Professionals (31%) and retirees (20%) made up over half of participants (Figure 3.16).

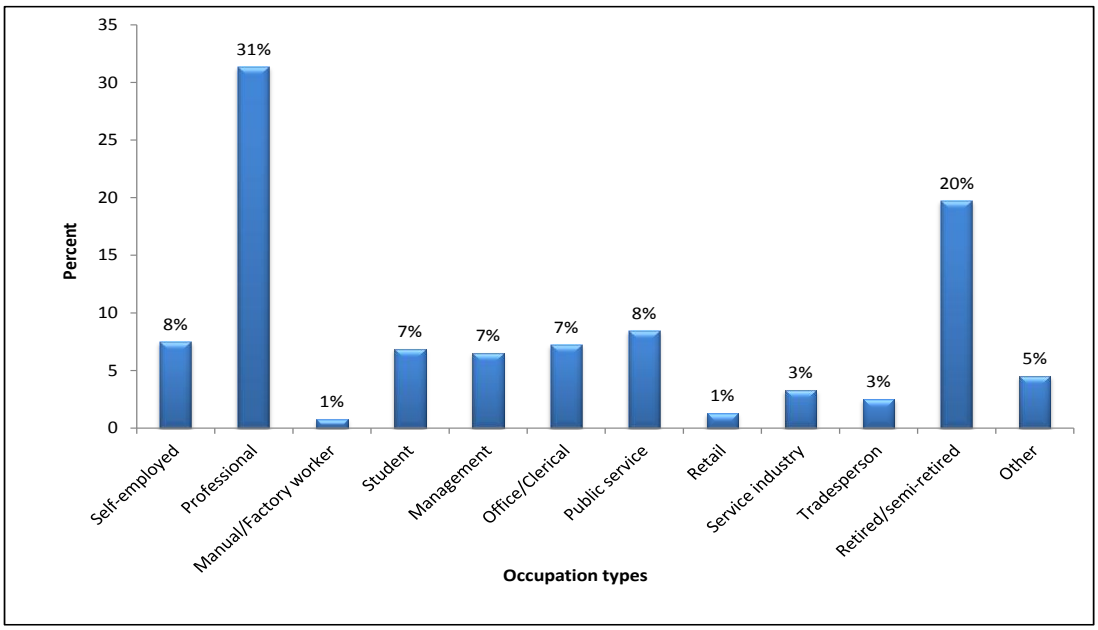


Figure 3.16 Occupation types

Almost three-quarters (74%) of respondents reported that they were aware of the location having World Heritage (WH) status. Of those who were cognisant, half indicated that the decision to visit the region was primarily because of its WH status. First time visitors accounted for slightly more

than half (55%) of the sample while 45% of respondents had prior visitations. Of the repeat visitors, 28% had visited the WTWHA once before, 32% had visited 2-3 times before while 40% noted more than 3 visitations. Table 3.7 shows mean and median trip duration.

Table 3.7 Trip duration

	Domestic		International	
	Mean	**Median**	**Mean**	**Median**
Nights away from home	32	8	34	21
Days in the region	26	7	18	7
Days specifically visiting WTWHA	34	3	15	3

The average length of stay in this study is much longer than that reported by Tourism Queensland (2011a). However, this can be explained by the fact that a large majority of respondents were caravanning around Australia, hence planned longer stays. It can also be observed that days visiting the WTWHA are higher than nights away from home for domestic tourists. This can be explained by the fact that many of the respondents were local residents of the region and possibly on day trips, hence did not need to spend the night away from home. This indicates that my sample (or those of theirs) may not be representative of the population at large. However, this is not an issue as long as I do not use the mean values to draw specific inferences about the wider tourist population in this region.

3.8.3 Comparisons between the sample of the current study and studies of others

The sample obtained in this study was in most aspects comparable to earlier studies (Table 3.8). The present sample is however markedly different from that of McNamara & Prideaux's (2009) earlier study in that the proportion of visitors whose decision to visit was influenced by the WH listing of the region is much greater in the current study than in theirs. This is likely to be because my sample encompassed a wider segment of visitors at several locations within and around the WTWHA, unlike that particular study which collected visitors' views only at the Cairns airport and is thus likely to include people who, for example, came to see the reef only.

Table 3.8 Representativeness of data

Demographics & visit characteristics	This study	Tourism Queensland (2011b) *(year ending June 2011)*	Carmody & Prideaux (2011) *(between Oct 2008 & May 2010)*	McNamara & Prideaux (2009) *(2008)*	McNamara & Prideaux (2010) *(Jan – Apr 2010)*	King & Prideaux (2010) *(2008)*
Intrastate	26%	37%	37%	-	-	-
Interstate	38%	29%	27%	-	-	-
International	36%	34%	36%	-	-	-
Professionals	31%	-	24%	22%	28%	-
Retirees	20%	-	16%	16%		-
Couple	48%	-	-	53%	49%	-
Family (adults & children)	17%	-	-		14%	-
Awareness of World Heritage status	74%	-	-	62%	58%	54%
World Heritage Area status influenced decision to visit	30%	-	-	13%	-	-

3.8.4 Prior knowledge of ECO certification and previous consumption of ECO-certified products

To build familiarity with the notion of certification and to minimise response bias, as well as ease respondents' understanding with the more difficult questions in the latter part of the survey, the questionnaire provided a general overview of what certification meant and what *ECO* certification does (Figure 3.17).

CERTIFICATION is *a **voluntary** procedure that sets, assesses, monitors and gives written assurance that a business, product, process, service or management system complies with a given standard.*

Certification is used in different industries worldwide and in tourism, it is used to denote well managed commitment by firms or operators. There are many types of logos and certification programs in tourism.

I am particularly interested in certification schemes which relate to environmental and social issues.

The ***ECO* CERTIFICATION** program is one such scheme. This program is said to assists visitors to identify genuine and authentic tours, accommodations and attractions that are environmentally, socially and financially sustainable.

Businesses that meet or exceed the baseline criteria are awarded a logo which is then used to demonstrate the businesses' sustainable credentials to visitors and the industry in general.

Figure 3.17 Excerpt of the questionnaire defining certification

Respondents were then asked about their previous knowledge of the scheme and previous trips whereby they *'consumed' ECO*-certified products (i.e. stayed at an *ECO*-certified accommodation, participated in an *ECO*-certified tour or visited an *ECO*-certified attraction). Results (n=602) show that prior to the survey, more than half of the respondents (53%) were unaware of *ECO* certification. Of those with prior knowledge (37%), 29% of participants had previously *'consumed' ECO*-certified products. Forty percent never did, while 31% were uncertain. However, one needs to be particularly cautious of recall bias here.

3.8.5 Awareness of ECO certification status of operators

Respondents were also asked about the *ECO* certification status of their current *'consumption'*. In total, 268 surveys were received from visitors of *ECO*-certified businesses. A clear majority of respondents (60%) knew that the business was *ECO*-certified, while 9% were unaware and 31% unsure.

It was also important to know how informed tourists were of the types of things that operators do in order to offer *ECO*-certified products. As illustrated in Figure 3.18, respondents were overwhelmingly uninformed, with 46% and 29% indicating they were not informed at all and poorly informed respectively. Only 1% of respondents claimed to be very well informed.

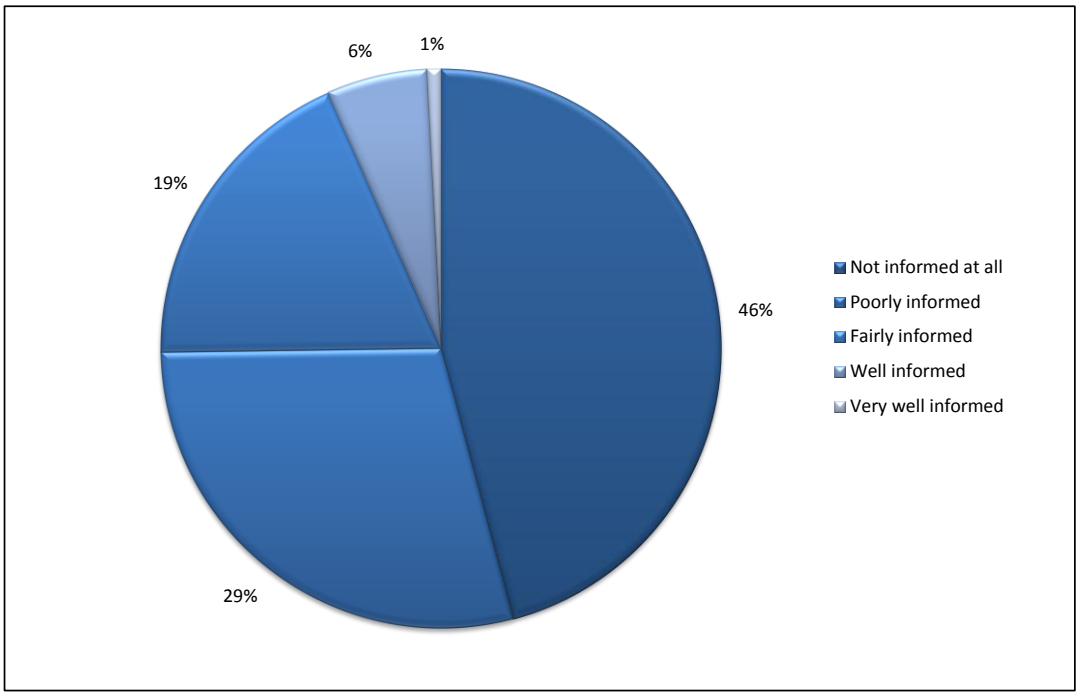


Figure 3.18 Respondents level of informedness about the measures required by tourism operations to get *ECO*-certification

3.9 Operator Survey

Data collection for the operator study lasted one year – from November 2010 to November 2011. Similar to the visitor survey, significant delays were encountered due to cyclone *Yasi* and for most of the first half of 2011, few surveys were received. However, the latter part of the year saw improvements in return rates.

3.9.1 Sample size and response rate

In total, 102 surveys were sent to operators and 48 completed questionnaires were received, yielding a response rate of 47%. Of these, 19 surveys were from accommodations, five from attractions and 24 from tours. These were then classified according to certification status to enable further comparisons between the two (Figure 3.19).

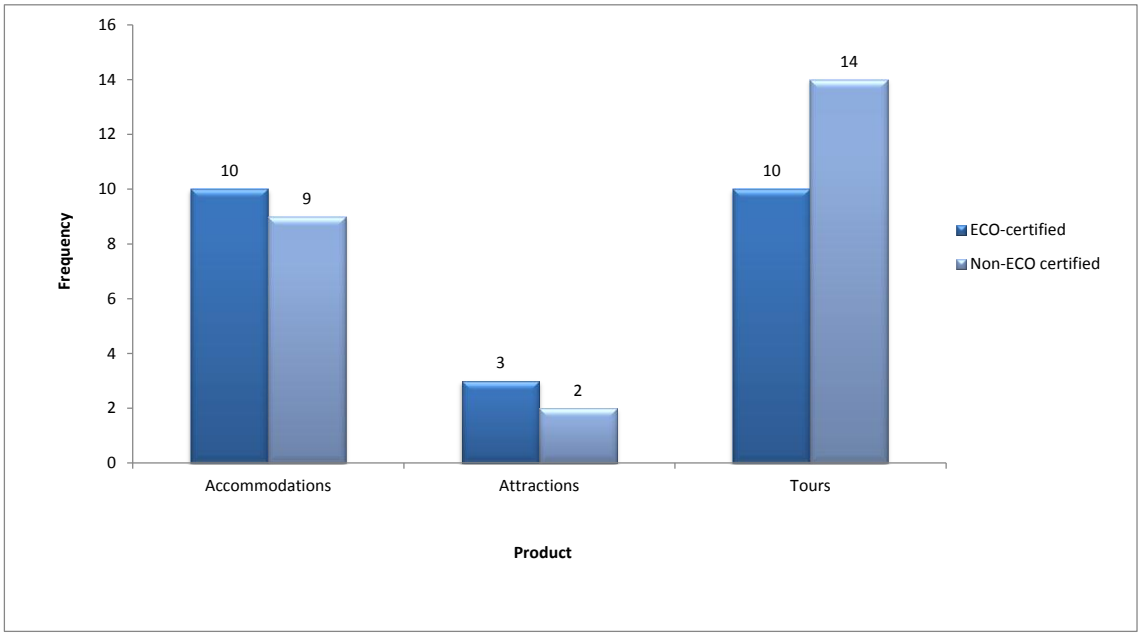


Figure 3.19 Number of surveys received from each operator - by certification status

3.9.2 Characteristics of business sample

The sample can be characterised as follows:

Business location: The majority of businesses were located in the Northern Region (e.g. Daintree, Mossman, Port Douglas) (46%), followed by the Tablelands region (25%) and Cairns region (23%). Fewer businesses responded from the Central and Southern regions (2% and 4% respectively) (Figure 3.20). Only the sample of tour operators was asked to indicate the regions in which their tours visit. Accordingly, the region most visited was Northern (n=18).

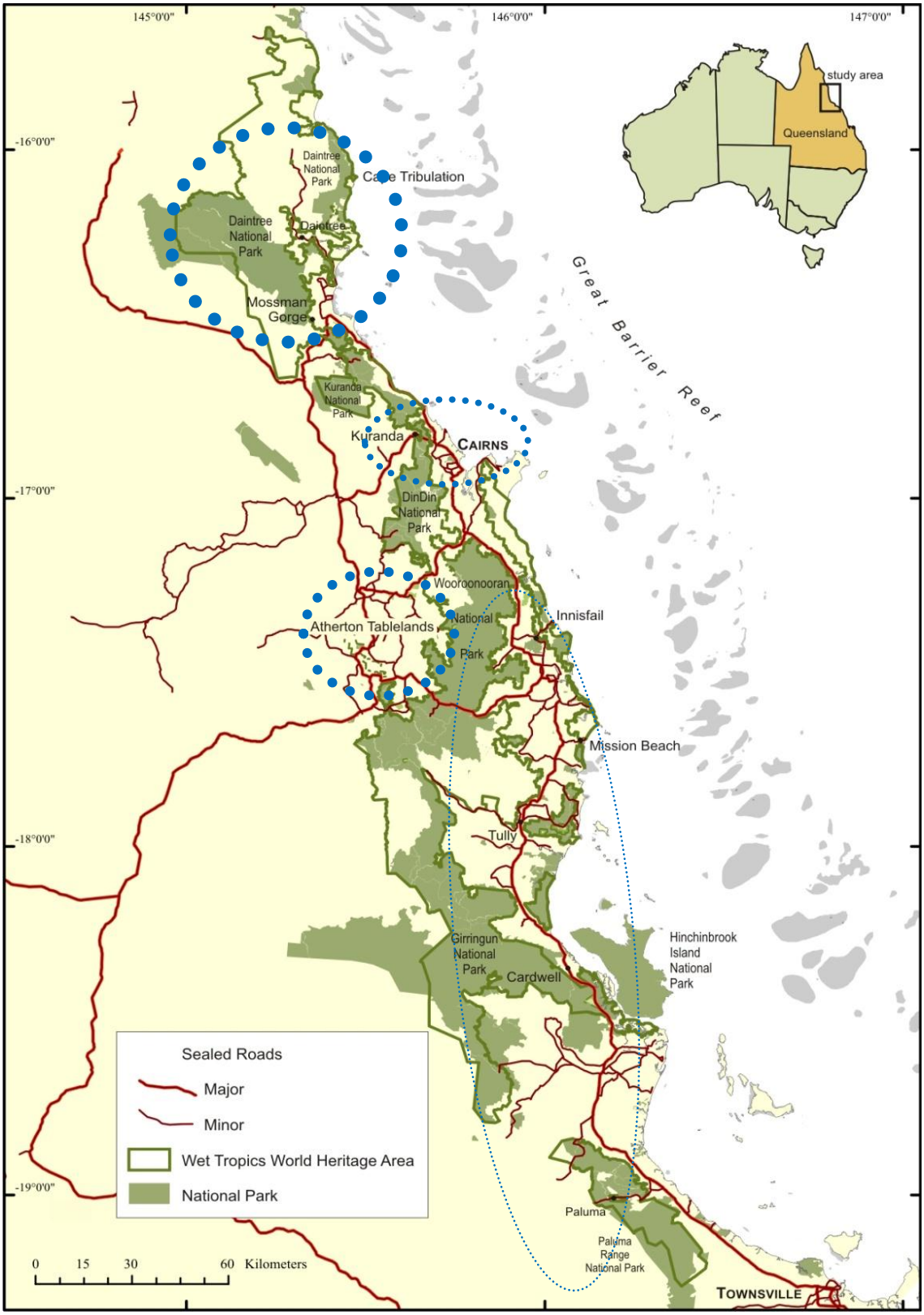


Figure 3.20 Location of operation

Note: The more heavily dotted the circle, the more businesses there are within that area.

Business structure: More than half of businesses surveyed (56%) identified themselves as a company. Twenty-seven percent were trading as partnerships while 15% as sole traders.

Years in operation: This sample of businesses were well experienced with 66% having been in operation for more than 10 years and 21% operating between 6-10 years.

Gross Income: Twenty one percent of businesses earned between $100,000-$250,000 in the last financial year, while 19% earned between $250,000-$500,000. On the other hand, 16% of businesses earned considerately less, indicating a gross income of less than $50,000. This trend was characteristic of sole trader operations (57%).

3.9.3 Status of ECO certification

Many of the businesses sampled already had *ECO* certification, i.e. 48% (n=23). However, for 27% of respondents, *ECO* certification was not even being considered. Interestingly, one business had its certification revoked (Figure 3.21).

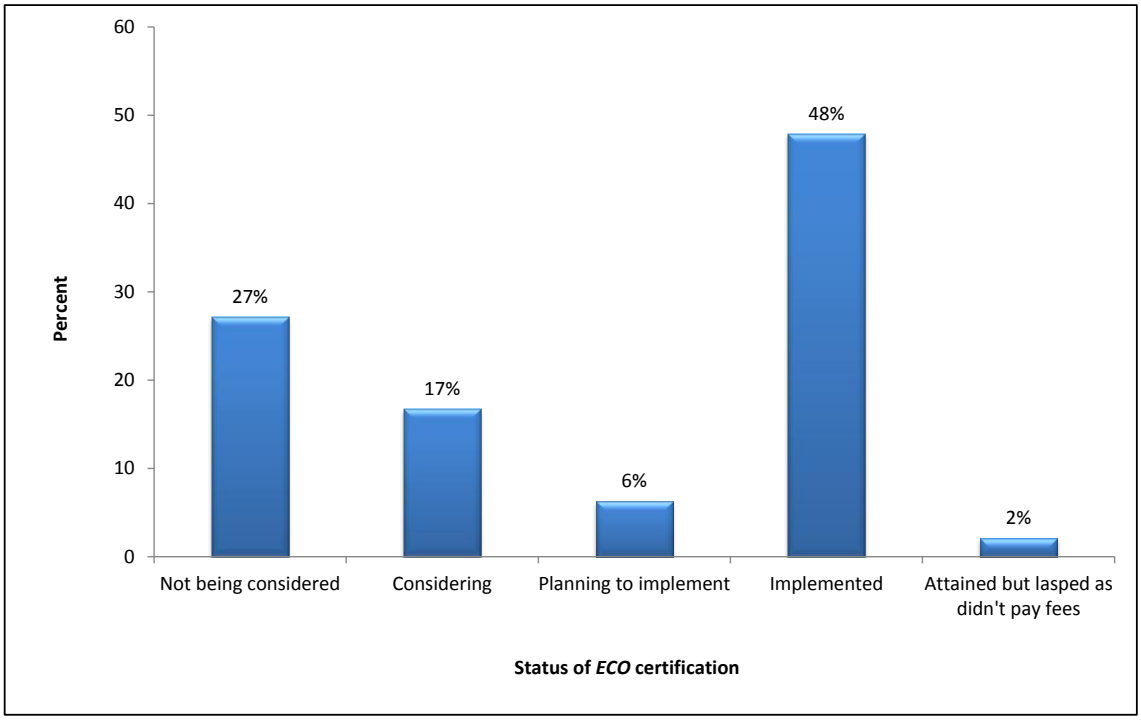


Figure 3.21 Status of *ECO* certification of sampled businesses

3.10 Summary

Chapter 1 recognised tourism as a key threat to protected areas, noting that certification has been upheld as a possible means to reduce its negative side-effects. This discussion formed the basis of the selection of the Wet Tropics World Heritage Area (WTWHA) and of the *ECO* certification scheme as an ideal case study area and certification scheme. A description of the development of the visitor and operator surveys was provided followed by details of the survey execution and some descriptive statistics of the sample. A summary of some of the key points are provided below.

- The WTWHA contains almost 900,000 hectares of tropical rainforest with a distinctive and diverse collection of plants and animals. It is famous for its exceptional natural beauty, comprising of spectacular landscapes and landforms and is also the traditional estate of 20 Tribal Groups. Easy year-round access and large concentrations of visitors and operators made it the logical study site.

- The *ECO* certification scheme encompasses several domains of sustainability and is Australia's most prominent environmental/ecotourism scheme, with a large number of tourism operators in Queensland subscribing to it. The scheme assesses products across 10 attributes, eight of which were considered in this study. They included: *Nature, Interpretation, Environment, Conservation, Community, Culture, Customer* and *Marketing*. Those that were omitted were *Business management and operational planning* and *Business ethics* and this was because these attributes were perceived as not providing direct benefits to consumers as did the others. Each attribute comprised several sub-attributes. Including all would have been a laborious task for respondents, thus only one sub-attribute was selected to help describe the core attribute. The choice of items for assessment was made by looking at the priorities of the region (as highlighted by WTMA), thus ensuring a regionally relevant focus.

- The questionnaire design sought to ensure that: 1) the alignment between importance and performance could be tested; 2) comparisons between visitor and operator values could be made; and 3) perceived importance of attributes to tourists could be cross-validated with WTP measures.

- Since *ECO* certification is product-specific, three surveys (matching three different products: accommodations, attractions and tours) were developed, each designed to elicit visitor and operator perceptions about: 1) which attributes of *ECO* certification were most/least important; and 2) their perceptions of performance.

- Information about visitors' WTP for certification in general was elicited using a dichotomous choice format.
- Hypothetical scenarios were used to gauge visitors' WTP for the different attributes.

- Information about whether certification actually makes a difference to tourism operators was sought using objective indicators of performance relating to: 1) customer satisfaction; 2) social performance; and 3) environmental performance.

- Following a pilot study, the questionnaires were amended and mailed out to operators for distribution to their clients (visitor surveys) or to fill out themselves (operator survey) and were also administered at the local (Cairns) airport (visitor survey). Data were collected from visitors over one and a half years (January 2010 to June 2011) and yielded 610 responses. Forty-eight operator surveys were also received between November 2010 and November 2011.

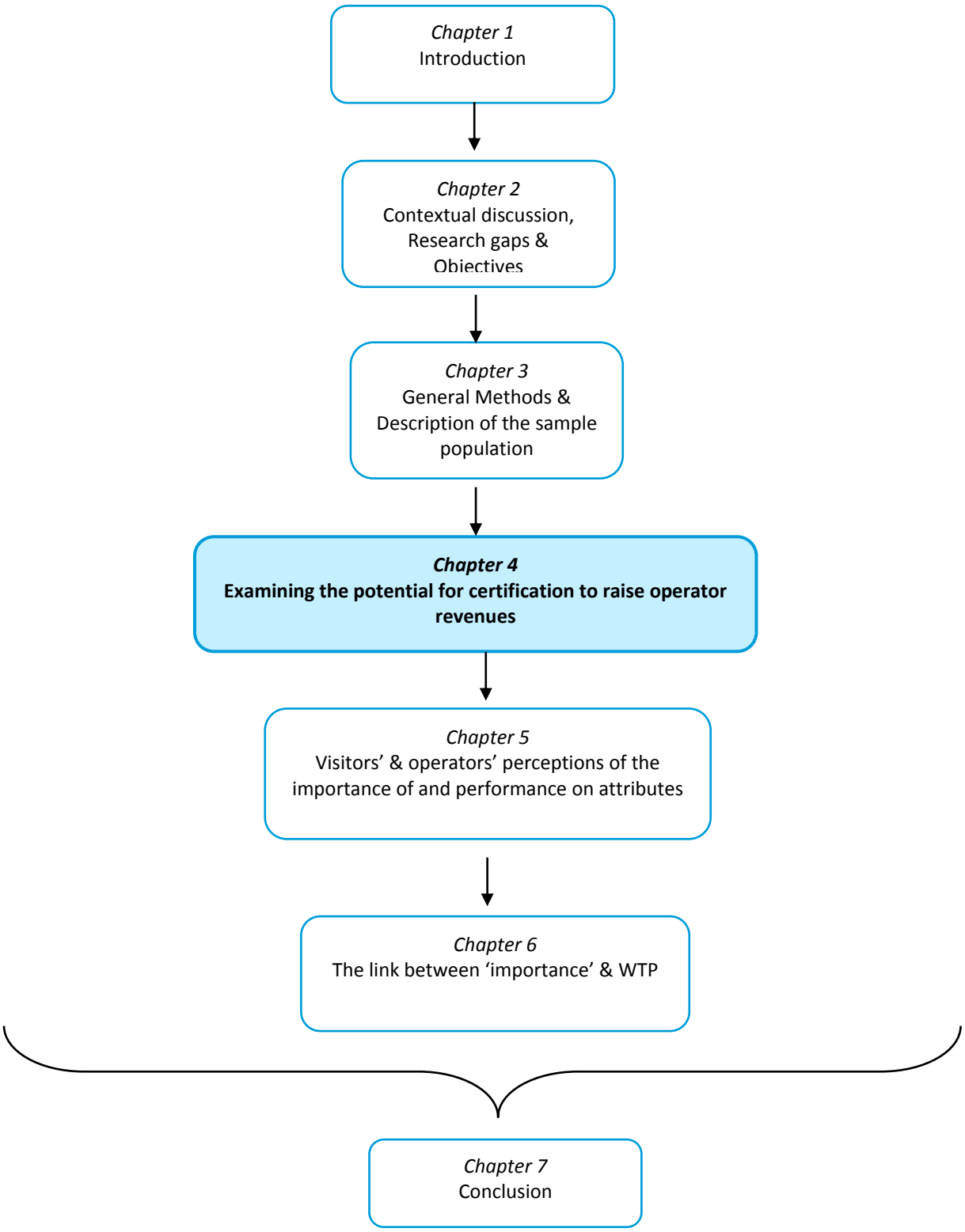
- Based on previous studies, the visitor sample appears to be reasonably representative of the population.

- The majority of respondents had no previous knowledge of *ECO* certification and was unaware of the types of things operators do in order to offer *ECO*-certified products.

- Most operators were located in the Northern region, were well experienced with more than ten years in operation and were trading as a company.

- The majority of operators sampled (48%) had already implemented *ECO* certification.

Thesis Outline



CHAPTER 4
EXAMINING THE POTENTIAL FOR CERTIFICATION TO RAISE OPERATOR REVENUES

Based upon: Esparon, M., Stoeckl, N., & Gyuris, E. (2013). *ECO Certification in Queensland's Wet Tropics World Heritage Area: Is it good for business?* In C. Tisdell (Ed.), Handbook on Tourism Economics: Analysis, New Applications and Case Studies. Singapore: World Scientific.

Synopsis

This is an updated version of the chapter published in the *"Handbook on Tourism Economics: Analysis, New Applications and Case Studies",* using more data than were available when the chapter was finalised. To make it reader friendly, I have removed any redundancies and cross referenced relevant chapters.

The chapter explores the idea that certification can improve operator profitability, focusing on consumer WTP for certified products (and leaving the important problem of whether certification lowers costs to future researchers). The chapter uses insights from existing literature in conjunction with the primary data collected in the survey of tourists, to assess the likely impact of changes in price (and associated quantity) on operator revenues, assuming no change to the existing customer base. Then, it appraises the possibility of certified operators being able to supplement their existing customer base with new customers, who might be more likely than others to pay a premium for certification. The research is unique in at least two aspects: 1. It goes beyond simply determining if tourists are willing to pay a premium – it looks at whether the percentage of tourists who are willing to pay a premium outweighs the percentage price increase; and 2. It looks at the determinants of WTP for certification.

Research objective addressed in this chapter:

Objective 1: Determine if visitors are willing to pay a premium for certified products and to see how an increase in price would impact on operator revenues

Sub-objective: Investigate the determinants of WTP

4.1 Introduction

As outlined in chapter 1, a handful of researchers have examined operator perceptions of certification programs. They found that, while awareness of and involvement with certification schemes is increasing, there is still uncertainty among operators about the potential impacts of certification. It appears that operators perceive significant barriers to certification (Darling, 2010), with the costs and fee structure of certification schemes being the main deterrent to participation (Cheyne & Barnett, 2001; Rowe, 2004; Darling, 2010). This is consistent with literature on what drives firms to implement sustainable practices: many intrinsic and extrinsic factors affect implementation, but in most cases, it is financial considerations that act as the main driver or the main obstacle (Chapter 1). While some businesses recognise non-monetary benefits to themselves and to society from improved environmental performance, others treat environmental decisions as just another business decision, to be determined on the basis of profitability alone (Darling, 2010). Businesses such as these are thus only likely to subscribe to the idea of certification if it can be proven to be in their best interests financially (Reinhardt, 1999).

If certification is to make a genuine difference, there must be additionality (Schneider, 2009; McKenney & Kiesecker, 2010). That is, it must be capable of altering the behaviour of firms rather than simply providing a logo for those who would have *'done the right thing'* anyway. As such, when assessing the success of certification as a means of advancing the sustainable tourism agenda, it is essential to look at the extent to which certification schemes are able to engage those who would otherwise be uninterested – hypothesised in this chapter to be those who would only be likely to subscribe to the idea, if they were convinced that it would increase their profitability. The literature tells us that in some instances, businesses may be able to lower costs when incorporating elements of sustainability into their operations (Stoeckl, 2004). But perhaps the most appealing of motivations for joining certification schemes is that certification promises businesses a marketing advantage and hence a competitive edge by attracting clients who are willing to pay a premium for a certified product (Teisl, Roe, & Levy, 1999; Tjolle, 2008).However, if consumers do

not choose to consume certified products, certification will not increase demand, so operators have a reduced incentive to seek certification.

In short, the hypotheses underlying my analysis are that a business' demand for certification will depend, at least in part, upon:

1. The owner/manager's attitudes or *'values';* and
2. The owner/manager's perceptions of the impact which certification will have upon their business' bottom line (i.e. their costs and revenues).

   Importantly, these perceptions will depend upon:

   a. The perceived impact of certification on costs; and
   b. The perceived impact of certification on revenues – which is inextricably linked to consumer demand, and willingness to pay (WTP) for certified products.

The focus of this chapter is on 2(b) – since having a better understanding of tourist WTP for certified products will help aid our understanding of business demand for certification. As regards 2(a), it is important to note that revenues are incomes that a company receives from the sales of goods and services to consumers, and are a function of price and quantity. Total profit therefore equals total revenue minus total cost, meaning that a proper analysis of the financial benefits of certification necessitates detailed information on the way in which certification affects businesses' production and cost functions, in addition to their revenues. However, the question of whether certification is also capable of lowering costs (be it fixed or variable) is a matter for further research.

As discussed in chapter 2, there is an array of research investigating consumers' awareness of and willingness to pay (WTP) for certified products. However, most of these studies have focused on the food sector (e.g. Krystallis & Chryssohoidis, 2005; Aryal, Chaudhary, Pandit, & Sharma, 2009) and on the forestry sector (e.g. Aguilar & Vlosky, 2007; Manaktola & Jauhari, 2007). In tourism, such investigations are relatively rare, despite the proliferation of certification schemes (Fairweather, et al., 2005; Schott, 2006). Indeed, very little is known about consumer views of tourism certification schemes (Schott, 2006). Consequently, the purpose of this chapter is to consider the hypothesis that certification can increase the profits of tourism operators by looking for evidence that it is able to increase revenues.

Also discussed in chapter 2, is the fact that some studies have measured visitor's expressed WTP for certification. Based on those findings, it appears that visitors are likely to pay a premium for certified products. To illustrate, in a survey of almost 500 Danish visitors staying in Green Key certified accommodations, 69% expressed a WTP extra for hotels with ecolabelling, with 34% of

them expressing WTP $0.25-$5.00 more to stay in a certified hotel. Remarkably, 2% were even willing to pay $25 more (cited in Chafe, 2005). Munoz and Rivera (2002) found that two-fifths of visitors in Mexico stated they would pay an average premium of US30 to US$60 for certified accommodations while the International Ecotourism Society (2005) found British tourists were keen to pay an additional US$9-US$11. Similar findings are supported by Puhakka and Siikamaki's (2011) study. In Queensland, Australia, visitors indicated that they were willing to pay a 5% premium to use certified businesses (Enhance Management, 2000). Although these studies have found positive WTP for certification, none of them have considered the likely impact that any given change in price or an associated change in quantity demanded would have on operator revenues.

Appropriately, before concluding that an expressed WTP necessarily translates to increased revenue, it is important to analyse the results of such studies a little more rigorously. In chapter 2, I noted that increases in price will only translate into increases in revenue if demand is inelastic: i.e. if the percentage increase in price exceeds the percentage reduction in quantity likely to be associated with that price rise (Frank & Bernanke, 2007). The opposite is true if the demand for a product is elastic (i.e. an increase in price will reduce quantity demanded, hence reduce revenues) (see Figure 2.2). As such, it is important to not only look at the percentage of people who are willing to pay a premium for certification, but also to compare the percentage of people who would NOT pay a premium with the stated increase in price.

Here, I use the contingent valuation (CV) method to determine how tourists would respond to *ECO* certification – with, and without, an accompanying price increase. Discussed in some detail in chapter 2, this technique is a sub-set of techniques belonging to the *'parent'* concept of Stated Preference (SP) valuation method. The CV method encompasses four different types of elicitation techniques, namely bidding game, payment card, open-ended and dichotomous choice. The potential use of each was carefully considered, however, because the latter stood out as being the most incentive-compatible, simple and cognitively manageable, it was adopted in this study. This approach is also the most commonly used form of CV and has been endorsed by the National Oceanic and Atmospheric Administration (NOAA) Report (Arrow, et al., 1993).

Because of its simplicity and the fact that respondents face a familiar task similar to a real referenda, the dichotomous choice minimises strategic responses (Hoehn & Randall, 1989). It works by offering respondents a price and asking them to indicate (Yes or No) if they would be WTP that price for the *'product'*. Sometimes a *'don't know'* option is also included to avoid forcing respondents into artificially choosing one of the answers (Bateman, et al., 2002). The researcher then ascertains the relationship between the price level and the proportion of *'Yes'* responses (Prayaga, 2011).

However, like all techniques, it is not without flaws – in fact, the dichotomous choice approach requires a large sample size (with different groups of respondents asked different prices) for precision (Bateman, Langford, Jones, & Kerr, 2001) and is criticised for the inconvenience of providing the researcher with only limited information. To mitigate this, some researchers, for example Hanemann, et al., (1991) proposed adding a follow-up (open-ended) question. Accordingly, in this study, respondents were given one follow-up question (although this was not an open-ended bid and it had a higher price).

Note, researchers frequently need use relatively sophisticated econometric approaches to use data collected from dichotomous CV studies to estimate WTP functions (See, for example Hanneman et al, 1990; Watanabe, 2010), but these did not need to be considered here, given the objective of the study is to look at the link between WTP and revenues – not to estimate mean (or median) WTP. As explained in chapter 2 however, to meet this later objective, one need only compare the percentage price increase presented in the questionnaire, with the percentage reduction in demand (i.e. the percent of respondents not willing to pay).

Central to the design of CV questions, is practicality: it is important that the trade-offs/scenarios being presented to respondents are as realistic as possible. Section 3.5.3.1, gives details on the questionnaire design (with excerpts from the questionnaire – the full copies are available in the appendix). Suffice to say here, a literature search was conducted on current costs of FULL DAY tours, B&B accommodations and PAID attractions in the region. From this, an average price was determined which was then used as the BASE PRICE, the next challenge being to determine appropriate increments to be used in the dichotomous choice questions.

Irrespective of whether or not there is a follow-up question, dichotomous-choice surveys are subject to starting point bias (or anchoring bias), i.e., respondents anchor their WTP to the bids, implying that WTP estimates may vary as a function of the bids (Whitehead, Hoban, & Clifford, 1995; Collier & Mahooney, 1996; Green, Jacowitz, Kahneman, & McFadden, 1998; Flachaire & Hollard, 2005, 2007). Consequently, a decision was made to produce two different versions of the questionnaire. The first – Version one (V1) – comprised price increments of 10% and 25% while version two (V2) comprised price increments of 30% and 50% (See Figure 3.7).[46] These premium increments were in line with previous, related research (Vlosky, et al., 1999; Gil, et al., 2000; Xia & Zeng, 2006; Aguilar & Vlosky, 2007; Thompson, et al., 2010).

[46] Splitting a questionnaire is common practice when the questionnaire would otherwise be excessively long (Raghunathan & Grizzle, 1995; Rodrigues & Beltrão, 2001).

4.2 WTP for *ECO* certification

A common concern in research is how to enhance rigor of analyses and this was no exception in this study. Aware that my visitor samples were obtained from two sources (non-airport and airport), I ran non-parametric tests to see if the distribution of responses about WTP between the two samples differed and found that they did not. Accordingly, these two sets of data were analysed concurrently. However, as expected, the distribution of responses across the three products (and versions of the questionnaire) was different - specifically, WTP 10% at attractions. I thus present results separately, according to the type of product and according to the version of the survey.

In the first instance, I simply looked at the percentage of responses who said that, with no difference in price, *ECO*-certified operations were the preferred choice (86%, 74% and 83% for accommodations, attractions and tours respectively). Few respondents preferred the non-*ECO* certified alternative (1% at both accommodations and on tours). However, some respondents did not seem to care if a business was certified or not, with 10% (accommodations), 5% (attractions) and 11% (tours).

Next, I looked at WTP for certification. For the majority of my survey respondents (67-74%), a 10% increase in price was acceptable (Table 4.1). However, as the price differential increased the proportion of respondents expressing a WTP a premium for *ECO* certification declined. Respondents overwhelmingly declared an unwillingness to pay the 50% premium for *ECO*-certified products.

Table 4.1 Proportion of respondents unwilling to pay a 10%, 25%, 30% or 50% premium for *ECO* certified products in the three different industry segments

Willingness to pay a premium			Accommodations Base price = $130 per room/night	Attractions Base price = $41 per adult	Tours Base price = $150 per adult
V1	10%	No	27% (n=86)	26% (n=89)	33% (n=85)
	25%	No	82% (n=73)	79% (n=75)	78% (n=74)
V2	30%	No	61% (n=77)	59% (n=82)	60% (n=63)
	50%	No	92% (n=87)	92% (n=78)	90% (n=71)

As expected, these results show clear evidence of starting point bias. In all cases the proportion of visitors expressing a positive WTP for the 30% premium (in version 2 (V2) of the questionnaire, where 30% was the lowest premium presented) exceeded the proportion of visitors expressing a

positive WTP the 25% premium (in version 1 (V1) of the questionnaire, where 25% was the highest premium presented). As such, one cannot (indeed should not) use these raw estimates to draw definitive conclusions about the absolute levels of WTP for *ECO* certification.

Still, irrespective of whether or not starting point bias exists, it is possible to use these results to draw inferences about the likely impact on operator revenues of price premiums for *ECO* certification. Clearly, there are at least some visitors who are willing to pay a premium for *ECO* certification and on the surface, this seems like good news for tourism operators. But on closer examination, it becomes apparent that in each and every case, the proportion of respondents unwilling to pay an increased price exceeds the proportional increase in price. For instance, an increase in price by 10% is likely to result in a reduction of visitors by 27% at accommodations. Since the percentage reduction in quantity exceeds the percentage increase in price, the resultant impact on revenues must be negative.

The implication here is that unless businesses are able to either

1. cut costs, for example by using less energy and water as part of running an *ECO*-certified business;

AND/OR

2. attract NEW customers,

then signing up for *ECO* certification and charging a price premium to cover associated transaction costs may not make financial sense, since the percentage (%) loss of existing customers exceeds any prospective gains from higher prices.

However, as emphasised in point two, businesses may counteract this situation if they are able to attract new customers who are both dedicated to sustainability in travel and tourism and who are also willing to pay more.

4.3 Types of visitors willing to pay a premium for *ECO*-certified products

Research identifying the profiles of consumers who are willing to pay more for sustainability or green products is abundant. These studies are important for marketers as identification of those characteristics enables marketers to develop marketing strategies specifically targeted at those customers. For the most part, these studies find that females are more likely to be willing to pay more for environmentally friendly products than males due to their stronger environmental attitudes and behaviour (e.g. Davidson & Freudenburg, 1996; Klineberg, McKeever, & Rothenbach, 1998; Vaske, Donnelly, Williams, & Jonker, 2001; Diamantopoulos, Schlegelmilch, Sinkovics, &

Bohlen, 2003a; Schubert, Kandampully, Solnet, & Kralj, 2010). Other demographic characteristics that have been identified as determinants of WTP include income, education and age.

As for a WTP a premium for certified products specifically, most previous studies have looked at sectors other than tourism. Of the few studies which have investigated WTP for certified tourism products, none have considered the link between demographic characteristics and WTP and have instead, presented the findings as a percentage of respondents who were likely to pay more for products that are certified (as was done in the previous section).

To address this gap in knowledge, responses to the above-mentioned questions about WTP were divided according to socio-demographic variables and the Mann Whitney U test was used to test for the statistical significance of differences in responses. Despite reports on the weakness of socio-demographic variables as WTP predictors (Krystallis & Chryssohoidis, 2005), in this study, income, education, gender, origin and age were found to be statistically significant determinants of stated WTP. The relationship between the groupings so investigated and WTP are shown in Table 4.2 to Table 4.6.

Table 4.2 Proportion of respondents unwilling to pay a 10%, 25%, 30% or 50% premium - according to income

Willingness to pay a premium			Accommodations Base price = $130 per room/night		Attractions Base price = $41 per adult		Tours Base price = $150 per adult	
			Below $60,000	Above $60,000	Below $60,000	Above $60,000	Below $60,000	Above $60,000
V1	10%	No	46% (n=22)	21% (n=58)	36% (n=33)	15% (n=48)	17% (n=24)	38% (n=55)
	25%	No	100% (n=19)	79% (n=48)	93% (n=27)	66% (n=42)	71% (n=17)	82% (n=50)
V2	30%	No	85% (n=26)	48% (n=46)	56% (n=25)	62% (n=39)	63% (n=19)	59% (n=41)
	50%	No	93% (n=30)	93% (n=53)	96% (n=24)	95% (n=37)	96% (n=26)	88% (n=40)

Note: Light and dark shaded values indicate significance at the 0.05 and 0.01 levels respectively

Respondents with incomes of $60,000 and above were statistically more likely to be willing to pay premiums of 10%, 25% and even 30%[47] to stay at an *ECO*-certified accommodation and up to 25%[48]

[47] 10% premium (U = 480.00, z = -2.20, p < .05), 25% (U = 361.00, z = -2.14, p < .05) and 30% (U = 378.00, z = -3.05, p < .01)

to visit an *ECO*-certified attraction (Table 4.2). This is not surprising, as income is often noted as the principal factor in determining a purchase decision (Fussell, 2011).

Table 4.3 Proportion of respondents unwilling to pay a 10%, 25%, 30% or 50% premium - according to education

Willingness to pay a premium			Accommodations Base price = $130 per room/night		Attractions Base price = $41 per adult		Tours Base price = $150 per adult	
			Primary-Secondary	Post-Secondary	Primary-Secondary	Post-Secondary	Primary-Secondary	Post-Secondary
V1	10%	No	63% (n=8)	22% (n=76)	29% (n=17)	25% (n=72)	40% (n=15)	32% (n=68)
	25%	No	90% (n=10)	80% (n=61)	77% (n=13)	79% (n=62)	87% (n=15)	75% (n=57)
V2	30%	No	80% (n=15)	57% (n=60)	74% (n=19)	54% (n=63)	70% (n=10)	59% (n=53)
	50%	No	94% (n=18)	91% (n=68)	95% (n=19)	92% (n=59)	100% (n=11)	88% (n=59)

Note: Shaded values indicates significance at the 0.05 level

Respondents with post-secondary education were statistically more likely to be willing to pay a premium of 10%[49] to stay at an *ECO*-certified accommodation than at a non-*ECO* certified accommodation (Table 4.3). This is not unexpected, as education and income are highly correlated. Accordingly, as the level of education increases, so does the level of income. Hence if a respondent has a larger budget, one would expect him/her to be able to pay a higher premium because they are less price sensitive to the lower income worker (Fussell, 2011). Moreover, many studies have revealed the importance of education in the WTP and acceptance of environmental goods and concepts, irrespective of income. As suggested by Diamantopoulos and colleagues (2003a, p. 472), the better educated are more likely to fully understand the issues involved and hence, are more concerned about environmental quality and more motivated to participate in environmentally responsible behaviours.

[48] 10% premium ($U = 619.00$, $z = -2.26$, $p < .05$) and 25% ($U = 420.00$, $z = -2.47$, $p < .05$)

[49] 10% premium ($U = 182.00$, $z = -2.44$, $p < .05$).

Table 4.4 Proportion of respondents unwilling to pay a 10%, 25%, 30% or 50% premium - according to gender

Willingness to pay a premium			Accommodations Base price = $130 per room/night		Attractions Base price = $41 per adult		Tours Base price = $150 per adult	
			Male	Female	Male	Female	Male	Female
V1	10%	No	21% (n=28)	30% (n=54)	27% (n=44)	23% (n=44)	35% (n=40)	29% (n=42)
	25%	No	84% (n=19)	82% (n=51)	81% (n=37)	76% (n=37)	85% (n=33)	71% (n=38)
V2	30%	No	68% (n=25)	59% (n=51)	65% (n=31)	55% (n=51)	67% (n=18)	59% (n=44)
	50%	No	97% (n=30)	90% (n=57)	100% (n=32)	87% (n=46)	86% (n=21)	92% (n=47)

Note: Shaded values indicates significance at the 0.05 level

In general, females are said to be more willing to pay a premium for environmental goods, are more environmentally friendly (Klineberg, et al., 1998) and tend to support green causes and participate in greening efforts more strongly than males (Davidson & Freudenburg, 1996; Vaske, et al., 2001; Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003b). The sample collected at attractions concurred – 13% of female visitors were willing to pay a premium of up to 50%[50] to visit an *ECO*-certified attraction (Table 4.4).

[50] 50% premium (U = 640.00, z = -2.11, p < .05).

Table 4.5 Proportion of respondents unwilling to pay a 10%, 25%, 30% or 50% premium - according to origin

Willingness to pay a premium	Accommodations Base price = $130 per room/night		Attractions Base price = $41 per adult		Tours Base price = $150 per adult	
	International	Domestic	International	Domestic	International	Domestic
V1 10% No	26% (n=31)	27% (n=55)	29% (n=34)	24% (n=55)	30% (n=30)	35% (n=54)
25% No	78% (n=23)	84% (n=49)	79% (n=29)	78% (n=46)	64% (n=25)	86% (n=49)
V2 30% No	45% (n=20)	67% (n=57)	77% (n=26)	50% (n=56)	53% (n=30)	66% (n=32)
50% No	82% (n=22	95% (n=65)	100% (n=26)	86% (n=52)	90% (n=31)	90% (n=39)

Note: Shaded values indicates significance at the 0.05 level

Table 4.6 Proportion of respondents unwilling to pay a 10%, 25%, 30% or 50% premium - according to age

Willingness to pay a premium	Accommodations Base price = $130 per room/night		Attractions Base price = $41 per adult		Tours Base price = $150 per adult	
	Below 50yrs	Above 50yrs	Below 50yrs	Above 50yrs	Below 50yrs	Above 50yrs
V1 10% No	18% (n=40)	37% (n=43)	20% (n=54)	34% (n=35)	27% (n=37)	36% (n=45)
25% No	77% (n=34)	89% (n=37)	71% (n=45)	90% (n=30)	75% (n=36)	80% (n=35)
V2 30% No	63% (n=32)	61% (n=44)	58% (n=62)	63% (n=19)	61% (n=28)	62% (n=34)
50% No	89% (n=45)	95% (n=42)	93% (n=59)	89% (n=18)	89% (n=27)	90% (n=41)

Note: Shaded values indicates significance at the 0.05 level

In relation to age, only one subset of the data (that relating to a 10%[51] price premium for accommodations) showed a statistically significant difference in the response of old and young tourists. But the findings are consistent with other studies (Forsyth, Haley, & Kozak, 1999; Xia &

[51] 10% (U = 690.00, z = -1.99, p < .05).

Zeng, 2006) which found that younger[52] people were more likely to pay a premium. According to Krystallis and Chryssohoidis (2005) and Corcoran and Osano (2009), this can be attributed to the fact that younger people tend to have greater environmental awareness and concern than the older generation. In the majority of cases, the sample of older visitors was less likely to pay a premium. This can be explained by the fact that many older people are on a pension, with the purchase of a holiday already being a luxury item (Berghoef & Dodds, 2011). Another possible reason is they may not wish to introduce a new factor into their holiday purchasing decision.

Overall, in each and every case, the percent of respondents who indicated an unwillingness to pay a price premium was greater than the percent increase in price (e.g. 21% of *'rich'* tourists say they would not be willing to pay a 10% premium for certified accommodation). This indicates that the demand for the *ECO*-certified tourism products considered in this study is price elastic – even for high income tourists. Evidently, even when dealing with *'well-educated'*, *'rich'*, *'female'*, *'local'*, *'international'* or *'young'* consumers, it seems that price increases are likely to lead to revenue decreases. Therefore, at issue next is the question of whether or not knowledge of certification and perception about its impact influence consumer WTP.

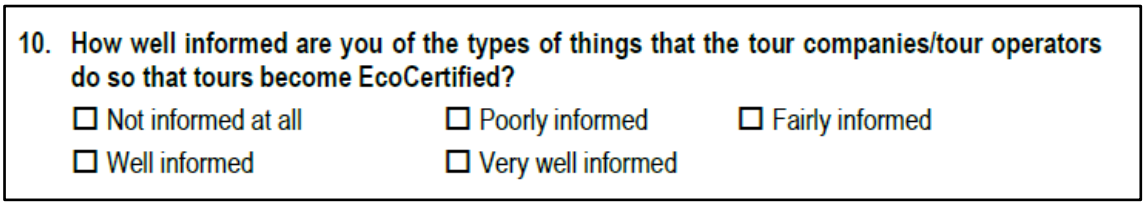
4.4 Knowledge and perception as an influence on consumers' WTP for certified tourism products

Simply being *'aware'* of certification may not suffice: it is equally important to gauge how informed visitors are and whether knowledge of certification translates into a WTP a premium for certified products.

With the exception of Schott's (2006) study, I am unaware of any other study of consumer knowledge of certification schemes. That particular study investigated visitor's level of knowledge of the Green Globe 21 certification program, specifically looking at knowledge about the characteristics and meaning of the scheme. Schott found that although three quarters of respondents claimed some knowledge, their level of understanding was predominantly low.

[52] The average age being 39 in the case of Forsyth, et al.,'s (1999) study, between 20-30 in the case of Xia & Zeng's (2006) study and lower than 50 years old in the *ECO* certification's study. In the case of the latter, age were categorised as a bivariate variable with respondents below the age of 50 in one category and those above 50 in another.

In addition to asking questions about WTP, this study of the *ECO* certification scheme also queried visitors about their knowledge of the types of things that operators must do to achieve *ECO* certification (Figure 4.1). Results showed that while the proportion of those who considered themselves to be *'informed'* was higher amongst those respondents who had purchased *ECO*-certified products than those who had not, overall between 66-94% of respondents admitted to knowing very little about the requirements of *ECO* certification (Figure 4.2).


10. How well informed are you of the types of things that the tour companies/tour operators do so that tours become EcoCertified?

☐ Not informed at all ☐ Poorly informed ☐ Fairly informed

☐ Well informed ☐ Very well informed

Figure 4.1 Exerpt of the Tour survey about level of knowledge

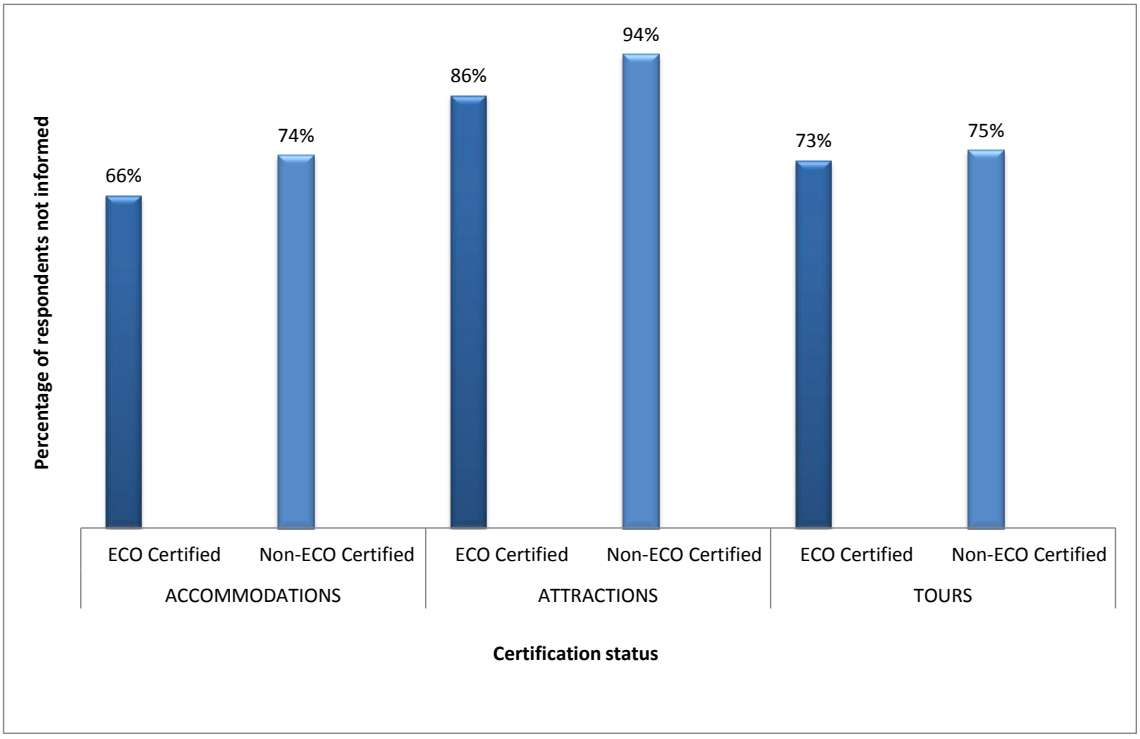


Figure 4.2 Respondents' knowledge about the requirements of *ECO* certification – sample segmented according to business' certification status

Table 4.7 Knowledge and willingness to pay

Willingness to pay a premium		Accommodations Base price = $130 per room/night		Attractions Base price = $41 per adult		Tours Base price = $150 per adult	
		Not Informed	Informed	Not Informed	Informed	Not Informed	Informed
V1	10% No	31% (n=55)	17% (n=30)	26% (n=72)	24% (n=17)	31% (n=62)	40% (n=20)
	25% No	89% (n=46)	68% (n=25)	79% (n=62)	77% (n=13)	81% (n=53)	68% (n=19)
V2	30% No	66% (n=61)	44% (n=16)	61% (n=67)	47% (n=15)	67% (n=45)	41% (n=17)
	50% No	93% (n=70)	88% (n=17)	93% (n=61)	88% (n=17)	98% (n=49)	70% (n=20)

Note: Light and dark shaded values indicate significance at the 0.05 and 0.01 levels respectively

Table 4.7 summarises the percentage of respondents who were willing to pay a premium for certification based on whether they were informed or not for each of the increments. As observed in Table 4.1, there is evidence of starting point bias (in all cases the proportion of visitors expressing a positive WTP for the 30% premium exceeded the proportion of visitors expressing a positive WTP the 25% premium). Statistically, the difference in WTP between the two groups (i.e. *'informed'* versus *'not informed'*) were significant at the 25% and 50% premiums for accommodations and on tours respectively, indicating that those who were *'informed'* were more likely to be willing to pay a premium than those who were not.

As regards perceptions of the contribution of certification to sustainability, while there are studies which found that visitors who understand the perceived benefits of certification would support their further development (Fairweather, et al., 2005; Chafe, 2007), it must be noted that most of this understanding and support focuses on biophysical environmental aspects only. This is perhaps not surprising, considering that most certification schemes cover criteria aimed at reducing only the biophysical impacts of tourism activities. In the context of sustainability, social and economic aspects of certification schemes are also important. Currently, there is a lack of understanding on visitors' perception on these aspects. The *ECO* certification program is one of the few schemes known for inclusion of all aspects.

Therefore, this study sought to examine visitors' perception of the difference in contribution to sustainability between *ECO*-certified and non-*ECO* certified businesses. To gauge respondents' perceptions they were presented with the following question (Figure 4.3).

15. In your opinion are ECO Certified tours doing more (than non ECO Certified tours) to help improve or protect:

	Much more	More	About the same	Less	Much less	Not sure
a) The ENVIRONMENT?	☐	☐	☐	☐	☐	☐
b) The LOCAL COMMUNITY?	☐	☐	☐	☐	☐	☐
c) The OPERATORS' financial performance?	☐	☐	☐	☐	☐	☐
d) Your PRODUCT EXPERIENCE?	☐	☐	☐	☐	☐	☐

Figure 4.3 Question about the contribution of *ECO* certification - excerpt of the tour survey

Visitors generally perceived *ECO*-certified firms to be making a positive contribution to the environment, the local community, the operators' profit and their product experience (Figure 4.4). The generalised perception that *ECO*-certified firms contribute more towards sustainability and the consumer experience is worth noting. When consumers have confidence that their product choice will make a significant contribution to desired collective outcomes they are more likely to show preference for those products and are more likely to pay a premium (Thompson, et al., 2010, p. 13). Indeed, this was evident when perception of contribution was correlated with WTP measures (Table 4.8). A similar conclusion was drawn by Aguilar and Vlosky (2007) who found potential premiums by those who believed certification can help reduce deforestation in the tropics.

Evidently, those hoping to charge a premium for certified products (e.g. to cover costs) must first be able to convince consumers that certification really does make a difference.

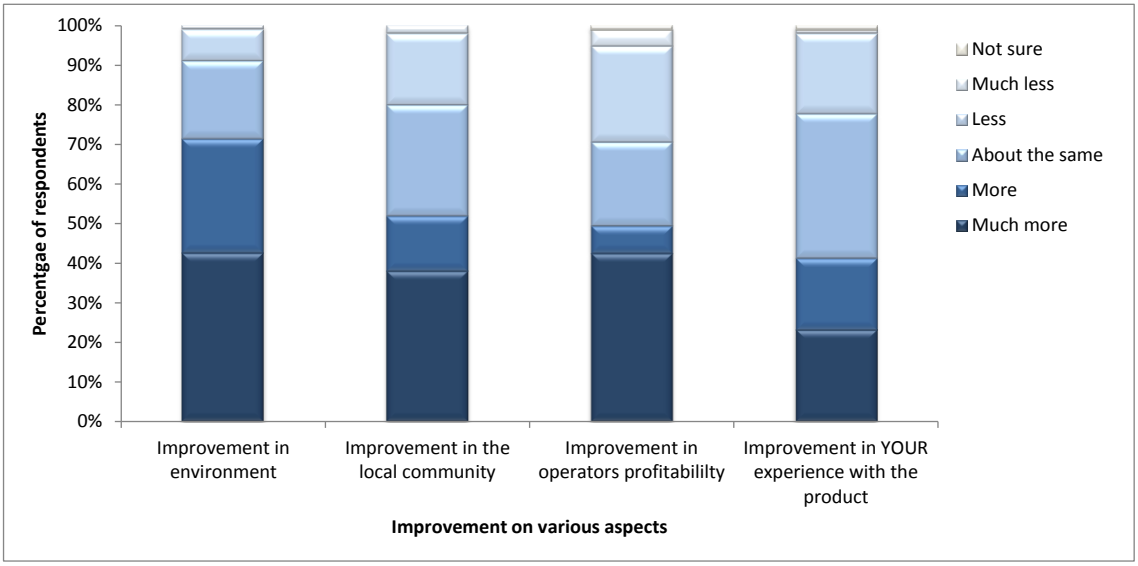


Figure 4.4 Perceived contribution of *ECO* certification to the environment, the community, operator profitability and the customer experience

Table 4.8 Correlation between respondents perceived contribution of *ECO* certification and their WTP for *ECO* certification

Aspects of sustainability and product	Accommodations				Attractions				Tours			
	WTP 10%	WTP 25%	WTP 30%	WTP 50%	WTP 10%	WTP 25%	WTP 30%	WTP 50%	WTP 10%	WTP 25%	WTP 30%	WTP 50%
Environment	r=.38	r=.30	-	-	r=.45	-	r=.29	r=.35	r=.53	r=.47	r=.37	r=.46
Local community	r=.27	-	r=.36	-	-	-	-	r=.33	r=.40	r=.43	r=.57	r=.44
Operators' financial performance	-	-	r=.32	-	-	-	-	r=.39		r=.52	r=.41	-
Experience with the product	r=.46	r=.39	r=.51	r=.28	r=.25	-	r=.29	r=.33	r=.48	r=.39	r=.52	-

Note: Light and dark shaded values indicate significant correlation (+ve) at the 0.05 and 0.01 levels respectively.

4.5 Discussion

Despite claims that certification will give firms a competitive edge by attracting consumers who are willing to pay a premium for certified products, to date, there has been no evidence supporting these claims. This chapter set out to explore the potential revenue implications of certification – specifically looking at consumers' WTP for *ECO*-certified tourism products. Based on the findings several important observations can be made:

Firstly, it was found that visitors are willing to pay more for *ECO*-certified products. This is consistent with other studies and on the whole, should be positive news for operators. However, this study demonstrated that increases in prices will result in a loss of existing customers, hence, in the short run, the option to increase prices may ultimately reduce revenues, thus lowering profits, if not associated with a simultaneous reduction in costs or a compensating increase in customers from elsewhere. This highlights a vitally important question for further research: *Does certification lower operator costs? And if it does, how the increase in price for ECO-certified products can be justified?*

In the medium run, it is quite possible that profits may increase (even if costs do not fall) if customers of previously non-*ECO* certified products switch to the more environmentally and socially friendly option. It is important to note nonetheless, that this reallocation of customers, if it eventuates, will take time and some of the smaller businesses might lack the resilience to cope, requiring some form of external assistance in the interim. Moreover, in the long run, economic

theory predicts that any excess profits accruing to those businesses will eventually dissipate – returning all to the expected (zero) economic profits.

That point aside, there is concern over whether an expressed WTP really translates into actual payments. It is argued that an individual's stated WTP may well be just intentions and not necessarily followed by actual behaviour (Fairweather, et al., 2005; Vermeer, et al., 2010; Chao & Lam, 2011). In certain instances, these answers may be subject to social desirability bias, with respondents feeling the pressure to appear socially and environmentally responsible, while in reality they are rather focused on comfort, quality and price of the product (Font & Epler Wood, 2007; Jarvis, et al., 2010; Chao & Lam, 2011; Puhakka & Siikamaki, 2011). According to Weeden (2008), consumer intentions are simply poor indicators of actual performance. Importantly, if those who participated in this study of WTP for *ECO* certification in the WTWHA were inclined to give socially desirable responses, then this empirical research may overstate the potential positive revenue effects of the scheme. In other words, if social desirability bias is present in this study, then operators who choose to charge a premium for certification may see an even more significant fall in revenues than is suggested here. In short, the strongest criticism of CV (namely that people will overstate WTP) supports, rather than undermines, the key findings of this chapter.

Fortunately, there are other avenues that can be pursued which may still enable the firm to raise its revenues. For example, the marketing of certification products that target the financially well-off, well-educated, female and the young visitors could be worthwhile, seeing that these groups of visitors are statistically more likely to express a WTP for certified products than others. These results suggest that demand for these visitors is still relatively elastic, but there are clearly many complex interactions across such variables, highlighting the need for more sophisticated (e.g. multivariate) analysis of the link between such demographic variables and WTP with larger data set. Still, it should be noted that other studies argue that the impact of demographic characteristics in general, have little impact on consumer's behaviour and their WTP (Laroche, Bergeron, & Barbaro-Forleo, 2001; Heidt & Firmin, 2009). Therefore, to better understand the true extent of consumer behaviour with certification, it is perhaps best to also examine their values and/or attitudes.

In addition, some studies suggest that the more informed a customer is, the more likely he/she will be willing to pay a premium. This research suggests that being informed about certification *per se* is actually not effective in determining WTP. Rather, it is consumer perceptions about the effectiveness of certification that is most significant.

Customers who think that certification makes a positive difference to the environment and the local community, are statistically more likely to be willing to pay a premium for certified products than those who do not. As might have been expected *a priori*, it is not the general awareness of schemes, but rather their perceived credibility that matters to consumers. This finding is consistent with that of Batte, Hooker, Haab, & Beaverson (2007) who also found that awareness of the National Organic Program (NOP) had no significant differences in WTP a premium. As such, it can be argued that it is unlikely that the use of the logo on its own is acting as a peripheral cue for consumers: as noted by Batte et al., (2007), consumers must *believe* that the certification logo is associated with activities that really do make a difference.

Further research on this issue and on the link between visitors' perceived importance of specific attributes of sustainability and WTP for certification could also help those who seek to design certification schemes to identify and prioritise attributes of sustainability that are important to consumers. The latter point is addressed in the subsequent chapter.

4.6 Conclusion

The principal aim of this chapter was to explore the potential revenue implications of certification (objective 1). Using a contingent valuation approach, specifically the dichotomous choice format, the study tested the hypotheses that certification can increase revenues if it can either:

1. Increase visitor numbers; and/or
2. Increase the price operators are able to charge (without causing significant decline in visitor numbers).

It found little evidence that certification will be able to raise revenues, unless visitors are able to simultaneously be convinced that certification is capable of making a *'difference'*. More specifically, the study found that with no price differences, visitors preferred *ECO*-certified operators, but this support failed to follow through when an accompanying price increase is introduced. While there were some visitors who were willing to pay more for *ECO*-certified products, overall, the percentage (%) decrease in quantity is more than the % increase in price - suggesting that an increase in price will result in a loss of existing customers. In other words, the existence of customers who are willing to pay for a product does not necessarily translate into tangible (commercial) *'demand'* for that product (in that it does not mean businesses will be able to charge higher prices for their products and earn higher revenues). Whilst this seems to be a relatively trivial finding (given the long history of the concept of price elasticity and its known link to revenues), the extra step of linking information about tourist WTP for certification to operator

revenue has, to the best of my knowledge, not yet been made within the broader literature and therefore highlights the importance of the message. That said, this research only focused on revenues. The final impacts on profits cannot be determined without also investigating the effect of certification on costs – a topic worthy of future research.

This finding has several implications: firstly, it highlights the fact that researchers must exercise caution when interpreting WTP values: simply reporting the percentage (%) WTP a premium is not enough. Instead, researchers must also look at the proportion of respondents who are *unwilling* to pay a premium, comparing that with the price rise considered in the study, since it is only the combination of both pieces of information that provides a picture of the revenue consequences of price increases.

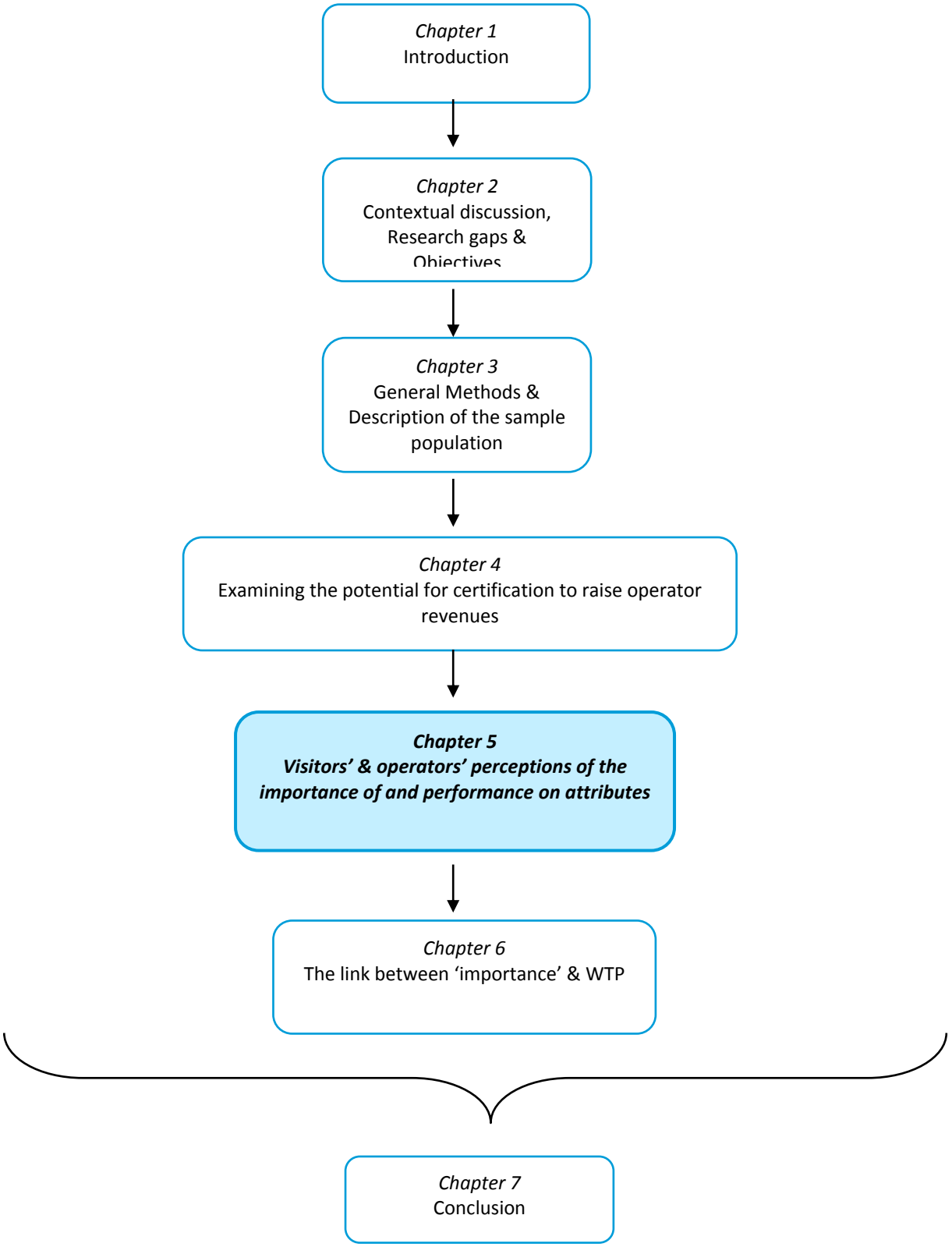
That said, even if certified operators cannot increase revenues by raising prices, all hope is not lost. Operators can counteract this situation if they are able to attract new customers who are both dedicated to sustainability and who are also willing to pay more. The financially well-off, well-educated, female and the young visitors were identified as potential market segments to be targeted by marketing campaigns. These visitor groups were statistically more likely to express a WTP for certified products (although their demand is still elastic). Furthermore, visitors generally perceived *ECO* certification to be making a positive contribution to the environment, the local community, the operators' profit and their experience – the more optimistic were these perceptions, the larger the number of respondents willing to pay a premium. The implication of this finding is that customers expect *ECO* certification to contribute positively to all aspects of sustainability, including their trip experience and these perceptions of effectiveness influence WTP. This implies that there is a strong desire for products that are authentically sustainable (Han, et al., 2009; Bonroy & Constantatos, 2011; Lebe & Zupan, 2012). Evidently, *ECO* certification must be able to demonstrate credible evidence of its positive environmental and social impacts, if customers are to fully support it as a measure of sustainability.

Finally, it is important to note that this chapter focused on the financial aspects of certification only. However, there is a need for more information on the biophysical and social aspects of certification – a topic worthy of further study. Information on all three features will provide a better indication of whether certification schemes are really effective in promoting sustainability. Specifically, if irrefutable evidence shows that:

1) certification benefits the operator, the environment and the community, then the message which certifiers would like us to believe – namely that certification leads to better outcomes (Chapter 1 and 2) – can be confirmed.

2) certification is unprofitable to businesses but good for both the environment and society then there would be a *prima facie* case for government intervention to help support such schemes, especially in environmentally sensitive areas such as the WTWHA. NB. this would depend upon its effect on costs, but the analysis undertaken in this chapter indicates that the revenue effects are not positive.
3) certification is profitable for the operators but bad for the environment &/or society, then perhaps more emphasis will need to be put on other initiatives (this view is shared by many who think that certification would be more effective as a policy bundle when coupled with environmental regulations (Dreike, 2007; Buckley, 2001)). Again, this would depend upon its effect on costs, but the analysis undertaken in this chapter indicates that this would only happen if there were substantive cost decreases, and this scenario seems unlikely given the slow uptake of certification thus far.
4) certification is neither profitable to businesses nor good for the environment and community, then (as in (3) perhaps more emphasis will need to be put on other initiatives.

Thesis Outline



CHAPTER 5
VISITORS' & OPERATORS' PERCEPTIONS OF THE IMPORTANCE OF & PERFORMANCE ON ATTRIBUTES

Based upon: Esparon, M., Gyuris., E & Stoeckl, N. (2013). "Does *ECO* certification deliver where it counts? An empirical investigation of the importance of attributes and operator performance". *Journal of Sustainable Tourism*. (Online first article). DOI:10.1080/09669582.2013.802325

Synopsis

In the previous chapter, I established that IF operators increase the prices they charge (perhaps to cover the costs of *ECO* certification), they will need to attract more visitors who are WTP a premium. This is because their existing customer base will be eroded by price increases, meaning revenues will fall without more customers. I also showed that the most significant correlate of WTP is consumers' perception of the effectiveness of certification. The current chapter gauges consumers' perception of effectiveness by identifying the attributes of certification that consumers deem most/least important and estimates perceptions of operators' performance on those attributes. I then widen the scope of enquiry, by looking at operator perceptions of attributes in order to see (a) what they feel is most/least important, (b) how they feel they are performing on those attributes and (c) whether visitor and operator perceptions align.

I find that *Marketing* and *Nature* were generally considered to be the most important attributes of certification, although responses varied across products and visitor groups. Results also showed that *ECO*-certified operators were perceived to be performing *'better'* than their non-*ECO* certified counterparts, notably at accommodations; whether or not these visitor perceptions translate into reality remains an important topic for future research. I also find that visitors and operators perceived the same attributes to be important – although operators perceived *Nature, Marketing* and *Community*

significantly higher than did the visitors.

Research objectives addressed in this chapter:

Objective 2: Improve our understanding of visitors' perceptions about the importance of different attributes of certification (linked to dimensions of sustainability) and about the performance of tourism operators on those attributes.

Objective 3: Improve our understanding of tourism operators' perceptions about the importance of different attributes of certification (linked with dimensions of sustainability) and about their performance on those attributes

Objective 4: Examine the alignment between visitor and operator perceptions on the importance of and performance in different attributes

5.1 Introduction

Certification has been the subject of many studies. As discussed in Chapters 1 and 2, claims about certification's role in positively impacting economies, societies and ecosystems have been well documented (Honey & Rome, 2001; Black & Crabtree, 2007b). Consumer and operator perceptions of certification have also been well addressed (Aguilar & Vlosky, 2007; Chafe, 2007; Rowe & Higham, 2007; Darling, 2010). Yet, despite all this research, there is not enough evidence to definitively accept or refute the claim that certification is a key tool in advancing the sustainable tourism agenda. Rather, the debate continues and most pertinent is the apparent lack of evidence of consumer demand for certification. As I explained in the first two chapters of the thesis, this has been attributed to a general lack of consumer demand for sustainable tourism and poor marketing.

Evidently, many tourism operators will only seek certification if they believe there is a market for certified products, i.e. consumer support is still needed. In other words, certification programs will only be able to provide specific benefits to both operators and tourists if consumers care about and believe the specific information presented to them (Teisl, 2003). Hence, why it is important to understand perceptions of certification.

Many studies have examined consumer perceptions of certification (e.g Aguilar & Vlosky, 2007; Chafe, 2007) and most conclude that consumers regard certification to be important and if given a choice, would choose certified providers or products over uncertified ones, provided *there is no loss in quality or that the certified alternative is not dearer* (Nielsen, 1995; Enhance Management, 2000; Foster, 2003; Fairweather, et al., 2005; Chafe, 2007; Esparon, Stoeckl, & Gyuris, 2013).

There has also been much research into the performance of certification programs. Development of appropriate performance management systems are considered essential for meeting key performance targets – as summed up by the adage *'What gets measured gets done'* (Lynch & Cross, 1991; Kennerley & Neely, 2003). In a study that looked at the performance of voluntary environmental programs, (VEPs) Darnall and Sides (2008) found that, collectively, VEP participants do not improve their environmental performance over non-participants. Rather, it is the latter whose environmental performance improves. Conversely, other studies found the reverse to be true. For example, Potoski and Aseem (2005) found that ISO 14001-certified facilities reduced their pollution emissions more than non-certified facilities. Caro and Garcia (2009) also found that, compared to non-certified firms, ISO certification improves consumers' perception with regard to quality, satisfaction and corporate image, suggesting that certified companies are able to realize marketing benefits.

However, most of these studies share two common failings:

1. They treat certification as a simple and single product, rather than a multifaceted product; and
2. They tend to focus on either the importance of, or the performance of certification – not both.

Treating certification as a simple *'good'* does not enhance our understanding of the relative importance of various attributes of certification to consumers. Recall from Chapter 2, that consumers make choices based on the different qualities or characteristics of a good and not for the good *per se* (Lancaster, 1966). That no one has yet considered certification except as a simple *'good'* is a significant research gap, since, products are comprised of attributes that *'extend beyond the physical product'* (e.g. environmental impacts, community impacts) and ultimately, a consumer purchases a product based on his/her attitude towards the product attributes he/she deems important (Thompson, et al., 2010). Consequently, the research reported in this chapter makes a substantial contribution to the literature, in that it *'unpacks'* consumer attitudes towards certification, clearly differentiating various factors that certification schemes frequently focus on.

Moreover, when assessing how satisfied consumers are with a product's attributes, it is essential to consider both the importance of an attribute (to the consumer) and the extent to which consumers feel an operator is *'performing'* on that attribute (Martilla & James, 1977; Graf, et al., 1992; Ainin & Hisham, 2008). If only considering importance or performance, key questions are frequently overlooked. For instance – *Do customers care equally about each attribute of the product? Which aspects are more important to them than others? Is the effort given to different attributes mirroring*

the importance the consumer attaches to each? or Are firms over-performing in some areas and under-performing in others?

But to date, no studies have examined the alignment between the social and ecological attributes emphasised by certification schemes and the importance that consumers of tourism products accord to those attributes. Also missing is research that links the consumer views on the importance of these attributes with their perceptions about the performance of operators or of products. These are also potentially significant research gaps since certification schemes depend on the confidence of consumers in the quality of products and services that certification holders offer for sale.

Improved knowledge of importance and performance is thus deemed necessary for three main reasons:

1. to see if importance and performance align from the perspective of the consumer, providing an opportunity for businesses and marketers to correct any misalignment;
2. to inform certification providers and businesses about which attributes are of interest or of special concern to consumers, i.e. to provide clear guidance to certified firms about what could be marketed *today* to current customers; and
3. to see if there are some aspects of sustainability, as measured by certification schemes, which consumers think are unimportant, but which others (e.g. scientists, protected area managers) believe are important. Notwithstanding the significance of having certification attributes reflecting real consumer needs, nonalignment between the two, nonetheless, does not necessarily mean that the scheme needs to be changed. Rather, it may mean there is a need to educate consumers about the importance of attributes they consider to be unimportant, which are nevertheless, essential for sustainability goals to be reached.

Since consumers have *"influences far beyond any other stakeholders"* (Chan, 2008, pp. 193), clearly, their views are critical if certification is to become a strong market. That said, knowledge of operators' perceptions about certification is just as important to its success since it is the operators who must decide whether to become certified or not. Unfortunately, relatively little research has been done in this area – although we do know that: (a) tourism operators are aware of certification schemes; (b) this awareness and involvement is increasing; but (c) operators remain neutral or undecided on the potential impacts of certification on their businesses (Chafe, 2005; Darling, 2010). Moreover, there is no information about the importance that tourism operators attach to specific attributes of certification. If operators do not recognise the significance of certification's individual

attributes, then it is likely that certification, as a concept, will not interest them (Rogerson & Sims, 2012) - and attempts to convince businesses to become certified may be somewhat ineffective.

Just as important, but also absent in the certification literature, is information about businesses' evaluation of their own performance. The value of businesses' self-assessment lies in its ability to make operators take responsibility for their own performance and development. Doing so enables businesses to internalise the need for change and performance improvement (Lawler-King, 1998; Luo & Bhattacharya, 2006; Goetsch & Stanley, 2009).

Finally, it is important to note that having information about either visitor or operator perceptions is essential; but having information about both and then checking to see how much they align is something that to the best of my knowledge has not been done before. This is a potentially important research gap, given that research has shown that the views of tourists and operators are often very different (Morgan & Vorhies, 2001) and given that certification relies on a *'chain'* of demand (specifically, tourists demanding certified products and businesses demanding certification).

The objectives of this chapter are, therefore, to help fill those gaps. In doing so, I look at the importance of the eight attributes of *ECO* certification and the (subjective) assessment of performance on these attributes from the perspective of both the visitor and that the operator. I also consider the alignment of perceptions (i.e. do visitors and operators *'value'* the same things?) (Objectives 2, 3 and 4).

The investigation of actual performance of operators lies outside the objectives of this chapter.[53] Also, unlike the preceding chapter which followed the *'usual'* journal style by presenting methods, results and discussion in that order, in this current chapter, discussions are interspersed with results to facilitate the flow of ideas. This is because I have conducted several investigations using two different, but related, samples (namely visitors and operators).

5.2 Questionnaire design & Data analysis

As discussed in Chapter 3, central to the survey design was the need to ensure a close alignment of questions about importance and performance – for both visitors and operators. Respondents (i.e. visitors and operators) were thus presented with a table with product-specific descriptors of an

[53] For information on objective measures of performance, see appendix 7.

attribute based on one of the several subcategories within each of the eight categories assessed by the *ECO* certification program (Figure 5.1). The subcategory chosen to characterize each attribute was the one that most closely matched the priorities of the Wet Tropics Management Authority for the region (see Chapter 3).

For each individual attribute both visitors and operators were asked to rate the followings using a 5 point Likert scale:

- How important are each of the following attributes of *ECO* certification to you?

Depending on the type of questionnaire given to them (i.e. accommodation, attraction or tour), they were then asked to answer the following question on a 5-point Likert scale ranging from 1 (*'Not well at all'*) to 5 (*'Very well'*).

For visitors:

- How well do you think the accommodation establishment you are staying at performed based on these attributes? (irrespective of being *ECO* certified or not)

OR

- How well do you think the attraction you visited today performed based on these attributes? (irrespective of being *ECO* certified or not)

OR

- How well do you think the tour you went on today performed based on these attributes? (irrespective of being *ECO* certified or not)

For operators:

- How well do you think this business performs on these attributes?

Data were analysed using SPSS. Non-parametric statistical tests were used to test for differences in responses regarding the importance and performance – thus allowing for the segmentation of responses into relatively small sub-samples while avoiding the need to assume that the underlying distribution was *'normal'*.

In sum:

1. I used the Wilcoxon signed-rank test to find out which attributes of the *ECO* certification scheme visitors and operators think are the most important.
2. Mann-Whitney U tests were used when seeking to determine if these preferences varied across different visitor groups (visitors only). I considered demographic variables

only and to facilitate the analysis, continuous variables were dichotomised. For example, the variable *age* was dichotomised by assigning the original values 1-4 (1=under 20, 2=20-29, 3=30-39, 4=40-49) the new value 0 (<50yrs old) and by assigning the original values 5-7 (5=50-59, 6=60-65, 7=over 65) the new value 1 (>50yrs old).[54]

3. The Mann-Whitney U test was also used to examine which types of operators were perceived to be performing better and on which attributes. The sample was segmented according to the type of product and certification status to enable comparison between perceived performance of *ECO*-certified operators vs. non-*ECO* certified operators.

4. To identify areas for improvement, the two sets of data were brought together (i.e. importance and performance) and analysed using the Wilcoxon signed-rank test (specifically seeking to determine if there were statistically significant differences between importance and performance scores).

5. Finally, to examine the alignment of values, I used the *two or more Independent-samples test*.[55] This test considered the distribution of importance scores of each of the attributes across visitors and operators.

In the following sections, I provide results and I discuss the findings, starting with the visitor sample, followed by that of the operator.

[54] A range of approaches can be employed, such as picking a cut-off point or dividing at the middle of a scale, however the most common is a median split (Irwin & McClelland, 2003). Although prevalent, the dichotomization of continuous variables is criticized and its use discouraged, namely for the loss of information about individual differences (MacCallum, Zhang, Preacher, & Rucker, 2002; Royson, Altman, & Sauerbrei, 2006). However, these arguments are grounded on the assumption of a normal distribution. It is argued therefore, that dichotomization may be justified when the opposite is true, i.e. the distribution is not normal (Williams, Mandrekar, Mandrekar, Cha, & Furth, 2006; DeCoster, Iselin, & Gallucci, 2009). In this study I have avoided the normality assumption and hence used non-parametric tests; dichotomization may thus be justified.

[55] The *two-independent-samples tests* procedure compares two groups of cases on one variable.

ATTRIBUTES OF *ECO* CERTIFICATION	11. How important to you, are each of the following attributes of *Eco* Certification?						12. How well do you think the tour you went o today performed based on these attributes?					
	Not Important at all				Very Important	Not Sure	Not well at all				Very well	Not Sure/ Unable to judge
	1	2	3	4	5		1	2	3	4	5	
NATURAL AREA FOCUS *e.g. The tour is based around activities that help customers to personally experience nature*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
INTERPRETATION *e.g. Pre-tour materials such as brochures that explains the environment are provided*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ENVIRONMENTAL SUSTAINABILITY *e.g. Vehicles used on tours utilise energy efficient fuel*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CONTRIBUTION TO CONSERVATION *e.g. The tour operator donates funds to rehabilitate degraded areas*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. The tour operator purchases many goods and services locally, thus contributing to the local economy*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CULTURAL COMPONENT *e.g. Indigenous people are consulted about the nature and scope of the operation*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CUSTOMER SATISFACTION *e.g. The tour operator provides visitors with forms they can provide feedback*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
RESPONSIBLE MARKETING *e.g. Marketing material representing the tour does not feature images of places that are not part of the product being offered*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Figure 5.1 Excerpt of the Tour survey

5.3 Results and discussions - VISITOR STUDY

Prior to discussing my findings, a few points must be made:

1. Recall from Chapter 3, that my visitor sample was obtained from two sources:
    a. from tourism operators who distributed the surveys to their clients; and
    b. from an airport exit survey, following cyclone *YASI* which had the most adverse effect on the participating tour operators and attractions. As a result, I supplemented my sample by using only my questionnaires relating to attractions and tours.
2. Cognisant of the fact that respondents would not necessarily be aware of whether the product they experienced while on tours or while visiting an attraction would be *ECO* certified or not, my sample at the airport was only asked about the importance of attributes, not about the performance of products. This was done to avoid issues with recall.

To ensure the robustness of my findings, I thus conducted non-parametric tests to see if there were any differences in the scoring of importance between the two samples (non-airport vs. airport). Unlike responses to questions about WTP for certification, I found that the distribution of responses to questions about the importance of various attributes varied between the two, and these differences were statistically significant. These differences may be attributed to the fact that not all of my airport sample were *'genuine'* visitors to the region, having spent time visiting attractions or going on tours, but were instead, in transit. This may have impacted on the scoring of attributes. Accordingly, the results presented throughout this chapter derive from the non-airport sample only.

5.3.1 Which attributes of the ECO certification scheme do visitors think are the most important?

Whilst it is not strictly correct to convert Likert scale data into numbers and then to calculate means, doing so facilitates an easy visual comparison of responses. Each *'category'* was therefore assigned a number (as set out in Table 5.1) and the mean scores of each attribute were computed and graphed (from most to least important) using bar charts across each of the three products (Figure 5.2 to Figure 5.4).

Table 5.1 Values assigned to categorical responses measuring importance

Category	Value assigned
'Not important at all'	-2
'Not important'	-1
'Neither important nor unimportant'	0
'Important'	1
'Very important'	2

To ensure analytical rigour, I used the Wilcoxon signed-ranked test to examine differences between the rankings of importance that visitors assigned to the different attributes. Specifically, each attribute was paired with each subsequent attribute, to see whether there were any significant differences in the distribution of responses across attributes (i.e. relative importance). Letters have been added to each *'bar'* to show the results of those tests.

As depicted in Figures 5.2, 5.3 and 5.4, respondents identified all attributes to be important, with *Marketing* and *Nature* being the most important attributes. This allows me to conclude that there is good alignment between the attributes of the *ECO* certification scheme and visitors' perception of the importance of those attributes.

Across all three products, *Customer* was consistently ranked amongst the lowest (7th at accommodation and 8th at attractions and on tours) – a result due perhaps to the example used to describe this attribute (the example used to describe *Customer* was: *forms are placed in rooms so customers can provide feedback* – it could well be that visitors refuse to fill out forms when on holiday, if so, then this example may have impacted on the importance ratings of *Customer*). However, rankings of mean importance of other attributes differed across the three products. For example, *Interpretation* was perceived to be more important at accommodations (ranked 3rd), compared to attraction venues (ranked 6th) and on tours (ranked 7th).

To better understand the degree of importance, I used the Wilcoxon signed-rank test. Across all three products, statistically significant differences in the rankings of the importance of attributes were observed. For example, at accommodations, *Nature* was found to be similar in importance to *Marketing*, but more important than other attributes (Figure 5.2). At attractions, *Nature* was found to be similar in importance to *Marketing, Conservation, Community, Environment* and *Interpretation* (Figure 5.3). On tours, however, *Nature* was significantly different in importance to all attributes (Figure 5.4).

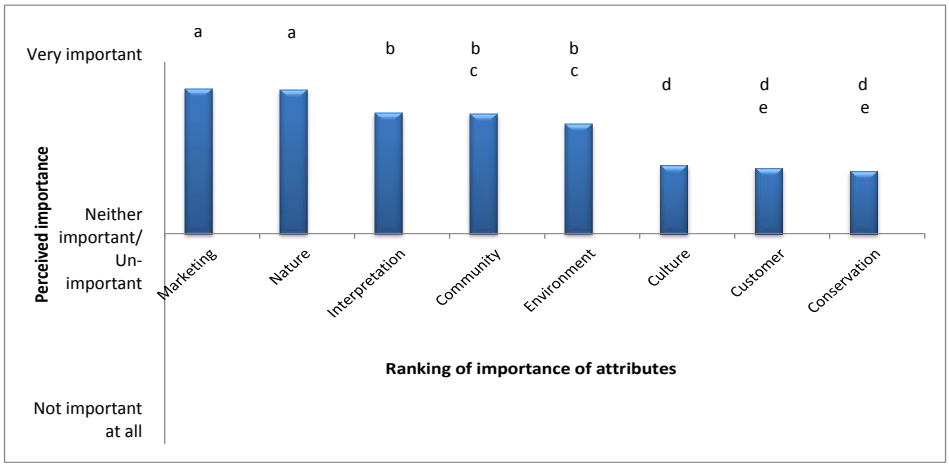


Figure 5.2 Perceived importance of attributes and similarity – Accommodations

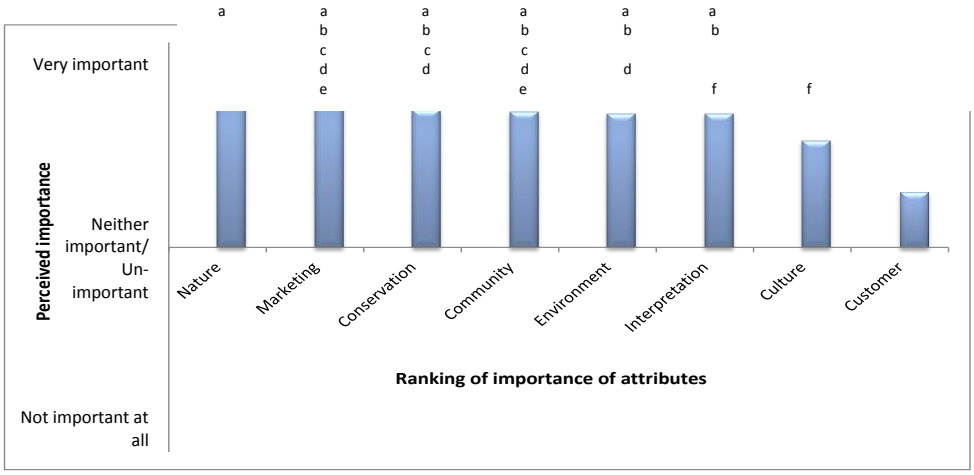


Figure 5.3 Perceived importance of attributes and similarity – Attractions

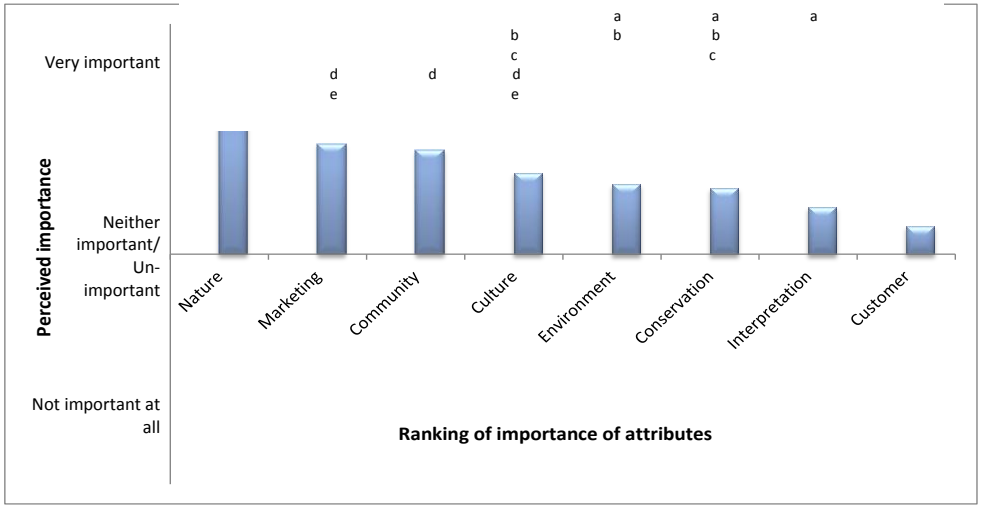


Figure 5.4 Perceived importance of attributes and similarity – Tours

Note: Mean scores are graphed. Letter codes above bars indicate similarity in perceived importance. That is, if two bars have the same letter above them, then the distributions were not statistically different as ascertained by the Wilcoxon-signed rank test.

Different tourism products appeal to different types of tourists. However, the fact that attributes were viewed positively across all three products is encouraging, primarily because it indicates that the attributes which both *Eco*-certification and the Wet Tropics Management Authority (WTMA) feel are important, are also considered to be important by tourists to this area.

Of the three products, a larger proportion of a visitor's holiday budget is usually spent on accommodation, so choosing an accommodation that offers what a visitor is looking for is perhaps given more due consideration than choosing a tour or an attraction venue. Also, the fact that more time is spent at the accommodation (one night or more) compared to a half-day tour for example, might lead one to conclude that accommodation is a more *'high involvement'* product than tours or attractions[56]. As such, one might expect that the importance of attributes for accommodation is given more weight. But clearly, this was not an issue in this study: attractions and tours were equally as important as accommodations.

Interestingly, most of the certification programs focus on accommodations (Honey, 2007), but the high importance scores at attractions and on tours observed in this study indicates that to focus solely on accommodations may be foolhardy. This analysis suggests that there may be some consumer demand for many of the attributes that certification seeks to highlight in these other products.

Although not directly linked to certification attributes, inferences can be drawn from studies centering on corporate social responsibility (CSR) in, for example, the lodging industry. These studies found that many of the green practices that visitors value most highly are guest related (i.e. guest-centered attributes) rather than those which focus on minimising adverse ecological impacts (i.e. earth-centered attributes) (Levy & Park, 2011, p. 148). For example, Kasim's (2004) study revealed that visitors valued the employment of local people, promotion of local conservation efforts and the environmental image of the hotel significantly less than other hotel attributes (e.g. friendliness of hotel staff). These observations were also made by Font and Mihalik (2002). They found that visitors do not choose a hotel principally for its *'grey'* environmental management practices (e.g. energy and water savings) but rather for the environmental quality of the

[56] To explain why, note that a high involvement *'product'*, involves higher risks in the decision choice (Havitz & Dimance, 2009; Radder & Huang, 2008. Planning a holiday involves investing a significant amount of time searching for information about the destination, its accommodations and its activities (attractions and tours). – although prior experiences may result in lower involvement and lower risk (Sirakaya & Woodside, 2005; Havitz & Dimanche, 2009). Thus, choosing an accommodation, an attraction or a tour is a meticulous task, given the choice may be irreversible (Swarbrooke & Horner, 2007)

destination (e.g. environmental quality of beaches, national parks, biodiversity). Similarly, Robinot and Giannelloni (2010) found that grey environmental attributes were perceived as *'basic'* rather than *'plus'*. This means that visitors make choices on the basis of the environmental aspects which they can see or feel directly (Bjork, 1998; Goodwin & Francis, 2003; Puhakka & Siikamaki, 2011). Ultimately, tourists yearn for a deeper sense of connection with nature and the community, wanting to feel *'real'* experiences (Font & Epler Wood, 2007). Interestingly, these findings support those of my sample at accommodations: although all attributes were deemed important, they differed in ranking. For example, *Community, Environment* and *Conservation* (earth-centered attributes), were found to be less important (ranked 4th, 5th, and 8th respectively) than other attributes such as *Interpretation* (ranked 3rd) (guest-centered attribute).

In further support of the guest-centered rather than earth-centered theme, respondents to my accommodation sample rated *Nature* as one of the most important attributes. Similar conclusions can be drawn in Andereck's (2009) and Kasim's (2004) studies which found landscaping with native plants which helps enhance visitor *'sense of place'* and green plants, respectively, to be the most important attributes of green hotels. The general perception of these findings is that visitors are more concerned about the current condition of the environment (i.e. the aesthetic experience) and not necessarily the (ecological) process of achieving it (Puhakka, 2008, cited in Puhakka & Siikamaki, 2011).

5.3.1.1 Does this vary across different visitor groups?

Next, the Mann-Whitney U test was used to examine the importance scores assigned to different attributes by different categories of visitors. Only demographic variables that were found to have a significant relationship are presented in Table 5.2. Visitors with different characteristics valued attributes differently. For example, at accommodations, those on a relatively high income thought that *Nature* was more important than those on a lower income. Similarly, those with a higher income or with a post-secondary education thought that *Interpretation* was more important than the less well off, or less well educated. In comparison to the younger sample of visitors, the elderly thought that *Environment* was relatively unimportant. Although this observation is at accommodations only, it is not surprising: as discussed in the preceding chapter, several studies (e.g. Corcoran & Osano, 2009) found that in general, the younger generation tends to be more concerned about environmental quality and its protection than the older generation. Furthermore, on tours, *Conservation* was scored more highly by females than males, lending support to previous studies reporting females as more environmentally friendly (Klineberg et al, 1998), maintaining

green causes and participating in greening efforts more strongly than males (Diamantopolous et al, 2003; Vaske et al, 2001).

Across the three products, differences were not uniform, but at attractions and on tours, most visitors ascribed a fairly similar level of importance to each attribute, with the exception of *Culture* (attraction) and *Conservation, Nature* and *Customer* (tours). The findings from my sample collected at attractions specifically, corroborated those of other studies (e.g Sun-Hwa, 2005) which found that socio-demographic variables are not well correlated with people's perceptions. However, deviations in my visitor samples collected at accommodations, perhaps reflect the substantial differentiation of product one finds in that sector (e.g. backpacker hostels versus five-star hotels) as compared to more homogenous attractions and tours (e.g. zoos).

Table 5.2 Perceived importance of attributes according to visitor characteristics and across segments

Attributes and visitor characteristics	Accommodations	Attractions	Tours
Nature			
Income > $60,000	* ↑		
Females			* ↑
Interpretation			
Post-Secondary Education	* ↑		
Environment			
Age > 50 years	** ↓		
Conservation			
Females			* ↑
Community			
Culture			
Post-Secondary Education		** ↑	
Domestic		** ↑	
Age > 50 years		*** ↓	
Customer			
Post-Secondary Education	* ↓		
Marketing			
Domestic			** ↑

Notes: Single and double asterisks (*) denote significance of coefficients at p<.05 and p<.01 respectively, using the Mann-Whitney U test. ↑ Positive relationship ↓ Negative relationship

5.3.2 Are there differences in visitors' perceptions of the performance of ECO-certified versus non-ECO certified operators?

Following the system used to analyse importance scores, each *'category'* was assigned a positive or negative value (as set out in Table 5.3) and the mean scores of performance on each attribute were computed based on these values (Figure 5.5 to Figure 5.7). I then compared the perceived performance of *ECO*-certified and non-*ECO* certified operators using Mann-Whitney U tests.

Table 5.3 Values assigned to categorical responses measuring performance

Category	Old value	New value assigned
'Not well at all'	1	-2
'Not well'	2	-1
'Fairly well'	3	0
'Well'	4	1
'Very well'	5	2

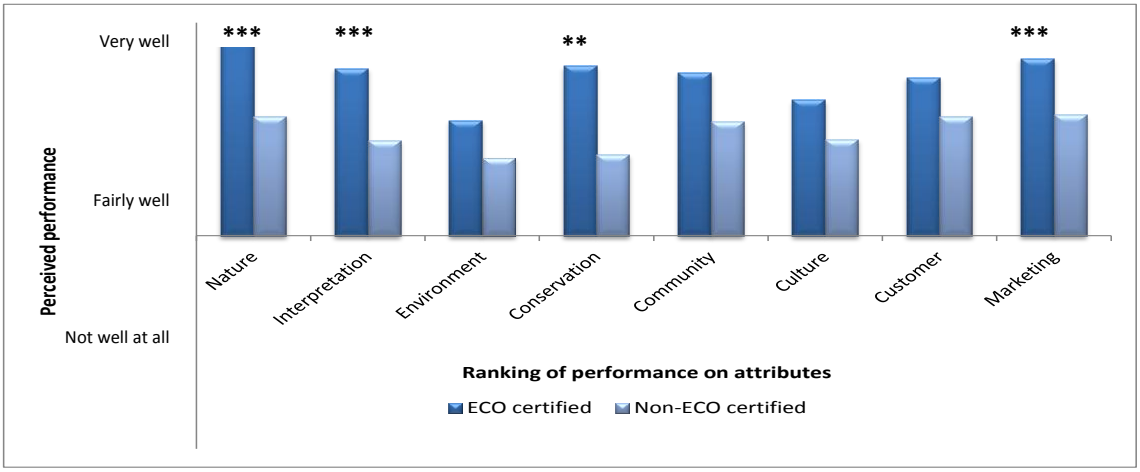


Figure 5.5 Perceived performance of operators – by certification status – Accommodations

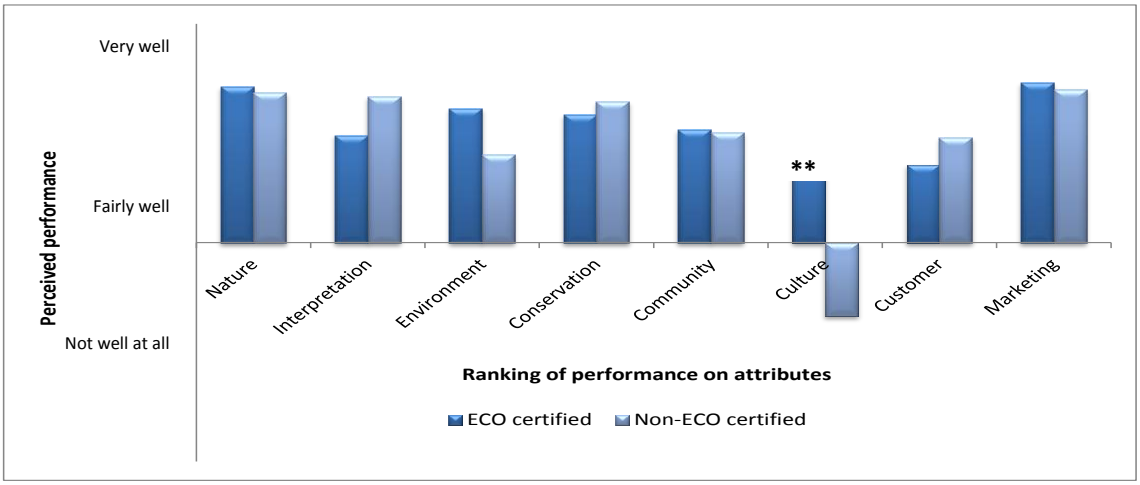


Figure 5.6 Perceived performance of operators – by certification status – Attractions

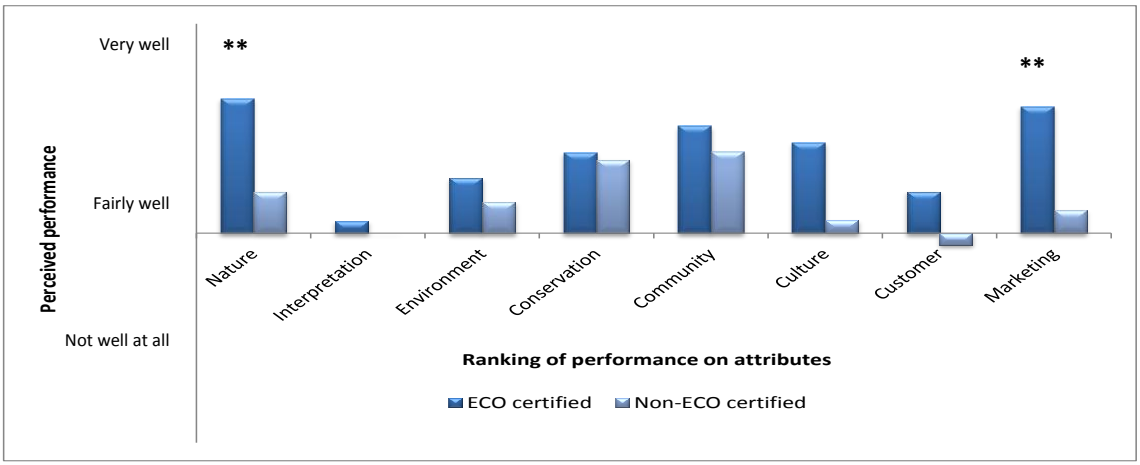


Figure 5.7 Perceived performance of operators – by certification status – TOURS

Notes: Mean scores are graphed. Single, double and triple asterisks (*) denote significance of the difference between the distribution (by certification status) at p<.05, p<.01 and p<.001 respectively, using the Mann-Whitney U tests.

It is important to remember that visitors' judgment of performance may or may not be reflecting actual performance. Nonetheless, visitors consistently judged the performance of *ECO*-certified operators to be better than their non-*ECO* certified counterparts, particularly at accommodations (Figure 5.5 to Figure 5.7). This contrast may be explained by the fact that accommodation typically comprises a much larger proportion of the budget than tours or attractions (Narayan, 2004; Mules, 2005; Tourism Queensland, 2006; Tourism Research Australia, 2012). Economic theory suggests, the more significant an expenditure item is, the more responsive consumers are to price (Findlay & Mc Taggart, 2009; Sloman, Norris, Garratt, & Norris, 2010) and the information presented here suggests that the *'responsiveness'* might extend beyond just price to other non-price factors related to sustainability. In other words, it seems that certified operators of relatively *'expensive'* products can compete on more than just price. It must be noted, that consumers *'responsiveness'* to a company's sustainability commitments, depends on the quality of the product and/or the level of environmental involvement of the consumer. For example, only those who perceive added value as a result of the superior environmental performance, will be prepared to pay a higher price for a certified product (Grimmer & Bingham, 2013).

Another possible explanation of the difference between the accommodation and attraction/tour samples, is the fact that accommodation is an integral part of a holiday, so visitors are more likely to have had previous experience with it and may thus be more discerning when evaluating attributes. Robinot and Giannelloni (2010) opined that a customers' previous experience in similar situations is critical when assessing attributes, especially key attributes.

It must also be emphasised that some attributes can be *'invisible'* to the visitor, in the sense that efforts made by the operators on these attributes are not known to the visitor. This arises due to an imbalance of information between the operator and the visitor - with the latter unable to observe whether their choice of providers/product is actually making a difference to their holiday's impact on the environment or community. This asymmetric information may give rise to market failure in the provision of certified sustainable tourism products (Bougherara & Grolleau, 2005; Akerlof, 1970; Font & Epler Wood, 2007; Hamilton & Zilberman, 2006; Janssen & Hamm, 2012). Accordingly, if an attribute is *'invisible'*, then visitors will be unable to judge the true extent of operators' performance. As such, lower performance scores on some attributes may not necessarily depict the realities of operations – but instead, a lack of information.

For example, operators may make substantial financial contributions to *Conservation*, but may not pass this information on to customers. Unless operators advertise that they do contribute (on their website or otherwise) and also provide information about the type of contributions they make (be it financial, physical or in-kind), visitors will not know about it and discrepancies in the evaluation of performance will remain an issue. The same can be said in regards to *Community* – for example, operators may contribute to local community initiatives, offer work placement opportunities to high school students, etc, but all these contributions may go unnoticed by the visitors.

Hence, results such as these may have to be interpreted with caution: they do not lend a true picture of what is actually occurring, rather they give a sense of what customers perceive to be occurring. This finding thus reinforces the need to provide better information so that visitors can properly assess the performance of operators (i.e. Information not necessarily about what certification entails, but specifically how certification is actually contributing to sustainability.

That said, comparisons of the (perceived) performance of *ECO*-certified and non-*ECO* certified operators makes it clear that in the Wet Tropics World Heritage Area of Queensland, Australia, *ECO*-certified tourism operators are perceived to be performing better than the non-*ECO* certified operators across a range of attributes. This finding is good news for *ECO*-certified operators (since their customers clearly perceive them to be *'better'*) – although as discussed above, it does not necessarily imply that these operators are producing products that are *'better'* from the perspective of the environment or the community. Appendix 7 looks at some metrics, but more research is needed before such inferences can be drawn.

5.3.3 Which aspects of ECO certification need improvement?

Thus far, I have examined importance and performance independently. But, as discussed in section 5.1, doing so does not tell me if the effort given to the different attributes parallels the importance tourists attach to each, nor does it tell me about whether the operator is over-performing on some attributes or under-performing on others. Accordingly, I used the IPA to examine both sets of data concurrently.

Traditionally, results of the IPA are plotted on a two dimensional grid whereby data falls into four quadrants, depicting areas requiring improvement (as shown in Figure 2.4 and discussed in detail in section 2.3 of chapter 2). But this method, although visually simple, has several limitations. These limitations range from issues in the interpretation of results arising from the placement of the axes or the cross-hairs, to its lack of statistical analysis rigour (Hammitt, Bixler, & Noe, 1996Tarrant & Smith, 2002; Bruyere et al, 2002; Bacon, 2003, Eskidsen & Kristensen, 2006) (See section 2.3 for details). To address some of the concerns of the IPA grid, researchers have extended the original IPA method by adding more information. For example, Lambini (2007) added additional cross-hairs, Slack (1994) modified the original 2x2 matrix into a 9x9 matrix and Bacon (2003) included an iso-rating or iso-priority line (an upward sloping 45 degree line).

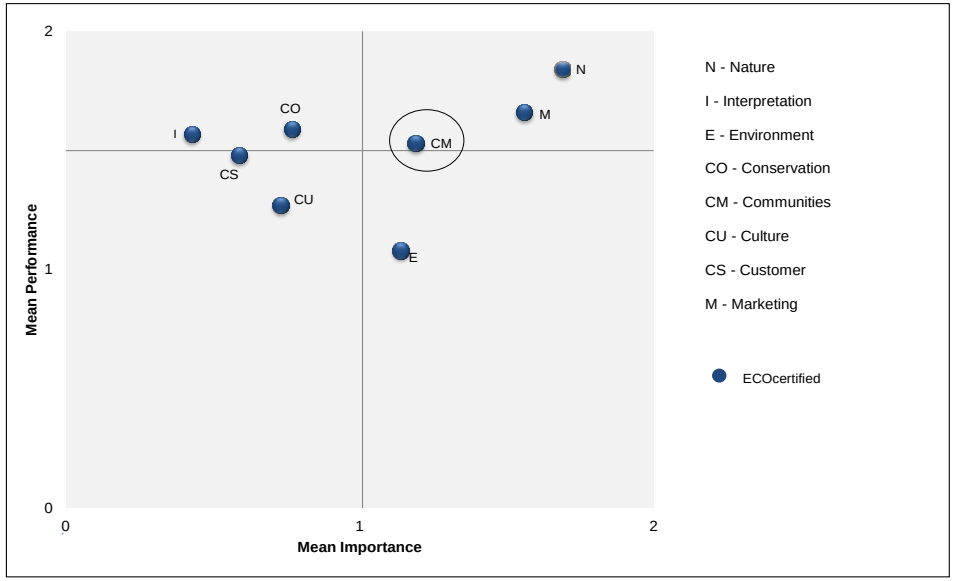
Considering the limitations of the traditional IPA, I thus chose to extend the traditional IPA analysis. However, before I discuss my extensions, I present my findings (of *ECO*-certified accommodation sample only) in light of the traditional quadrants in a bid to show the sensitivity of results and its managerial implications subject to the placement of the crosshairs (axes). I chose to focus on the location of the axes as this is the most notable of the inconsistencies of the IPA grid (Oh, 2001).

Martilla and James (1977) noted that the decision of where to place the axes in the four quadrants is simply a matter of judgement, since the aim is relative rather than absolute measurement of importance and performance. However, several studies have found that results and interpretations are noticeably different depending upon whether actual means (i.e. self-reported) or scale means are used. For example, in Chon, et al's study (1991) which used actual importance and performance mean scores, 40 percent of attributes fell in Quadrants I or III, and another 40 percent in Quadrants II or IV when actual means were used. In contrast, all attributes fell in Quadrant I when scale means were used. According to Oh (2001), conflicting results such as these demand careful interpretations and investigators must caution readers and their research consumers about this hidden problem.

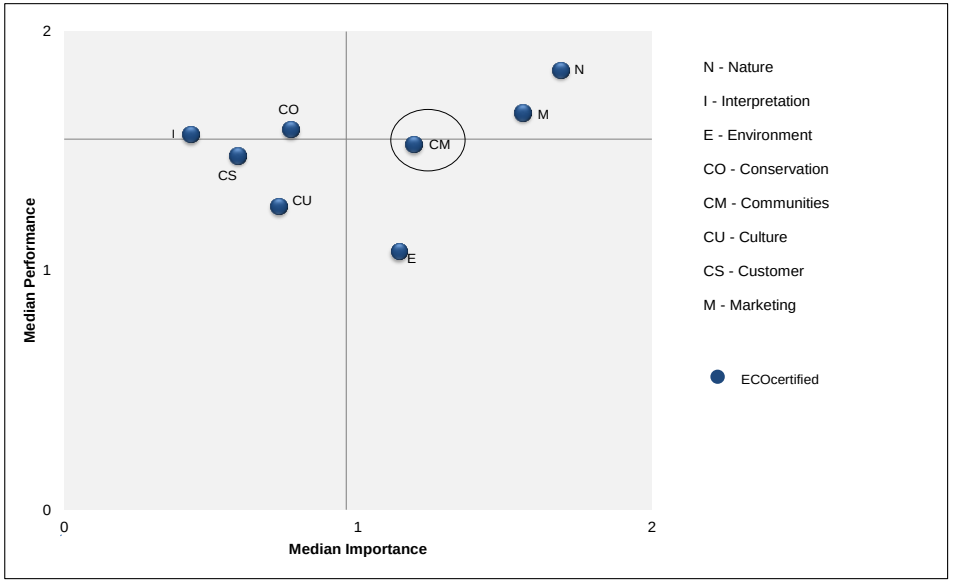
Both of these means were used in this study, however, I also considered another type of actual means – the median, given it is theoretically better as a measure of central tendency than the

'normal' mean (Martilla & James, 1977). Results are presented in Figure 5.8, where a, b and c represent mean, median and scale respectively. Clearly noticeable from the graphs, is that all attributes fall in two quadrants when the scale mean is used (i.e. Quadrant I (High performance, low importance) and Quadrant II (High performance, High importance). Results vary with the use of the mean and median, with *Culture,* for example, falling in Quadrant III instead (Poor performance, Low importance) and *Environment* falling in Quadrant IV (Poor performance, High importance).

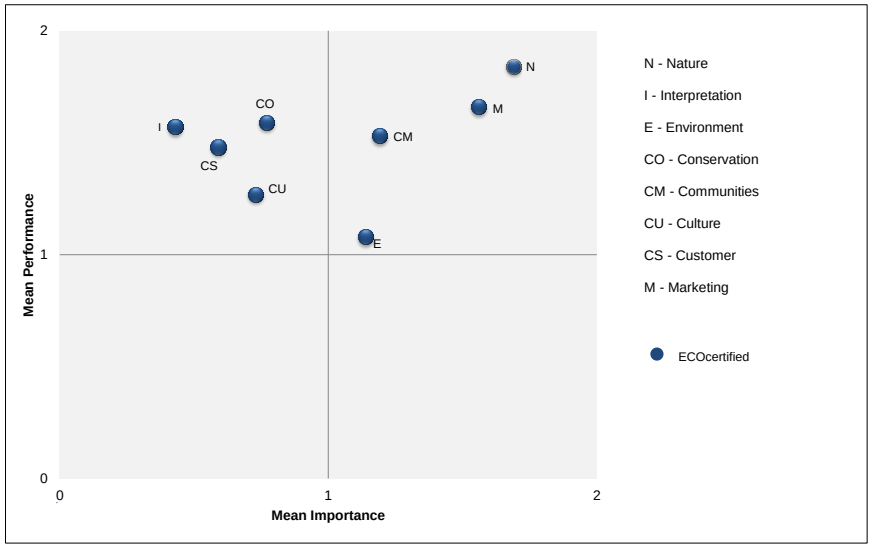
Differences in the findings imply different managerial implications, which may be a cause for concern, especially when the points are too close to the intersection or overlap either of the two axes. For example, when mean is used, *Community* (depicted by a circle on the graph) falls in Quadrant II (High performance, High importance), implying that this attribute is a key driver of customer satisfaction and that the operator's job is to ensure the business *'keeps up the good job'* (Matzler, et al, 2004). Conversely, when median is used, this same attribute falls into Quadrant IV (Poor performance, High importance), denoting that urgent corrective action is required and that this attribute must be given top priority (Anon & Hisham, 2008). But, as argued by Wade and Eagles (2003), the difference between the two scores may not be sensitive enough to warrant an entirely opposite managerial interpretation.



a) Mean



b) Median



c) Scale

Figure 5.8 Importance-performance analysis by different axes – *ECO*-certified accommodations

In view of these shortcomings, I decided to extend the traditional IPA analysis by:

1. Presenting results differently. I chose Bacon's (2003) diagonal line approach (iso-priority line) to clearly differentiate regions of differing priorities. All points on the line have equal opportunities for improvement, while those below suggest high priorities for improvement as importance exceeds performance;
2. Performing rigorous statistical tests on the differences between importance and performance on each attribute. Doing so provides confidence in prioritising attributes for improvement. For example, in the traditional IPA model, an attribute in the *'Concentrate Here'* quadrant may be interpreted as requiring urgent attention from the operator, however, the use of statistical analysis validates whether this is really the case or not (i.e. if there is a significance difference between importance and performance scores). This is especially important for small businesses that may lack the necessary funds – instead, they can divert their scarce resources to where it is needed most; and
3. Segmenting the data according to (1) product type (i.e. accommodations, tours and attractions); and (2) certification status (i.e. *ECO* certified vs. non *ECO* certified). As noted by Wade and Eagles (2003), IPA – and indeed many analytical tools – are enhanced when combined with market segmentation. Bruyere, et al, (2002) support this conclusion noting that segmentation is a necessary component of IPA in order to identify differences between distinct user groups and - as is the case in this study - distinct products. Segmentation accounts for such diversities and provides more powerful results to recreation managers and tourism planners. Without segmentation, results may be misinterpreted. Segmentation thus allows for more accurate planning and decision making.
4. Linked with the above, most studies that have performed segmentation, have presented results separately. For instance, Chu and Choi (2000) examined business and leisure travellers' perceived importance and performance of six hotel selection factors, and findings from each group were presented independently. However, in this study, I present my analysis of *ECO*-certified and Non-*ECO* certified samples together in the same graph, facilitating comparisons between the two groups. The same applies with the analysis of visitors and operators.

Importance and performance scores were then brought together and analysed using the Wilcoxon signed-rank test to highlight areas where differences in perception between importance and performance exist (Figure 5.9 to Figure 5.11).

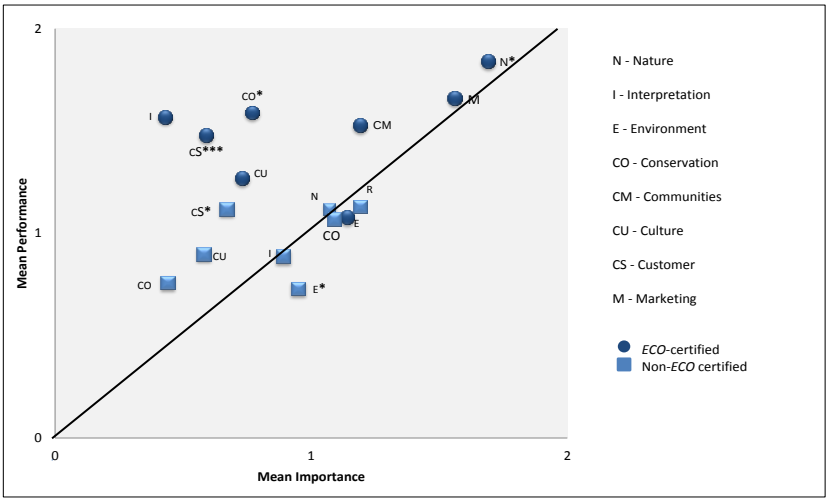


Figure 5.9 Comparisons of perceived importance and performance – Accommodations

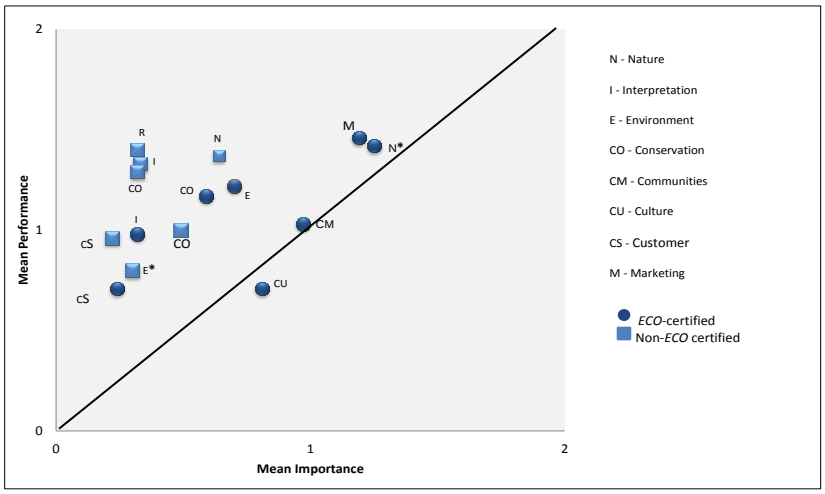


Figure 5.10 Comparisons of perceived importance and performance – Attractions

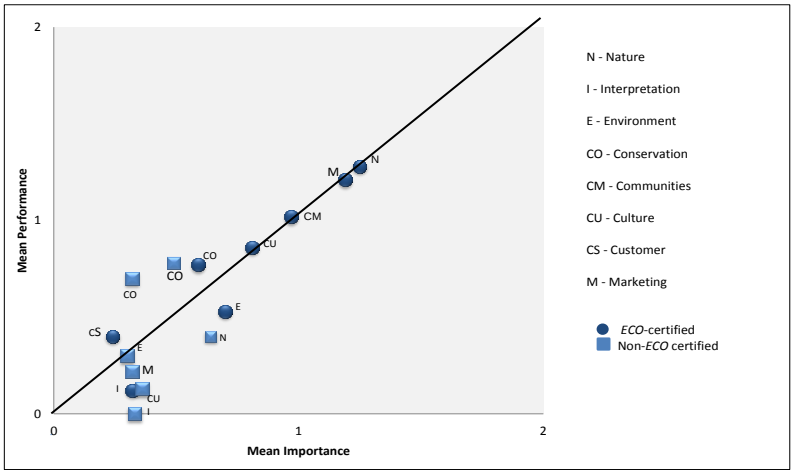


Figure 5.11 Comparisons of perceived importance and performance – Tours

Notes: Mean scores for importance and performance are graphed. Single, double and triple asterisks (*) denote significance of the difference between the distributions relating to importance and performance at p<.05, p<.01 and p<.001 respectively. Points below the line indicates that mean importance exceeds mean performance. This implies that there are opportunities for improvement.

Important observations emerge from my comparison of importance and performance scores. Where significant differences exist, *ECO*-certified operators' scores of performance exceed their scores of importance – positive differences. In contrast, for non-*ECO* certified operators, in every case of a significant difference between scores of importance and performance, the performance scores were below the importance scores – negative differences (*Customer* and *Environment* being the exception at accommodations and attractions respectively). Particularly marked are the poor performance scores relative to importance scores for *Environment* at non-*ECO* certified accommodations.

In the IPA framework, performance scores that exceed importance scores have been interpreted as indicating either *'Possible Overkill'* or a *'Strength'* on which to build new customers (Oh, 2001; Kinley, et al., 2002; Wade & Eagles, 2003; Ainin & Hisham, 2008). So there is some ambiguity as to whether such differences are good or bad. But, when performance scores fall short of importance scores, the clear – and unambiguous – message is that customers are not satisfied and that improvement is needed. Managing customer satisfaction is key. Previous studies have shown that satisfaction leads to increased loyalty, reduced price-elasticity, and positive word of mouth (Matzler, Bailom, Hinterhuber, Renzl & Pichler, 2004). However, each operator is constrained by limitations on the amount of resources available. Therefore, it must be decided how scarce resources are best deployed to achieve the highest level of satisfaction.

In this study, several attributes fell below the line, indicating opportunities for improvement in those particular attributes. If the management implications of the traditional IPA were to follow, this would mean that operators will have to divert effort and resources to those particular attributes. However, a more strategic and effective approach will be to maximize effort and resources on attributes where a significant difference between importance and performance scores were found, thereby indicating where resources are needed most. In this case, non-*ECO* certified accommodations, for example, should be focusing on *Environment* and not *Conservation* and/or *Marketing* (where performance was found to be lower than importance, but where these differences were not statistically significant – in stark contrast to *Environment*). By focusing on critical attributes, operators are able to prioritise quantity and quality of effort and resources. Such an approach creates a more sustainable competitive advantage which may benefit operators in the long-term. As explained above, this is especially important where a lack of resource is an issue.

Similarly, several attributes fell above the line, indicating that performance exceeded importance scores. While it is necessary to maintain such good performance, attributes of significance should be at the centre of a business' strategy implementation. These attributes represent areas of clear

strength and customer satisfaction and are critical when differentiating from competitors (Arbore, Alessandro, Busacca & Bruno, 2011). *ECO*-certified accommodations should be highlighting their strength in the following areas: *Nature*, *Conservation* and *Customer*. These are important strengths which *ECO*-certified accommodations must capitalize on to stand out from its non-*ECO* certified competitor: *Nature* and *Conservation* are critical given the case study area being of World Heritage status.

As a final point, it must be said that a firm's longevity in the market depends on not only what it offers, but also whether such offerings reflect customer beliefs and facilitates a positive customer experience (Ding, Huan & Verman, 2011). Based on these findings, it appears that overall, customers of *ECO*-certified operators tend to be more satisfied than customers of non-*ECO* certified operators (given that performance was generally higher than importance). This is good news in highly competitive industries such as tourism, since customer satisfaction is critical to business survival and importantly, if customer loyalty is to be guaranteed (Robinot & Giannelloni, 2010; Wilkins, 2010).

5.4 VISITOR AND OPERATOR ALIGNMENT OF VALUES

In section 5.3, I presented and discussed the findings of visitor perceptions only. In this section, I examine the alignment of values by extending the analysis to include operator perceptions. To facilitate this examination, I analyse visitor data collectively, instead of segmenting the market into accommodations, attractions & tours. When assessing performance, I do, however, segment both my visitor and operator samples according to certification status.

5.4.1 The alignment of perceived importance

As noted earlier, although it is not strictly valid to convert Likert scale data into numbers and then to calculate means, doing so enables an easy visual comparison of responses, so, here too, numerical values were assigned to importance scores (see Table 5.1) and mean scores of each attribute were computed and then ordered (from 'most' to 'least' important). Table 5.4 summarises the top three and bottom three attributes.

Table 5.4 The *'top three'* and *'bottom three'* importance scores – Visitor and Operator perceptions compared (all data)

	Visitor	Operator
Top 3	Nature	Marketing
	Marketing	Nature
	Community	Community
Bottom 3	Culture	Interpretation
	Conservation	Conservation
	Customer	Culture

Visitors and operators clearly have the same *'values'* with similar attributes being perceived as the most important. Although there is some divergence in the bottom three attributes, overall, it can be concluded that visitor and operator perceptions of importance are well aligned. This is good news for certifiers since they can strategically market the same attributes to both groups.

However, there may be reasons for the WTMA to be concerned given the fact that *Conservation* was ranked 7th in importance by both operators and visitors (out of eight attributes). Clearly, this is in contrast to the goals and objectives of the authority: as described in Chapter 3, WTMA strongly advocates the building and maintenance of ecosystem health and resilience as defensive responses to potential impacts of climate change in the region (WTMA, 2009). Thus, contributions towards *Conservation*, financially or otherwise, are paramount to this cause. This indicates that there may be a need to engage in educational campaigns aimed at raising the awareness of the significance of *Conservation*, particularly given the area in which this study was conducted (Miller, 2005; Bushell & Eagles, 2007; Clucas, McHugh, & Caro, 2008).

The observation that *Culture* is considered to be the least important[57] attribute by operators is at first impression unexpected, given the cultural significance of the region: the Wet Tropics is the traditional estate of 20 Tribal Groups (Ignjic, 2001; Zeppel, 2002) and its cultural values have been recently added to the National Heritage Listing.[58] However, such a finding may be attributed to the fact that not all operators engage in cultural tourism ventures, or because they do not operate in areas of importance to the local Indigenous people and therefore do not find the need to consult with the Indigenous people, hence the low score. The fact that not all operators are familiar with

[57] In fact, this was most pronounced by the non-*ECO* certified operators whose score of importance were relatively low for this particular attribute, with 0 being the neutral score any score below 0 is falling on the not important side. *Culture* had a score of -0.26.

[58] See http://www.environment.gov.au/heritage/places/world/wet-tropics/index.html

the concept of sustainability (Bauer, 2011), believing it to comprise solely environmental and not social/cultural elements may also help explain the low score. Another possible explanation may be due to an inherent element of racism. Although not directly elicited in this study, previous studies conducted with tourism operators and organisations in the region, (e.g. Nielsen, Buultjens, & Gale, 2008), have suggested that racism does exist, consequently limiting relationships between mainstream tourism operators and Indigenous operators and/or communities. For example, Nielsen, et al. (2008) found that, contrary to their non-Indigenous counterparts, Indigenous operators were not involved in any great extent in the tourism networks and Indigenous ventures were scarcely integrated in mainstream packages. Moreover, the study found that interests in Indigenous tourism experiences prevailed largely in the international market. The domestic segment's lack of interest in such experiences is due, at least in part, to racist views. Similar findings of racism in the tourism industry can be found in Mbaiwa's (2003) and Spenceley's (2007) studies to name a few. Clearly, more detailed study is required to confirm or refute these ideas, but it does nonetheless highlight the need for educational campaigns as is the case with *Conservation*.

Statistically, results show that operators assigned greater importance to *Nature, Community, Customer* and *Marketing* than did the visitors (Figure 5.12).[59] This finding is not particularly surprising, given the fact that these attributes may have greater resonance with the operator. For example, ensuring *Customer* and *Marketing* are key aspects of a profit maximising firm since satisfaction and trust in the product maintains customer loyalty (Robinot & Giannelloni, 2010; Wilkins, 2010).

[59] To statistically examine the alignment of values, I used the *two or more Independent-samples test*. This test considered the distribution of importance scores of each of the attributes across visitors and operators. The results suggest that visitors and operators have similar values in four of eight attributes.

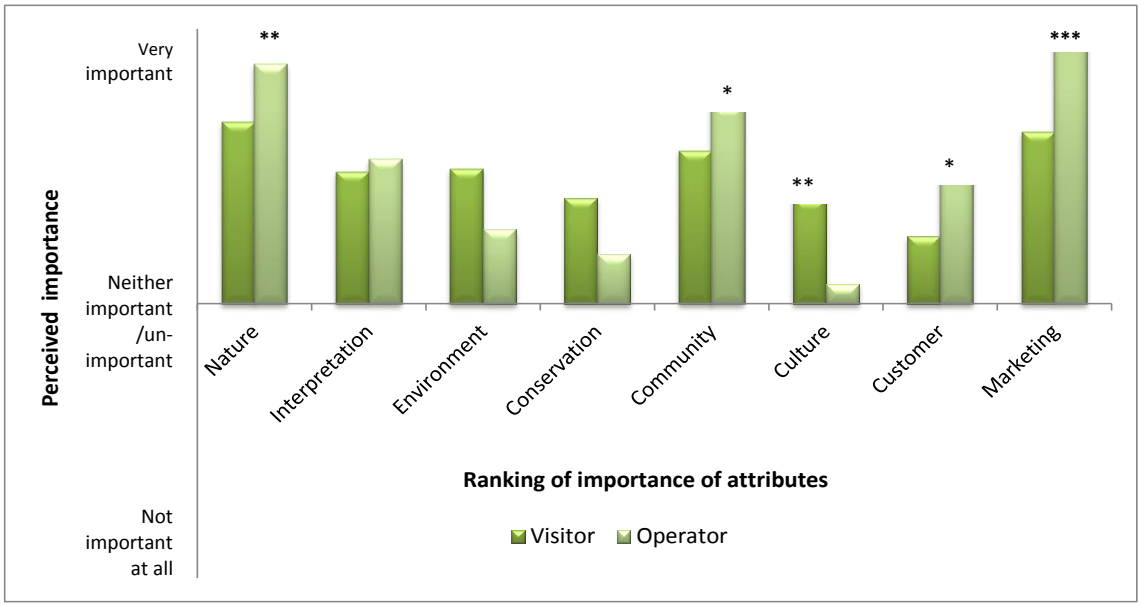


Figure 5.12 Differences and similarities on the importance of attributes between visitor and operator

Note: Mean scores are graphed. There were statistically significant differences in the distribution of responses to questions about perceived importance on various attributes, using the two or more Independent-samples test. The asterisk denotes significance of the difference between the distributions (by visitors versus operators) at p<.001.

5.4.2 The alignment of perceived performance

As per the assessment of importance, I first examined visitors' and operators' (self-assessed) perceptions of performance individually, and segmented my analysis according to certification status. Here too, I converted likert-scale responses to numeric and show mean values for easy visual communication of results (using more appropriate statistical tests to check for differences in the distribution of responses). I found that visitors generally rated the performance of *ECO* certified operators higher than the performance of non-*ECO* certified operators with performance in *Nature*, *Interpretation, Culture* and *Marketing* being significantly *'better'*. This is consistent with my earlier findings in section 5.3.2 with product segmentation.

Self-rating of performance revealed highest scores for *Marketing* followed by *Nature* and *Community* across both *ECO* and non-*ECO* certified operators (the same top three on the importance scores). *ECO*-certified operators tended to rate their own performance higher than non-*ECO* certified operators (although, there were no statistically significant differences in self-rating of performance between the two groups operators). That the *ECO*-certified operators self-scored higher in performance is not unexpected. Recall that these attributes are core criteria against which businesses are assessed against in order to obtain *ECO* certification. Accordingly, *ECO*-certified businesses may have had time to work on those attributes and may have felt more

confident in scoring their performance. Moreover, they may have obtained feedback that validated their scores – thus, they present a more realistic performance score.

That said, an alternative hypothesis is that there is strategic bias – *ECO*-certified operators have a stronger incentive to score well, or risk losing certification. Another possible reason for the higher scores is that those with *ECO* certification would have displayed superior levels of performance without the logo: as noted in Chapter 2, the vast majority of businesses joining certification schemes are the sustainability pioneers (although there are some businesses who have become more informed through certification). Therefore, how much of the improvement in performance is attributable to certification *per se*, as opposed to prior interest of sustainability remains unclear (UNEP, 2006; Font, 2007). In spite of suggestions that operators' judgement of performance may be biased, considering the self-rated perspective, the results nevertheless reflect visitors' perception of the performance of operators in the region.

When I compared visitor and operator views of performance, I found statistically significant differences in five attributes. Visitors' evaluation of performance was significantly higher than those of the operator on *Conservation* and *Culture*, while operators rated their performance higher on *Nature, Community* and *Marketing* (Figure 5.13).

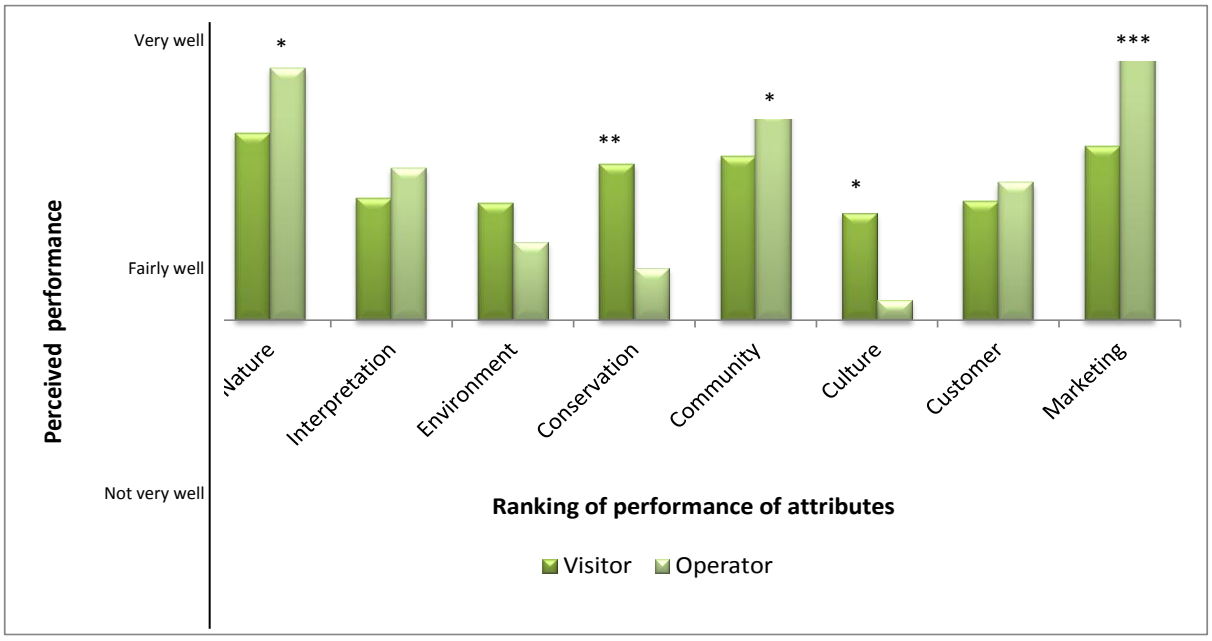


Figure 5.13 Differences and similarities on the performance of attributes between visitor and operator

Notes: Mean scores are graphed. Single and triple asterisks (*) denote significance of the difference between the distributions (by visitor versus operator) at $p<0.05$ and $p<0.001$ respectively.

The mis-alignment of perceptions may be viewed as a product quality *'problem'* which may adversely impact on the outcome of operators' quality improvement strategies. This means that

when businesses consider their performance to be better than the consumer perceives it, there is a tendency to be less likely to devote resources towards improving either the customers' perceptions of quality or the products' quality (Morgan & Vorhies, 2001). However, since some attributes are invisible to the consumer, it is likely that customers will be unable to make appropriate or accurate assessments of operator performance.Moreover, it can be argued that unlike consumers who lack factual knowledge, operators are better able to make objective assessments of their own performance (Janssen and Hamm, 2012). The reverse is also true: according to Morgan & Vorhies (2001), when operators value thier customers perceptions of performance higher than their own, lower investment in performance improvement may occur.

5.4.3 Aspects of operation needing improvement

To examine areas for improvement, I used the Importance-Performance Analysis (IPA) protocol. As noted previously, this technique is most common in assessing consumer satisfaction and its use in assessing operator performance has not been validated nor well documented. However, this technique was chosen to maintain consistency with the visitor survey and also because it can simultaneously examine both importance and performance. To highlight areas where differences in perception of importance and performance exist, I used the Wilcoxon signed-rank test.

In most cases, differences between importance and performance were statistically insignificant. However, where significant differences were observed, *ECO*-certified operators' performance exceeded importance (*Nature* and *Customer*), whereas for the non-*ECO* certified operators, importance exceeded performance on *Nature* and *Environment* – although the performance scores on *Conservation* were higher than that of importance (Figure 5.14). This finding is based on visitor perceptions and is generally consistent with the findings of section 5.3.3. However, when operator perceptions are considered, the performance of *ECO*-certified operators is considered to be less than importance on *Community* and *Customer* (Figure 5.15) – and these differences are statistically significant.

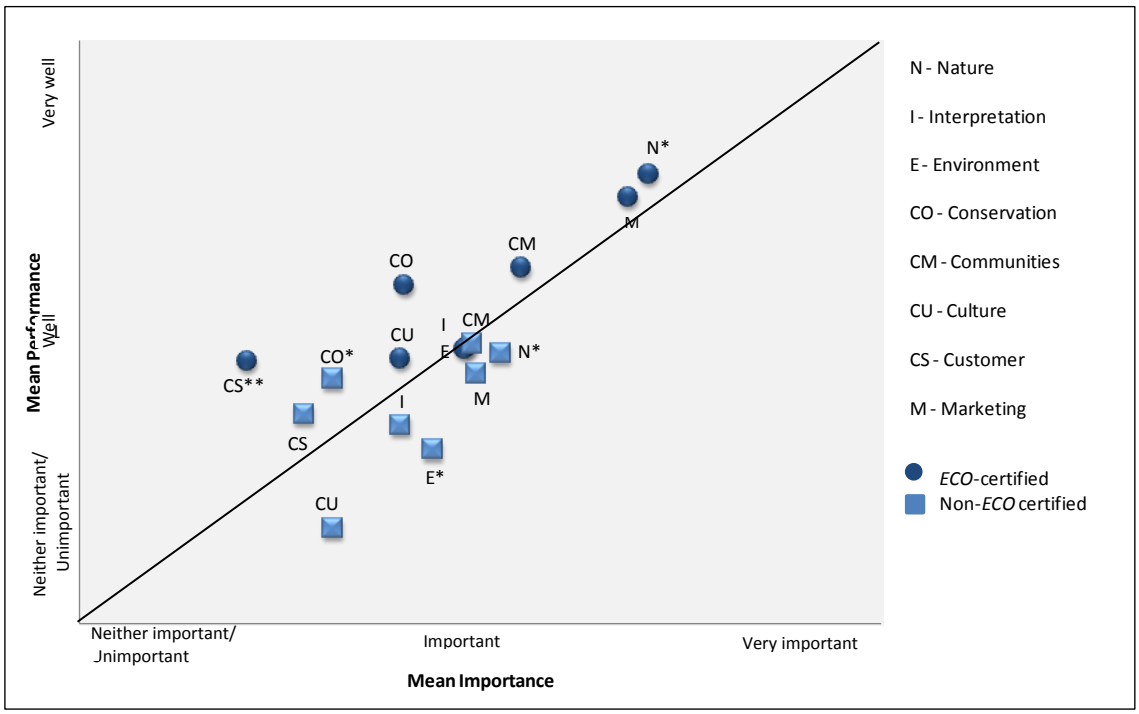


Figure 5.14 Comparisons of importance and performance – Visitors' perception

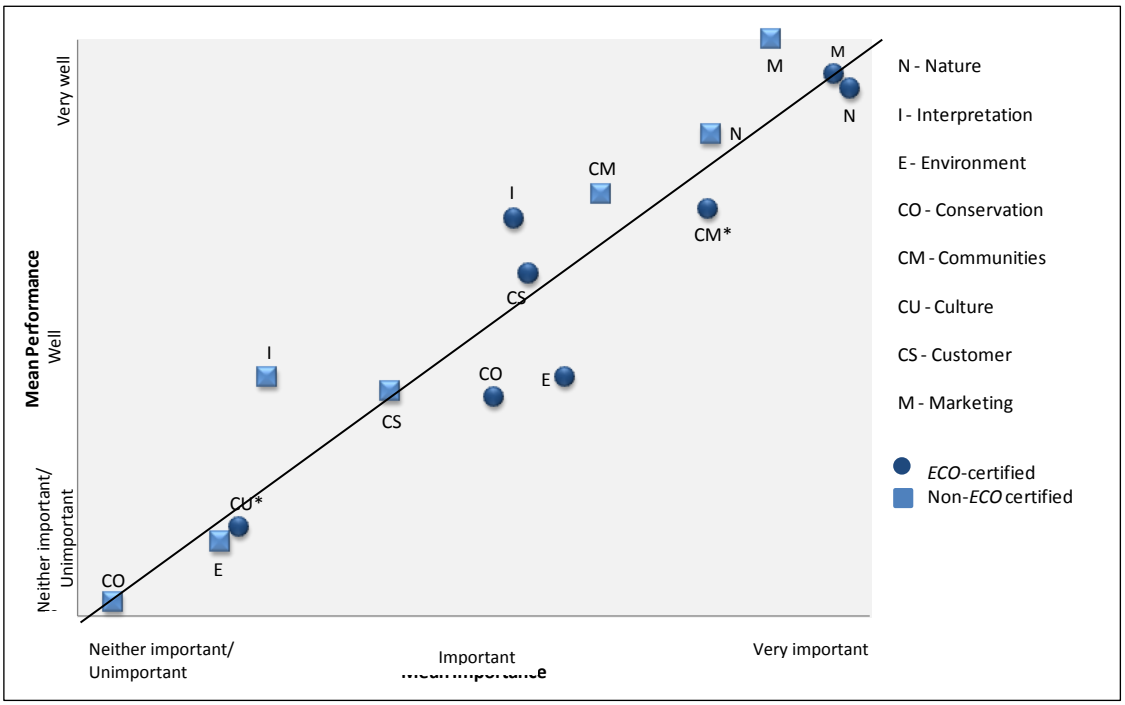


Figure 5.15 Comparisons of importance and performance – Operators' perception

Notes: Mean scores are graphed. Single and double asterisks (*) denote significance of the difference between the distributions relating to importance and performance at p<.05 and p<0.1 respectively. Points below the line indicates that mean importance exceeds mean performance. This implies that there are opportunities for improvement.

5.5 Conclusions

Evidence from previous studies has showed that consumers (specifically tourists) are interested in learning more about certification (e.g. Bjork, 2004; Kangas, 2007; Han, Hsu, Lee, & Sheu, 2010; Puhaka & Siikamaki, 2011), but to date, no research has been able to show what it is about certification that consumers *'want'*. The lack of understanding stems from the fact that certification has been viewed as a simple, homogenous product, despite certification being advertised as a measure for improving the sustainability of the tourism industry. By its very core, sustainability encompasses three key pillars: economic, social and environment – pillars which many certification schemes (including *ECO* certification) seek to cover. Certification is thus multifaceted and an understanding of at least the main attributes may help consumers make a suitably informed decision with some degree of confidence (Lebe & Zupan, 2012 pg.141). This information may help certification providers identify areas of strength in the quest to increase market uptake. Specifically, it will provide information about what could be marketed today to current customers.

In view of that, this chapter had three key objectives:

1. To improve our understanding of visitors' perceptions about the importance of different attributes of certification and about the performance of tourism operators on those attributes (objective 2);
2. Improve our understanding of tourism operators' perceptions about the importance of different attributes of certification and about their performance on those attributes (objective 3); and
3. Examine the alignment between visitor and operator perceptions on the importance of and performance in different attributes (objective 4).

The study found evidence of support for certification. Firstly, across all three tourism products, visitors perceived all attributes to be important. Indeed, this is good news for certification providers – in this case, specifically Ecotourism Australia, as it shows that the *ECO* certification scheme is aligned with visitors' *'wants'*. In other words, the *ECO* certification scheme is covering factors that resonate what visitors perceive to be important. Although not an issue for *ECO* certification since it covers all three products, other schemes focusing on accommodations only, may find it *'smarter'* to also include other tourism products (attractions and tours) as part of the scheme.

Interestingly, the same two attributes were found to be important across all three products (i.e. *Nature*, *Marketing*). Similarly *Customer* was perceived amongst the least important attributes

across all three – although this may be a factor of the example used in the survey. Nonetheless, it does show clear aspects of the program that are important to visitors, irrespective of the type of product. That said, the ranking of attributes varied with some attributes considered to be more important than others, suggesting that a product-specific approach is equally important. Age, education, gender, income and origin were found to be key determinants of importance - however, most of the statistically significant differences were found at accommodations.

As regards performance on the different attributes, visitors consistently judged the performance of *ECO*-certified operators to be better than their non-*ECO* certified counterparts, especially at accommodations. This is good news for *ECO*-certified operators in the Wet Tropics area, since tourists clearly perceived them as performing *'better'* than their counterparts – although it does not necessarily imply that they are demonstrably *'better'* on the environment and/or community. Rigorous comparison of sustainability performance between the two types of operators must be made in order to confirm visitor perceptions, especially given the subjective nature of this examination, coupled with earlier evidence from Chapter 4 that visitors have relatively little understanding of what *ECO* certification entails. That said, this is not just an issue for the *ECO* certification scheme, but one for the broader certification *'market'*.

To be fair, not all attributes are known or tangible even pre or post purchase (e.g. *Conservation* compared to *Interpretation*), hence many efforts made by the operator remain *'invisible'* to the visitor. Accordingly, if operators do not advertise the contributions made to enhance attributes (e.g. financial contributions to *Conservation*) then visitors are unable to properly assess performance. As such, lower performance scores may not necessarily depict the realities of operations. There is thus a need for operators (or certifiers) to provide better information that allows visitors to assess performance/impact (not just actions/inputs), thereby bridging the gap in asymmetric information between the operator and the tourist.

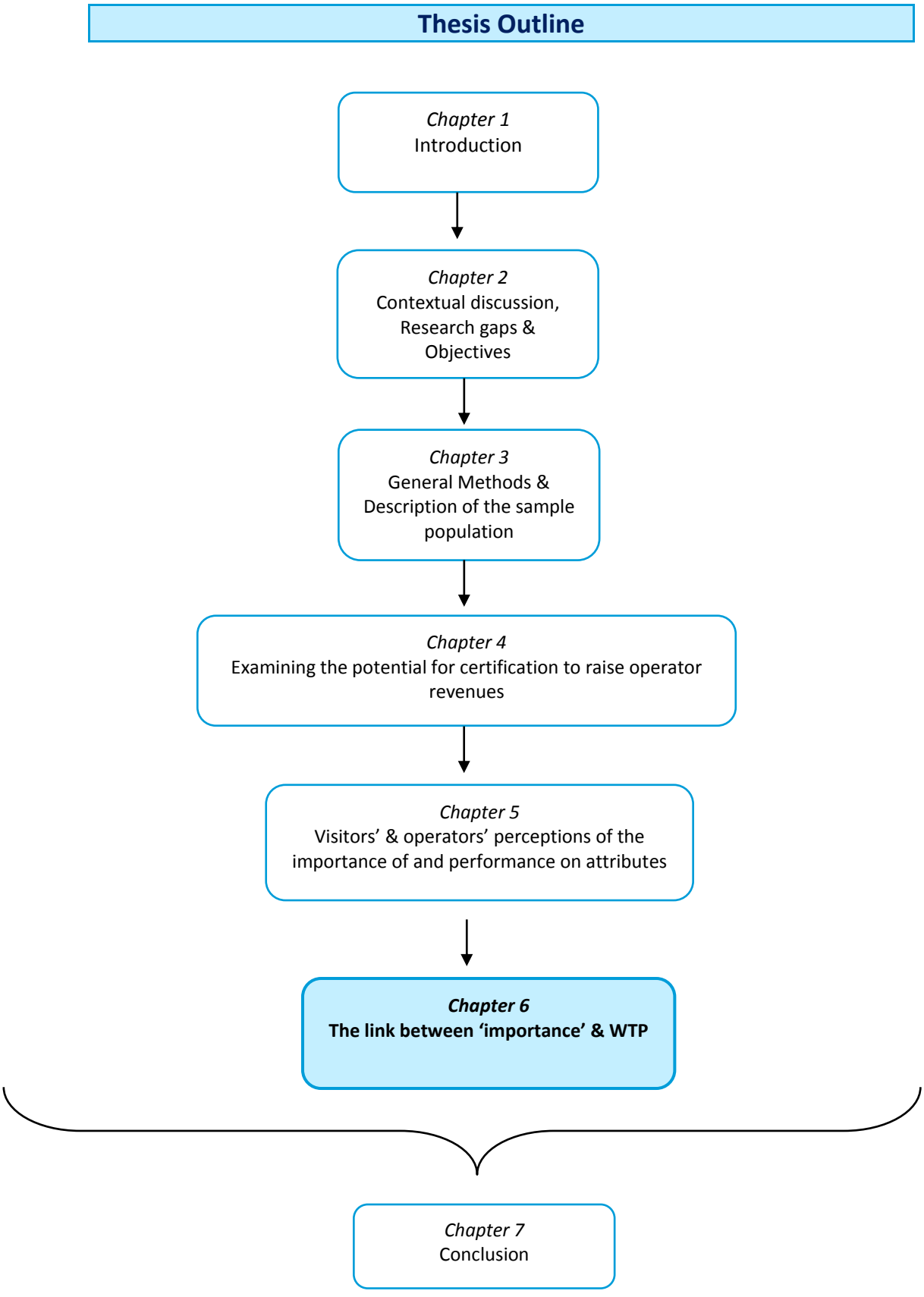
While the above information is necessary, looking at importance and performance in isolation limits our understanding of visitor satisfaction with *ECO* certification. This study thus used the *importance-performance analysis* to investigate both aspects and to identify attributes that may need improvement. *ECO*-certified operators' scores of performance generally exceeded their scores of importance. Non-*ECO* certified operators' scores of performance were particularly poor on *Environment*, relative to their importance scores. Overall, it appears that customers of *ECO*-certified operators in the WTWHA are more satisfied than customers of non-*ECO* certified operators. This is encouraging, however, as noted above, more objective evidence, particularly

relating to actual environmental and social performance is needed before a final conclusion can be made.

Objective 3 recognised the lack of research on operator perspectives of certification and set out to fulfil the void, by mirroring the analyses of the visitor study. Firstly, operators identified *Marketing, Nature*, and *Community* as the most important attributes. Secondly, across the majority of attributes, *ECO*-certified operators self-scored their performance higher than did their non-*ECO* certified counterparts, perhaps because of more confidence, having already succeeded the third-party assessment for *ECO* certification and obtaining a logo as validation. That said, there were no statistically significant differences in self-rating of performance between the two categories of operators. While one can argue of biases in operators' own judgement of performance - indeed plausible – the results nevertheless corroborate those of the visitors.

While information about visitor and operator perceptions is essential, the literature notes that visitor and operator views often differ (Morgan & Vorhies, 2001). Therefore, objective 4 set out to see how much they align. This is something that to the best of my knowledge has not been done before. To satisfy this objective, the survey was designed in a manner where questions on importance and performance asked in the operator survey paralleled those of the visitor survey. Mean scores were computed for operators and visitors respectively, and data were segmented according to certification status only. Results show that the same attributes were perceived to be important by both visitors and operators. These attributes were: *Nature, Marketing* and *Community*. Although there were some divergences in the bottom three attributes, overall, it can be concluded that visitors and operators value the same things. This finding suggests that certifiers can strategically market the same attributes to both groups of consumers.

Statistically, operators perceived *Nature, Customer, Marketing* and *Community* to be significantly more important than did the visitors, perhaps because these attributes (notably *Marketing* and *Customer*) have greater resonance to the operator as key aspects of customer satisfaction which may lead to customer loyalty and repeat business. It is interesting to note, nonetheless, that *Conservation* was rated 7th in importance by both visitors and operators. Given the World Heritage connotation of the study area, there may be a cause for concern. As such, there may be a need for increased effort in raising public awareness of the importance of this particular attribute. Visitors rated the performance of *ECO*-certified operators higher than the performance of non-*ECO* certified operators, with the performance of *ECO*-certified operators being significantly better on *Nature, Interpretation, Culture* and *Marketing*.


Thesis Outline
Chapter 1
Introduction
Chapter 2
Contextual discussion,
Research gaps &
Objectives
Chapter 3
General Methods &
Description of the sample
population
Chapter 4
Examining the potential for certification to raise operator revenues
Chapter 5
Visitors' & operators' perceptions of the importance of and performance on attributes
Chapter 6
The link between 'importance' & WTP
Chapter 7
Conclusion

CHAPTER 6
THE LINK BETWEEN 'IMPORTANCE' & WILLINGNESS TO PAY

This chapter will be submitted to the Journal of Tourism Economics as follows: Esparon, M., Stoeckl, N., & Gyuris, E. Does the importance ascribed to different attributes correspond with willingness to pay? A valuation of the multi-faceted *ECO* certification scheme.

Synopsis

In the preceding chapter, I investigated: which attributes of *ECO* certification were deemed most important to visitors and operators; how operators were perceived to '*perform*'; and the alignment between visitor and operator perceptions. In this chapter, I extend the visitor enquiry by looking at visitor WTP for those attributes. The aim here is to find out if those facets of the program that visitors rate as most important are also those for which they are willing to pay most. In other words, *will their valuation match their perception of what is important?* Using ordered logistic models, I show that importance is a significant determinant of WTP, although the relationship is dependent on the type of product.

Research objective addressed in this chapter:

Objective 5: Determine if tourists are willing to pay more for some attributes than for others and if visitors are willing to pay more for attributes which are deemed 'important'.

6.1 Introduction

The analysis of Chapter 5 clearly identified attributes which visitors thought most/least important, however these findings do not necessarily imply real preference for those attributes. Social science disciplines encourage the approach of triangulation to increase confidence in research findings. That is, using information from a variety of sources and perspectives to corroborate, elaborate or illuminate the research problem (Decrop, 1999; Huang & Busby, 2007). This is the primary goal of this chapter, namely to use data on willingness to pay (WTP) for *ECO* certifications' attributes to cross-validate with respondents' assessments of which attributes are most/least important. This research design also provides an opportunity to validate contingent valuation (CV) estimates of WTP. Doing so is essential since the approach of using stated responses to hypothetical scenarios is oftentimes criticised as being inherently flawed (Louviere, Hensher, & Swait, 2000; Bateman, et al., 2002; Haab & McConnell, 2002; Zakaria, 2011).

Although I am unaware of any published study that looks at the WTP for specific attributes of certification, there have been a number of studies assessing attributes of a wide variety of goods and services (Steiner, 2002; Ara, 2003; Carlsson, Frykblom, & Liljenstolpe, 2003; Batte, et al., 2007; Chung, Briggeman, & Han, 2008; Peterson, Hustvedt, & Chen, 2008; Michaud, Llerena, & Joly, 2012). As regards tourism specifically, studies have looked at valuing attributes of bird-watching tours and interpretive services (Lee, Lee, Kim, & Mjelde, 2010), parks and forest preserves (Louviere & Timmermans, 1990; Yacob, Radam, & Rawi, 2009) and visitor trails (Cahill, Marion, & Lawson, 2008) to name a few.

Yet, while many researchers have examined consumers' WTP for product attributes, very few appear to have linked the importance placed on these attributes to consumers' WTP of these same attributes. One notable exception is Parcell, Franken, Cox, Patterson, and Randle's (2010) study looking at buyers' perceptions of importance and WTP for specific quality attributes of heifers delivered by the *Show-Me-Select* Replacement Heifer, Inc. (SMS program) - a quality-based bred heifer production program designed to educate and assist producers in enhancing the quality of bred heifers. The study found that respondents perceived *pen uniformity, artificially inseminated to*

calving ease bull, synchronized calving and *heifer size* to be important attributes and their WTP for these attributes were economically significant (Parcell, et al., 2010). Interestingly, respondents of the same study rated low the importance of a third-party verification of the quality attributes of heifers. Studies like this, which link importance and WTP are clearly lacking in the general literature and of note, is a complete absence of research in the tourism literature that aligns the importance consumers place on certification's attributes with their WTP for certified products.

This is a significant research gap: simply ascertaining the WTP and preference for certification is not enough. It is equally important to know if visitors support the things they say they believe in and if so, how strong that support is. Moreover, since *ECO* certification, indeed any certification scheme, in tourism or otherwise, sells its attributes as a pure bundle (Chapter 2), it thus faces the conundrum of proving its value in a way that can be understood by consumers. It is only by fully articulating the requirements of attributes assessed, that effective purchasing decisions can be made.

Thus far, this study has made contributions by disaggregating attributes of the *ECO* certification scheme and identifying the importance of each as perceived by visitors. This chapter thus goes a step further and links the perceived importance of these attributes with visitors WTP for each attribute, hence helping to fill an important gap. Specifically, the chapter tries to find out whether those facets of the program that visitors value most are reflected in their stated WTP for similar attributes. Additionally, the chapter extends earlier findings from Chapter 4 which looked at the WTP for certification overall, by identifying what may be the strongest/weakest driver of total WTP.

Two research questions were developed to guide the investigation. They are:

1. Which attributes are *'valued'* most/least (in terms of WTP)?
2. Does visitors' perceived importance of attributes correspond with higher WTP for those attributes?

6.2 Approach used to measure visitors' WTP for individual attributes

The literature presents several approaches that can be used to measure preferences and WTP for various attributes. These were described in Chapter 2. In this chapter I provide a recap and justify my choice of the chosen approach. One such technique is the hedonic pricing method (HPM) (Rosen, 1974), which builds upon the Lancaster's (1966) *Theory of Characteristics*. The HPM identifies price factors according to the premise that price is determined both by internal characteristics of the good being sold and external factors affecting it (Rosen, 1974). Therefore, the total value of a good is dependent upon the quantities of each of the various utility bearing

attributes that constitutes it (Rosen, 1974). According to Tajima (2003), variables of the pricing model can be adjusted so as to accurately represent the characteristics of the research subject. However, whilst the HPM seems appropriate for this study, given that it *'uses'* attributes, its use was impractical because it requires attributes to vary across products of different prices. Since *ECO* certification is *'sold'* as a bundle and given the invisibility of some attributes (Chapter 5), there is not enough observable data on attribute variations for HPM to work in this instance.

When faced with an absence of existing and observable data, other ways of examining consumer preferences and WTP for attributes involves the use of choice modeling (CM) or conjoint analysis (CA). These are types of stated preference approach, based on the notion that respondents' willingness to trade-off attributes of a good (at various prices) can be used to gain insights into the monetary value placed on individual attributes (Hanley, Wright, & Adamowicz, 1998). Respondents are typically presented with hypothetical scenarios and are asked to select one of several options (CM), or to rate/rank the options (CA).

In CM, respondents are asked to choose their preferred product from choice sets of hypothetical scenarios characterised by a number of attributes and attribute levels (Bech & Gyrd-Hansen, 2005; Dellaert, Borgers, & Timmermans, 1995; Kuhfeld, 2010; Zwerina, Huber, & Kuhfeld, 1996). The question is put in a behavioural form such as *"Which would you choose, given these options?"* and the alternative which yields the highest overall utility is selected (Louviere et al., 2000; Rolfe, 2006b). Proponents of CM note that its strengths derives from the fact that choosing the most preferred alternative from some set of alternatives is a common experience in everyday life (Bishop, et al., 2011).

As such, choice modelling offers some important advantages over other stated preference approaches, principle of which is the ability to be able to elicit preferences for the components of a good (i.e. individual attributes) rather than merely for the good as a whole (Bech & Gyrd-Hansen, 2005). Also, a choice, which may or may not actually exist in real markets, is made possible (Morely, 1994; Haaijer, Kamakura, & Wedel, 2001; Hensher, Stopher, & Louviere, 2001; Janssen & Hamm, 2012). With such a technique, one is able to construct the preference functions of individuals (i.e. substitution or trade-offs between attributes) and use this information to predict potential switching to new offerings/alternatives (Hensher, et al., 2001; Kanninen, 2002; Rolfe & Bennett, 2009; Roman, Espino, & Martin, 2009).

Similar to CM, in conjoint analysis (CA) respondents are presented with alternative descriptions of products differentiated by attributes and levels and are asked to indicate their preference. It shares four common characteristics with CM. Both require:

1. Identification of key attributes underpinning preferences for goods at assigned levels;
2. Experimental designs combining attribute levels into profiles to be assessed by a sample of respondents;
3. Analysis of respondent's evaluations using statistical models which are able to decompose preference into components of each attribute level; and
4. Use of simulation methods to predict preferences or choices (Novotorova, 2008).

However, CA and CM differ in the manner in which preference is gauged. While CM requires that only one option is chosen, CA uses ranking or rating scales to estimate preferences of various alternatives. Accordingly, all options are considered (Elrod & Chrzan, 2007). But, by rating or ranking attributes, they inhibit the simultaneous evaluations of a number of alternatives (Novotorova, 2008; De Pelsmacker, Driesen & Rayp, 2005). That said, rating or ranking scales requires respondents to provide the intensity of their preference for competing alternatives. The main advantage in the use of these scales is the increased information they provide. They provide ordinal measures of preferences and respondents are able to profess their indifference among alternatives by assigning same rating (Karniouchina, Moore, Rhee & Verma, 2007; Elrod, Louviere & Davey, 1992; Heurtas-Garcia, Garcia & Consolation, 2012).

Regardless of their popularity, CM, and other stated preference approaches for that matter, have received much criticism, due to their hypothetical nature (Adamowicz, Louviere, & Williams, 1994). The fact that respondents are stating what they would do in certain hypothetical situations (i.e. expressions of intent) and that this is perhaps not the same as what they actually do, or would do in reality (i.e. observations of actions), raises questions of bias in such data (Morely, 1994; Bennett, 2006). Consequently, it can be somewhat challenging to make absolute demand estimations.[60]

Most pertinent here, moreover, is the fact that both CM and CA increase in complexity as the number of attributes investigated increases. In full-fledged attribute–based choice and rating studies, *Statistical Design Theory* (Louviere, et al., 2000) is used to combine levels of the attributes into a number of alternative scenarios or profiles to be presented to respondents. Where a *full factorial design* CM study is employed, every setting of every factor (main effects) appears with every setting of every other factor (interactions). Whilst this allows for the full effects of the attributes upon choices to be estimated, they (unfortunately) produce an impracticably large

[60] However, it is also argued that as long as respondents understand the task and can reasonably evaluate the alternatives offered, the relative utility weights that are the focus of these stated choice models, can be estimated without bias (Morely, 1994; Louviere, et al., 2000).

number of combinations to be evaluated (Bateman, et al., 2002). Fortunately, this can be overcome with the use of *fractional factorial design* that ultimately condenses the number of scenario combinations presented to the respondent - however, this is to the detriment of the estimation power.

In consideration of the issues associated with the experimental designs, employment of the CM approach would not have been feasible in this study either, since there are six different attributes which potentially could each take up to at least three different levels, requiring an impracticable number of possible choice sets (certainly the case if a *full factorial approach* is adopted but also a problem for *fractional factorial design* given the desire to explore so many different attributes).[61] Consequently, a decision to adopt a simpler approach (hereafter termed a *modified CV*) was made, one that captures elements of both CM and CV.[62] Ratings or ranking based choices could have been used as these involve fairly straightforward designs. Unlike CM, CA needs only to generate an orthogonal set of product profiles, but given the already lengthy questionnaire, I adopted for this simpler approach.

6.3 Survey design

Full details are given later, but to begin with an overview, respondents were presented with six scenarios (choice sets), each focusing on a specific attribute (*Customer* and *Marketing* being the exceptions – as explained in Chapter 3, these two attributes were not included in this part of the survey principally because I considered them to be of little relevance to tourists (compared to other attributes); the desire being to minimise the length of the questionnaire (thus increasing response rates), while still generating useful information.

Each scenario consisted of four alternatives (A, B C and D) which were IDENTICAL in all aspects EXCEPT two: price and quality of one particular attribute. For example, in scenario one, the firms

[61] Choice set is equal to 6x5x4x3x2=720

[62] Note also that in a typical CM experiment, alternatives are randomised in theory, making it possible to obtain a *'better'* good for less (randomisation for example will change levels (1 2 3) to one of the following: (1 2 3), (1 3 2), (2 1 3), (2 3 1), (3 1 2), (3 2 1) - Kuhfeld (2010) and Bateman et al., (2002) But, one of the key factors influencing the design of the questions presented to respondents was the fact that I wanted to present them with a product that costs more than its alternative, but which had more *'sustainable'* environmental and social features. Simply, the aim was to see if they would be willing to pay more for the *'improved'* product or if they would choose a lower priced (and less *'sustainable'*) product instead. Thus, allowing for all possible combinations (as with a *full factorial design*) would have been meaningless.

differed in how often they consulted with the Indigenous people (*Culture*) (more consultation meant higher price), while in scenario two, they differed in how much they donated towards conservation initiatives (*Conservation*) (again, more contribution was associated with higher price). See Figure 6.1 for an example (the full questionnaire appears in the appendix).

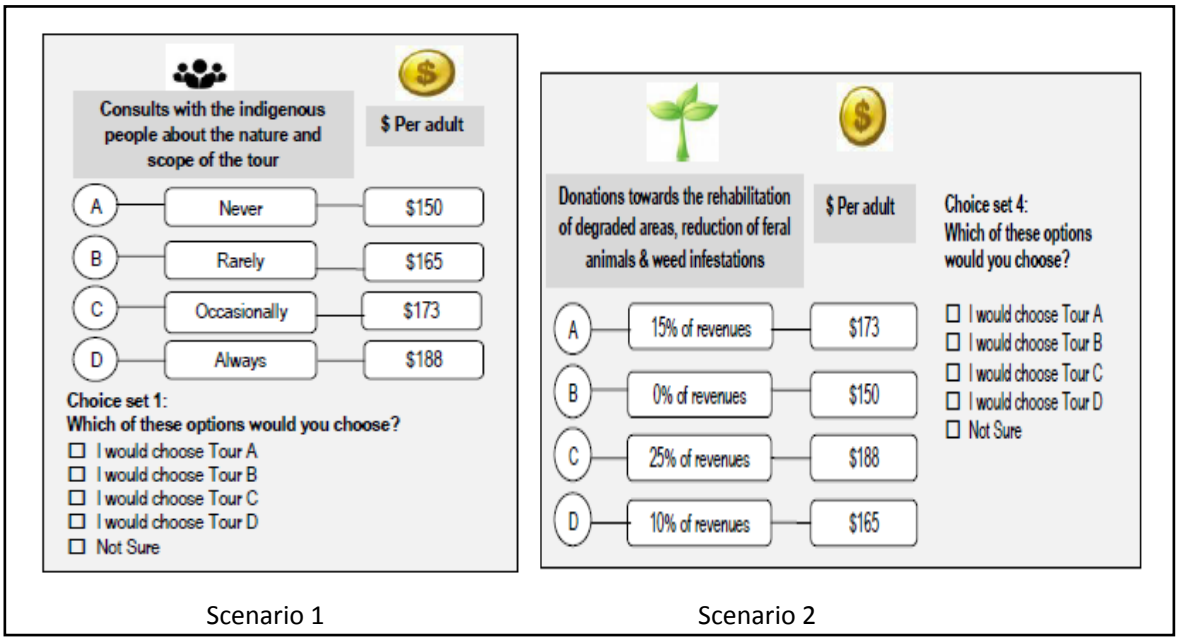


Figure 6.1 Excerpt of choice sets - Tour survey version 2

Now for the specifics:

It is not uncommon for researchers to attempt to design *'overly complex'* experiments (i.e. including more alternatives, attributes, levels and labels), in order to make the choice sets realistic (Arentze, Borgers, Timmermans, & DelMistro, 2003; Caussade, Ortuzar, Rizzi, & Hensher, 2005). This practice has led to several investigations about task complexity and in particular about what is acceptable to give to each respondent.[63] Evidently, greater complexity can be detrimental rather

[63] Several studies have tested the effects of task complexity and found evidence of cognitive burden, giving rise to respondent fatigue and/or serial non-participation - all of which affect the respondent's ability to choose (e.g. De Palma, Myers, & Papageorgiou, 1994; Mazzotta & Opaluch, 1995; Pullman, Dodson, & Moore, 1999; Swait & Adamowicz, 2001; DeShazo & Fermo, 2002; Arentze, et al., 2003) Consequently, imposing strict limitations on the complexity of experiments has now become common practice. These days, experiments tend to include fewer attributes or the number of choice alternatives per choice sets presented to participants are less. Conversely, there are also many studies that provide evidence to refute this belief. For example, Hensher et al., (2001), found that the more choice sets, the less likely respondents will choose the same alternative in each choice set. This is because the more choice sets (in that particular case up to 32), then the more occasions respondents have to choose amongst the different alternatives. Additionally, issues of missing data seemed insignificant. These findings corroborate those of Stopher & Hensher (2000) who also found that 32 profiles have only a marginal effect on consistency. Brazelle and Louviere (1998) (cited in Pullman, et al., 1999) tested the effects of up to 120 choice task and again, found little indication of a decrease in response rates as the number of choice task increased, nor did they found major evidence of fatigue. Similar conclusions were drawn from Louviere et al.,'s (1993) and Malhotra, Jain & Lagakos's (1982) studies.

than desirable. I thus decided to err on the side of caution, aiming for simplicity. Only six choice sets were presented in total to respondents. Each choice set focused on a specific attribute of *ECO* certification. As detailed in Chapter 3, the type of example used to describe the attribute was meticulously considered to reflect issues pressing to the region of interest and also factors relevant to each particular tourism product.

When it comes to how many alternatives to present in each choice set, Caussade, et al., (2005) suggest that offering more than two alternatives which include a *status quo* option, is best. When given just two alternatives, respondents tend to choose the same option consistently, disregarding changes in the attributes. Carson, et al., (1994) commented that the *'average'* questionnaire deals with up to four alternatives. For example, Caussade, et al.'s (2005) study found that designs with four alternatives displayed the highest scale parameters, followed by those with five, and three alternatives. Rolfe & Bennett (2009) gave support to these findings. Despite other commentators asserting that increasing the number of alternatives increases the probability that a respondent may find an option that matches his/her preferences better, thus leading to a more precise selection (Caussade, et al., 2005), I decided that each choice set would have four alternatives.

Along with the four alternatives, respondents were given a *'not sure'* option. Provision of a *'not sure'* option enables respondents to better select their preferred choice. This is because, in conjunction with the other options on offer, they act as a multiple choice format question, giving respondents a better chance to express their NO vote (Rolfe & Bennett, 2009). This option also ensures that respondents are not forced into making a decision, hence leading to less biased results (Janssen & Hamm, 2012).

When designing choice experiments, it is important to ensure that one of the choice options remain constant between the choice sets. Doing so *'grounds'* the choice tasks (Rolfe, 2006a). Commonly known as the base alternative, it serves to reflect the current situation (a *status quo*) with no improvements, and no additional cost (Carlsson, et al., 2003). This too, was considered in the design.

The literature search (Chapter 4) provided base prices. In all six choice sets, the base price was pegged to the basic core criteria of the *ECO* certification scheme. Price increments were associated with successive improvements in performance, based on the more advanced certification criteria under the scheme. For example, in the case of *Interpretation,* the basic requirement was the provision of brochures, while improvements ranged from brochures and displays; brochures, displays and audio-visuals; to all of the above integrated with appropriate activities (e.g. quizzes, games).

Also, the literature clearly indicated that price range influences the perception of attribute values (Cooke & Mellers, 1995). As explained by Hensher (1993) (cited in Morely, 1994, p. 9), when determining the range of prices, differences need to be large enough to impact on the stated choices, yet not beyond the range of what could be experienced and considered believable by the respondents. But whilst choosing prices that are too close together will render the price effect to be minimal (Kuhfeld, 2010), Caussade, et al., (2005) conclude that narrow ranges place less cognitive burden on respondents. In all cases, one needs to settle on a price range that makes sense for the product. Accordingly, a split sample approach was used, and as explained in Chapter 3, the attributes varied identically across both versions of the survey but each version used different price increments (10%, 15%, 25%; and 30%, 40%, 50% in versions 1 (V1) and 2 (V2) respectively). These price increments were chosen to provide a reasonably wide, yet feasible, spread of possibilities.

Several studies have also examined the effects of swapping or cycling alternatives in choice experiments (conceptually equivalent to the *factorial design approach*) (e.g. Huber & Zwerina, 1996; Sandor & Wedel, 2001).[64] Neither method would have been applicable in this study as the aim was to *'force'* respondents to pay for improvements in environmental and social attributes.

There appears to have been no studies on the effects of changing the order in which alternatives are presented, hence doing so presents some uncertainties. However, cautious of the fact that respondents may choose the same option consistently thereby disregarding changes in the attributes, the order in which the alternatives were presented was changed (although I ensured that the level of improvement matched the corresponding price increase each time). For example, in choice set one, alternatives were increased from low (*status quo*, i.e. no improvements) to high (most improvement), while in choice set two, the reverse was done (i.e. from high to low). As to the other choice sets, the order was rotated randomly.

Finally, a budget constraint reminder was included to alert respondents of their available budget prior to making their choice. Such reminders are believed to increase the reliability of the experiment (e.g. Hensher, Barnard, & Truong, 1988; Morely, 1994; Bishop, et al., 2011). Although some studies have found limited evidence of budget reminders (e.g. Loomis, Gonzalez-Caban, & Gregory, 1994), the use of a budget constraint reminder can be justified when new information is

[64] *Swapping* involves switching two attribute levels among alternatives within a choice set while *cycling* is a combination of cyclically rotating the levels of an attribute and swapping them.

introduced, particularly in instances whereby the respondent faces a novel and previously unconsidered decision, as is the case in this study (Bateman, et al., 2002, p. 333).

6.4 Results

6.4.1 *Which attributes are 'valued' most/least (in terms of WTP)?*

To maintain consistency and importantly, to allow for cross-verification with respondents' stated importance of attributes (Chapter 5), data were segmented across products and questionnaire version.

Figure 6.2 to Figure 6.4, depict the distribution of WTP across attributes according the. At accommodations, respondents were not generally willing to pay for *Culture* and *Interpretation* with the majority of respondents preferring the *status quo* (i.e. low price and low quality). However, many were willing to pay for *Community* and *Environment*, with the greater proportion of the respondents willing to pay for a medium or high-level improvements (i.e. up to 15% or 40% in version 1 and 2 respectively) (Figure 6.2).

At attractions, respondents were most willing to pay for *Environment*, *Nature* and *Community* (Figure 6.3). Similar patterns were observed from the tour sample (Figure 6.4). However, somewhat surprisingly, *Interpretation* had the lowest percentage (%) of respondents willing to pay for improvement. In this case, respondents overwhelmingly showed a preference for the *status quo*.

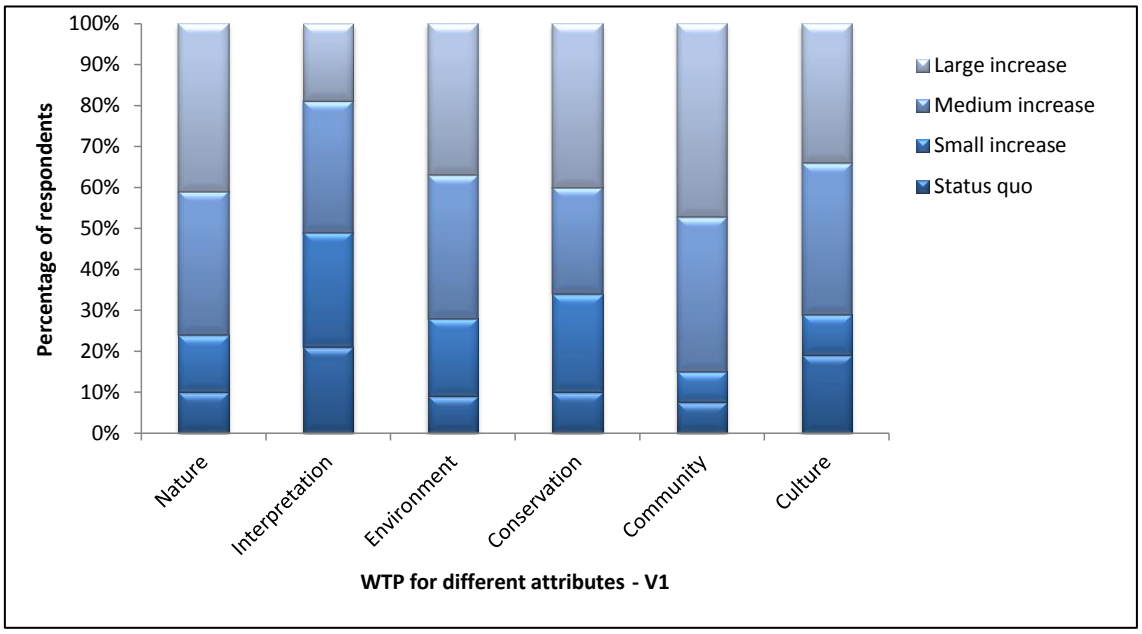


Figure 6.2a Distribution of the strength of respondents' preferences of attributes, in terms of WTP – Accommodations V1

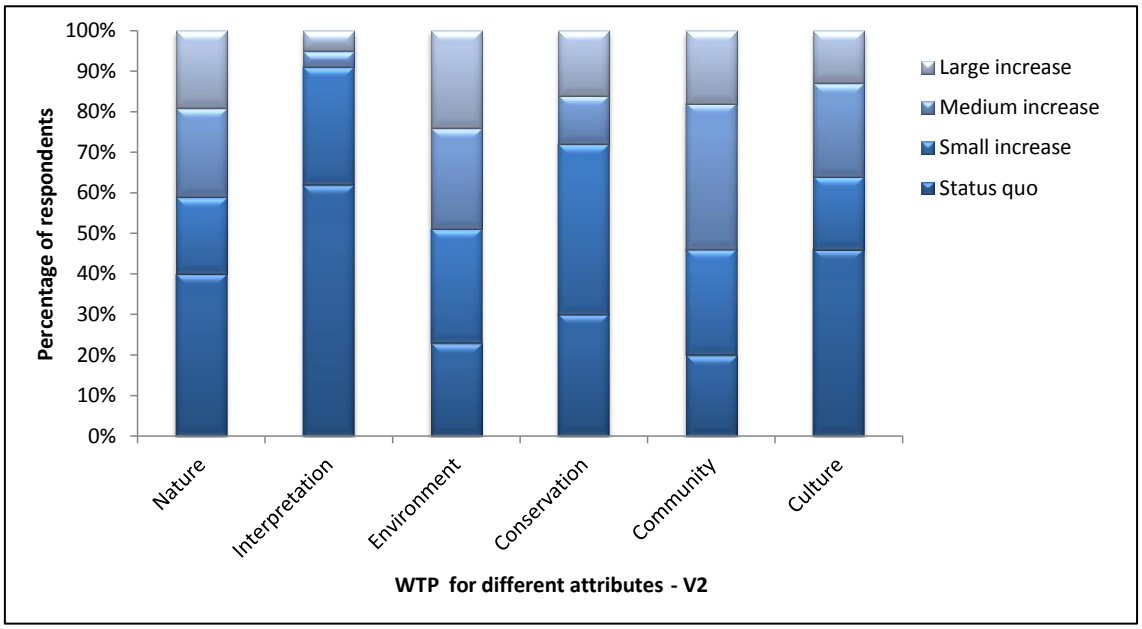


Figure 6.2b Distribution of the strength of respondents' preferences of attributes, in terms of WTP – Accommodations V2

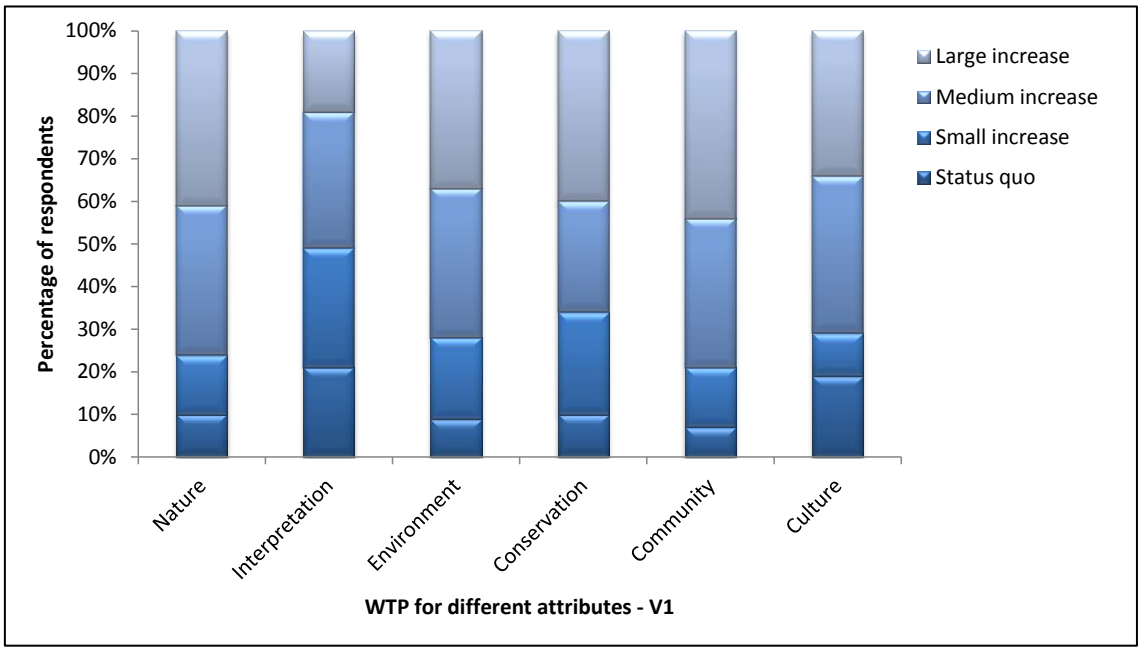


Figure 6.3a Distribution of the strength of respondents' preferences of attributes, in terms of WTP – Attractions V1

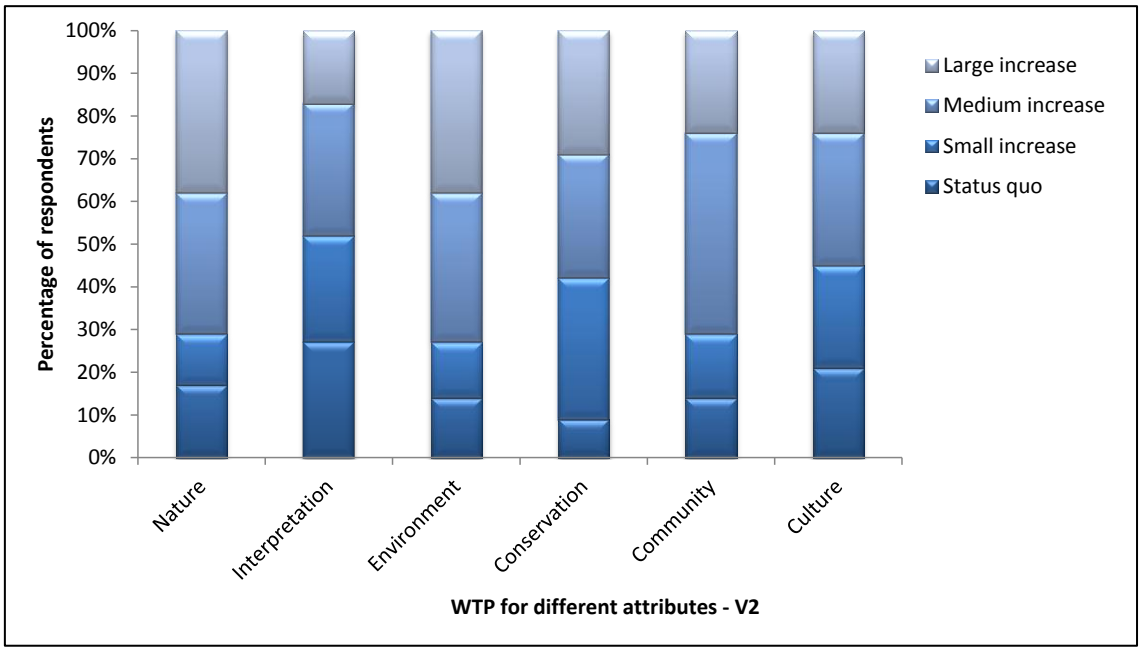


Figure 6.3b Distribution of the strength of respondents' preferences of attributes, in terms of WTP – Attractions V2

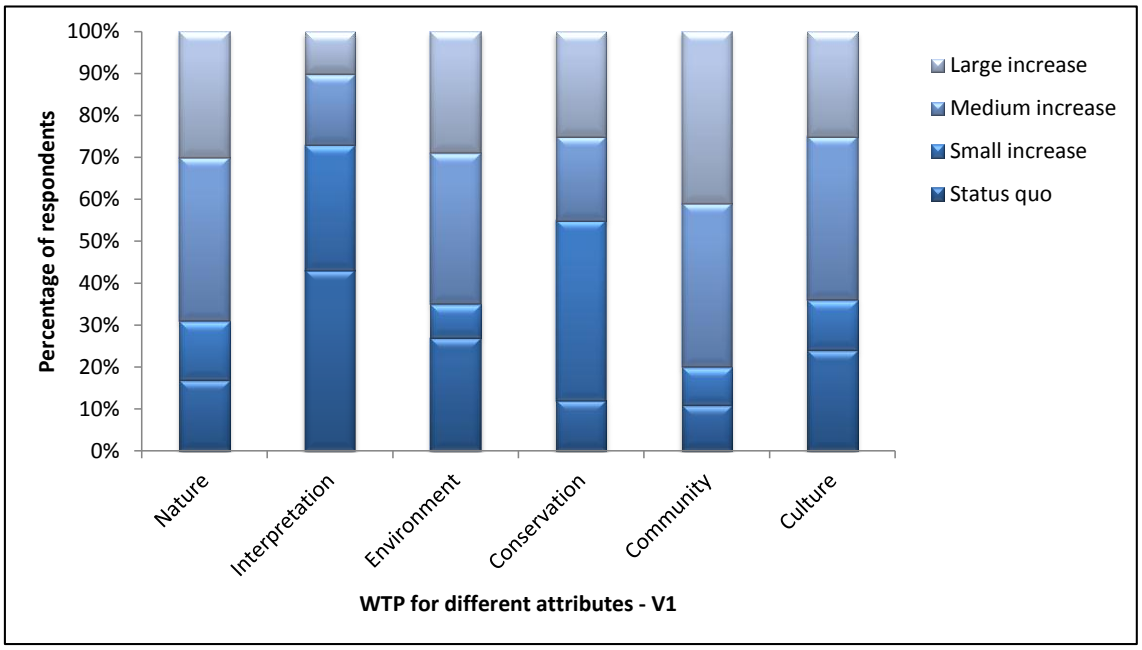


Figure 6.4a Distribution of the strength of respondents' preferences of attributes, in terms of WTP – Tours V1

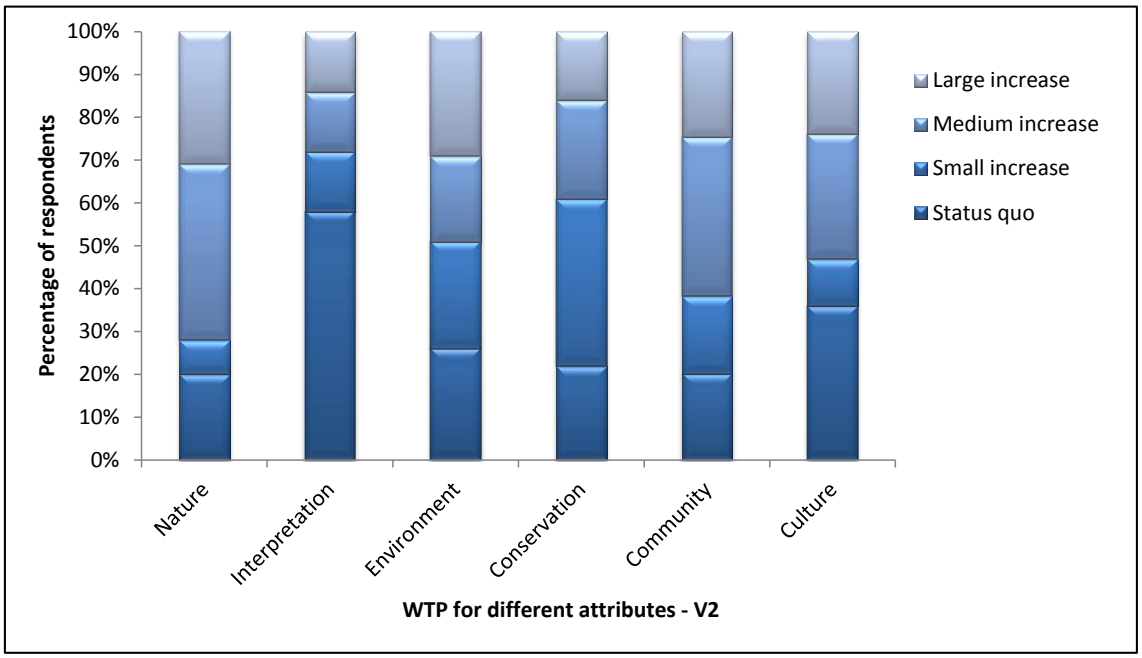


Figure 6.4b Distribution of the strength of respondents' preferences of attributes, in terms of WTP – Tours V2

6.4.2 *Does visitors' perceived importance of attributes correspond with higher WTP for those attributes?*

Essentially, this research question sought to investigate the link between WTP and stated importance of attributes. The analysis was modelled on the premise that WTP is a function of several variables as shown below:

WTP = f (stated importance of attributes and socio-demographic variables)

The WTP values were defined as the dependent variable in the model and were coded as 100 (*status quo*), 110, 115, 125, 130, 140 and 150, reflecting the percentage price increments above the base. Independent variables which included the stated importance of attributes (from Chapter 5) and a variety of demographic variables (often found to influence WTP – see for example, Bishop, et al., 2011) were dichotomised in a similar manner as that described in section 5.2.[65] The demographic variables selected for inclusion were those that were found to be significant from earlier analyses (Chapters 4 & 5) and an ordered logistic regression was used to estimate the relationship between WTP and various factors, particularly, stated importance.[66]

Here, the aim was not to generate precise estimates of mean WTP (i.e. effects of individual parameters) but rather to determine which variables serve as significant predictors in the model. Indeed, there was no attempt at all to generate mean estimates of WTP since they were deemed likely to produce misleading results given:

1. prior evidence of imperfect information (Chapter 4); and
2. knowledge that marginal social benefit will only equal to price if there is perfect information (and no externalities for example) associated with it.

Unlike the previous analyses in this study (which were conducted using SPSS), these were performed using STATA (version 10) since it can estimate robust standard errors to control for heteroscedasticity inherent in the data (some incidental, some also introduced because of the two

[65] For example, the original values for age 1-4 (1=under 20, 2=20-29, 3=30-39, 4=40-49) I assigned the new value 0 (<50yrs old) and for the original values 5-7 (5=50-59, 6=60-65, 7=over 65) the new value 1 (>50yrs old).

[66] One can argue that a Multinomial logit regression could have also been used (although it is used to model predominantly nominal outcome variables), however, the downside of this approach is that the information contained in the ordering is lost. Moreover, using an Ordinary least squares (OLS) regression model would have been inappropriate, given the discreet nature of the dependent variable and its non-normal distribution.

versions of the questionnaire).[67] Versions 1 and 2 of each type of questionnaire were initially analysed separately, however, since similar variables came up as significant predictors, they were subsequently combined. Table 6.2 to Table 6.4 present the estimation results.

The first issue that needs discussing is the poor Chi Square values of the models. The Chi Square statistics from the accommodation and tour samples were statistically significant (with WTP for *Community*,, and WTP for *Community* and *Environment*, respectively, as the exceptions). However, the Chi Square values for many of the attractions were not statistically significant. Consequently, I have chosen to focus the discussion on the statistically significant variables and not the coefficients *per se*: clearly, there are many important missing variables (indicating likely bias).

At accommodations, the importance of attributes was found to be significant in five out of six attributes (*Community* being the exception, where the entire model was statistically insignificant). Evidently, this implies that the more important an attribute is perceived to be, the more a visitor is willing to pay for improvements in it. With the exception of age, where the younger visitors were WTP more for *Nature,* demographic variables overall were not significant predictors.

Conversely, at attractions, demographic indicators were significantly associated with WTP. Those on a higher income were more likely to be willing to pay a premium for improvements in *Nature* as well as in *Interpretation*, compared to their lower income counterparts. Similar to the accommodation sample, the younger visitors were more likely to be willing to pay a premium for improvements in *Nature.* The importance of an attribute was positively associated with WTP for *Culture* and *Community* only. All in all, the sample of visitors at attractions was not likely to be willing to pay a premium for improvements in attributes they deemed to be important (Table 6.1)

The same can be said about tours. The only statistically and significant positive relationship between WTP and importance of attributes was found for *Culture, Conservation* and *Interpretation*. As at accommodations, demographic variables were not necessarily key predictors – with only two instances of significant differences. For older visitors (>50 yrs. old), WTP was positively associated with *Culture*, while those who were highly educated showed stronger preference for *Nature* than did their less well educated counterparts.

[67] Heteroskedasticity causes standard errors to be biased which affect test statistics and confidence intervals. However, by using the *robust standard errors* available in STATA, the assumptions that errors are both independent and identically distributed, are relaxed yielding more reliable p-values.

Table 6.1 Ranking of attributes according to mean importance

Sector	Attributes	Mean importance
Accommodations	Nature	1.37 (n=209)
	Interpretation	1.15 (n=209)
	Community	1.14 (n=202)
	Environment	1.04 (n=205)
	Culture	0.65 (n=197)
	Conservation	0.60 (n=196)
Attractions	Nature	1.43 (n=108)
	Conservation	1.34 (n=111)
	Community	1.32 (n=108)
	Environment	1.10 (n=109)
	Interpretation	1.30 (n=108)
	Culture	1.04 (n=104)
Tours	Nature	1.16 (n=142)
	Community	0.90 (n=135)
	Culture	0.70 (n=136)
	Environment	0.61 (n=135)
	Conservation	0.57 (n=130)
	Interpretation	0.41 (n=140)

Note: Only five attributes are considered. *Customer* and *Marketing* have been omitted in this analysis. Responses were scaled from -2 – not important at all, to 2 – very important

Table 6.2 Estimates for the ordered logistic model of WTP for attributes – Accommodation

	WTP for Culture	WTP for Community	WTP for Environment	WTP for Conservation	WTP for Interpretation	WTP for Nature
N	150	164	170	164	180	172
Chi-Square	**46.33 *** **	7.94	**16.51***	**19.46****	**18.65****	**18.51****
Female	-0.57(0.33)	-0.39(0.32)	-0.02(0.30)	-0.22(0.31)	-0.46(0.31)	0.09(0.31)
Domestic Visitors	- 0.24(0.35)	0.13(0.35)	0.03(0.33)	-0.21(0.35)	0.10(0.31)	-0.04(0.34)
Age	-0.13(0.11)	-0.07(0.10)	-0.11(0.10)	-0.01(0.11)	-0.07(0.10)	**-0.23(0.11)***
Income	0.11(0.10)	0.10(0.10)	0.13(0.09)	0.03(0.11)	0.06(0.10)	0.06(0 .09)
Education	-0.01(0.01)	0.01(0.01)	-0.03(0.02)	-0.11(0.13)	-0.24(0.12)	-0.12(0.11)
Importance of attribute	**0.99(0.18)*****	0.28(0.17)	**0.39(0.19)***	**0.61(0.14)*****	**0.57(0.18)****	**0.53(0.19)****

Table 6.3 Estimates for the ordered logistic model of WTP for attributes – Attraction

	WTP for Culture	WTP for Community	WTP for Environment	WTP for Conservation	WTP for Interpretation	WTP for Nature
N	75	81	81	81	81	81
Chi-Square	**20.37****	8.26	7.03	11.37	**21.26****	**16.27****
Female	0.45(0.50)	0.76(0.42)	0.44(0.47)	0.08(0.46)	-0.35(0.45)	0.09(0.47)
Domestic Visitors	0.43(0.61)	0.40(0.51)	0.55(0.54)	0.50(0.52)	0.37(0.45)	0.55(0.57)
Age	-0.16(0.14)	0.06(0.13)	-0.14(0.14)	-0.11(0.16)	-0.08(0.12)	**-0.38(0.14)****
Income	0.27(0.16)	0.11(0.15)	0.08(0.14)	0.18(0.16)	**0.36(0.13)****	**0.28(0.13)***
Education	-0.02(0.17)	-0.07(0.17)	-0.04(0.21)	-0.06(0.15)	-0.09(0.16)	0.02(0.19)
Importance of attribute	**0.82(0.21)****	**0.01(0.28)***	0.18(0.27)	0.04(0.27)	0.46(0.27)	0.16(0.29)

Table 6.4 Estimates for the ordered logistic model of WTP for attributes – Tour

	WTP for Culture	WTP for Community	WTP for Environment	WTP for Conservation	WTP for Interpretation	WTP for Nature
N	91	108	93	110	112	114
Chi-Square	**31.70*****	11.86	5.70	**15.87***	**14.40***	**13.60***
Female	0.21(0.40)	0.52(0.37)	0.51(0.40)	0.51(0.38)	0.50(0.40)	0.58(0.36)
Domestic Visitors	-0.45(0.49)	0.49(0.41)	-0.58(0.43)	-0.77(0.44)	0.73(0.45)	-0.15(0.39)
Age	**0.29(0.13)****	-0.00(0.11)	0.12(0.12)	0.17(0.11)	0.10(0.11)	-0.13(0.11)
Income	0.04(0.12)	0.18(0.13)	-0.01(0.13)	0.03(0.12)	0.04(0.12)	0.04(0.12)
Education	-0.12(0.18)	-0.14(0.14)	-0.17(0.18)	-0.25(0.14)	-0.20(0.16)	**0.06(0.02)****
Importance of attribute	**0.65(0.20)****	0.29(0.16)	0.05(0.15)	**0.39(0.16)***	**0.49(0.18)****	0.27(0.19)

Note*:* Single, double and triple asterisks (*) denote significance of coefficients at p<.05, p<.01 and p<.001 respectively. The number in brackets ( ) is the robust standard error.

6.5 Discussion

Several studies have documented the high degree of preference for and WTP for certification and previous chapters of this study presented corroborating evidence. However, an in-depth understanding of consumer preferences for certification has been hampered by the lack of empirical research concerning consumers' valuations of specific attributes of certification and whether the assessment of importance of these attributes corresponds with higher WTP for those attributes. This chapter helps to fill that gap.

Respondents are clearly willing to pay more for some attributes than for others and this is consistent across all three sectors. These attributes include *Community*, *Environment* and *Nature*. At most, respondents were willing to pay a medium to large premium for enhancements in those specific attributes. Previous research has shown that businesses prefer to invest in eco-initiatives by first considering consumer preferences and their WTP (Temperini, et al., 2012). These findings thus provide businesses with useful information that could be used to guide their investment decisions.

Important findings also emerge in regards to the disparities in WTP across the three products. For example, at accommodations, respondents were not willing to pay for *Culture* and *Interpretation* (the *status quo* was the preferred option). They were only willing to pay a small increase for improved *Conservation*. On the surface, this finding seems to contradict earlier findings from Chapter 5 and others (e.g. Levy & Park, 2011) where it was noted that visitors at lodgings rated guest-centred attributes as more important than earth-centred attributes.[68] However, it is important to note the distinction between *Total* and *Marginal* values (e.g. between consumer surplus or expenditure versus price). Guest-centered attributes may be more important overall (total values) but it seems that visitors are willing to pay for improvements (marginal changes) to other attributes. The results are thus not inconsistent.

Those points aside, importance scores were statistically associated with WTP for most attributes. At accommodations, the perceived importance of an attribute was found to be a key determinant

[68] In comparison, these same attributes (i.e. *Culture* and *Interpretation*) were valued higher at attractions. Perhaps, this can be explained by the nature of those two sectors – these particular attributes relate more to attractions. Culture is an important attraction of the region which is in effect rich in Indigenous and European cultures. As noted by Ray and Anderson (2000), many people are seeking connections to traditional values that have been lost due to modern progress. The fact that there are also several natural attractions which demand protection (note the WHA status of the region), serves to support the finding of the high importance of *Conservation* at attractions.

of WTP, with five out of six attributes being statistically significant determinants. This implies that perceived importance has a positive effect on WTP and importantly, the conclusion that there is good alignment between the levels of importance attributed to attributes with visitors stated WTP for these attributes is supported at accommodations.

However, this was not the case at attractions, with only two attributes (*Community* and *Culture*) showing a positive association between importance and WTP. This is also the case for *Nature* on tours (although the importance of three attributes was positively correlated with WTP).

The results of this study suggest that WTP may not be a bad indicator of preference, although it must be used in a sector specific context. If an attribute was deemed *'important'*, there was a positive association between WTP and importance (controlling for other factors), at accommodations. This suggests that the respondents in this survey were reacting to hypothetical scenarios in a similar way as to attitudinal questions, hence adding value in the robustness of the findings at accommodations. That said, I have no evidence to suggest that the expressions of WTP would actually be followed through in the market place (another good reason for not generating means estimates of WTP). As I mentioned in previous chapter, it is normally argued that there are discrepancies between attitudes and intentions, and this is clearly evident in my attractions sample in particular. This is known as the attitude-behaviour gap or green-gap and arises from the fact that people often give socially desirable answers (Yamamoto, et al., 2012; Žnidaršič, et al., 2012). As mentioned above, while several studies have documented consumers' stated WTP to buy green, at the same time, many have shown that such behaviours do not match the stated intentions. Cowe and Williams (cited in Murphy & Jenner-Leuthart, 2011) referred to this gap as the *'30:3 syndrome'* which implies that while a third of the population declare worthy intentions in support of ethical issues and of a firms' effort in social and environmental responsibility, the fact is, only a third of those declarations are translated into observable behaviour. Several ethical products struggle to attain more than three percent market share (Murphy & Jenner-Leuthart, 2011). Because respondents are not willing to report their convictions accurately (e.g. for fear of not conforming to social norms), this has led to some researchers (for example, Ulrich and Sarasin (1995) (quoted in de Pelsmacker, Driesen, & Rayp, 2005) to cynically disregard questioning the public on their attitudes as it ultimately leads to misleading information. Specifically, respondents have the tendency to report WTP a larger premium as they are cognisant that such questions are hypothetical and that they are not required to purchase the product (Bougherara & Grolleau, 2005).

Nonetheless, this is not to say that the WTP information is not important – to the contrary, it allows researchers to clearly identify what attributes visitors are WTP most for. The *relative* information is,

evidently reliable (or at least as reliable as Likert scale information on importance), even if *absolute* estimates (e.g. precise dollar ($) values of WTP) need to be treated with considerable caution. This information is particularly useful to many in this industry and in other industries and to those interested in promoting sustainability in general. A vitally important future research topic is to investigate WTP and/or attitude versus actual behaviour.

6.6 Conclusions

While many researchers have examined the importance of different product attributes and consumers' WTP for these attributes, very few appear to have linked the two. This lack of research is noticeably significant in the tourism certification literature. Simply ascertaining the WTP and preference for certification is not enough. It is equally important to know if visitors support the things they say they believe in and if so, how strong that support is. This provided impetus for objective 5, being to determine if tourists are willing to pay more for some attributes than for others and if visitors are willing to pay more for attributes which are deemed *'important'.* This objective served as methodological triangulation to validate the conclusions drawn in earlier chapters about WTP and perceived importance of certification's attributes.

To fulfil this objective, two research questions were developed:

1. Which attributes are *'valued'* most/least (in terms of WTP)?
2. Does visitors' perceived importance of attributes correspond with higher WTP for those attributes?

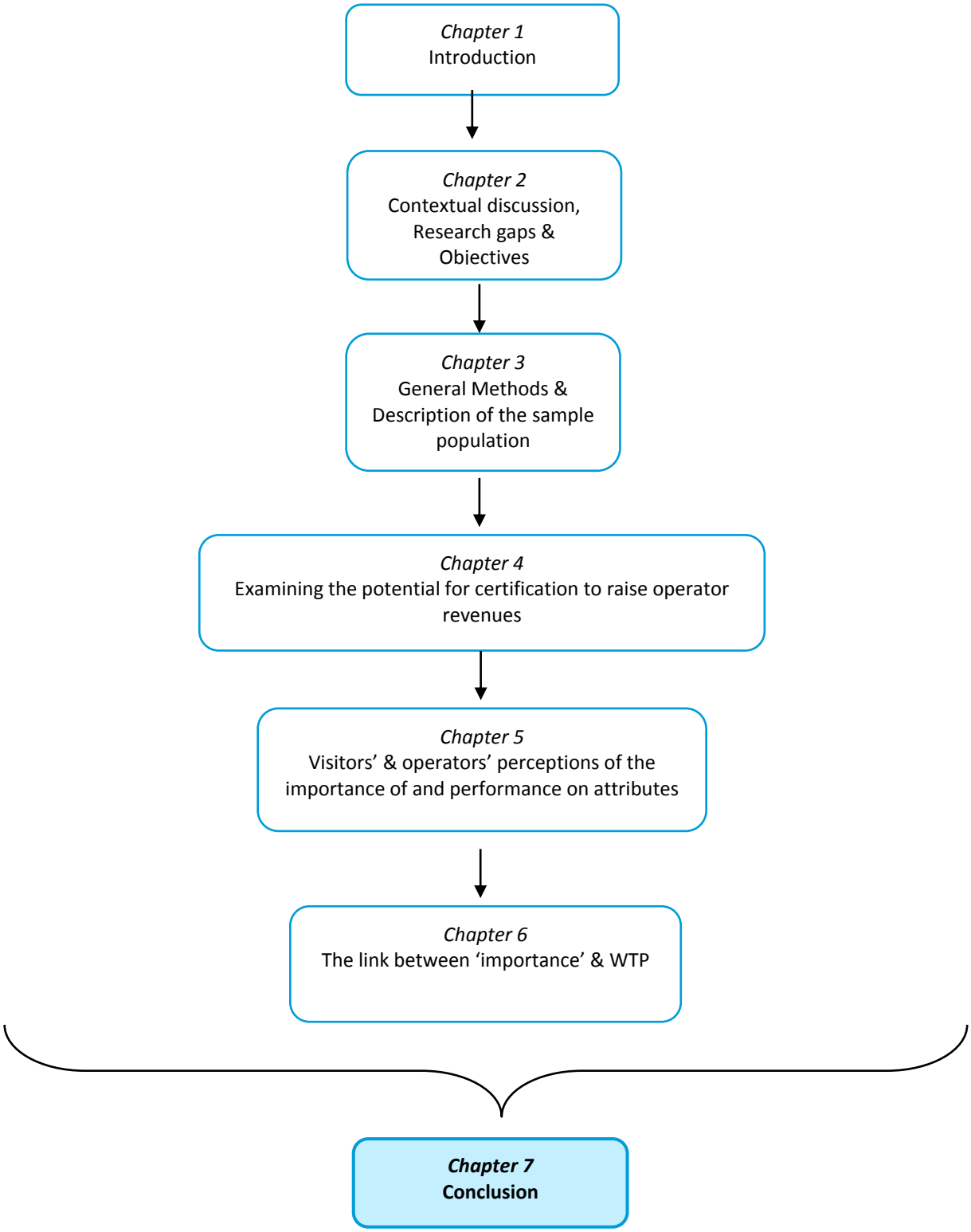
Different methods known to be able to elicit preferences and WTP values for different attributes, were considered. These include: hedonic pricing method (HPM), choice modelling (CM), Conjoint analysis (CA) and contingent valuation (CV). However, given a lack of observable data on attribute variations (HPM), issues of task complexity associated with experimental designs (CM and CA – although to a lesser degree in the case of the latter) and the goal to still value multiple attributes (not normally useful when done using CV), a *modified CV* approach was employed. Insights from the CM literature were used to help structure the choice designs.

Across all three products, respondents were willing to pay more for *Community, Environment* and *Nature* (in the order of a medium-large premium). However, there were some variations across the products – at accommodations, for example, respondent were not willing to pay a premium for *Culture* instead most preferred the *status quo*, while at attractions, respondents' WTP for that same attribute was higher (medium-large premium). This is not unexpected: at accommodations

generally, emphasis tends to be on the adoption of best practices in energy savings, water management for example (Butler, 2008; Ustad, 2010).

Perceived importance was found to be a significant predictor of WTP for the accommodation sector (*Community* being the exception). This implies that there was good alignment between the levels of importance ascribed to attributes and visitors stated WTP for these attributes. In other words, if attributes are perceived to be important, then consumers will be willing to pay more. However, the same cannot be said about the attraction and tour samples. This is particularly true in the former: here, it was the characteristics of respondents that emerged as statistically significant determinants of WTP. Income, age and education were the most statistically significant determinants of WTP.

Thesis Outline



CHAPTER 7
CONCLUSION, IMPLICATIONS & FUTURE RESEARCH DIRECTIONS

Synopsis

This final chapter begins with a background of the study, synthesises the outcomes of the research, discusses the immediate implications of the findings and identifies the major contributions of the study. A description of the wider connotations of key findings and their limitations are then provided. The chapter concludes with suggestions for further research.

7.1 Background

With the tourism industry expected to double in size over the next decade and given the wide evidence of its negative consequences, many are concerned that future tourism development will be unsustainable. A key tool to help mitigate tourism's negative environmental and social externalities is the certification of tourism products. A well-known concept in the field of tourism, certification has been linked with the advancement of sustainable tourism development (Honey, 2002; Maccarrone-Eaglen & Font, 2002; Honey, 2007). Stakeholders and the broader community are said to benefit from certification. Consumers, looking for socially and environmentally friendly practices, are guaranteed quality. Certified firms, officially recognised as delivering *'responsible'* practices, are promised a competitive edge (hence increased profits). The environment and the community are also alleged to benefit as certified businesses adopt a range of environmentally and socially friendly practices (Rotherham, 2005; Bien, 2007; Honey, 2007).

However, there appears to be a generalised perception that the claimed benefits of certification have failed to materialise; tourism operators and academics are calling for more thorough investigations of the impacts of certification (Font & Epler Wood, 2007). Thus a need for evidence-

based studies of these claims provided the impetus for this research. In particular, the study took interest in the claim about the ability of certification to enhance the financial viability of certified businesses, said to arise by more consumers looking for businesses with good reputations, ones which are *'responsible'* and dedicated to sustainability and are perhaps, even willing to pay more for it (Smith, 2007; Bonroy & Constantinos, 2011, Millar, et al, 2000).

Clearly apparent in the literature is the lack of demonstrated demand for certified sustainable tourism products despite the reported plethora of certification schemes worldwide. Evidently, certification may not be satisfying the needs of its two key consumer groups: tourism operators who must decide whether or not to purchase certification, and tourists who must decide whether or not to purchase certified products from tourism operators. Although financial motives are not the sole reason for joining certification (or adopt sustainable measures for that matter), it is nonetheless the most prominent of motives (Levy & Par, 2011; Tepelus, 2005; Vernon, et al, 2003). Hence, the underlying hypothesis of this study is that tourism operators would not buy certification, unless visitors do, and visitors will only buy certification if certification delivers on what matter most to them. In view of that, the overarching aim of this thesis was to improve our understanding of the demand for tourism certification, by investigating the attitudes and perceptions of these two groups - with a focus on the *ECO* certification scheme in the Wet Tropics World Heritage Area (WTWHA), Queensland, Australia. To fulfil this principal aim, five objectives were developed, each derived from specific research gaps identified in the literature (Figure 8.1).

An attribute-level approach was adopted in the examination of certification, principally because certification is not just a simple, homogenous product, and is instead multi-faceted. This approach stemmed from Lancaster's' *Theory of Characteristics* which recognises that attributes have value to consumers, hence consumers chooses products based on the utility that each attribute provides (Lancaster, 1966).

The study adopted a multi-disciplinary approach using approaches commonly employed by both marketers and economists. Since *ECO* certification is product specific, this meant that questionnaires were developed to match the particular product, i.e. accommodation, attraction and tour. Data were gathered between January 2010 to June 2011 from a sample of 610 visitors and from 48 tourism operators. Information was analysed in a manner that allowed comparisons between certification status and products. Major research findings and the implications for each of the five objectives are summarized in the next section.

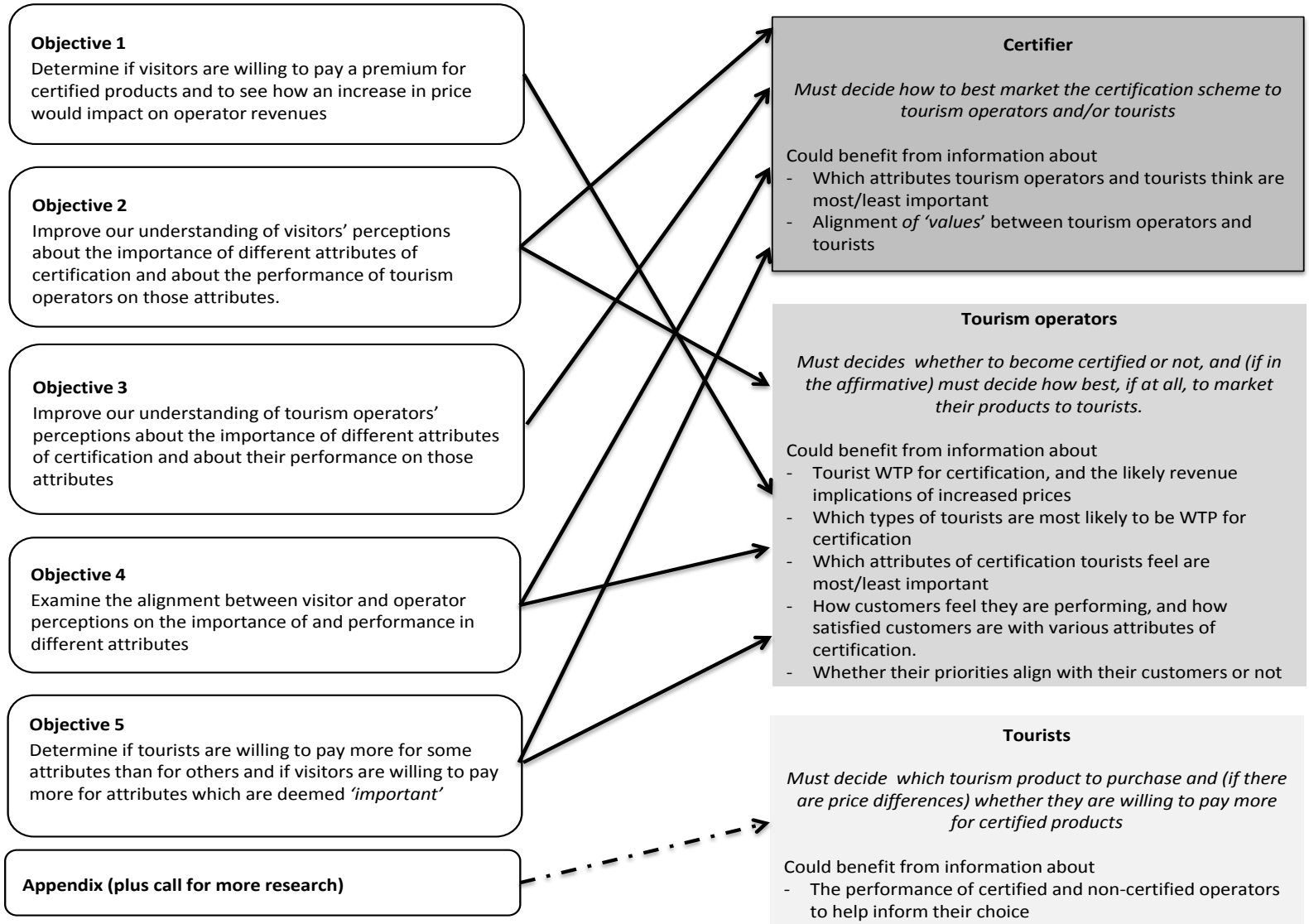


Figure 8.1 Summary of contributions of the research

7.2 Summary of findings

Objective 1: Determine if visitors are willing to pay a premium for certified products and to see how an increase in price would impact on operator revenues

The analysis of Chapter 4, demonstrated that, given identical prices but different certification status, visitors had a strong preference for *ECO*-certified products (86%, 74% and 83% for accommodations, attractions and tours respectively). This finding reflects those of others that suggests visitors are more likely to purchase a holiday from tourism enterprises with a sustainable tourism policy (Mintel, 2007; Goodwin, 2011). To operators, this means that if they have a label, it is probably in their interest to display it prominently.

Visibility of the label is necessary given the fact that research has found that most visitors are unaware of the certification status of their chosen product (at least partially due to the lack of advertisement on the part of the business) (Jhawar, et al., 2012). Although a clear majority of respondents involved in this study claimed to know that the business they were asked to assess offered certified products, only 60% were correct. A search conducted by the researcher on some of the *ECO*-certified businesses' websites, confirmed that some operators are simply not publicising their ECO certification brand, perhaps helping to explain this observation. It seems that this is a recurrent issue for certification schemes in tourism: Newton, et al., (2004) also found that half of hotels subscribed to Costa Rica's CST program failed to advertise their certification credentials.

That visitors prefer *ECO*-certified products, is encouraging, however, simply adding a logo and promoting the product is not going to increase purchases (Bien, 2005), unless there is demand and unless visitors are willing to pay more for it. Hence, the principal focus of Chapter 4, was to find out if visitors were willing to pay a premium for *ECO* certification. Results from the dichotomous contingent–valuation approach used here showed that they were. Here too, this finding is consistent with previous related research (Enhance Management, 2000; Chafe, 2005, 2007).

However, still missing from current discourses was the link between willingness to pay (WTP) and operator revenues. Accordingly, Chapter 4 set out to investigate the possible revenue implications of certification. It found that despite visitors to the WTWHA and surrounding areas expressing a positive WTP for *ECO*-certified products, caution should be used before *ECO*-certified operators seek to earn a premium for their effort by raising prices. The study found that an increase in price as low as 10%, would generate a fall in demand of between 26%-33%. Consequently, the increase in price would reduce revenues. In other words, the results indicate that certification may not necessarily provide operators with a competitive edge. Therefore, despite indications that some visitors are WTP a premium for certified products, certification is unlikely to raise revenues since

operators who increase price will lose customers. Evidently, the demand for certification in the WTWHA is elastic. That said, this research only focused on revenues. The final impacts on profits cannot be determined without also investigating the effect of certification on costs – a topic worthy of future research. This finding also has highlights the fact that researchers investigating any phenomena (not just certification) must exercise caution when interpreting WTP values: simply reporting the percentage (%) WTP a premium is not enough. Instead, researchers must also look at the proportion of respondents who are unwilling to pay a premium, and compare this to the premium presented, to get a better picture of the revenue consequences of a price increase.

Sub-objective: Investigate the determinants of WTP

This component of the study also explored other avenues which may potentially provide certified businesses with a competitive edge, specifically, the ability of certification to attract new customers, who are both dedicated to sustainability and who are willing to pay more. Non-parametric tests were employed to identify the demographic characteristics of such tourists. The financially well-off, well-educated, female and younger visitors were found as likely groups to target. This provides a starting point in profiling visitors with preference for *ECO* certification. Thus, marketing strategies geared towards these visitor types may be more successful than those geared at the population in general.

Recognising the fact that demographics may not always be good indicators of WTP (Krystallis & Chryssohoidis, 2005), the chapter extended the discussion to also assess the impacts of knowledge and perceptions of the contribution that certification makes on WTP. This extension was also driven by the fact that visitors' understanding of 'sustainability' or 'responsible tourism' in general is reportedly inadequate (Miller, et al., 2010; Jhawar, et al., 2012) and their understanding of certification specifically, is low (Schott, 2006). So, in order to encourage WTP, there is a need to increase visitor awareness. In further support of my decision to consider perceptions of the contribution of certification to sustainability was the tendency of certification programs to incorporate only the biophysical aspects of sustainability: however, economic and social aspects are also pertinent to sustainability (WCED, 1987; McCool, et al., 2001). Hence visitors who understand the perceived benefits of certification would support their further development, as suggested by Fairweather, et al., (2005) and Chafe (2007).

Findings relating to knowledge (i.e. tourists' awareness of the requirements of *ECO* certification) revealed an overwhelmingly low level of awareness. This lack of knowledge varied across the three products (66-94%). Even recognition of the scheme prior to taking this survey was low (53%). The results mirror research done almost a decade ago on the same scheme (then called NEAP) whereby

the majority of those surveyed had no knowledge of the scheme (Planeta.com cited in Font & Epler Wood, 2007). Hence, while there has been an increase in awareness since NEAP, it appears to have had limited stimulus in driving the *ECO*-certified brand, overall.

Evidently, certification remains opaque because consumers are unaware of what the business is doing to address any particular issue or what the level of achievement is, for example, on water conservation or re-use. Findings such as these may be a cause for concern for the *ECO* certification brand, seeing that it prides itself on the fact that it is well-known and adopted worldwide. In fact, the stated popularity of the scheme influenced the decision to choose this program for this research. But the findings of this study refute this claim. This shows that the majority of respondents lack awareness of what *ECO* certification stands for, drawing attention to the need for more effective marketing campaigns. Consumer awareness is a prerequisite for a change in behaviour in favour of a brand's social and environmental investments (Nielsen, 2012). Thus, when consumers are more aware, they can translate their support by means of buying products for their positive qualities (such as certification). This is evidenced by the statistically significant difference found in WTP at the 25% and 50% premiums between 'informed' and 'not informed' visitors to accommodations and tours.

Visitors perceived *ECO* certification as having a positive impact on social, environmental and financial factors, including their trip experience. Perceptions are important, since consumers are more likely to pay a premium if they believe that products purchased have a positive or at least neutral impact on the environment and society (Fairweather, et al., 2005; Chafe, 2007; Thompson, et al., 2010). Indeed, this was evident when perception of contribution was correlated with WTP measures. The implication of this finding is that customers expect *ECO* certification to contribute positively to all aspects of sustainability, including their trip experience and these perceptions of effectiveness influence WTP. This implies that there is a strong desire for products that are authentically sustainable (Han, et al., 2009; Bonroy & Constantatos, 2011; Lebe & Zupan, 2012). Evidently, *ECO* certification must be able to demonstrate credible evidence of its positive environmental and social impacts, if customers are to fully support it as a measure of sustainability.

Objective 2: Improve our understanding of visitors' perceptions about the importance of different attributes of certification (linked to dimensions of sustainability) and about the performance of firms on those attributes.

The hypothesis underpinning the investigation in Chapter 5, is that if tourists are to pay a product premium, they must first care about products and its attributes – in this case the individual attributes that make up *ECO* certification. This is the crux of Lancaster's proposition: that consumers make purchase decisions based on the characteristics of the different attributes of a

product (Lancaster, 1966). According to Jaccard, Brinberg & Ackerman (1986), an attribute is important if a change in the individual's perception of that product attribute leads to a change in the attitude towards the product, which may impact buying power. Identification of important attributes will provide clear guidance to certified firms about what could be marketed today to current customers.

Accordingly, the chapter explored the importance of various attributes to visitors. This chapter also looked at visitor perceptions of operator performance on those attributes reasoning that this would help to highlight issues that may require further attention and that this information could be used as a measure of customer satisfaction with *ECO*-certified products.

The chapter found fairly high levels of importance for most attributes across all three products, with *Marketing* and *Nature* consistently ranked as the most important, while *Customer* was found to be one of the least important attributes. However, rankings of mean importance of other attributes differed across the three products. For example, Interpretation was perceived to be more important at accommodations (ranked 3rd), compared to attraction venues (ranked 6th) and on tours (ranked 7th).

Consumers considered *ECO*-certified operators to be performing 'better' than non-*ECO* certified operators on many attributes. This sentiment was especially pronounced at accommodations. This, taken together with the positive correlation between visitor perception of operator contribution to sustainability and WTP, would lead one to believe that *ECO*-certified operators are doing well and provides an impetus for operators to become certified. However, there is a need for rigorous comparison of sustainability performance of certified and non-certified operators so that visitor perceptions can be validated.

First, consumer perceptions are of a subjective nature and are generally not based on objective and scientifically verifiable facts (Janssen & Hamm, 2012, pg 16): as previous research and Chapter 4 shows, many consumers have relatively little understanding of certification and what it entails.

Second, not all contributions to sustainability of an operator are visible to the customer. For example, visitors do not know how much a business contributes to *Conservation*, so they may not be able to adequately assess performance. As such, caution must be exerted in interpreting such findings, as they do not lend a true picture of what is actually occurring. Rather they give a sense of what customers perceive to be occurring. The wider implications of the 'invisibility' of attributes are examined in a Section 7.3. The main point here being that 'invisibility' likely occurs because of a restricted flow of information from the operator to the visitor. Such asymmetric information gives

rise to market failure which certification is also claimed to address (Bougherara & Grolleau, 2005; Yamamoto, et al., 2012; Žnidaršič, et al., 2012). Clearly, this issue is not yet effectively addressed.

When importance and performance were compared (via the importance–performance analysis), the performance ratings of some attributes for *ECO*-certified operators were identified as being higher than importance ratings. These differences were statistically significant for *Nature, Conservation* and *Customer* at *ECO*-certified accommodations and *Nature* at *ECO*-certified attractions. There were two attributes in which the perceived performance of non-*ECO* certified operators exceeded importance by a statistically significant amount – *Customer* and *Environment* at accommodations and attractions respectively. Areas where operators were found to be lacking (in that performance was regularly assessed as being less than importance) included: *Environment* at non-*ECO* certified accommodations only. Although visitors' judgments may not necessarily depict actual behaviour, the results nonetheless imply that customers are more satisfied with *ECO*-certified products than they are with the alternative.

Certification providers must explore ways to further enhance satisfaction, and this study has been able to pinpoint aspects of certification that may need attention as well as areas of clear strength, critical when differentiating from competitors: thus managing customer satisfaction is key. That said, it seems that *ECO*-certified operators can compete on more than just price and in competitive industries like tourism, such an advantage is highly desirable.

Objective 3: Improve our understanding of tourism operators' perceptions about the importance of different attributes of certification (linked with dimensions of sustainability) and about their performance on those attributes

Objective 3 recognised the lack of research on operator perspectives of certification and set out to help fill the void by mirroring the analyses of the visitor study. Firstly, operators identified *Marketing, Nature,* and *Community* as the most important attributes. Secondly, across the majority of attributes, *ECO*-certified operators self-scored their performance higher than did their non-*ECO* certified counterparts, perhaps because of more confidence, having already succeeded the third-party assessment for *ECO* certification and obtaining a logo as validation. However, there were no statistically significant differences in self-rating of performance between the two categories of operators. While one can argue of biases in operators' own judgement of performance - indeed plausible – the results nevertheless corroborate those of the visitors. That said, if certification is to be properly recognised as a tool for the sustainability of the industry, it is necessary that these perceptions be validated with objective scientific data.

Objective 4: Examine the alignment between visitor and operator perceptions on the importance of and performance in different attributes

Chapter 5 also aimed to compare the importance that visitors and operators place on certification's various attributes. Using just the mean scores of importance, the results showed that operator and visitor views were similar: like tourists, operators felt that *Nature* and *Marketing* were the most highly valued attributes and *Conservation* and *Culture*, the least valued attributes. As the alignment of views, these were found to be statistically similar on four out of eight attributes. However, operators valued *Nature, Community, Customer* and *Marketing* more highly than did the visitors, and these differences in importance scores were statistically significant. The fact that these attributes were regarded as being more important by operators may be logical given the fact that they tend to be closely associated with the business, in comparison to Interpretation for example, which is more customer focused.

Objective 5: Determine if tourists are willing to pay more for some attributes than for others and if visitors are willing to pay more for attributes which are deemed 'important'

The final data chapter provided information about what attributes visitors considered important. The focus of Chapter 6 then was to determine if visitors were willing to pay more for improvements in those attributes deemed to be important. This chapter also served as methodological triangulation to validate the conclusions drawn in earlier chapters about WTP and perceived importance of certification's attributes. Insights from the choice modeling and contingent valuation literature facilitated the development of survey questions using a 'modified contingent valuation' approach. Responses were used not to generate estimates of 'value' (since these estimates would only be valid in the presence of perfect information and since results of Chapters 4 and 5 clearly indicate this was not the case), but to gauge the strengths of visitors' preferences for the different attributes.

Attributes for which visitors were willing to pay most (in terms of percentage (%) mark up on normal prices) included *Community, Environment* and *Nature* – and this was consistent across all three products. Visitors indicated that they would be willing to pay a medium-large increase in price (25-30%) for improvements in these specific attributes. However, there were clear product differences. For example, visitors were not willing to pay a high premium for *Culture* at accommodations but would pay more for that attribute at attractions. At accommodations generally, most emphasis is placed on the adoption of best practices in energy savings, water and waste minimisation (Butler, 2008; Ustad, 2010).

Ordered logistic regression was then used to cross-validate the perceived importance of attributes (Chapter 5) with WTP whilst controlling for other socio-economic factors (e.g. age, income). Results revealed that, at accommodations, the perceived importance of attributes was a significant predictor of WTP (*Community* being the exception). This implies that there was good alignment between the levels of importance ascribed to attributes and visitors stated WTP for these attributes. However, the same cannot be said about the attraction sample – here, it was the characteristics of respondents that emerged as statistically significant determinants of WTP.

This research clearly shows that if attributes are perceived to be important, then consumers will be willing to pay more for them. That said, care must be taken when dealing with dollar estimates of WTP since the literature clearly suggests discrepancies between attitudes/intentions and actual purchasing behaviour (Font & Epler Wood, 2007; Li & Ouyang, 2009; Leslie, 2012). These analyses also improve the confidence in the conclusions drawn by studies that may be limited to using the contingent valuation or Likert-scale data to assess the relative importance of a range of factors.

7.3 Additional contributions

In addition to the empirical contributions mentioned above, the research has also made the following substantive contributions:

This research is the first to adopt a *'disaggregated'* approach to assessing certification. Unlike previous studies, this study recognised that certification is multi-faceted, comprising many attributes that need to be assessed in detail. It demonstrated a relatively simple system for assessing both tourist and operator views on the importance of various attributes and also for assessing performance. Although this study focused on *ECO* certification in the WTWHA, the method could be adapted and used to assess other certification schemes in different industries worldwide.

The research incorporated various dimensions of sustainability, providing an in-depth view of the *ECO* certification scheme in the WTWHA. Of the few studies that have looked at this particular scheme, most have looked at whether visitors were willing to pay a premium for certified products, or at the overall structure of the scheme. Thus this study builds on those by providing evidence that increasing the price of *ECO*-certified products may reduce revenues, despite the fact that some visitors are willing to pay a premium. It has also helped improve our understanding of:

- tourist' perceived importance of and willingness to pay for various attributes of *ECO* certification;

- tourist' perspectives of how operators perform on several attributes of *ECO* certification;
- tourism operator views of the importance of different attributes used for assessment by *ECO* certification and of their perceived performance on those attributes; and
- the alignment of views between tourist and operators on the different attributes measured by the *ECO* certification scheme.

Of note, this research is the first to compare tourist and operator views regarding the different attributes of certification. The method used here (of developing matching surveys for businesses and visitors) is clearly transferable to other contexts.

Importantly, this study has been able to test outcomes regarding certification claims specifically about certification increasing operator revenues & certification being '*better'* (although based on perceptions), which can be considered as a starting point for an assessment of the need for comparing different types of operations, using objective indicators of performance. Moreover, the study has provided insights of some of the differences between *ECO*-certified and non-*ECO* certified tourism operations in the WTWHA and surrounds. These findings thus affirm the importance of focusing on attributes, the importance of looking at more than just WTP when assessing demand for (as opposed to value of) a product like *'certification'*, and the importance of beliefs. Hence, the methods used here can be used to understand other environmental issues, for example evaluations of peoples' perceptions of climate change.

This study provides information about visitors' and operators' satisfaction with certification in general and with its respective attributes - a topic which has previously received little attention, particularly in the case of the latter. To facilitate this information, it used the importance-performance analysis, modifying it to address limitations commonly identified in consumer satisfaction studies which used this technique. These limitations range from issues in the interpretation of results arising from the placement of the axes or the cross-hairs, to its lack of statistical analysis rigour (Hammitt, Bixler, & Noe, 1996; Tarrant & Smith, 2002; Bruyere et al, 2002; Bacon, 2003, Eskidsen & Kristensen, 2006). Specifically, this study provides supporting evidence about the intricacies over the placement of the cross-hairs (axes), showing how in certain situations, the consequential management decisions may not be warranted (conflicting results were found based on the type of mean used: all attributes fell in two quadrants when the scale mean was used (i.e. Quadrant I (High performance, low importance) and Quadrant II (High performance, High importance). Results varied with the use of the mean and median, with *Culture,*

for example, falling in Quadrant III instead (Poor performance, Low importance) and *Environment* falling in Quadrant IV (Poor performance, High importance). Given these concerns, the study adopted Bacon's (2003) diagonal line approach, clearly differentiating regions of differing priorities (while all points on the line have equal opportunities for improvement, those below suggest high priorities for improvement as importance exceeds performance and vice versa). The study also provides supporting evidence that segmentation of data accounts for diversities between distinct user groups (in this study, *ECO*-certified and non-*ECO* certified operators), thus providing more powerful results (Wade & Eagles, 2003; Bruyere, et al, 2002). However, the study differs from others by presenting results of distinct user groups together in the same graph. Doing so facilitates comparisons. In sum, these analyses provided information about the strengths and weaknesses of *ECO*-certification as perceived by visitors and operators – information that is beneficial when differentiating from competitors (Arbore, Alessandro, Busacca & Bruno, 2011) (for example, *ECO*-certified accommodations should be highlighting their strength in the following areas: *Nature*, *Conservation* and *Customer*).

The study also contributes significantly to the broader literature about WTP for certification. Importantly, WTP studies were initially developed by environmental economists hoping to assess the *'value'* of non-market goods. They were not intended to be used as a way of assessing the *'demand'* (in a commercial sense) for products. As clearly shown in chapter 4, the existence of customers who are willing to pay for a product does not necessarily translate into tangible (commercial) *'demand'* for that product (in that it does not mean businesses will be able to charge higher prices for their products and earn higher revenues). Whilst this seems to be a relatively trivial finding (given the long history of the concept of price elasticity and its known link to revenues), the extra step of linking information about tourist WTP for certification to operator revenue has, to the best of my knowledge, not yet been made within the broader literature and therefore highlights the importance of the message. Without that link, results from WTP studies may be mis-interpreted by those not familiar with the subtle nuances of the theory behind contingent valuation studies.

A *'modified contingent valuation'* model for valuing the different attributes was also developed. This enabled the comparison of WTP with Likert-scale importance scores which allowed for the cross validation of assessment systems. The contingent valuation approach is often criticised for its hypothetical nature (Louviere, et al., 2000; Bateman, et al., 2002; Zakaria, 2011). The findings of this research however, indicate that the contingent valuation responses were as robust as Likert-scale responses (or are at least strongly associated), (i.e. they are able to generate reliable ordinal

indicators of *'value'*, in that visitors were willing to pay most for attributes considered to be most important).

In addition, the research adds to the current literature about whether tourism in protected areas pays attention to certification. As already noted, *ECO* certification was not well known to tourists in the WTWHA, but they did indicate strong preference for *ECO* certified operators (all else constant); evidently, one of the benefits of *ECO* certification in this region, is that it does, indeed, allow tourists to identify and select sustainably run businesses (Fairweather, et al,2005; Puhakka & Siikamäki (2012). Moreover, it seems that tourists believe that *ECO* certified businesses in the WTWHA are perceived to be performing *'better'* than their non-*ECO* certified counterparts, perhaps suggesting that greenwashing (Kuehnel, 2011) is not an issue in this region – although this suggestion needs to be verified with objectively measured scientific evidence.

The types of tourism activities that are undertaken in different regions also play a significant role in determining impacts in protected areas (UNESCO 2010a, 2012; IUCN, 2009; Dudley, et al, 1999). While most studies tend to focus on accommodations, this research has been able to provide information on tours and attractions as well. Despite the fact that *ECO*-certified businesses in the WTWHA were perceived to be performing *'better'* than non-*ECO* certified firms across a range of (sustainability related) attributes, this research found that 27% of tourism operators are not considering certification, while at least 23% are either considering or planning to implement certification. Evidently, there may be scope for further expansion of the certification scheme in this region, but unless something changes (e.g. tourist WTP for or perceptions of certification, operator perceptions of certification) there are limits to this expansion.

The findings also contribute to the literature on consumer behaviour: even with a lack of information (evidenced by low awareness of *ECO* certification) tourists still make evaluations and choices, (preferring *ECO*-certified businesses in this study). This finding supports the view that consumers are *'irrational'*, and when faced with limited information, time and cognitive ability (characteristic of real market situations) many adopt satisfying rather than optimising criteria – a logic stemming from the *Theory of Bounded Rationality* (Bowbrick, 1994; Simon, 1995).

That said, consumers will try to choose the option that maximises utility, subject to budget constraints. Evaluations of products can also be made according to the perceived benefit of the product. When consumers have confidence that their product choice will make a significant contribution to desired collective outcomes they are more likely to show preference for those products and are more likely to pay a premium (Thompson, et al, 2010). As demonstrated in chapter 4, tourists who perceived certification to be contributing positively to sustainability as well

as to their trip, were more likely to be willing to pay for *ECO*-certified products than tourists who did not feel similarly. Moreover, the findings of this research provide support to the notion that consumer behaviour differs according to (a) the setting (for example, with disparities in pro-environmental behaviour across a home and hotel setting) (Miao & Wei, 2012; Lindenberg & Steg, 2007; Gatersleben, et al, 2002; Stern, 2000); and (b) the type of tourism product (with higher importance given to most attributes in accommodations and attractions and lower importance given to those same attributes on tours).

Finally, this research provides supporting evidence to the Lancasterian view of utility. Lancaster assumed that quality is in the mind of the consumer, that individuals see the same objective characteristics in a good, but value them differently. Indeed, this research found that visitors with different characteristics valued attributes differently. For example, at accommodations, those on a relatively high income thought that *Nature* was more important than those on a lower income. Similarly, those with a higher income or with a post-secondary education thought that *Interpretation* was more important than the less well off, or less well educated. Lancaster also assumed that the consumer has to pay more to get more of a characteristic and that he or she can get more by paying more. This research found that respondents were generally willing to pay more for attributes they considered important and less for attributes deemed to be less important. However, this research also suggests that WTP differs across different settings: respondents at accommodations were willing to pay for *Culture* while at attractions they were not. The key point to be made here therefore, is that as predicted by Lancaster, this study found that consumers (visitors) are willing to pay different amounts for different attributes of certification: if they were not, then there would have been much less variations in the WTP for individual attributes.

7.4 Wider implications of the research

The research has several ramifications, most of which have already been noted in this chapter. However, three other significant implications warrant discussion.

Firstly, the study unambiguously found that visitors lacked the necessary information to make an informed assessment on the performance of tourism operators across many attributes (particularly on some issues such as the *Conservation*, or *Community*). That is, there was imperfect information which can lead to complete market failure (Akerlof, 1970). Much of the problem is likely to stem from the *'invisibility'* of some attributes. As such, it seems that *there is a need to increase the visibility of these attributes* by communicating exactly what certification entails and how operators satisfy these attributes. This could be done in many ways (e.g. websites, brochures) and by many

different people (e.g. businesses, certification schemes, government). Without such information, the market may fail. This advice is applicable to other certification schemes and or/products (tourism or otherwise).

Importantly, providing more and better information will not only make people more aware of certification (which could potentially lead to an increase in uptake by operators and/or an increase in demand for certified products by consumers), but the information could be used to *'properly'* evaluate the impact of certification on firms, communities and the environment. This would allow one to test if certification does indeed contribute to the sustainability agenda. *If* proven, this could generate significant support for certified operators from customers (given that those who felt certification was making a difference were willing to pay more for it) but perhaps also provide a *prima facie* argument for public policies to support certification schemes, *if* there are still positive externalities.

Secondly, the study found a lack of concern over some attributes, which are generally believed to be vitally important to the sustainability agenda. As mentioned earlier, this may be due to a lack of understanding of *'sustainability'* or limits on cognitive ability to process the information (Valor, 2008). This suggests that there may be a need to consider using public awareness campaigns (or similar) to highlight their importance and thus raising private demand for certified products, promoting sustainability. Although this study was conducted in the WTWHA, the implications of its finding are likely to extend to other protected areas (marine and terrestrial) and to other products in different industries promoting sustainability. The fundamental issue here is the fact that consumers and businesses may not perceive some attributes to be important (for e.g. *Conservation, Community*, and *Culture*). Public awareness campaigns coupled with more and better information (from the discussion above) may thus help revitalise the business-to-consumer (B2C) campaigns, which to date, have been deemed as unsuccessful and may also enhance that of business-to-business (B2B) campaigns for further support of certification and increase market uptake.

Thirdly, the study showed that many criteria can be applied in assessing sustainability of businesses and of tourism at large. The challenge is to determine which attribute(s) is(are) most important in a particular area – evidently, they are not equally important everywhere. And just because an operator performs well across several attributes, it may not necessarily mean that the operator is addressing the most important local sustainability issues. This study is a clear example – although tourism operators operate in an area that is globally renowned and recognised for its ecological

and cultural significance, *Conservation* and *Culture* were not perceived to be important by the sample of operators in this study.

Lastly, the study found that should operators increase the prices they charge for *ECO*-certified products they are likely to face a loss of existing customers, hence a loss of revenues (despite evidence of WTP). *If* certification can be proven to generate public good benefits (which to date has not been convincingly demonstrated), then co-existence of (a) public benefits and (b) risk of decreased revenues, may provide a *prima facie* case for government support as well as marketing educational support to address issues of imperfect information. There are many avenues that could be pursued, for example, subsidisation. However, this can be costly. This research is emphasizing the potential of less costly approaches for support: to reduce the price elasticity of demand for certification, government could consider *legislating* so that all firms in sensitive areas (such as protected areas) seek to be certified. This would allow all operators to increase prices to cover any potential increases in cost, without risking the loss of customers. Legislation to enforce compliance to certification may help reduce issues of *'free-riding'*, given that many businesses fear their position in the market may be undermined by the less *'principled'* companies (Forsyth, 1997; Rivera, et al., 2006; Lyne, et al., 2008).

7.5 Limitations and opportunities for further research

A major advantage of this study is that it has disaggregated the parent concept of certification into individual components, providing information about their importance to key stakeholders, about the performance on each attribute and customer WTP for them. Whether or not certification really does make a difference to sustainability is still up for debate. While this study has provided some important pieces to that puzzle, there are still many pieces to find before a final assessment can be made. Some of the limitations of the study also serve to highlight opportunities for future research. They are:

- This study was conducted in the Wet Tropics region and included land-based tourism operations only. Future studies could greatly add to our knowledge base by looking at certification in other context, in Australia and around the world.

- The current study explored the importance and performance of core attributes only. Future research should explore the possibilities for assessing the importance and valuation of the subcategories of attributes. This will perhaps cater for the variations in importance due to the examples used to describe the core components. As noted earlier, *providing*

forms in rooms so customers can provide feedback may not be popular to many as a method of measuring customer satisfaction. Additionally, *minimising energy use* (a subcategory of *Environment* and which was used as example) may be of lower importance to a person than *visual impacts or noise* (other subcategories of the core attribute *Environment*).

- For fear of having a lengthy survey, two attributes (*Customer* and *Marketing*) were not included in the '*modified contingent valuation*' model as, at the time of the survey design, they were perceived to render more benefits to the operators. This may have led to potential biases in the values estimated. Future research should explore inclusion of these two attributes in the survey - especially since the study found that visitors ranked *Marketing* highly and *Customer* poorly.

- Since I did not look at the trade-offs between the different variables (as I wanted to ensure that improvements in attributes corresponded with a higher premium) future research could consider at using choice experiments or conjoint analysis to allow variations in the attribute levels and look at the trade-offs (e.g. less Indigenous involvement but more local purchases) – although this may be limited by the number of attributes one can assess in a single choice study.

  The inclusion of a variety of performance indicators contributed to some insights into the performance of *ECO*-certified businesses and how they compare with their non-*ECO* certified counterparts. However, the analysis was limited by sample size and data limitations – hence the reason for only including that part of the study in the appendix. Future research should consider a larger group of operators, to facilitate not only assessments by certification status but also detailed comparisons across comparable characteristics (e.g. similar size, similar turnover, similar activities, similar workforce, etc). It is only by comparing performance (assuming that they are measured) that a true validation or refutation can be made regarding the claims of certification.

- Linked to that idea, future studies should also validate these with qualitative data (e.g. interviews, on-site visits).

- This study has examined the importance of attributes as currently targeted by certification schemes. Future research would benefit from carefully examining what else is important to tourists and operators, relative to the attributes of sustainability/certification. While there is a huge body of literature about destination competitiveness, none have included

certification as a factor influencing the decision to visit. Hence, the inclusion of the importance of certification in such studies could contribute significantly in the marketing of a destination. It would be interesting therefore, if future study could intercept potential visitors (while they make their decisions), to see if certification (or indeed, the 'greenness' of the destination area/region/country) influences where they go for holiday (e.g. importance of certification for coming to Australia). This would also help in deciding if certification or regulation may be more effective both in the area of marketing and as environmental outcomes.

- If researchers would like to continue with the focus on certification, then they could alternatively seek tourists and operators views on what characteristics they look for in a certified product (tourist) or in joining a certification program (operators). These can then be used to make comparisons with those measured by certification schemes. This knowledge may prove useful when designing certification criteria and ultimately help ensure that certification schemes reflect stakeholder needs.

- Finally, this study has shown what certification means to consumers and to operators. Future research would benefit from an understanding of what certification means to other agents in the communication and distribution channels (e.g. travel guides, booking specialists and the media), to the scientific community (e.g. researchers), as well as to protected area managers (e.g. the Wet Tropics Management Authority (WTMA), hence a multi-stakeholder view is needed.

7.6 Concluding remarks

This study set out to improve our understanding of the demand for tourism certification, by investigating the attitudes and perceptions of these two key consumer groups (visitors and tourism operators), with a particular focus on whether certification is able to enhance business revenues. Although this research found no real revenue benefits for tourism operators should they choose to increase prices charged for certified products, it did nonetheless find evidence to suggest that *ECO*-certified operators are strongly preferred to non-*ECO* certified operators if offered at the same price, particularly if consumers (a) are aware and (b) believe that certification makes a difference.

Moreover, the study found evidence that consumers are willing to pay a premium for attributes that are considered to be important, and that *ECO*-certified operators are generally perceived to be performing *'better'* than the non-*ECO* certified operators. Whether or not those perceptions match scientifically verifiable realities remains to be seen, but on the surface, they indicate that

certification may indeed be able to help advance the sustainable tourism agenda (if the financial issues can be overcome). In other words, if certification is to contribute towards the sustainability of the tourism industry (yet to be shown), then this research suggests that there may be a prima facie case for policies to support certification, in particular those that: (a) redress information deficits; and/or (b) increase public awareness of the important role that certification can play; and/or (c) help reduce the price elasticity of demand for certification.

Linked to both (a) and (b) is the fact that core attributes which would be considered critical to sustainability and to protected areas in particular (such as *Conservation and Culture)*, were not considered to be particularly important by some operators. This finding indicates the potential need for increased effort in raising public awareness of the importance of those particular attributes, since the weight of scientific opinion is that each must be addressed if wishing to promote sustainability.

As a final point, a firm's longevity in the market depends on not only what it offers, but also whether such offerings reflect customer beliefs and facilitates a positive customer experience. If the *'benefits'* of certification which consumers and others in the region deem to be important are not signaled, then certified products will not command price premiums; market failure will occur. Improving information is thus key. Prior research already points to the fact that consumers want to know more about certification and about the performance of certified operators. It can only be hoped that an increased understanding of certification and its attributes can change consumers' attitudes and alter their consumption behaviour in favour of certified products, benefiting the operator by helping him/her compete for market shares from sales to the attribute-conscious, certification label-using consumers, and ultimately helping to ensure that this important industry develops sustainably, particularly in protected areas, which by nature are environmentally and culturally significant but vulnerable.

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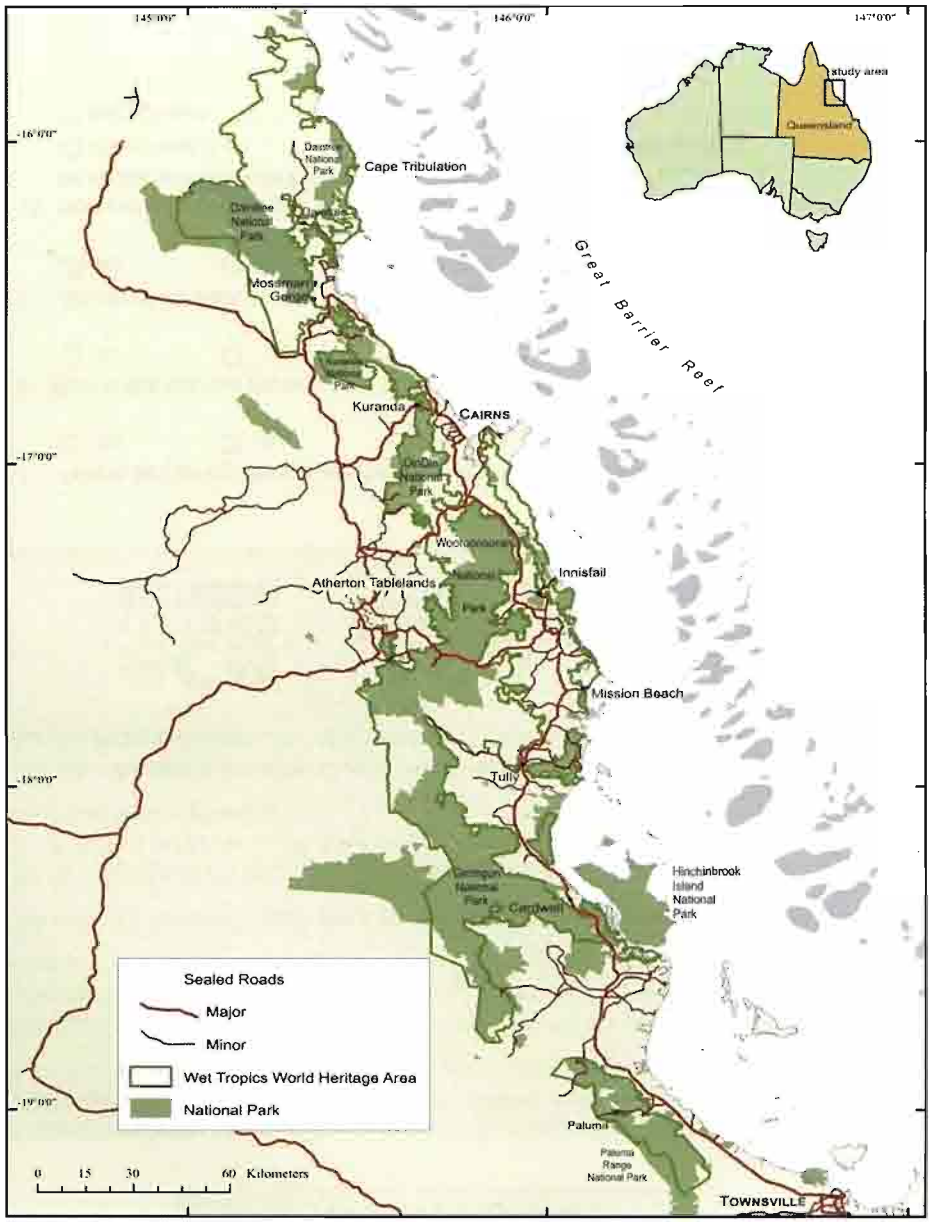
A survey of Visitors' Perceptions of EcoCertified and Non-EcoCertified Tours in the Wet Tropics World Heritage Area

JAMES COOK UNIVERSITY AUSTRALIA

Reef & Rainforest RESEARCH CENTRE
Implementing the Marine and Tropical Sciences Research Facility in North Queensland



The Wet Tropics World Heritage Area Region

APPENDIX 1: VISITOR SURVEY - TOUR VERSION 1

A. About your trip to the Wet Tropics World Heritage Area (hereafter Wet Tropics WHA)

1. **Where do you usually live?** ☐ Australia..... *Postcode*
   ☐ Overseas..... *Country*

2. **Overall, how many nights will you be away from your usual place of residence on this trip?** ..... Nights

3. **a) How many days do you intend to spend in this general area?** *(E.g. 10 days in Cairns, 2 days in Cape Tribulation = 12 days in general area)*..... Days

   b) Approximately, how much of this time will be spent visiting the Wet Tropics WHA? *(See map on page 1) (E.g. 1 day at Lake Barrine, 2 days at Mossman =3 days)*
   .....Days

4. **a) Were you aware that the location you are visiting today is within the Wet Tropics WHA?** *(see map on page 1)* ☐ No *(go to question 5)* ☐ Yes

   b) If yes, did the fact that this location is part of the Wet Tropics WHA influence your decision to visit this part of Australia?
   ☐ No ☐ Yes

5. **a) Is this your first visit to the Wet Tropics WHA?** ☐ No ☐ Yes *(go to question 6)*

   b) If no, how many times have you visited before?
   ☐ Once ☐ 2-3 times ☐ more than 3 times

6. **What was your main reason for visiting this region?**
   .....

****Please also note the following definition which will be useful in answering the questionnaire from this point forward****

B. Awareness of EcoCertification

CERTIFICATION is a ***voluntary*** *procedure that sets, assesses, monitors and gives written assurance that a business, product, process, service or management system complies with a given standard.*

Certification is used in different industries worldwide and in tourism, it is used to denote well managed commitment by firms or operators. There are many types of logos and certification programs in tourism.

I am particularly interested in certification schemes which relate to environmental and social issues.

The **ECOCERTIFICATION** program is one such scheme. This program is said to assists visitors to identify genuine and authentic tours, accommodations, and attractions that are environmentally, socially and financially sustainable.

Businesses that meet or exceed the baseline criteria are awarded a logo which is then used to demonstrate the businesses' sustainable credentials to visitors and the industry in general.

7. **Prior to this survey had you ever heard or read anything about EcoCertification?**
   ☐ No ☐ Yes ☐ Not Sure

8. **Prior to this trip, had you ever been on an EcoCertified tour?**
   ☐ No ☐ Yes ☐ Not Sure

9. **Are any of the tours you went on or intend to go on in the Wet Tropics WHA, ecocertified?**
   ☐ No ☐ Yes ☐ Not Sure

10. **How well informed are you of the types of things that the tour companies/tour operators do so that tours become EcoCertified?**
    ☐ Not informed at all ☐ Poorly informed ☐ Fairly informed
    ☐ Well informed ☐ Very well informed

APPENDIX 1: VISITOR SURVEY - TOUR VERSION 1

The table below gives the attributes of EcoCertification.

For Q11, please indicate how important each of the attribute is to you. (1 being not important at all and 5 being very important)

For Q12 please indicate how well you think the tour you went on today performed based on these attributes (irrespective of whether it is ecocertified or not). (1 being not well at all and 5 being very well)

COMPONENTS OF ECOCERTIFICATION	11. How important to you, are each of the following attribute of Eco Certification?						12. How well do you think the tour you went on today performed based on these attributes?					
	Not important at all				Very Important	Not Sure	Not well at all				Very well	Not Sure/ Unable to judge
	1	2	3	4	5		1	2	3	4	5	
NATURAL AREA FOCUS *e.g. The tour is based around activities that help customers to personally experience nature*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
INTERPRETATION *e.g. Pre-tour materials such as brochures that explains the environment are provided*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ENVIRONMENTAL SUSTAINABILITY *e.g. Vehicles used on tours utilise energy efficient fuel*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CONTRIBUTION TO CONSERVATION *e.g. The tour operator donates funds to rehabilitate degraded areas*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. The tour operator purchases many goods and services locally, thus contributing to the local economy*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CULTURAL COMPONENT *e.g. Indigenous people are consulted about the nature and scope of the operation*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CUSTOMER SATISFACTION *e.g. The tour operator provides visitors with forms they can provide feedback*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
RESPONSIBLE MARKETING *e.g. Marketing material representing the tour does not feature images of places that are not part of the product being offered*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

13. Is there anything else you feel should be considered in the EcoCertification program? ☐ No ☐ Yes *If yes what?* ..... ☐ Not Sure

14. (To answer ONLY IF YOU TICKED NOT SURE FOR MOST OF THE ATTRIBUTES from question 12) --- **Do you think an EcoCertified label would help?** ☐ No ☐ Yes ☐ Not Sure

APPENDIX 1: VISITOR SURVEY - TOUR VERSION 1

C. Your opinion about the contribution of EcoCertification

15. In your opinion, are EcoCertified tours doing more (than non EcoCertified tours) to help improve or protect:

	Much more	More	About the same	Less	Much less	Not sure
a) the ENVIRONMENT?	☐	☐	☐	☐	☐	☐
b) the LOCAL COMMUNITY?	☐	☐	☐	☐	☐	☐
c) the OPERATOR'S financial performance?	☐	☐	☐	☐	☐	☐
d) your TOUR EXPERIENCE?	☐	☐	☐	☐	☐	☐

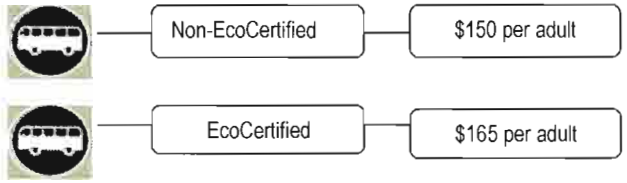
D. About your willingness to pay and preference for Ecocertified tours

Below are a series of hypothetical questions/scenarios. Please indicate your choice of the preferred outcome in each. Some questions ask about your willingness to pay for EcoCertified tourism operations. When answering these questions, please keep in mind that your own personal income is limited and each dollar has important alternative uses. There are no right or wrong answers and you should consider your real household circumstances and preferences when answering the questions.

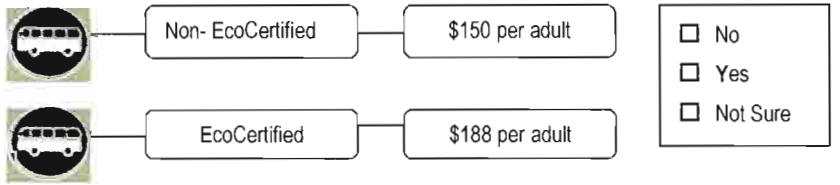
16. **Suppose that there is NO DIFFERENCE IN PRICE between an EcoCertified and a Non-EcoCertified tour and both are the same in all other aspects (e.g. same locations visited and same activities, etc). Which of the two would you choose to go on?**

☐ EcoCertified tour ☐ Non-EcoCertified tour ☐ I would not care – I am indifferent between the two ☐ Not Sure

17. **Imagine two FULL DAY tours, IDENTICAL in all aspects, EXCEPT one is Not EcoCertified and charges $150 per adult and the other is EcoCertified and charges more per adult. Would you be willing to pay an extra 10% to go on an EcoCertified tour?**



18. **Thinking back to the last question, would you be willing to pay an extra 25% to go on an EcoCertified tour?**



19. **Thinking back to your answers to questions 17 and 18, were you willing to pay more for EcoCertification?**

If YES, why? .....

If NO, why not? .....

APPENDIX 1: VISITOR SURVEY - TOUR VERSION 1

20. Imagine four FULL DAY tours (A, B, C and D) to key areas within the Wet Tropics World Heritage Area. All four are IDENTICAL in all aspects (e.g. same sites, activities, number of visitors, etc) EXCEPT in the factors highlighted below.

Carefully consider each of the following choice sets (1 to 6) and for each, please indicate which of the tours you would choose to go on.

Consults with the indigenous people about the nature and scope of the tour	$ Per adult
A Never	$150
B Rarely	$165
C Occasionally	$173
D Always	$188

Choice set 1:
Which of these options would you choose?

- ☐ I would choose Tour A
- ☐ I would choose Tour B
- ☐ I would choose Tour C
- ☐ I would choose Tour D
- ☐ Not Sure

Purchase of basic materials (e.g. foodstuff) and maintenance services	$ Per adult
A 100% local purchase	$188
B 50% local purchase	$173
C 25% local purchase	$165
D 0% local purchase	$150

Choice set 2:
Which of these options would you choose?

- ☐ I would choose Tour A
- ☐ I would choose Tour B
- ☐ I would choose Tour C
- ☐ I would choose Tour D
- ☐ Not Sure

Type of fuel used by vehicles	$ Per adult
A Petrol which emits 3.45kg of CO^2/ 100km/passenger	$165
B Biodiesel which emits 0.15kg of CO^2/100km/ passenger	$188
C Diesel which emits 4.05kg of CO^2/ 100km/passenger	$150
D LPG which emits 2.4kg of CO^2/ 100km/ passenger	$173

Choice set 3:
Which of these options would you choose?

- ☐ I would choose Tour A
- ☐ I would choose Tour B
- ☐ I would choose Tour C
- ☐ I would choose Tour D
- ☐ Not Sure

Donations towards the rehabilitation of degraded areas, reduction of feral animals & weed infestations	$ Per adult
A 15% of revenues	$173
B 0% of revenues	$150
C 25% of revenues	$188
D 10% of revenues	$165

Choice set 4:
Which of these options would you choose?

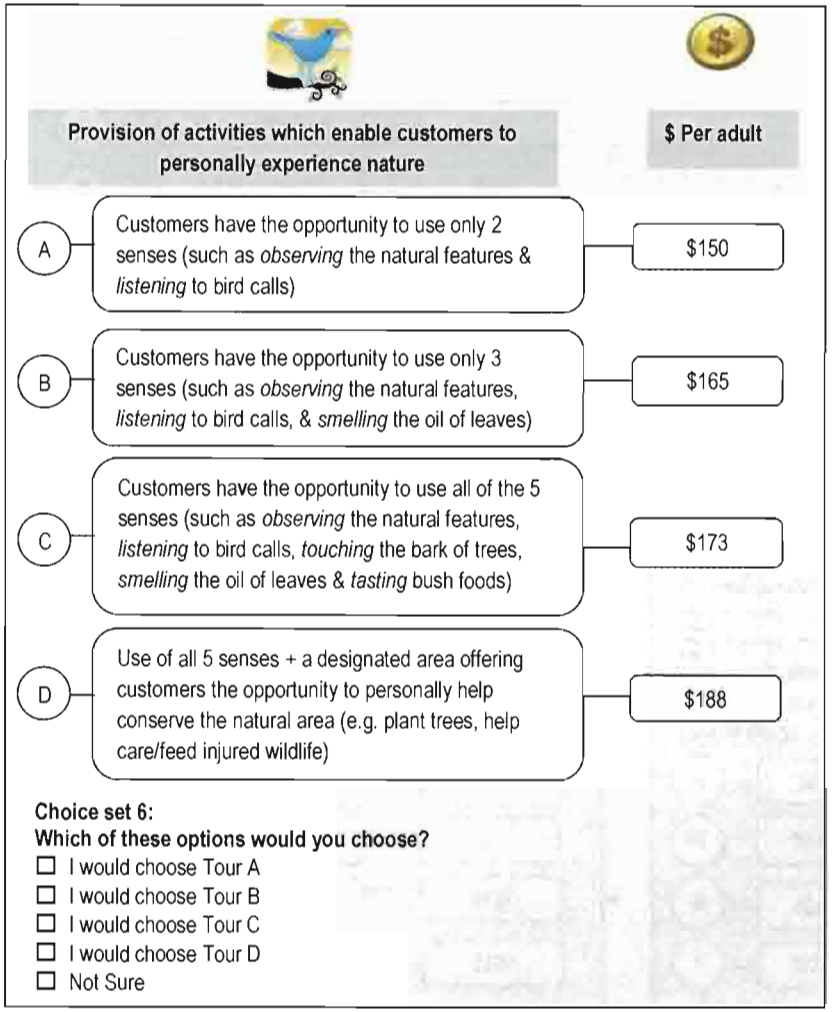
- ☐ I would choose Tour A
- ☐ I would choose Tour B
- ☐ I would choose Tour C
- ☐ I would choose Tour D
- ☐ Not Sure

Provision of interpretive materials	$ Per adult
A Brochures only	$150
B Brochures, displays	$165
C Brochures, displays and audio-visuals	$173
D All of the above which integrates with activities (e.g. quizzes, games)	$188

Choice set 5:
Which of these options would you choose?

- ☐ I would choose Tour A
- ☐ I would choose Tour B
- ☐ I would choose Tour C
- ☐ I would choose Tour D
- ☐ Not Sure

APPENDIX 1: VISITOR SURVEY - TOUR VERSION 1



Provision of activities which enable customers to personally experience nature	$ Per adult
A — Customers have the opportunity to use only 2 senses (such as *observing* the natural features & *listening* to bird calls)	$150
B — Customers have the opportunity to use only 3 senses (such as *observing* the natural features, *listening* to bird calls, & *smelling* the oil of leaves)	$165
C — Customers have the opportunity to use all of the 5 senses (such as *observing* the natural features, *listening* to bird calls, *touching* the bark of trees, *smelling* the oil of leaves & *tasting* bush foods)	$173
D — Use of all 5 senses + a designated area offering customers the opportunity to personally help conserve the natural area (e.g. plant trees, help care/feed injured wildlife)	$188

Choice set 6:
Which of these options would you choose?

- ☐ I would choose Tour A
- ☐ I would choose Tour B
- ☐ I would choose Tour C
- ☐ I would choose Tour D
- ☐ Not Sure

E. About you

22. Are you: ☐ Male ☐ Female

23. Which of these age groups do you belong to?

☐ Under 20 years ☐ 20-29 ☐30-39 ☐ 40-49 ☐ 50-59
☐ 60-65 ☐ over 65

24. What is the highest level of education you have obtained?

☐ Primary ☐ Secondary ☐ Trade ☐ Diploma/Certificate ☐ Degree
☐ Postgraduate ☐ Other *(please specify)*.....

25. How would you best describe your occupation? (Please choose one only)

☐ Self-employed ☐ Professional ☐ Manual/Factory worker ☐Student
☐ Management ☐ Office/clerical ☐ Public service ☐ Retail
☐ Service industry ☐ Tradesperson ☐ Retired/semi-retired
☐Other *(please specify)*.....

26. Which of these best describes your immediate travel party?

☐ Alone ☐Couple ☐ Friends ☐ Relatives ☐ Family (adults and children)
☐ Club or tour group ☐ Other *(please specify)*.....

27. How often do you	Always	Very Frequently	Occasionally	Rarely	Never
Turn off lights when leaving rooms	☐	☐	☐	☐	☐
Turn off computers and monitors when not in use	☐	☐	☐	☐	☐
Dry clothes outside whenever possible	☐	☐	☐	☐	☐
Minimise shower time	☐	☐	☐	☐	☐
Minimise toilet flushing	☐	☐	☐	☐	☐
Run washing machine only when full load	☐	☐	☐	☐	☐
Purchase goods and services that are produced locally	☐	☐	☐	☐	☐
Purchase foods that are certified organic or sustainably produced	☐	☐	☐	☐	☐

28. When you think about how much you donate annually to charities of all kinds, would you estimate your annual donations to be:

☐ > $500 ☐ $300-$500 ☐ $100-$299 ☐ $1-$99 ☐ $0

29. How strongly do social equity issues (e.g. youth disadvantaged, poverty, etc) influence your voting?

☐ Very Strongly ☐ Strongly ☐ Moderately Strongly ☐ Not Strongly ☐Not strongly at all

30. Please indicate your approximate ANNUAL HOUSEHOLD income (AUS Dollars)

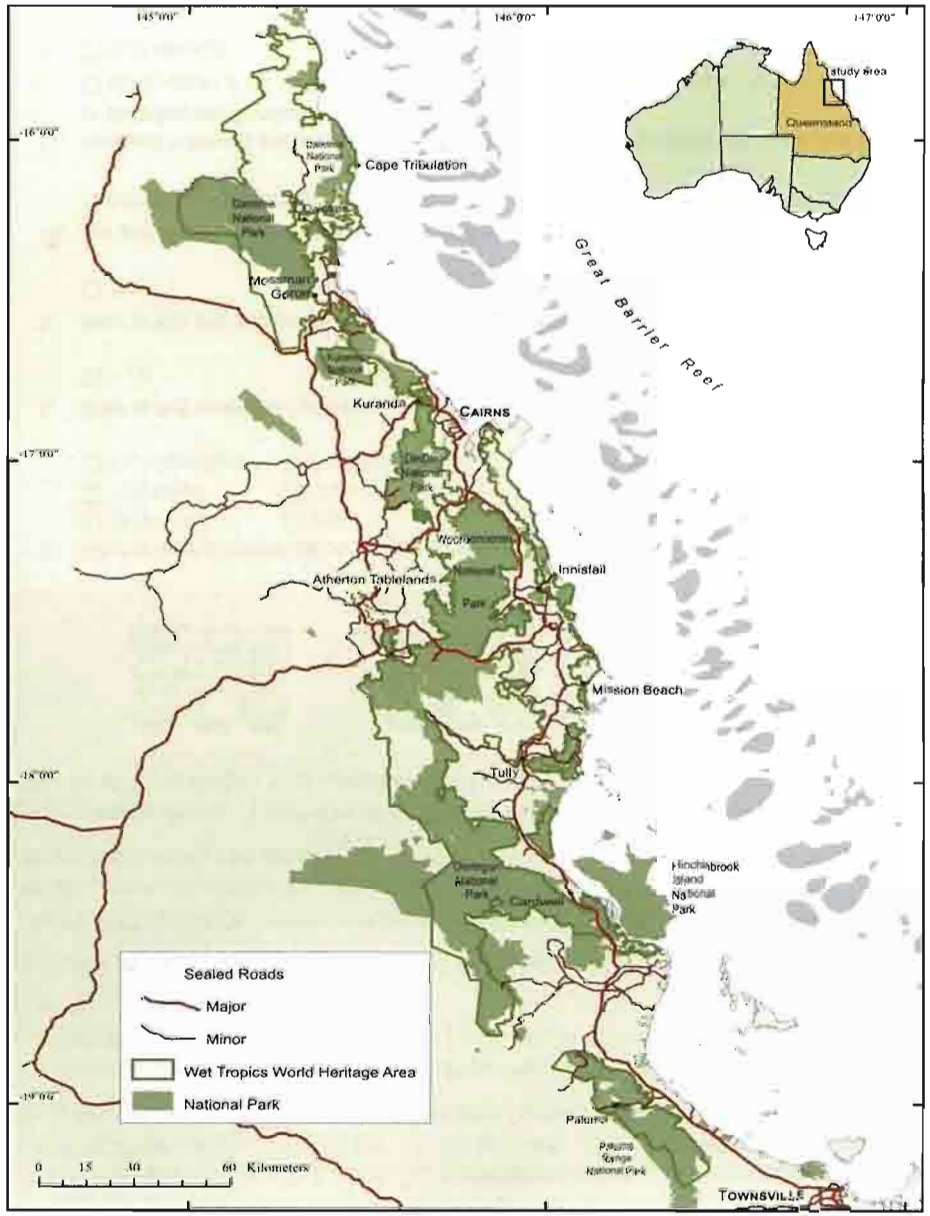
☐ Under $20,000 ☐ $20,000-$39,000 ☐ $40,000-$59,000
☐ $60,000-$79,000 ☐ $80,000-$99,000 ☐ > $100,000

Thank you for your help ☺

A survey of Visitors' Perceptions of EcoCertified and Non-EcoCertified Accommodations in the Wet Tropics World Heritage Area

JAMES COOK UNIVERSITY AUSTRALIA

Reef & Rainforest RESEARCH CENTRE
Implementing the Marine and Tropical Sciences Research Facility in North Queensland



The Wet Tropics World Heritage Area Region

APPENDIX 2: VISITOR SURVEY - ACCOMMODATION VERSION 1

A. About your trip to the Wet Tropics World Heritage Area (hereafter Wet Tropics WHA)

1. **Where do you usually live?** ☐ Australia..... *Postcode*
   ☐ Overseas..... *Country*

2. **Overall, how many nights will you be away from your usual place of residence on this trip?** ..... Nights

3. **a) How many days do you intend to spend in this general area?** *(E.g. 10 days in Cairns, 2 days in Cape Tribulation = 12 days in general area)*..... Days

   b) Approximately, how much of this time will be spent visiting the Wet Tropics WHA? *(See map on page 1) (E.g. 1 day at Lake Barrine, 2 days at Mossman =3 days)*
   .....Days

4. **a) Were you aware that the accommodation you are staying at is near the Wet Tropics WHA?** *(see map on page 1)* ☐ No *(go to question 5)* ☐ Yes

   b) If yes, did the fact that this accommodation is near the Wet Tropics WHA influence your decision to visit this part of Australia?
   ☐ No ☐ Yes

5. **a) Have you ever visited the Wet Tropics WHA?** ☐ No *(go to question 6)* ☐ Yes

   b) If yes, how many times have you visited before?
   ☐ Once ☐ 2-3 times ☐ more than 3 times

6. **What was your main reason for visiting this region?**
   .....

****Please also note the following definition which will be useful in answering the questionnaire from this point forward****

B. Awareness of EcoCertification

CERTIFICATION is *a **voluntary** procedure that sets, assesses, monitors and gives written assurance that a business, product, process, service or management system complies with a given standard.*

Certification is used in different industries worldwide and in tourism, it is used to denote well managed commitment by firms or operators. There are many types of logos and certification programs in tourism.

I am particularly interested in certification schemes which relate to environmental and social issues.

The **ECOCERTIFICATION** program is one such scheme. This program is said to assists visitors to identify genuine and authentic tours, accommodations, and attractions that are environmentally, socially and financially sustainable.

Businesses that meet or exceed the baseline criteria are awarded a logo which is then used to demonstrate the businesses' sustainable credentials to visitors and the industry in general.

7. **What type of accommodation are you staying at?**
   ☐ Hotel/motel ☐ Resort ☐ Holiday apartment/unit
   ☐ Eco lodge ☐ Caravan park/cabin ☐ Bed and breakfast
   ☐ Friends/relatives ☐ Backpacker hostel ☐ Other (please specify).....

8. **Prior to this survey had you ever heard or read anything about EcoCertification?**
   ☐ No ☐ Yes ☐ Not Sure

9. **Prior to this trip, had you ever stayed in an EcoCertified accommodation?**
   ☐ No ☐ Yes ☐ Not Sure

10. **Are any of the accommodations you stayed in or intend to stay in while visiting the Wet Tropics WHA, EcoCertified?** ☐ No ☐ Yes ☐ Not Sure

11. **How well informed are you of the types of things that the accommodation providers have to do to become EcoCertified?**
    ☐ Not informed at all ☐ Poorly informed ☐ Fairly informed
    ☐ Well informed ☐ Very well informed

APPENDIX 2: VISITOR SURVEY - ACCOMMODATION VERSION 1

The table below gives the attributes of EcoCertification.

For Q12, please indicate how important each of the attributes is to you. (1 being not important at all and 5 being very important)

For Q13 please indicate how well you think the accommodation you are staying performed based on these attributes (irrespective of whether it is ecocertified or not). (1 being not well at all and 5 being very well)

COMPONENTS OF ECOCERTIFICATION	12. How important to you, are each of the following attributes of Eco Certification?						13. How well do you think the accommodation establishment you are staying at performed based on these attributes?					
	Not important at all				Very Important	Not Sure	Not well at all				Very well	Not Sure/ Unable to judge
	1	2	3	4	5		1	2	3	4	5	
NATURAL AREA FOCUS *e.g. The establishment is based around activities that help customers to personally experience nature*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
INTERPRETATION *e.g. The establishment provides materials that explains the environment*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ENVIRONMENTAL SUSTAINABILITY *e.g. The establishment uses renewable energy sources to provide power*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CONTRIBUTION TO CONSERVATION *e.g. The establishment donates funds to rehabilitate degraded areas*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. The establishment purchases many goods and services locally, thus contributing to the local economy*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CULTURAL COMPONENT *e.g. Indigenous people are consulted about the nature and scope of the operation*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CUSTOMER SATISFACTION *e.g. Forms are placed in rooms so customers can provide feedback*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
RESPONSIBLE MARKETING *e.g. Marketing material representing the establishment does not feature images of places that are not part of the product being offered*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

14. Is there anything else you feel should be considered in the EcoCertification program? ☐ No ☐ Yes *If yes what?* ..... ☐ Not Sure

15. (To answer ONLY IF YOU TICKED NOT SURE FOR MOST OF THE ATTRIBUTES from question 13) --- **Do you think an EcoCertified label would help?** ☐ No ☐ Yes ☐ Not Sure

APPENDIX 2: VISITOR SURVEY - ACCOMMODATION VERSION 1

C. Your opinion about the contribution of EcoCertification

16. In your opinion, are EcoCertified accommodations doing more (than non EcoCertified accommodations) to help improve or protect:

	Much more	More	About the same	Less	Much less	Not sure
a) the ENVIRONMENT?	☐	☐	☐	☐	☐	☐
b) the LOCAL COMMUNITY?	☐	☐	☐	☐	☐	☐
c) the OPERATOR'S financial performance?	☐	☐	☐	☐	☐	☐
d) your ACCOMMODATION EXPERIENCE?	☐	☐	☐	☐	☐	☐

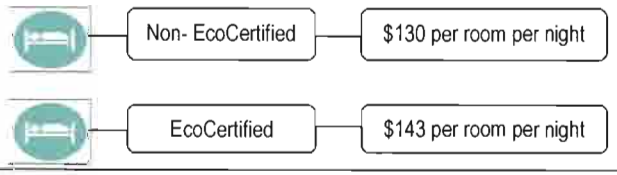
D. About your willingness to pay and preference for Ecocertified accommodations

Below are a series of hypothetical questions/scenarios. Please indicate your choice of the preferred outcome in each. Some questions ask about your willingness to pay for EcoCertified tourism operations. When answering these questions, please keep in mind that your own personal income is limited and each dollar has important alternative uses. There are no right or wrong answers and you should consider your real household circumstances and preferences when answering the questions.

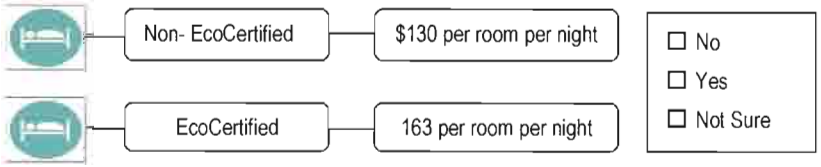
17. **Suppose that there is NO DIFFERENCE IN PRICE between an EcoCertified and a Non-EcoCertified accommodation and both are the same in all other aspects (e.g. same type of room, offer same facilities, same location, etc). Which of the two would you choose to stay at?**

☐ EcoCertified accommodation ☐ Non-EcoCertified accommodation ☐ I would not care – I am indifferent between the two ☐ Not Sure

18. **Imagine two accommodation establishments, IDENTICAL in all aspects, EXCEPT one is Not EcoCertified at $130 per room per night and the other is EcoCertified and charges a higher price per room per night. Would you be willing to pay an extra 10% to stay at the EcoCertified accommodation?**



19. **Thinking back to the last question, would you be willing to pay an extra 25% to stay at the EcoCertified Accommodation?**



20. **Thinking back to your answers to questions 18 and 19, were you willing to pay more for EcoCertification?**

If YES, why? .....

If NO, why not? .....

APPENDIX 2: VISITOR SURVEY - ACCOMMODATION VERSION 1

21. Imagine four accommodation establishments (A, B, C and D) around the Wet Tropics World Heritage Area. All four establishments are Bed and Breakfast and have standard room with ensuite. Each room has a queen bed, a balcony and a stunning view of the rainforest. All rooms have the same equipment and facilities (e.g. air conditioning and ceiling fans, television, etc). On the whole, all four establishments are IDENTICAL in all aspects EXCEPT in the factors highlighted below.

Carefully consider each of the following choice sets (1 to 6) and for each, please indicate which of the accommodations you would choose to stay at.

	Consults with the indigenous people about the nature and scope of the establishment	$ Per room per night
A	Never	$130
B	Rarely	$143
C	Occasionally	$150
D	Always	$163

Choice set 1:
Which of these options would you choose?

- ☐ I would choose Establishment A
- ☐ I would choose Establishment B
- ☐ I would choose Establishment C
- ☐ I would choose Establishment D
- ☐ Not Sure

	Purchase of basic materials (e.g. foodstuff) and maintenance services	$ Per room per night
A	100% local purchase	$163
B	50% local purchase	$150
C	25% local purchase	$143
D	0% local purchase	$130

Choice set 2:
Which of these options would you choose?

- ☐ I would choose Establishment A
- ☐ I would choose Establishment B
- ☐ I would choose Establishment C
- ☐ I would choose Establishment D
- ☐ Not Sure

	Use of renewable energy to provide power	$ Per room per night
A	25%	$143
B	100%	$163
C	0%	$130
D	50%	$150

Choice set 3:
Which of these options would you choose?

- ☐ I would choose Establishment A
- ☐ I would choose Establishment B
- ☐ I would choose Establishment C
- ☐ I would choose Establishment D
- ☐ Not Sure

	Donations towards the rehabilitation of degraded areas, reduction of feral animals & weed infestations	$ Per room per night
A	15% of revenues	$150
B	0% of revenues	$130
C	25% of revenues	$163
D	10% of revenues	$143

Choice set 4:
Which of these options would you choose?

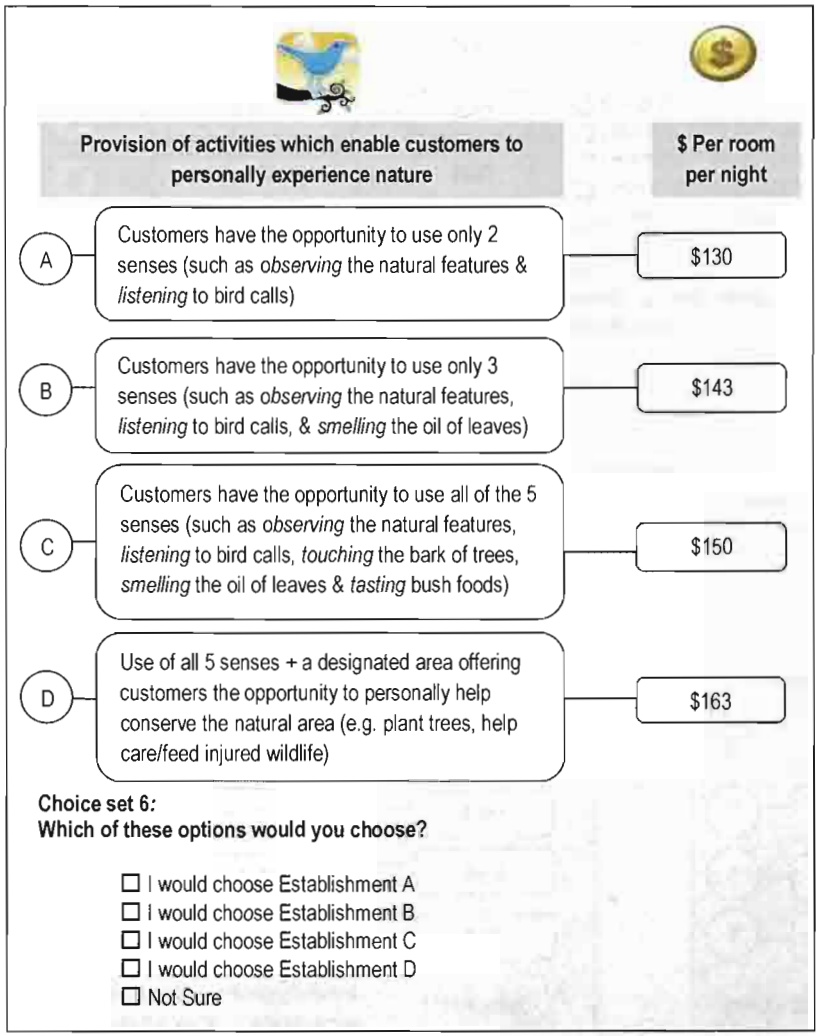
- ☐ I would choose Establishment A
- ☐ I would choose Establishment B
- ☐ I would choose Establishment C
- ☐ I would choose Establishment D
- ☐ Not Sure

	Provision of interpretive materials	$ Per room per night
A	Brochures only	$130
B	Brochures, displays	$143
C	Brochures, displays and audio-visuals	$150
D	All of the above which integrates with activities (e.g. quizzes, games)	$163

Choice set 5:
Which of these options would you choose?

- ☐ I would choose Establishment A
- ☐ I would choose Establishment B
- ☐ I would choose Establishment C
- ☐ I would choose Establishment D
- ☐ Not Sure

APPENDIX 2: VISITOR SURVEY - ACCOMMODATION VERSION 1



	Provision of activities which enable customers to personally experience nature	$ Per room per night
A	Customers have the opportunity to use only 2 senses (such as *observing* the natural features & *listening* to bird calls)	$130
B	Customers have the opportunity to use only 3 senses (such as *observing* the natural features, *listening* to bird calls, & *smelling* the oil of leaves)	$143
C	Customers have the opportunity to use all of the 5 senses (such as *observing* the natural features, *listening* to bird calls, *touching* the bark of trees, *smelling* the oil of leaves & *tasting* bush foods)	$150
D	Use of all 5 senses + a designated area offering customers the opportunity to personally help conserve the natural area (e.g. plant trees, help care/feed injured wildlife)	$163

Choice set 6:
Which of these options would you choose?

- ☐ I would choose Establishment A
- ☐ I would choose Establishment B
- ☐ I would choose Establishment C
- ☐ I would choose Establishment D
- ☐ Not Sure

E. About you

22. Are you: ☐ Male ☐ Female

23. Which of these age groups do you belong to?
☐ Under 20 years ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59
☐ 60-65 ☐ over 65

24. What is the highest level of education you have obtained?
☐ Primary ☐ Secondary ☐ Trade ☐ Diploma/Certificate ☐ Degree
☐ Postgraduate ☐ Other *(please specify)*.....

25. How would you best describe your occupation? (Please choose one only)
☐ Self-employed ☐ Professional ☐ Manual/Factory worker ☐ Student
☐ Management ☐ Office/clerical ☐ Public service ☐ Retail
☐ Service industry ☐ Tradesperson ☐ Retired/semi-retired
☐ Other *(please specify)*.....

26. Which of these best describes your immediate travel party?
☐ Alone ☐ Couple ☐ Friends ☐ Relatives ☐ Family (adults and children)
☐ Club or tour group ☐ Other *(please specify)*.....

27. How often do you	Always	Very Frequently	Occasionally	Rarely	Never
Turn off lights when leaving rooms	☐	☐	☐	☐	☐
Turn off computers and monitors when not in use	☐	☐	☐	☐	☐
Dry clothes outside whenever possible	☐	☐	☐	☐	☐
Minimise shower time	☐	☐	☐	☐	☐
Minimise toilet flushing	☐	☐	☐	☐	☐
Run washing machine only when full load	☐	☐	☐	☐	☐
Purchase goods and services that are produced locally	☐	☐	☐	☐	☐
Purchase foods that are certified organic or sustainably produced	☐	☐	☐	☐	☐

28. When you think about how much you donate annually to charities of all kinds, would you estimate your annual donations to be:
☐ > $500 ☐ $300-$500 ☐ $100-$299 ☐ $1-$99 ☐ $0

29. How strongly do social equity issues (e.g. youth disadvantaged, poverty, etc) influence your voting?
☐ Very Strongly ☐ Strongly ☐ Moderately Strongly ☐ Not Strongly ☐ Not strongly at all

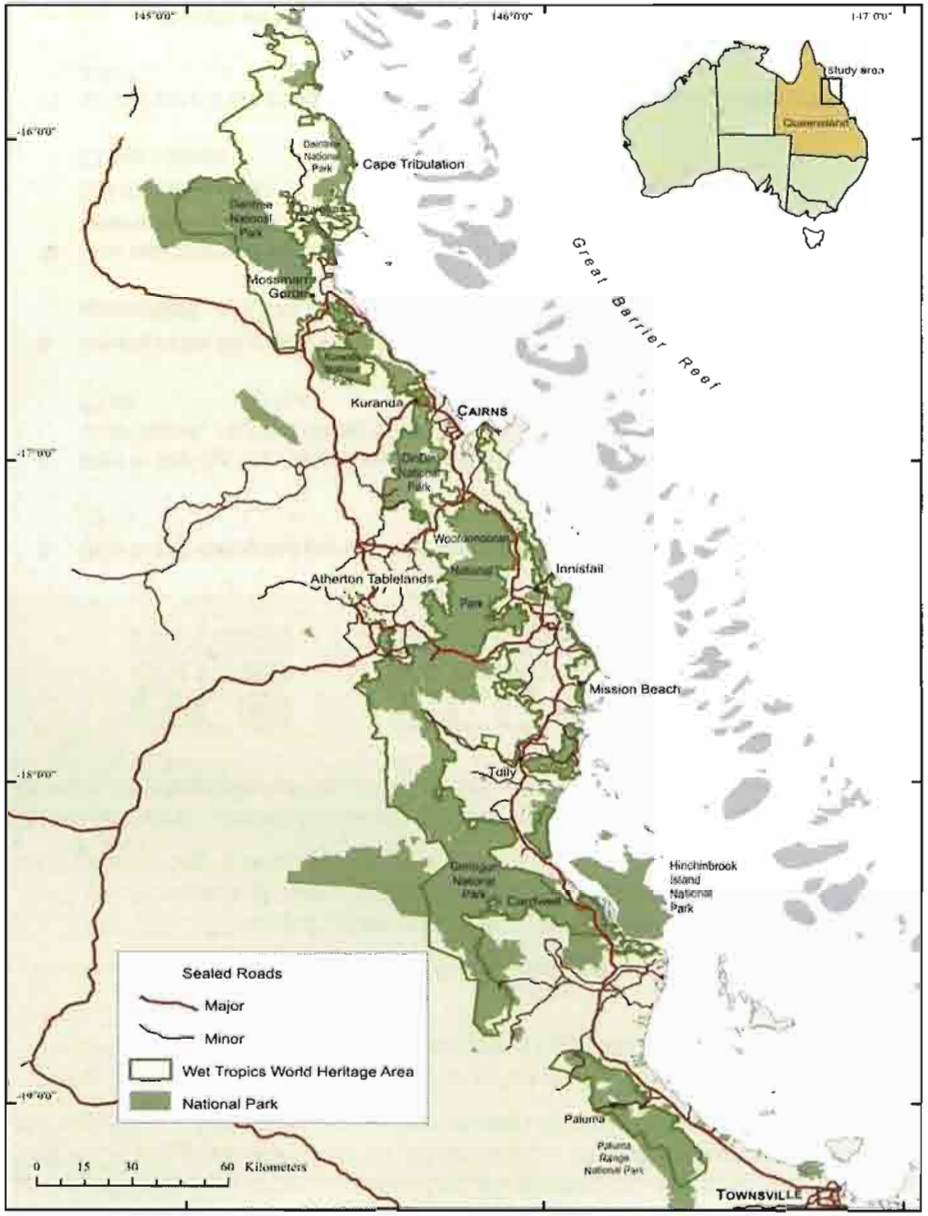
30. Please indicate your approximate ANNUAL HOUSEHOLD income (AUS Dollars)
☐ Under $20,000 ☐ $20,000-$39,000 ☐ $40,000-$59,000
☐ $60,000-$79,000 ☐ $80,000-$99,000 ☐ > $100,000

Thank you for your help ☺

A survey of Visitors' Perceptions of EcoCertified and Non-EcoCertified Attractions in the Wet Tropics World Heritage Area

JAMES COOK UNIVERSITY AUSTRALIA

Reef & Rainforest RESEARCH CENTRE
Implementing the Marine and Tropical Sciences Research Facility in North Queensland



The Wet Tropics World Heritage Area Region

APPENDIX 3: VISITOR SURVEY - ATTRACTION VERSION 1

A. About your trip to the Wet Tropics World Heritage Area (hereafter Wet Tropics WHA)

1. **Where do you usually live?** ☐ Australia..... *Postcode*
   ☐ Overseas..... *Country*

2. **Overall, how many nights will you be away from your usual place of residence on this trip?** ..... Nights

3. **a) How many days do you intend to spend in this general area?** *(E.g. 10 days in Cairns, 2 days in Cape Tribulation = 12 days in general area)*..... Days

   b) Approximately, how much of this time will be spent visiting the Wet Tropics WHA? *(See map on page 1) (E.g. 1 day at Lake Barrine, 2 days at Mossman =3 days)*
   .....Days

4. **a) Were you aware that the location you are visiting today is within the Wet Tropics WHA?** *(see map on page 1)* ☐ No *(go to question 5)* ☐ Yes

   b) If yes, did the fact that this location is part of the Wet Tropics WHA influence your decision to visit this part of Australia?
   ☐ No ☐ Yes

5. **a) Is this your first visit to the Wet Tropics WHA?** ☐ No ☐ Yes *(go to question 6)*

   b) If no, how many times have you visited before?
   ☐ Once ☐ 2-3 times ☐ more than 3 times

6. **What was your main reason for visiting this region?**
   .....

****Please also note the following definition which will be useful in answering the questionnaire from this point forward****

B. Awareness of EcoCertification

CERTIFICATION is *a **voluntary** procedure that sets, assesses, monitors and gives written assurance that a business, product, process, service or management system complies with a given standard.*

Certification is used in different industries worldwide and in tourism, it is used to denote well managed commitment by firms or operators. There are many types of logos and certification programs in tourism.

I am particularly interested in certification schemes which relate to environmental and social issues.

The **ECOCERTIFICATION** program is one such scheme. This program is said to assists visitors to identify genuine and authentic tours, accommodations, and attractions that are environmentally, socially and financially sustainable.

Businesses that meet or exceed the baseline criteria are awarded a logo which is then used to demonstrate the businesses' sustainable credentials to visitors and the industry in general.

7. **Prior to this survey had you ever heard or read anything about EcoCertification?**
   ☐ No ☐ Yes ☐ Not Sure

8. **Prior to this trip, had you ever visited an EcoCertified attraction?** (e.g. wildlife sanctuary, visitor centres, rainforest canopy walkway, Skyrail, etc which have obtained EcoCertification)
   ☐ No ☐ Yes ☐ Not Sure

9. **Are any of the attractions you have visited or intend to visit in the Wet Tropics WHA, ecocertified?** ☐ No ☐ Yes ☐ Not Sure

10. **How well informed are you of the types of things that the managers/staff of attraction venues do so that the attraction becomes EcoCertified?**
    ☐ Not informed at all ☐ Poorly informed ☐ Fairly informed
    ☐ Well informed ☐ Very well informed

11. **a) How many of the attractions you have or intend to visit in the Wet Tropics WHA charge a fee?** .....

    b)** (If you answered 0 in question 11a) **Why are you not visiting any paid attractions? .....

APPENDIX 3: VISITOR SURVEY - ATTRACTION VERSION 1

The table below gives the attributes of EcoCertification.

For Q12, please indicate how important each of the attributes is to you. (1 being not important at all and 5 being very important)

For Q13 please indicate how well you think the attraction you visited today performed based on these attributes (irrespective of whether it is ecocertified or not). (1 being not well at all and 5 being very well)

COMPONENTS OF ECOCERTIFICATION	12. How important to you, are each of the following attribute of Eco Certification?						13. How well do you think the attraction you visited today performed based on these attributes?					
	Not important at all				Very Important	Not Sure	Not well at all				Very well	Not Sure/ Unable to judge
	1	2	3	4	5		1	2	3	4	5	
NATURAL AREA FOCUS *e.g. The attraction is based around activities that help customers to personally experience nature*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
INTERPRETATION *e.g. Materials that explains the environment (e.g. brochures, signage) are provided at the attraction venue*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ENVIRONMENTAL SUSTAINABILITY *e.g. The attraction venue uses renewable energy sources to provide power*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CONTRIBUTION TO CONSERVATION *e.g. A proportion of money raised from visitation to the attraction is donated to fund the rehabilitation of degraded areas*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. Goods sold and services needed at the attraction venue are purchased locally, thus contributing to the local economy*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CULTURAL COMPONENT *e.g. Indigenous people are consulted about the nature and scope of the operation*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CUSTOMER SATISFACTION *e.g. Visitors to the attraction are provided with forms so they can provide feedback*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
RESPONSIBLE MARKETING *e.g. Marketing material representing the attraction does not feature images of places that are not part of the product being offered*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

14. Is there anything else you feel should be considered in the EcoCertification program? ☐ No ☐ Yes *If yes what?* ..... ☐ Not Sure

15. (To answer ONLY IF YOU TICKED NOT SURE FOR MOST OF THE ATTRIBUTES from question 13) --- **Do you think an EcoCertified label would help?** ☐ No ☐ Yes ☐ Not Sure

APPENDIX 3: VISITOR SURVEY - ATTRACTION VERSION 1

C. Your opinion about the contribution of EcoCertification

16. In your opinion, are EcoCertified attractions doing more (than non EcoCertified attractions) to help improve or protect:

	Much more	More	About the same	Less	Much less	Not sure
a) the ENVIRONMENT?	☐	☐	☐	☐	☐	☐
b) the LOCAL COMMUNITY?	☐	☐	☐	☐	☐	☐
c) the OPERATOR'S financial performance?	☐	☐	☐	☐	☐	☐
d) your ATTRACTION EXPERIENCE?	☐	☐	☐	☐	☐	☐

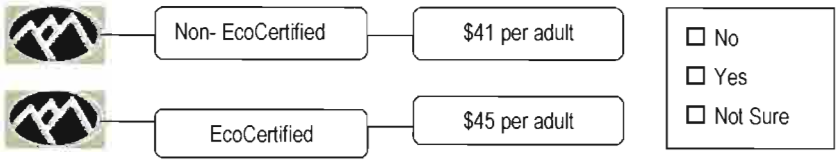
D. About your willingness to pay and preference for Ecocertified attractions

Below are a series of hypothetical questions/scenarios. Please indicate your choice of the preferred outcome in each. Some questions ask about your willingness to pay for EcoCertified tourism operations. When answering these questions, please keep in mind that your own personal income is limited and each dollar has important alternative uses. There are no right or wrong answers and you should consider your real household circumstances and preferences when answering the questions.

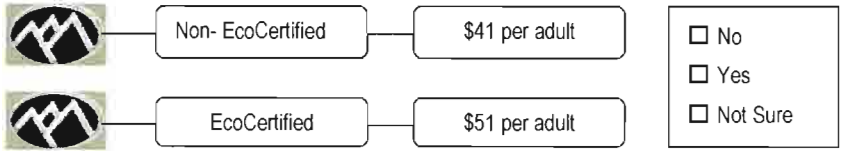
17. **Suppose that there is NO DIFFERENCE IN PRICE between an EcoCertified and a Non-EcoCertified attraction and both are the same in all other aspects (e.g. same type of facilities and activities, etc). Which of the two would you choose to visit?**

☐ EcoCertified attraction ☐ Non-EcoCertified attraction ☐ I would not care – I am indifferent between the two ☐ Not Sure

18. **Imagine two attractions, IDENTICAL in all aspects, EXCEPT one is Not EcoCertified and charges $41per adult and the other is EcoCertified and charges more per adult. Would you be willing to pay an extra 10% to visit an EcoCertified attraction?**



19. **Thinking back to the last question, would you be willing to pay an extra 25% to visit an EcoCertified attraction?**



20. **Thinking back to your answers to questions 18 and 19, were you willing to pay more for EcoCertification?**

If YES, why? .....

If NO, why not? .....

21. Imagine four attractions (A, B, C and D) in the Wet Tropics World Heritage Area. All four are rainforest wildlife sanctuaries, have the same wildlife on display and offer the same types of activities. All four are IDENTICAL in all aspects EXCEPT in the factors highlighted below.

Carefully consider each of the following choice sets (1 to 6) and for each, please indicate which of the attractions you would choose to visit.

	Consults with the indigenous people about the nature and scope of the attraction	$ Per adult
A	Never	$41
B	Rarely	$45
C	Occasionally	$47
D	Always	$51

Choice set 1:
Which of these options would you choose?

- ☐ I would choose Attraction A
- ☐ I would choose Attraction B
- ☐ I would choose Attraction C
- ☐ I would choose Attraction D
- ☐ Not Sure

	Purchase of basic materials (e.g. foodstuff) and maintenance services	$ Per adult
A	100% local purchase	$51
B	50% local purchase	$47
C	25% local purchase	$45
D	0% local purchase	$41

Choice set 2:
Which of these options would you choose?

- ☐ I would choose Attraction A
- ☐ I would choose Attraction B
- ☐ I would choose Attraction C
- ☐ I would choose Attraction D
- ☐ Not Sure

	Use of renewable energy to provide power	$ Per adult
A	25%	$45
B	100%	$51
C	0%	$41
D	50%	$47

Choice set 3:
Which of these options would you choose?

- ☐ I would choose Attraction A
- ☐ I would choose Attraction B
- ☐ I would choose Attraction C
- ☐ I would choose Attraction D
- ☐ Not Sure

	Donations towards the rehabilitation of degraded areas, reduction of feral animals & weed infestations	$ Per adult
A	15% of revenues	$47
B	0% of revenues	$41
C	25% of revenues	$51
D	10% of revenues	$45

Choice set 4:
Which of these options would you choose?

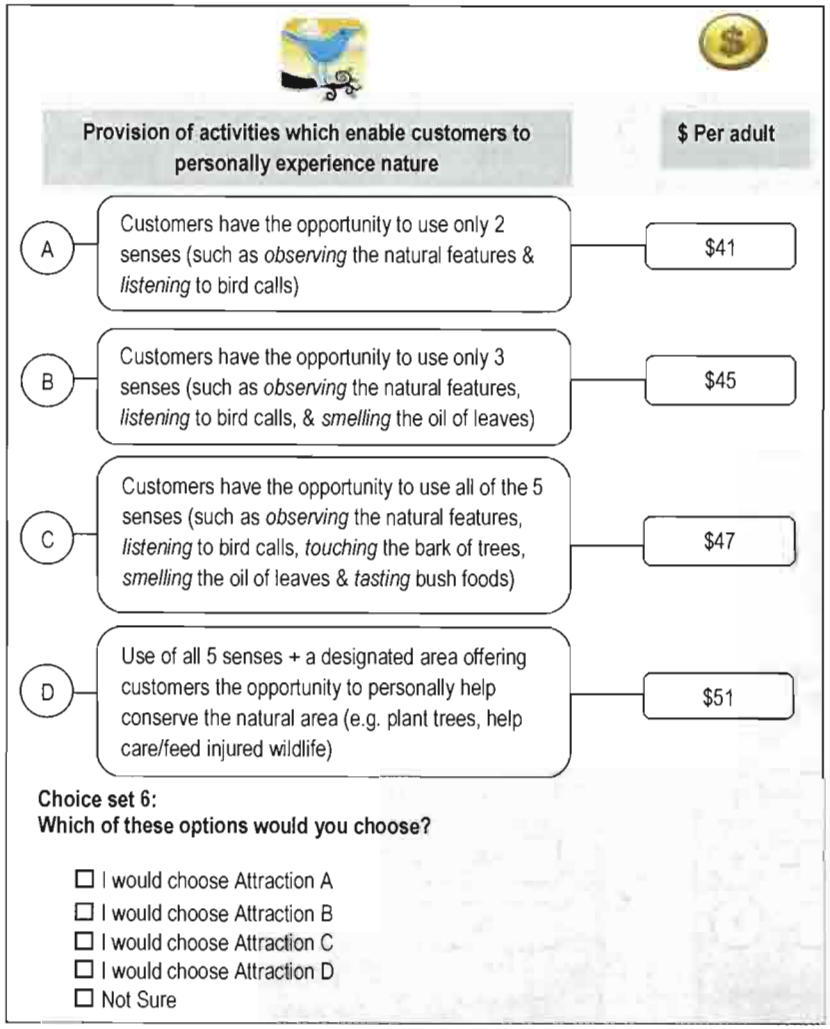
- ☐ I would choose Attraction A
- ☐ I would choose Attraction B
- ☐ I would choose Attraction C
- ☐ I would choose Attraction D
- ☐ Not Sure

	Provision of interpretive materials	$ Per adult
A	Brochures only	$41
B	Brochures, displays	$45
C	Brochures, displays and audio-visuals	$47
D	All of the above which integrates with activities (e.g. quizzes, games)	$51

Choice set 5:
Which of these options would you choose?

- ☐ I would choose Attraction A
- ☐ I would choose Attraction B
- ☐ I would choose Attraction C
- ☐ I would choose Attraction D
- ☐ Not Sure

APPENDIX 3: VISITOR SURVEY - ATTRACTION VERSION 1



	Provision of activities which enable customers to personally experience nature	$ Per adult
A	Customers have the opportunity to use only 2 senses (such as *observing* the natural features & *listening* to bird calls)	$41
B	Customers have the opportunity to use only 3 senses (such as *observing* the natural features, *listening* to bird calls, & *smelling* the oil of leaves)	$45
C	Customers have the opportunity to use all of the 5 senses (such as *observing* the natural features, *listening* to bird calls, *touching* the bark of trees, *smelling* the oil of leaves & *tasting* bush foods)	$47
D	Use of all 5 senses + a designated area offering customers the opportunity to personally help conserve the natural area (e.g. plant trees, help care/feed injured wildlife)	$51

Choice set 6:
Which of these options would you choose?

- ☐ I would choose Attraction A
- ☐ I would choose Attraction B
- ☐ I would choose Attraction C
- ☐ I would choose Attraction D
- ☐ Not Sure

E. About you

22. Are you: ☐ Male ☐ Female

23. Which of these age groups do you belong to?
☐ Under 20 years ☐ 20-29 ☐30-39 ☐ 40-49 ☐ 50-59
☐ 60-65 ☐ over 65

24. What is the highest level of education you have obtained?
☐ Primary ☐ Secondary ☐ Trade ☐ Diploma/Certificate ☐ Degree
☐ Postgraduate ☐ Other *(please specify)*.....

25. How would you best describe your occupation? (Please choose one only)
☐ Self-employed ☐ Professional ☐ Manual/Factory worker ☐Student ☐ Management
☐ Office/clerical ☐ Public service ☐ Retail ☐ Service industry
☐ Tradesperson ☐ Retired/semi-retired ☐Other *(please specify)*.....

26. Which of these best describes your immediate travel party?
☐ Alone ☐Couple ☐ Friends ☐ Relatives ☐ Family (adults and children)
☐ Club or tour group ☐ Other *(please specify)*.....

27. How often do you	Always	Very Frequently	Occasionally	Rarely	Never
Turn off lights when leaving rooms	☐	☐	☐	☐	☐
Turn off computers and monitors when not in use	☐	☐	☐	☐	☐
Dry clothes outside whenever possible	☐	☐	☐	☐	☐
Minimise shower time	☐	☐	☐	☐	☐
Minimise toilet flushing	☐	☐	☐	☐	☐
Run washing machine only when full load	☐	☐	☐	☐	☐
Purchase goods and services that are produced locally	☐	☐	☐	☐	☐
Purchase foods that are certified organic or sustainably produced	☐	☐	☐	☐	☐

28. When you think about how much you donate annually to charities of all kinds, would you estimate your annual donations to be:
☐ > $500 ☐ $300-$500 ☐ $100-$299 ☐ $1-$99 ☐ $0

29. How strongly do social equity issues (e.g. youth disadvantaged, poverty, etc) influence your voting?
☐ Very Strongly ☐ Strongly ☐ Moderately Strongly ☐ Not Strongly ☐Not strongly at all

30. Please indicate your approximate ANNUAL HOUSEHOLD income (AUS Dollars)
☐ Under $20,000 ☐ $20,000-$39,000 ☐ $40,000-$59,000
☐ $60,000-$79,000 ☐ $80,000-$99,000 ☐ > $100,000

Thank you for your help ☺

APPENDIX 4: OPERATOR SURVEY - TOUR

Ecocertified & Non-Ecocertified Tours Compared - Is There Much Difference?

To make a realistic assessment of whether or not ecocertification "makes a difference", one needs to consider the environmental and social impacts of different types of businesses as well as their economic performance. This survey is divided into different sections that ask about each of those.

N.B Some firms have multiple sites, (e.g. branch offices, franchises) but for this research I am interested in what is happening at this specific business/location. Therefore, when answering the following questions, please think about the circumstance of this specific business/location only.

Section A: About your business

To begin with, I would like to know a little about your business and your opinion on whether or not you think ecocertified businesses are performing better than non-ecocertified businesses.

1. **My area of interest for this study is the Wet Tropics World Heritage Area AND its adjacent locales. I have divided these areas into regions as descibed below.**

   a) **Which region is this particular business located?**

   ☐ **Cairns Region:** *(e.g. Cairns, Gordonvale, Kuranda)*
   ☐ **Central Region:** *(e.g. Mission Beach, Innisfail)*
   ☐ **Tablelands Region:** *(e.g. Malanda, Atherton, Walkamin)*
   ☐ **Southern Region**: *(e.g. Tully, Ingham, Cardwell, Lucinda)*
   ☐ **Northern Region**: *(e.g. Daintree, Mossman, Port Douglas)*

   b) **Which region(s) do your TOURS visit?***(Tick as many as appropriate)*

   ☐ **Cairns Region**
   ☐ **Central Region**
   ☐ **Tablelands Region**
   ☐ **Southern Region**
   ☐ **Northern Region**

2. **What is this business structure?**
   ☐ Sole Trader ☐Partnership ☐ Company
   ☐Other *(please specify)* .....

3. **How many years has this been in operation, in this location?**
   ☐ less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ more than 10 years

4. **What is the nature of the tour(s) provided by this business?** (e.g. bird watching, rainforest guided walks, etc)

   .....
   .....
   .....

5. **Roughly, what percentage (%) of your customers comes from:**

Within your region (as in question 1)	.....%
Elsewhere in the wet tropics	.....%
Elsewhere in Australia	.....%
Elsewhere in the world	.....%

6. **What is the status of ecocertification at this business?**
   ☐ Not being considered ☐ Considering ☐ Planning to implement
   ☐ Currently implementing ☐ Implemented

7. **In your opinion, are ecocertified businesses doing more than non ecocertified businesses to help improve:**

	Much more	More	About the same	Less	Much less	Not sure
a) the visitors' EXPERIENCE?	☐	☐	☐	☐	☐	☐
b) the LOCAL COMMUNITY?	☐	☐	☐	☐	☐	☐
c) the ENVIRONMENT?	☐	☐	☐	☐	☐	☐
d) the OPERATOR'S financial performance?	☐	☐	☐	☐	☐	☐

8. **Excluding Ecocertification programs, what other certification schemes/programs is this business affiliated with (if any)?**
   ☐ None ☐ Green Globe ☐ Climate Action
   ☐ EcoGuide ☐ Guides of Australia (GOA)
   ☐Other (please indicate) .....

APPENDIX 4: OPERATOR SURVEY - TOUR

The table below gives the components of EcoCertification.

IRRESPECTIVE OF WHETHER THIS BUSINESS IS ECOCERTIFIED OR NOT

9. **Please indicate how important each of the attribute is to this business.** (1 being not important at all and 5 being very important)

10. **Please indicate how well you think THIS BUSINESS does these types attributes.** (1 being not well at all and 5 being very well)

COMPONENTS OF ECOCERTIFICATION	9. How important to this business, are each of the following attributes of Eco Certification?						10. How well do you think THIS BUSINESS performs on these attributes?					
	Not important at all				Very Important	Not Sure	Not well at all				Very well	Not Sure
	1	2	3	4	5		1	2	3	4	5	
NATURAL AREA FOCUS *e.g. The tour is based around activities that help customers to personally experience nature*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
INTERPRETATION *e.g. Pre-tour materials such as brochures that explains the environment are provided*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ENVIRONMENTAL SUSTAINABILITY *e.g. Vehicles used on tours utilise energy efficient fuel*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CONTRIBUTION TO CONSERVATION *e.g. The tour operator donates funds to rehabilitate degraded areas*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. The tour operator purchases many goods and services locally, thus contributing to the local economy*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CULTURAL COMPONENT *e.g. Indigenous people are consulted about the nature and scope of the operation*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CUSTOMER SATISFACTION *e.g. The tour operator provides visitors with forms they can provide feedback*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
RESPONSIBLE MARKETING *e.g. Marketing material representing the tour does not feature images of places that are not part of the product being offered*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

11. **In your opinion, are ecocertification schemes measuring the things that matter?** ☐ No ☐ Yes ☐ Not sure

12. **Is there anything else you think ecocertification schemes should measure?**.....

APPENDIX 4: OPERATOR SURVEY - TOUR

13. **How many vehicles/vessels do you have? For each of those vehicles/vessels, please answer the following questions. NB – Each vehicle/vessel should be completed separately**. For additional vehicles, please complete the attached form.

VEHICLE / VESSEL 1

a) **Type of vehicle/vessel?** *(e.g. light 4WD)* .....
b) **Type of fuel used?** *(e.g. diesel)* .....
c) **Average km travelled per week?** .....
d) **Maximum number of passengers?** .....
e) **Approximate number of passengers each day during the different tourism seasons:**

WET SEASON		DRY SEASON	
Nov-Jan	Feb-Apr	May-Jul	Aug-Oct
.....	.....	.....	.....

f) **Number of guides in this vehicle/vessel?** .....

VEHICLE / VESSEL 2

a) **Type of vehicle/vessel?** *(e.g. light 4WD)* .....
b) **Type of fuel used?** *(e.g. diesel)* .....
c) **Average km travelled per week?** .....
d) **Maximum number of passengers?** .....
e) **Approximate number of passengers each day during the different tourism seasons:**

WET SEASON		DRY SEASON	
Nov-Jan	Feb-Apr	May-Jul	Aug-Oct
.....	.....	.....	.....

f) **Number of guides in this vehicle/vessel?** .....

VEHICLE / VESSEL 3

a) **Type of vehicle/vessel?** *(e.g. light 4WD)* .....
b) **Type of fuel used?** *(e.g. diesel)* .....
c) **Average km travelled per week?** .....
d) **Maximum number of passengers?** .....
e) **Approximate number of passengers each day during the different tourism seasons:**

WET SEASON		DRY SEASON	
Nov-Jan	Feb-Apr	May-Jul	Aug-Oct
.....	.....	.....	.....

f) **Number of guides in this vehicle/vessel?** .....

Section B: About your customers' experience

14. **How do you measure customer satisfaction?** (Please tick all that apply)
- ☐ Discussions with customers
- ☐ Visitor books/feedback forms
- ☐ Regular meetings/debriefs on operations between management & staff
- ☐ Use of structured interviews & questionnaires
- ☐ Discussion with agents & wholesalers
- ☐ Reviews by tourism professionals
- ☐ Other .....

15. **Which methods does this business use to ensure clients are well informed about the area they are visiting?** (Please tick all that apply)
- ☐ We make information available (e.g. brochure stands/displays on site)
- ☐ We custom make information specific to the area (e.g. interpretative material)
- ☐ We ensure informative interactions with staff (e.g. tours, group information sessions)
- ☐ We offer specialist lectures/talks for individual customers/groups
- ☐ Other .....

16. **How does this business ensure that its marketing is accurate and leads to realistic expectations?** (Please tick all that apply)
- ☐ We update marketing materials to match any changes
- ☐ We consult with clients to verify the delivery of services & experiences offered
- ☐ We consult with relevant organisations to ensure terms used are accurate
- ☐ We substantiate any claims through research and reviews by tourism professionals

Section C: About your business and the community

17 a) **Including yourself how many people are currently employed by this business?**.....

b) **How many full time equivalent positions do you have?** *(e.g. if you have 1 fulltime and 2 part time employees, each working 50% of the time, then put down 2).* .....

c) **How many of these employees are members of your own family?** .....

d) **How many of these employees are Aboriginal or Torres Strait Islanders?** .....

e) **Roughly, how many of these employees are permanent residents of your region** *(as in question 1)***?** .....

f) **Does this business have any apprentices?** ☐ No ☐ Yes

If yes, how many? .....

g) **Does this business provide work experience for school students?** ☐ No ☐ Yes

18. **Approximately, what proportion of all the operational money spent by this business** *(e.g. staff, capital equipment, supplies, maintenance services, etc)* **is spent:**

    a. *Within your region? (as in question 1)* .....%

    b. *Elsewhere in the Wet Tropics?* .....%

    c. *Elsewhere in Australia?* .....%

    d. *Elsewhere in the world?* .....%

19. **How much does this business donate annually to charities of all kinds? $**.....

20. **Of all the money that this business spends on charities and other social initiatives, approximately what proportion would you say is spent:**

    a. *Within your region? (as in question 1)* .....%

    b. *Elsewhere in the Wet Tropics?* .....%

    c. *Elsewhere in Australia?* .....%

    d. *Elsewhere in the world?* .....%

21. **Does this business contribute FINANCIALLY towards other local community initiatives?** *(e.g sponsoring sporting teams, etc)* ☐ No ☐ Yes

    If yes, on average, how much is contributed annually and for what? **$**.....

    For what?.....

    .....

    .....

22. **What other non monetary contributions does this business provide towards local community initiatives?** *(e.g. participating in community clean-up, providing facilities for local football teams to train, etc).*

    .....

    .....

    .....

23. **Does this business operate in areas of importance to the local Indigenous people?**

    ☐ No ☐ Yes

    If yes, how often do you consult with the traditional custodians about the nature and scope of the product?

    ☐Never ☐ Rarely ☐ Occasionally ☐ Always ☐ Not Sure

Section D: About vour business and the environment

24. **Do visitors on your tour(s) have the opportunity to feed wildlife?**

    ☐ No ☐ Yes ☐Not Applicable

25. **Do visitors on your tour(s) have the opportunity to handle wildlife?**

    ☐ No ☐ Yes ☐Not Applicable

26. **Which of the following measures do you practice on your tour(s)?** *(Tick all that applies)*

    ☐ We have a "carry in-carry out" policy for all litter and waste

    ☐ We clear new tracks

    ☐We inform other operators of our tour plan

    ☐We use spotlights for activities involving stag watching (e.g. watching tree hollows for emergence of nocturnal fauna)

    ☐We ensure that visitors and guides clean their boots before entering the WHA or National Parks

    ☐We ensure that vehicles are clean before entering the WHA or National Parks

27. How often do you	As soon as I spot any problem(s)	After 2 or 3 visits from the initial sighting	After 4-5 visits from the initial sighting	Only if the problem(s) is likely to interfere with my tour(s)	Never
Report problem(s) seen while on tour to relevant authorities? (e.g. erosion, weed infestations, etc.)	☐	☐	☐	☐	☐

28. **Do you calculate and offset the carbon emissions of your tour(s)?**

    ☐ No ☐ Yes

29. **Does this business offer clients the opportunity to offset the impacts of their tour experience?**

    ☐ No ☐ Yes

    If yes, what initiative(s) has this business implemented?

    .....

    .....

    .....

    .....

30. **Approximately, how much does this business contribute financially each year towards conservation efforts, and for what?** *(e.g providing funds towards rehabilitation of areas subject to negative visitor impacts, funds reduction of feral animals and/or weed infestations,etc)*

$.....

For what?

.....

.....

31. **Of that, approximately how much would you say is spent:**

a. *Within your region? (as in question 1)* .....%

b. *Elsewhere in the Wet Tropics?* .....%

c. *Elsewhere in Australia?* .....%

d. *Elsewhere in the world?* .....%

32. **What other non monetary contribution does this business provide towards conservation?** *(e.g.participating in or providing in kind support for research projects, helping to contruct walkboards, participating in tree planting activities, etc)*

.....

.....

.....

33. **Does this business provide visitors with the opportunity to contribute financially or otherwise, towards conservation efforts?** ☐ No ☐ Yes

Section E: Some more background information about your business

34. **Finally, please comment on the following:**

If you are ecocertified, do you think that the process of becoming ecocertified has helped the business to increase its profits or not?

.....

.....

.....

.....

If you are not ecocertified, do you think that ecocertification is likely to increase the business's profitability or not?

.....

.....

.....

.....

Optional **- Additional comments, either in relation to this survey, the overall study, or in general.**

.....

.....

.....

.....

35. **What was the approximate gross income for your business in the last financial year?**

☐ Less than $ 50,000	☐ $750,000 - $1m
☐ $50,000 - $ 100,000	☐ $1m - $2m
☐ $100,000 - $250,000	☐ $2m - $3m
☐ $250,000 - $ 500,000	☐ $3m - $4m
☐ $500,000 - $750,000	☐ More than $4m

Thank you for your participation ☺

APPENDIX 5: OPERATOR SURVEY - ACCOMMODATION

Ecocertified & Non-Ecocertified Accommodations Compared - Is There Much Difference?

To make a realistic assessment of whether or not ecocertification "makes a difference", one needs to consider the environmental and social impacts of different types of businesses as well as their economic performance. This survey is divided into different sections that ask about each of those.

N.B Some firms have multiple sites, (e.g. branch offices, franchises) but for this research I am interested in what is happening at this specific business/location. Therefore, when answering the following questions, please think about the circumstance of this specific business/location only.

Section A: About your business

To begin with, I would like to know about your business and your opinion on whether or not you think ecocertified businesses are performing better than non-ecocertified businesses.

1. **My area of interest for this study is the Wet Tropics World Heritage Area AND its adjacent locales. I have divided these areas into regions as descibed below.**

   Which region are you in? *(please tick as appropriate)*

   - ☐ ***Cairns Region:*** (e.g. Cairns suburbs, Aloomba, Gordonvale, Kuranda)
   - ☐ ***Central Region:*** (e.g. Mission Beach, Innisfail, Miriwinni)
   - ☐ ***Tablelands Region:*** (e.g. Malanda, Atherton, Walkamin, Yungaburra)
   - ☐ ***Southern Region:*** (e.g. Tully, Ingham, Halifax, Cardwell, Lucinda)
   - ☐ ***Northern Region:*** (e.g. Daintree, Mossman, Port Douglas, Oak Beach)

2. **What is this business structure?**
   ☐ Sole Trader ☐Partnership ☐ Company
   ☐Other *(please specify)* .....

3. **How many years has this business been in operation, in this location?**
   ☐ less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ more than 10 years

4. **What is your business's TOTAL CAPACITY?** (Please answer according to the type of accommodation you provide)

Hotel/Motel/ B&B	Caravan Park	Hostel/Backpacker
Number of rooms	Number of powered sites ..... Number of unpowered sites ..... Number of rooms	Number of bed spaces .....

5. **In the last year, what was your AVERAGE OCCUPANCY rate during the different periods?**

WET SEASON		DRY SEASON	
Nov-Jan	Feb-Apr	May-Jul	Aug-Oct
.....%	.....%	.....%	.....%

6. **Roughly, what percentage (%) of your customers comes from:**

Within your region (as in question 1)	.....%
Elsewhere in the wet tropics	.....%
Elsewhere in Australia	.....%
Elsewhere in the world	.....%

7. **What is the status of ecocertification at your business?**
   ☐ Not being considered ☐ Considering ☐ Planning to implement
   ☐ Currently implementing ☐ Implemented

8. **In your opinion, are ecocertified businesses doing more than non ecocertified businesses to help improve:**

	Much more	More	About the same	Less	Much less	Not sure
a) the visitors' EXPERIENCE?	☐	☐	☐	☐	☐	☐
b) the LOCAL COMMUNITY?	☐	☐	☐	☐	☐	☐
c) the ENVIRONMENT?	☐	☐	☐	☐	☐	☐
d) the OPERATOR'S financial performance?	☐	☐	☐	☐	☐	☐

9. **Excluding Ecocertification programs, what other certification schemes/programs is your business affiliated with (if any)?**
   ☐ None ☐ Green Globe ☐ Climate Action ☐ Other
   (please indicate) .....

APPENDIX 5: OPERATOR SURVEY - ACCOMMODATION

The table below gives the components of EcoCertification.

IRRESPECTIVE OF WHETHER YOUR BUSINESS IS ECOCERTIFIED OR NOT

10. **Please indicate how important each of the attribute is to your business.** (1 being not important at all and 5 being very important)

11. **Please indicate how well you think YOUR BUSINESS does these attributes.** (1 being not well at all and 5 being very well)

COMPONENTS OF ECOCERTIFICATION	10. How important to your business, are each of the following attribute of Eco Certification?						11. How well do you think YOUR BUSINESS does these attributes?					
	Not important at all				Very Important	Not Sure	Not well at all				Very well	Not Sure
	1	2	3	4	5		1	2	3	4	5	
NATURAL AREA FOCUS *e.g. The establishment is based around activities that help customers to personally experience nature*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
INTERPRETATION *e.g. The establishment provides materials that explains the environment*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ENVIRONMENTAL SUSTAINABILITY *e.g. The establishment uses renewable energy sources to provide power*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CONTRIBUTION TO CONSERVATION *e.g. The establishment donates funds to rehabilitate degraded areas*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. The establishment purchases many goods and services locally, thus contributing to the local economy*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CULTURAL COMPONENT *e.g. Indigenous people are consulted about the nature and scope of the operation*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CUSTOMER SATISFACTION *e.g. Forms are placed in rooms so customers can provide feedback*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
RESPONSIBLE MARKETING *e.g. Marketing material representing the establishment does not feature images of places that are not part of the product being offered*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

12. **In your opinion, are ecocertification schemes measuring the things that matter?** ☐ No ☐ Yes ☐ Not sure

13. **Is there anything else you think ecocertification schemes should measure?**.....

Section B: About your customers' experience

14. **How do you measure customer satisfaction?** (Please tick all that apply)
- ☐Discussions with customers
- ☐Visitor books/feedback forms
- ☐ Regular meetings/debriefs on operations between management & staff
- ☐ Use of structured interviews & questionnaires
- ☐ Discussion with agents & wholesalers
- ☐ Reviews by tourism professionals
- ☐Other .....

15. **Which methods does your business use to ensure clients are well informed about the area they are visiting?** (Please tick all that apply)
- ☐We make information available (e.g. brochure stands/displays on site)
- ☐We custom make information specific to the area (e.g. interpretative material)
- ☐We ensure informative interactions with staff (e.g. tours, group information sessions)
- ☐ We offer specialist lectures/talks for individual customers/ groups
- ☐Other .....

16. **How does your business ensure that its marketing is accurate and leads to realistic expectations?** (Please tick all that apply)
- ☐We update marketing materials to match any changes
- ☐We consult with clients to verify the delivery of services & experiences offered
- ☐ We consult with relevant organisations to ensure terms used are accurate
- ☐ We substantiate any claims through research and reviews by tourism professionals

Section C: About your business and the community

17. a) **Including yourself how many people are currently employed by your business?** .....

b) **How many full time equivalent positions do you have?** *(e.g. if you have 1 fulltime and 2 part time employees, each working 50% of the time, then put down 2).* .....

c) **How many of these employees are members of your own family?** .....

d) **How many of these employees are Aboriginal or Torres Strait Islanders?** .....

e) **Roughly, how many of these employees are permanent residents of "your region"** *(as in question 1)***?** .....

f) **Does your business have any apprentices?** ☐ No ☐ Yes

If yes, how many? .....

g) **Does your business provide work experience for school students?** ☐ No ☐ Yes

18. **Approximately, what proportion of all the operational money spent by your business** *(e.g. staff, capital equipment, supplies, maintenance services, etc)* **is spent:**

a. *Within your region? (as in question 1)* .....%

b. *Elsewhere in the Wet Tropics?* .....%

c. *Elsewhere in Australia?* .....%

d. *Elsewhere in the world?* .....%

19. **How much does your business donate annually to charities of all kinds?** $.....

20. **Of all the money that your business spends on charities and other social initiatives, approximately what proportion would you say is spent:**

a. *Within your region? (as in question 1)* .....%

b. *Elsewhere in the Wet Tropics?* .....%

c. *Elsewhere in Australia?* .....%

d. *Elsewhere in the world?* .....%

21. **Does your business contribute FINANCIALLY towards other local community initiatives?** *(e.g sponsoring sporting teams, etc)* ☐ No ☐ Yes

If yes, on average, how much is contributed annually and for what? $.....

For what?.....
.....

22. **What other non monetary contributions does your business provide towards local community initiatives?** *(e.g participating in community clean up, providing facilities for local football teams to train, etc).*

.....
.....
.....

23. **Does your business operate in areas of importance to the local Indigenous people?** ☐ No ☐ Yes

If yes, how often do you consult with the traditional custodians about the nature and scope of the product?

☐Never ☐ Rarely ☐ Occasionally ☐ Always ☐ Not Sure

APPENDIX 5: OPERATOR SURVEY - ACCOMMODATION

Section D: About your business and the environment

I recognize that you may not have immediate access to your electricity, gas and water bills to be able to answer some of the following questions (questions 24* and 26*). If that is the case, please tick the box below if you are happy for me to phone and ask about it later. Please also provide the name and phone number of the most suitable person for me to speak to.

☐Call back later

Number..... Person to contact .....

ENERGY CONSUMPTION

24. *On average, how much energy does your business use per quarter? (IF you are not sure about KWh, then you can provide an approximate dollar value)

	1st QUARTER mid Jan – mid Apr	2nd QUARTER Mid Apr – mid Jul	3rd QUARTER Mid Jul – mid Oct	4th QUARTER mid Oct – mid Jan
Electricity	.....(KWh)	.....(KWh)	.....(KWh)	.....(KWh)
Gas	.....(MJ)	.....(MJ)	.....(MJ)	.....(MJ)

25. What proportion of green power does your firm use (if any)? .....%

WATER CONSUMPTION

26. *On average, how much water does your business use per quarter? (IF you are unsure about ML, then you can provide an approximate dollar value)

1st QUARTER mid Jan – mid Apr	2nd QUARTER Mid Apr – mid Jul	3rd QUARTER Mid Jul – mid Oct	4th QUARTER mid Oct – mid Jan
.....(ML)	.....(ML)	.....(ML)	.....(ML)

☐Don't Know ☐No meter for indoor use

☐ No meter for outdoor use

27. Does this amount also include water that is used OUTDOORS (e.g. in the garden)?

☐ No *(go to question 28)* ☐ Yes *(go to question 29)*

28. If your business does not have a meter for outdoor water use, please indicate approximately, how many hours per week water is used for the following: *(Please fill a separate number for the wet and the dry season)*

	In the wet season	In the dry season
Water the garden	____hours per week	____hours per week
Fill a swimming pool	____hours per week	____hours per week
Other *(Please specify)*	____hours per week	____hours per week

29. Where does MOST of the water that your business uses INDOORS come from? (Please tick the appropriate box).

☐ From a dam ☐ From the local government (e.g. mains water)
☐ From an underground bore or well ☐ From a river or stream
☐ From rainwater/tanks ☐ Other_____

30. Where does MOST of the water that your business uses OUTDOORS come from? (Please tick the appropriate box)

☐ From a dam ☐ From a river or stream ☐From rainwater/tank
☐From an underground bore or well ☐ Recycled (e.g. grey water)
☐ From the local government (e.g. mains water) ☐Other.....

WASTE MANAGEMENT

31. How much waste does your business generate on a weekly basis? (Please indicate the approximate number of bins according to the appropriate type used by your business).

Mobile garbage bins (120ltr -240ltr wheelie bins) .....
Four-wheel bin (660ltr-1100ltr plastic bin) .....
Four-wheel steel bin (1.5 cubic metres) .....
Four-wheel steel bin (3 cubic metres) .....
Four-wheel steel bin (4.5 cubic metres) .....
Skip/Hooklift & Bulk waste bin (2-4 cubic metres) .....
Skip/Hooklift & Bulk waste bin (5-8 cubic metres) .....
Skip/Hooklift & Bulk waste bin (9-12 cubic metres) .....

32. Roughly, what percentage of this waste is:

Recyclable	Compostable	Non-Recyclable
.....%	.....%	.....%

33. **Does your business sell or give food waste to local collectors to be used for feeding animals?**
☐ No ☐ Yes

RESPONSE TO CLIMATE CHANGE

34. **Does your business calculate and offset its carbon emissions?**
☐ No ☐ Yes

35. **Does your business offer clients the opportunity to offset the impacts of their stay?**
☐ No ☐ Yes

If yes, what initiative(s) has your firm implemented?

.....
.....
.....
.....

CONSERVATION

36. **Approximately, how much does your business contribute financially each year towards conservation efforts, and for what?** *(e.g providing funds towards rehabilitation of areas subject to negative visitor impacts, funds reduction of feral animals and/or weed infestations,etc)*
$.....

For what?

.....
.....

37. **Of that, approximately how much would you say is spent:**

a. *Within your region? (as in question 1)* .....%
b. *Elsewhere in the Wet Tropics?* .....%
c. *Elsewhere in Australia?* .....%
d. *Elsewhere in the world?* .....%

Thank you for your participation☺

38. **What other non monetary contribution does your business provide towards conservation?** *(e.g.participating in or providing in kind support for research projects, helping to contruct walkboards, participating in tree planting activities, etc)*

.....
.....
.....
.....

39. **Does your business provide visitors with the opportunity to contribute financially or otherwise, towards conservation efforts?** ☐ No ☐ Yes

Section E: Some more background information about your business

40. **Finally, please comment on the following:**

If you are ecocertified, do you think that the process of becoming ecocertified has helped the business increase its profits or not?

.....
.....
.....

If you are not ecocertified, do you think that ecocertification is likely to increase your profitability or not?

.....
.....
.....

Optional **- Additional comments, either in relation to this survey, the overall study, or in general.**

.....
.....
.....

41. **What was the approximate gross income for your business in the last financial year?**

☐ Less than $ 50,000
☐ $50,000 - $ 100,000
☐ $100,000 - $250,000
☐ $250,000 - $ 500,000
☐ $500,000 - $750,000
☐ $750,000 - $1m
☐ $1m - $2m
☐ $2m - $3m
☐ $3m - $4m
☐ More than $4m

APPENDIX 6: OPERATOR SURVEY - ATTRACTION

Ecocertified & Non-Ecocertified Attractions Compared - Is There Much Difference?

To make a realistic assessment of whether or not ecocertification "makes a difference", one needs to consider the environmental and social impacts of different types of businesses as well as their economic performance. This survey is divided into different sections that ask about each of those.

N.B Some firms have multiple sites, (e.g. branch offices, franchises) but for this research I am interested in what is happening at this specific business/location. Therefore, when answering the following questions, please think about the circumstance of this specific business/location only.

Section A: About your business

To begin with, I would like to know a little about your business and your opinion on whether or not you think ecocertified businesses are performing better than non-ecocertified businesses.

1. **My area of interest for this study is the Wet Tropics World Heritage Area AND its adjacent locales. I have divided these areas into regions as descibed below.**

   Which region are you in? *(please tick as appropriate)*

   ☐ ***Cairns Region:*** (e.g. Cairns suburbs, Aloomba, Gordonvale, Kuranda)
   ☐ ***Central Region:*** (e.g. Mission Beach, Innisfail, Miriwinni)
   ☐ ***Tablelands Region:*** (e.g. Malanda, Atherton, Walkamin, Yungaburra)
   ☐ ***Southern Region:*** (e.g. Tully, Ingham, Halifax, Cardwell, Lucinda)
   ☐ ***Northern Region:*** (e.g. Daintree, Mossman, Port Douglas, Oak Beach)

2. **What is this business structure?**
   ☐ Sole Trader ☐Partnership ☐ Company
   ☐Other *(please specify)* .....

3. **How many years has this business been in operation, in this location?**
   ☐ less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ more than 10 years

4. **What is the nature of the attraction provided by this business?** (e.g. wildlife park etc)

   .....

   .....

5. **What is your business's TOTAL CAPACITY?** (i.e. what is the maximum number of visitors your business can accommodate on any single day) .....

6. **In the last year, what was your AVERAGE DAILY number of visitors during the different tourist seasons?**

WET SEASON		DRY SEASON	
Nov-Jan	**Feb-Apr**	**May-Jul**	**Aug-Oct**
.....	.....	.....	.....

7. **Roughly, what percentage (%) of your customers comes from:**

Within your region (as in question 1)	.....%
Elsewhere in the wet tropics	.....%
Elsewhere in Australia	.....%
Elsewhere in the world	.....%

8. **What is the status of ecocertification at this business?**
   ☐ Not being considered ☐ Considering ☐ Planning to implement
   ☐ Currently implementing ☐ Implemented

9. **In your opinion, are ecocertified businesses doing more than non ecocertified businesses to help improve:**

	Much more	More	About the same	Less	Much less	Not sure
a) the visitors' EXPERIENCE?	☐	☐	☐	☐	☐	☐
b) the LOCAL COMMUNITY?	☐	☐	☐	☐	☐	☐
c) the ENVIRONMENT?	☐	☐	☐	☐	☐	☐
d) the OPERATOR'S financial performance?	☐	☐	☐	☐	☐	☐

10. **Excluding Ecocertification programs, what other certification schemes/programs is this business affiliated with (if any)?**
    ☐ None ☐ Green Globe ☐ Climate Action
    ☐Other (please indicate) .....

APPENDIX 6: OPERATOR SURVEY - ATTRACTION

The table below gives the components of EcoCertification.

IRRESPECTIVE OF WHETHER THIS BUSINESS IS ECOCERTIFIED OR NOT

11. **Please indicate how important each of the attribute is to this business.** (1 being not important at all and 5 being very important)

12. **Please indicate how well you think THIS BUSINESS does these attributes.** (1 being not well at all and 5 being very well)

COMPONENTS OF ECOCERTIFICATION	11. How important to this business, are each of the following attribute of Eco Certification?						12. How well do you think THIS BUSINESS does these attributes?					
	Not important at all				Very Important	Not Sure	Not well at all				Very well	Not Sure
	1	2	3	4	5		1	2	3	4	5	
NATURAL AREA FOCUS *e.g. The attraction is based around activities that help customers to personally experience nature*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
INTERPRETATION *e.g. Materials that explains the environment (e.g. brochures, signage) are provided at the attraction venue*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ENVIRONMENTAL SUSTAINABILITY *e.g. The attraction venue uses renewable energy sources to provide power*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CONTRIBUTION TO CONSERVATION *e.g. A proportion of money raised from visitation to the attraction is donated to fund the rehabilitation of degraded areas*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
WORKING WITH LOCAL COMMUNITIES *e.g. Goods sold and services needed at the attraction venue are purchased locally, thus contributing to the local economy*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CULTURAL COMPONENT *e.g. Indigenous people are consulted about the nature and scope of the operation*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
CUSTOMER SATISFACTION *e.g. Visitors to the attraction are provided with forms so they can provide feedback*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
RESPONSIBLE MARKETING *e.g. Marketing material representing the attraction does not feature images of places that are not part of the product being offered*	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

13. **In your opinion, are ecocertification schemes measuring the things that matter?** ☐ No ☐ Yes ☐ Not sure

14. **Is there anything else you think ecocertification schemes should measure?**.....

Section B: About your customers' experience

15. **How do you measure customer satisfaction?** (Please tick all that apply)
- ☐Discussions with customers
- ☐Visitor books/feedback forms
- ☐ Regular meetings/debriefs on operations between management & staff
- ☐ Use of structured interviews & questionnaires
- ☐ Discussion with agents & wholesalers
- ☐ Reviews by tourism professionals
- ☐Other .....

16. **Which methods does your business use to ensure clients are well informed about the area they are visiting?** (Please tick all that apply)
- ☐We make information available (e.g. brochure stands/displays on site)
- ☐We custom make information specific to the area (e.g. interpretative material)
- ☐We ensure informative interactions with staff (e.g. tours, group information sessions)
- ☐ We offer specialist lectures/talks for individual customers/ groups
- ☐Other .....

17. **How does your business ensure that its marketing is accurate and leads to realistic expectations?** (Please tick all that apply)
- ☐We update marketing materials to match any changes
- ☐We consult with clients to verify the delivery of services & experiences offered
- ☐ We consult with relevant organisations to ensure terms used are accurate
- ☐ We substantiate any claims through research and reviews by tourism professionals

Section C: About your business and the community

18. a) **Including yourself how many people are currently employed by your business?** .....

b) **How many full time equivalent positions do you have?** *(e.g. if you have 1 fulltime and 2 part time employees, each working 50% of the time, then put down 2).* .....

c) **How many of these employees are members of your own family?** .....

d) **How many of these employees are Aboriginal or Torres Strait Islanders?** .....

e) **Roughly, how many of these employees are permanent residents of "your region"** *(as in question 1)***?** .....

f) **Does your business have any apprentices?** ☐ No ☐ Yes

If yes, how many? .....

g) **Does your business provide work experience for school students?** ☐ No ☐ Yes

19. **Approximately, what proportion of all the operational money spent by your business** *(e.g. staff, capital equipment, supplies, maintenance services, etc)* **is spent:**

a. *Within your region? (as in question 1)* .....%
b. *Elsewhere in the Wet Tropics?* .....%
c. *Elsewhere in Australia?* .....%
d. *Elsewhere in the world?* .....%

20. **How much does your business donate annually to charities of all kinds?** $.....

21. **Of all the money that your business spends on charities and other social initiatives, approximately what proportion would you say is spent:**

a. *Within your region? (as in question 1)* .....%
b. *Elsewhere in the Wet Tropics?* .....%
c. *Elsewhere in Australia?* .....%
d. *Elsewhere in the world?* .....%

22. **Does your business contribute FINANCIALLY towards other local community initiatives?** *(e.g sponsoring sporting teams, etc)* ☐ No ☐ Yes

If yes, on average, how much is contributed annually and for what? $.....

For what?.....
.....

23. **What other non monetary contributions does your business provide towards local community initiatives?** *(e.g participating in community clean up, providing facilities for local football teams to train, etc).*

.....
.....
.....

24. **Does your business operate in areas of importance to the local Indigenous people?** ☐ No ☐ Yes

If yes, how often do you consult with the traditional custodians about the nature and scope of the product?

☐Never ☐ Rarely ☐ Occasionally ☐ Always ☐ Not Sure

Section D: About your business and the environment

I recognize that you may not have immediate access to your electricity, gas and water bills to be able to answer some of the following questions (questions 25* and 27*). If that is the case, please tick the box below if you are happy for me to phone and ask about it later. Please also provide the name and phone number of the most suitable person for me to speak to.

☐Call back later

Number..... Person to contact .....

ENERGY CONSUMPTION

25. *On average, how much energy does your business use per quarter?
(IF you are not sure about KWh, then you can provide an approximate dollar value)

	1st QUARTER mid Jan – mid Apr	2nd QUARTER Mid Apr – mid Jul	3rd QUARTER Mid Jul – mid Oct	4th QUARTER mid Oct – mid Jan
Electricity	.....(KWh)	.....(KWh)	.....(KWh)	.....(KWh)
Gas	.....(MJ)	.....(MJ)	.....(MJ)	.....(MJ)

26. What proportion of green power does your business use (if any)? .....%

WATER CONSUMPTION

27. *On average, how much water does your business use per quarter?
(IF you are unsure about ML, then you can provide an approximate dollar value)

1st QUARTER mid Jan – mid Apr	2nd QUARTER Mid Apr – mid Jul	3rd QUARTER Mid Jul – mid Oct	4th QUARTER mid Oct – mid Jan
.....(ML)	.....(ML)	.....(ML)	.....(ML)

☐Don't Know ☐No meter for indoor use
☐ No meter for outdoor use

28. Does this amount also include water that is used OUTDOORS (e.g. in the garden)?
☐ No *(go to question 29)* ☐ Yes *(go to question 30)*

29. If your business does not have a meter for outdoor water use, please indicate approximately, how many hours per week the outside tap is used for various purposes: *(Please fill a separate number for the wet and the dry season)*

	In the wet season	In the dry season
e.g. Watering the garden &/or external irrigation	4 hours per week	10 hours per week
Other *(Please specify)*		
.....	____hours per week	____hours per week
.....	____hours per week	____hours per week
.....	____hours per week	____hours per week
.....	____hours per week	____hours per week
.....	____hours per week	____hours per week
.....	____hours per week	____hours per week
.....	____hours per week	____hours per week
.....	____hours per week	___hours per week

30. Where does MOST of the water that your business uses INDOORS come from?
(Please tick the appropriate box).
☐ From a dam ☐ From the local government (e.g. mains water)
☐ From an underground bore or well ☐ From a river or stream
☐ From rainwater/tanks ☐ Other_____

31. Where does MOST of the water that your business uses OUTDOORS come from?
(Please tick the appropriate box)
☐ From a dam ☐ From a river or stream ☐From rainwater/tank
☐From an underground bore or well ☐ Recycled (e.g. grey water)
☐ From the local government (e.g. mains water) ☐Other.....

32. **Does your business calculate and offset its carbon emissions?**
☐ No ☐ Yes

33. **Does this business offer clients the opportunity to offset the impacts of their attraction experience?**
☐ No ☐ Yes

If yes, what initiative(s) has this business implemented?

.....
.....
.....
.....

34. **Approximately, how much does this business contribute financially each year towards conservation efforts, and for what?** *(e.g providing funds towards rehabilitation of areas subject to negative visitor impacts, funds reduction of feral animals and/or weed infestations,etc)*

$.....

For what?

.....
.....

35. **Of that, approximately how much would you say is spent:**

a. *Within your region? (as in question 1)* .....%
b. *Elsewhere in the Wet Tropics?* .....%
c. *Elsewhere in Australia?* .....%
d. *Elsewhere in the world?* .....%

36. **What other non monetary contribution does this business provide towards conservation?** *(e.g.participating in or providing in kind support for research projects, helping to contruct walkboards, participating in tree planting activities, etc)*

.....
.....
.....

37. **Does this business provide visitors with the opportunity to contribute financially or otherwise, towards conservation efforts?** ☐ No ☐ Yes

Section E: Some more background information about your business

38. **Finally, please comment on the following:**

If you are ecocertified, do you think that the process of becoming ecocertified has helped the business to increase its profits or not?

.....
.....
.....
.....

If you are not ecocertified, do you think that ecocertification is likely to increase the business's profitability or not?

.....
.....
.....
.....

***Optional* - Additional comments, either in relation to this survey, the overall study, or in general.**

.....
.....
.....
.....

39. **What was the approximate gross income for your business in the last financial year?**

☐ Less than $ 50,000
☐ $50,000 - $ 100,000
☐ $100,000 - $250,000
☐ $250,000 - $ 500,000
☐ $500,000 - $750,000
☐ $750,000 - $1m
☐ $1m - $2m
☐ $2m - $3m
☐ $3m - $4m
☐ More than $4m

Thank you for your participation ☺

APPENDIX 7: Operator performance: Some insights of actual performance

Appendix 7 presents data collected from operators about their actual performance on some key indicators of customer satisfaction, environment and the community. Although this was not the primary aim of this research, it does provide some insights on differences in performance between those with and without certification, in a bid to understand if certification improves performance.

Development of questions specific to operators

Although not the primary focus of my research, I took the opportunity to also include questions that would help understand whether certification improves performance. I did that by looking at some objective indicators of performance. To maintain consistency, I aimed to ensure that indicators matched the attributes as measured by *ECO* certification and matched the respective product (i.e. accommodation, attraction, tour). However, I also used the broader literature to help confirm which indicators were relevant to my case study area (Ceron & Dubois, 2003; Moldan & Dahl, 2007; Bell & Morse, 2008; Castley, Hill, & Pickering, 2008). I began with a full list of indicators subsequently eliminating those which I would not be able to obtain data on. The selected indicators fell into three categories of performance and each are described in detail below:

1. Maintenance of customer satisfaction/experience
2. Contribution to the local and wider communities (i.e. social performance)
3. Contribution to the local and wider environments (i.e. environmental performance)

Maintenance of customer satisfaction/experience

Operators were queried about the actions taken to ensure that customer's experience is enjoyable and is value for money. Across all three surveys, respondents were presented with a list of actions/measures in three categories (obtaining feedback, provision of interpretation and responsible marketing) and were asked to identify those implemented by the business. All three categories were part of the assessment criteria of the *ECO* certification scheme.

First, respondents were asked about how they measure customer satisfaction. In general, tourism operators assess customer satisfaction by obtaining feedback via methods such as questionnaires, random interviews and written feedback on the service and quality of the product (UNEP, 2005a). To demonstrate that they monitor customer feedback, operators seeking certification have to

satisfy at least four of the seven criteria (informal feedback) listed in the application form[69]. More effort is required for advanced *ECO* certification and operators have to engage formally with customers when obtaining feedback (formal feedback)[70]. A mixture of these two types of feedback was considered. Altogether, six criteria were selected for inclusion in this study, sorted according to the amount of effort operators needed to employ in order to satisfy them. Operators were asked to indicate which of the measures they practiced and the opportunity to describe their own measure was also given.

Second, operators must provide an appropriate level of interpretation about the natural and cultural heritage of the areas visited, through for example, the employment of qualified guides and the provision of accurate information, both prior to and during the experience (Ecotourism Australia, 2009). To ensure that the questions bore significance to the accommodation providers as well, the questionnaire focused on the provision of accurate information and asked about the methods used to ensure customers are well informed about the area they visit. The measures chosen were classified as personal or non-personal. Examples of *personal* interpretation are: informative interaction with a guide (e.g. spotlighting, bird watching, etc); talks or lectures by specialists; theatre performances; others (e.g. games, treasure hunts, quizzes, role plays, etc). Examples of *non-personal* interpretation are: Pretour materials (e.g. briefing sheets, brochures); displays/interpretive signage; interpretive brochures; audio visuals; reference materials; self-guiding trails, etc) (Ecotourism Australia, 2003).

Third, it is important that responsible marketing is practiced. This means respecting the cultural and environmental integrity of destinations and products and resisting the commercial pressures to *'over sell'* or make unrealistic claims (UNEP, 2005a). For example, marketing images are correct, i.e. brochures and other mediums of communication present an accurate image of the destination or product, so that visitors can match their needs and interest. Importantly, claims made about the

---

[69] *Informal* feedback on customer satisfaction is sought via at least four of the following measures: observation of customers; discussions with customers; visitor books or feedback forms; regular meetings/debriefs on operations between management and staff; discussion with agents and wholesalers; review of articles by visiting journalists; reviewing and responding to letters/telephone calls from customers (Ecotourism Australia, 2003).

[70] *Formal* feedback include measures such: organised observations of customer behaviour; structured interviews with customers; focus groups that represent their market; questionnaires; reviews by tourism professionals (e.g. other nature tourism or ecotourism operators; product development and marketing officers from national, state and regional tourism organisations; nature and ecotourism industry associations; and tourism industry consultants), etc (Ecotourism Australia, 2003).

product must be correct and verifiable. In view of that, respondents were asked about the measures adopted to ensure that their marketing was accurate and leads to realistic expectations.

Contribution to the local and wider communities (i.e. social performance)

The intention with this section of the questionnaire was to assess businesses' social performance. Social performance is the social dimension of the commitment to contribute to sustainable development as part of the day-to-day business, not as a separate activity or initiative (Jones, Fossgard-Moser, de Wit, & Shell International Limited, 2004). Whilst evaluating a business' financial performance may be straightforward, judging its social impact presents more of a challenge, with the latter being multidimensional. Examples of the different dimensions of social performance identified in the literature are employee relations, community relations, issues concerned with woman and minorities and product safety (e.g. Hillman & Keim, 2001; Griffin & Mahon, 1997; Johnson & Greening, 1999, cited in Brammer, Pavelin, & Porter, 2006). Businesses are judged according to the contributions made (positively/negatively) to the communities and societies in which they are located or with which they interact in some way. Accordingly, the firms behaviour impacts various stakeholder groups (e.g. employees, customers, communities, the environment) (Brammer, et al., 2006).

As explained earlier, the most common indicators and those most relevant to the region of interest were chosen for assessment. Importantly, indicators needed to be quantitative and were categorised according to:

1. Provision of local benefits; and
2. Community involvement

As regards the provision of local benefits, indicators focused principally on employment practices and included the number and kinds of people employed and the mode of employment (family members, people of indigenous descent and/or permanent residents of the region, fulltime/part time). Information was also sought about the provision of apprenticeships and/or work experience for school students. Because buying from local sources (provided they are available) is pivotal in the provision of local benefits, respondents were asked what proportion of their purchasing budget was spent locally, regionally, nationally or outside Australia.

As regards community involvement, respondents were asked about their annual financial contributions to local, regional, national or international charities and local community initiatives. Lastly, respondents were also asked to identify their in-kind support and involvement in community initiatives (e.g. participation in community clean-up).

Contribution to the local and wider environments (i.e. environmental performance)

This part of the survey investigated the environmental performance of firms. Environmental performance refers to how well a firm manages the environmental aspects of its activities, products and services and the impact they have on the environment (Schaltegger & Synnestvedt, 2002; Elsayed & Paton, 2005; Kortelainen, 2008; Praxiom Research Group Limited, 2012). Accordingly, a firm's environmental performance can be improved by reducing its negative environmental impact or increasing its positive environmental impact. To gauge how well (or badly) a firm's environmental aspects are, environmental performance must be measurable. This is pivotal when faced with the claim that certified firms are environmentally *'better'*.

In addition to ensuring that the selected indicators were measurable, relevant to the case study area and to each respective product, I also set out to ensure that the chosen indicators were understandable and feasible.

The selected indicators encompassed, for example: energy use, water use, solid waste, response to climate change, and biodiversity. Unlike indicators about maintaining customer satisfaction and social performance which were similar across all three surveys, indicators about environmental performance differed slightly across the three surveys – this is because not all indicators were relevant to all three types of operators and impacts varied according to the type of operation, activities and settings in which the business operated. For example, in the case of energy use, accommodation and attraction providers were asked about their electricity and gas use per quarter (easily obtainable from the power and/or gas bills). As regards tour operators, energy use was measured as consumption per unit distance per passenger. Another example is water usage – this question was omitted from the tour survey as it was thought to be at least partially irrelevant. To facilitate comparisons, all measurement was then converted to a per person per night basis.

As discussed in section 3.5.1.1, one of the most pressing issues for the region is climate change. In consideration of the anticipated impacts, the Wet Tropics Management Authority (WTMA) stresses that the most important management interventions will be those that build ecological resilience in and around the area. Mitigating greenhouse gas emissions and improving forest health are two of several measures proposed in a bid to boost ecological resilience. Questions therefore included: the proportion of green power used (or energy efficiency of tour vehicles), whether the business calculated and offset their carbon emissions and whether clients were provided with opportunities to also do so, and about the types of initiatives taken and provided to clients, financially or otherwise towards conservation efforts (e.g. plant trees, purchase carbon credits, donate to carbon offset schemes, help to construct walk boards, participate in research projects etc). As regards the

financial contributions, I was interested to know the proportion of that contribution that goes locally vs. elsewhere (i.e. rest of Australia and the world).

Table A summarises the selected indicators and the corresponding questions in the survey (for details of the full survey, see Appendix 4, 5 & 6) and shows the link between the different attributes and sub-attributes of *ECO* certification with the chosen indicators.[71] Where relevant, the units of measurement were also considered and these were converted to per visitor per night indicators.

[71] See Figure 3.2 for a list of sub-attributes. The one most relevant to the indicators being assessed is included in Table 7.1.

Table A Summary of indicators used to assess and compare performance of *ECO*-certified and non-*ECO* certified operators

Attributes		Performance indicators	Accommodations	Attractions	Tours
Customer Interpretation ❖ **Access to interpretation** Marketing	**CUSTOMER SATISFACTION**	Obtaining feedback (informal and formal measures) Provision of interpretation (personal and non-personal) Responsible marketing (measures employed to ensure that marketing is accurate and leads to realistic expectations)	Q. 14 Q. 15 Q. 16	Q. 15 Q. 16 Q. 17	Q. 14 Q. 15 Q. 16
Community ❖ **Provision of local benefits** ❖ **Community involvement**	**SOCIAL**	Provision of local benefits through: 1) employment practices • Number of employees • Kinds (e.g. indigenous, family members, permanent residents of the region) • Mode (fulltime/part time) • Number of apprentices and/or provision of work experience for school students 2) Buying from local sources (proportion of budget spent locally, regionally, nationally or outside Australia) Financial contribution to charities and/or community initiatives (local, regional, national or international) In-kind community support (e.g. participation in community clean-up)	Q. 17 Q. 18 Qs. 19, 20, 21 Q. 22	Q. 18 Q. 19 Qs. 20, 21,22 Q. 23	Q. 17 Q. 18 Qs. 19, 20, 21 Q. 22
Environment ❖ **Energy use& minimisation: buildings & transport** ❖ **Water supply & conservation** ❖ **Waste minimisation & litter**	**ENVIRONMENTAL**	Electricity (kWh/person/night) Natural gas (MJ/person/night) Liquid fuel (l/km/passenger) type of vehicle and fuel used Water use (l/person/night) Solid waste (l/person/night) Response to climate change (% of green power; energy efficient fuel; calculation and offsetting of the business 'emissions, opportunities provided to clients to offset the impacts of their holiday) Contribution to Biodiversity by both the business and the clients (financial and in-kind)	Q. 24 Q. 24 Q. 26 Qs. 31,32 Qs. 25, 34, 35 Qs. 36, 37, 38, 39	Q. 25 Q. 25 Q. 27 Qs. 26, 32, 33 Qs. 34, 35, 36, 37	Q. 13 Qs. 13, 28, 29 Qs. 30, 31, 32, 33
Conservation ❖ **Conservation initiatives**					

Objective indicators of performance

Part of the goal in measuring performance, was to ensure that a fair assessment is made between those that have certification and those that don't. For example, comparing a non-certified bed and breakfast with its certified counterpart, or a non-certified river tour with its certified counterpart. Unfortunately, the low number of surveys received and non-response on some key indicators did not permit comparisons to be made at that level of detail. Thus I limit comparisons between certified and non-certified operators to generic comments.

Performance on customer experience

Table B contains a list of the measures adopted by businesses to assess and ensure the customer experience is satisfactory. For the first question, measures above the dotted line represents high level of engagement with customers, staff and peers (i.e. proactive engagement), while measures below the dotted line depicts lower (passive) level of engagement.

Overall, it looks as if *ECO*-certified operators are doing *'better'* in ensuring customer satisfaction by adopting higher levels of engagement measures than their non-*ECO* certified counterparts, although differences observed are relatively small. To ensure clients are well informed about the area they visit, businesses can offer non-personal tools (represented here by those measures above the dotted line) or personal tools (represented here by those measures below the dotted line). *ECO*-certified firms appear to engage more on both levels than non-*ECO* certified firms. In terms of responsible marketing, it looks as if both types of firms are using similar approaches in providing accurate marketing and ensuring realistic expectations.

Table B Performance on indicators of customer satisfaction

Questions	*ECO* certified businesses (n=23)	Non-*ECO* certified businesses (n=25)
How do you measure customer satisfaction?	**%**	**%**
Discussions with customers	87	88
Regular meetings/debriefs on operations between management & staff	57	36
Discussion with agents & wholesalers	57	44
Use of structured interviews & questionnaires	17	12
Visitor books/feedback forms	91	60
Reviews by tourism professionals	30	20
Which methods does this business use to ensure clients are well informed about the area they are visiting?	%	%
We make information available (e.g. brochure stands/displays on site)	78	72
We custom make information specific to the area (e.g. interpretative material)	78	40
We ensure informative interactions with staff (e.g. tours, group information sessions)	78	64
We offer specialist lectures/talks for individual customers/ groups	44	24
How does this business ensure that its marketing is accurate and leads to realistic expectations?	**%**	**%**
We update marketing materials to match any changes	91	84
We consult with clients to verify the delivery of services & experiences offered	78	56
We consult with relevant organisations to ensure terms used are accurate	44	40
We substantiate any claims through research and reviews by tourism professionals	30	28

Performance on social indicators

There appears to be little difference between indicators of social contribution for certified and non-certified firms. The only criterion revealing a clear difference is *'Donations to community initiatives'* where *ECO*-certified firms contributed nearly twice as much as non-*ECO* certified firms (Table C).

Table C The firm and the community

	Fulltime equivalent	Indigenous employees	Donations to charities	Donations to community initiatives	Non-monetary contribution
ECO-certified	64%	1%	$69000	$22300	57%
Non-*ECO* certified	69%	2%	$70710	$12100	44%

Performance on environmental indicators

Of the 19 accommodations included in this survey, 13 provided details about energy consumption. Of these, two were operating on 100% renewable energy – solar and hydroelectric – and both were

ECO-certified. Although units of measurement were given in the survey (e.g. kWh), in some instances respondents provided the energy consumption in units convenient to them: two provided dollar values, another two provided kg (gas) and one provided amphours - these were converted into kWh to facilitate comparisons. To estimate energy efficiency, the average occupancy was considered and final estimates are presented on a kWh/visitor/night basis. To highlight the equivalent greenhouse gas produced, kWh was then multiplied by a conversion factor of 1.046. All conversion factors used were provided by the Australian Greenhouse Office (ecoBiz, 2007).

As I have discussed already, not everyone was able to provide the necessary information, hence many indicators are not presented here (e.g. water usage). Yet, it would appear that *ECO*-certified firms were outperformed by their non-*ECO* certified counterparts. *ECO*-certified firms generated more CO_2 emissions and waste (Table D). However, considering the dispersal around the mean of various indicators, it is inappropriate to use these measures to draw conclusions about environmental performance. The fact that there was one observation with large greenhouse gas emissions heavily biased the data, whereas the other observations were almost indistinguishable.

Table D The firm and the environment

	kWh/ Visitor/ night	Kg CO^2e-/ Visitor/ night	Waste - Litres/ Visitor/ night	Calculate & offset CO^2	Contribution to conservation
ECO certified	38.0	39.7	64.4	3	$54800
Non-*ECO* certified	29.6	31.0	35.9	0	$8750

Table E A summary of comparison of performance on various objective indicators

Attributes	Indicators	Category	Performance compared
Customer	Obtaining feedback (informal and formal measures)	CUSTOMER EXPERIENCE	*ECO*-certified *'better'* than non-*ECO*certified
Interpretation	Provision of interpretation (personal and non-personal)		*ECO*-certified *'better'* than non-*ECO*certified
Marketing	Responsible marketing (measures employed to ensure that marketing is accurate and leads to realistic expectations)		*ECO*-certified *'better'* than non-*ECO*certified
Community	Employment: Full-time equivalent	SOCIAL PERFORMANCE	Inconclusive
	Employment: Indigenous employees		Inconclusive
	Donations to charities		Inconclusive
	Donations to community initiatives		*ECO*-certified *'better'* than non-*ECO*certified
	Non-monetary contribution		*ECO*-certified *'better'* than non-*ECO*certified
Environment	Energy use	ENVIRONMENTAL PERFORMANCE	Non-*ECO* certified 'better' than *ECO*-certified
	Green house emission		Non-*ECO* certified 'better' than *ECO*-certified
	Waste		Non-*ECO* certified 'better' than *ECO*-certified
	Carbon offset		Inconclusive
Conservation	Contribution to conservation		*ECO*-certified *'better'* than non-*ECO*certified
Nature	NOT MEASURED		-
Culture	NOT MEASURED		-

Table E provides a summary of operators' performance based on objective indicators. Overall, it seems that *ECO*-certified operators are performing *'better'* on most indicators.

Table F Summary of statistically significant differences in perceptions of the performance of *ECO*-certified compared to non-*ECO* certified operators

Attribute	VISITOR PERCEPTIONS of …		OPERATOR PERCEPTIONS of ..		Objective measures of performance – *(No statistical tests done due to small sample size)*
	performance	aspects of operation that need improvement[72]	performance (self-assessed)	aspects of operation that need improvement[1]	
Nature	*ECO*-certified *'better'* than non-*ECO* certified	*ECO*-certified performing *'well'* Non-*ECO* certified performing *'poorly'*			
Interpretation	*ECO*-certified *'better'* than non-*ECO* certified				*ECO*-certified *'better'* than non-*ECO* certified
Environment		Non-*ECO*certified performing *'poorly'*			Non-*ECO* certified *'better'* than *ECO*-certified
Conservation		Non-*ECO*certified performing *'well'*			*ECO*-certified *'better'* than non-*ECO* certified
Community				*ECO*-certified performing *'poorly'*	*ECO*-certified *'better'* than non-ECO certified on donations
Culture	*ECO*-certified *'better'* than non-*ECO* certified				
Customer		*ECO*-certified performing *'well'*		*ECO*-certified performing *'poorly'*	*ECO*-certified *'better'* than non-*ECO* certified
Marketing	*ECO*-certified *'better'* than non-*ECO* certified				*ECO*-certified *'better'* than non-*ECO* certified

[72] The term *'well'* indicates that performance exceeds importance; *'poorly'* indicates that importance exceeds performance

A synthesis of performance measures

This chapter examined the performance of tourism operators in three different ways – by using visitors' and operators' subjective perceptions of performance and by using several indicators to measure actual performance. Table F summarises cases where statistically significant differences in perceptions on each attribute were found between *ECO*-certified and non-*ECO* certified operators and in each case, states which of the two groups of operators appear to be performing *'better'*.

Based on visitors' subjective perceptions, the clear observation is that *ECO*-certified operators are out-performing their non-*ECO* certified counterparts. There were no statistically significant differences in performance when operator views are considered. If considering whether visitors are satisfied (i.e. performance in relation to importance), here too, the generalised perception of performance is in favour of the *ECO*-certified operators. *ECO*-certified operators however, were not necessarily satisfied with their performance on *Community* and *Customer*.

Objective measures of performance confirmed the overarching perception that *ECO*-certified operators are '*better'* on most attributes – however, these results need to be interpreted with caution, given the small sample size.

Discussion

In most areas, *ECO*-certified firms showed better execution, while in others their performance was relatively poor. Whilst there is limited evidence (mostly due to relatively small sample of operators) to definitely confirm or refute the claim that certification improves performance, the subjective indicators of performance (based on visitor and operator perceptions) generally indicated that *ECO*-certified operators were out-performing their non-*ECO* certified counterparts. Although, there are few evidenced-based studies on this topic, those that have attempted to explore these claims, were unable to provide decisive evidence either way. For example, in a study conducted over a five year period, Rivera, de Leon & Koerber (2006) found no evidence to conclude that ski areas adopting the Sustainable Slopes Program (SSP) displayed superior performance levels than non-participants in several areas of environmental protection (namely, overall environmental performance, expansion management, pollution management, and wildlife and habitat management). The authors have gone as far as to even imply that opportunistic behaviour on the part of those with SSP is a matter of simply improving their *'green'* reputation without actually implementing beyond compliance practices. This sentiment is shared by Rivera (2002) who noted that most firms engage in voluntary practices, such as certification programs, not to improve their

environmental practices but instead to conceal their inferior performance.[73] Clearly, more research is needed before a final consensus can be shown in support of certification.

Specific to my region of interest, research by Colmar Brunton[74] (2010) revealed that tourism operators in the Wet Tropics region and surrounds were both positive and apprehensive about environmental issues. Particularly, operators were significantly more likely to agree that: (1) it was important for their business to reduce its carbon footprint; (2) their customers expect them to be environmentally responsible; and (3) climate change is an issue that requires drastic action. A recent study by the Nielsen company (provide support for such findings: worldwide, 66% of consumers identified environmental sustainability as a cause companies should support (Nielsen, 2012). Interestingly, despite these positive affirmations, the Colmar Brunton research also found that tourism operators were significantly less likely to agree that they personally want to be more environmentally responsible in their business. Similar findings were also found in Zeppel and Beaumont (2011)'s study. Although they found 28% of environmentally certified businesses already carbon offsetting and 37% planning to begin offsetting, it is instructive to note 34% did not consider offsetting necessary.

The findings of this thesis concur with those of earlier studies: in general, tourism operators were not implementing measures to mitigate their business' carbon footprint. For instance, only three operators surveyed stated that they measured and/or engaged in practices for offsetting their carbon emissions. Only two operators indicated usage of 100% solar energy as their source. Despite five operators stating that they offer the opportunity to clients to offset the impacts of their travel, none of the respondent were able to identify specific measures that were being implemented, i.e. on the ground actions that actively engages customers (for example, guests participating in tree planting as part of the business' own carbon offset/bio-sequestion project). A search on Ecotourism Australia's website revealed ~15 operators (inclusive of both marine and terrestrial) in the Wet Tropics region having Climate Action Certification Program[75]. This is clearly a low number in respect

[73] Other reasons for joining include: pre-empt future mandatory environmental regulations or reduce their stringency; avoid frequent and in-depth environmental monitoring; and create barriers of entry for new competitors (Rivera, 2002).

[74] The largest independent and Australian owned Market research agency specialising in product, services and social research.

[75] The Climate Action Certification Program identifies tourism operators' efforts to reduce carbon emissions. It is designed for all sectors of the tourism industry (hotels, attractions, tours, transport, restaurants, travel agents, tourism commissions and industry bodies), regardless of size and level of carbon reduction already undertaken ((Sustainable Tourism Australia, 2008)

to the hundreds of operators known to operate in the area. Overall, these findings reveal that despite operator concerns and stated intentions over emission issues of their business, actual implementation remains lacking.

Future study

This study considered some environmental indicators that have the potential to minimise climate change (i.e. energy use, by looking at kWh used and its resultant carbon emissions). Whilst these are important, they are realistically, '*a drop in the ocean*' in the sense that it is a tiny part of the global tourism impact, especially when one considers the global impact of air travel in tourism. This study found that tourism operators (notably those with *ECO* certification) were making significant contributions locally, either financially or in kind, towards conservation and community initiatives and that their customers thought they were performing *'better'* than their non-certified counterparts. But, this begs the question of whether more emphasis should be placed on what tourism operations do on the global end rather than on the local end. In this line of reasoning, it would be interesting if future research explored the global versus the local impacts of certification (e.g. if certification increases the number of visitors coming to area, the per visitor impacts may be less, but total impacts may be greater – not just because of increased visitor numbers, but also because of more air travel or similar).