

# ***ECO CERTIFICATION AND TOURISM OPERATORS: MARKETING AND OPERATIONAL ISSUES***

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## **ABSTRACT**

The objectives of this paper are twofold: (1) to examine the alignment between visitor and operator perceptions on the importance of different attributes of certification, and (2) to look for evidence of the belief that certification improves operators' performance. Over 600 visitors and 48 tourism operators in and around the Wet Tropics World Heritage Area, Australia, provided data on the popular ECO Certification Program<sup>®</sup>. Using just the mean scores of importance, the study found that visitors and operators had similar views: both perceived Nature and Marketing as the most important attributes and Conservation and

Culture as the least important attributes. However, statistically, operators 'valued' Nature, Community, Customer and Marketing significantly higher than visitors. To examine that certification improves performance, we collected data about operators' subjective views of their own performance (self-assessed) and visitors' subjective views of operator performance. These perceptions of performance were then validated with independent, actual objective measures. To facilitate comparisons, data were segmented according to certification status. Across the majority of attributes, ECO certified operators self-scored their performance higher, but not significantly so, than did their non-ECO certified counterparts. According to visitors, ECO certified operators out-performed their non-ECO certified counterparts on many attributes and these were statistically significant. Objective measures of performance confirmed these perceptions: ECO certified operators are 'better' on most attributes – however, these results need to be interpreted with caution, given the small sample size.

**Key Words:** *ECO certification, importance-performance analysis, Wet Tropics World Heritage Area, visitor-operator alignment.*

## **INTRODUCTION**

Tourism is renowned for its significant economic contributions to economies worldwide but its environmental and social impacts cannot be ignored. While the growth of the industry is pivotal, such growth must nevertheless occur in a manner that does not adversely affect the physical and human environments that sustain it. This is especially important when tourism occurs in protected areas, as the beauty and significance of protected areas attracts considerable public interest (Puhakka & Siikamaki, 2011; Rogerson & Sims, 2012). The tourism industry must therefore become a proactive leader by implementing initiatives that will lead to more sustainable outcomes. One such initiative is certification.

Certification is 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” (Honey & Rome, 2001). It is broadly promoted as being able to improve the triple bottom line performance of firms whilst promoting more

sustainable consumption (Font, 2007). But not everyone is convinced given limited conclusive evidence that certification is able to satisfy these claims.

Many argue that certification has failed to attract customers. This failure is compatible with the overall perception that the majority of certification programs are ephemeral, unknown, regrettably vague and misleading. For example, Vail (2011) found that a large majority of Australian and German residents were unaware of their countries' tourism certification programs. Although some studies have found an increase in demand<sup>1</sup> or a willingness to pay (WTP) for certified products, such findings need to be interpreted with caution since customers seldom have just one motivator to purchase a product (Font & Epler Wood, 2007) and oftentimes very little of expressed 'willingness' is actually translated into practice (Manaktola & Jauhari, 2007; Vermeer et al., 2010; Oom do Valle et al., 2012).

Ideally, certification should help consumers differentiate between the genuine and the 'opportunist' (i.e. the green washers), serving as a guarantee against false claims of sustainability. But, credible 'green' reputations are rare and difficult to create because such reputations are met with strong suspicion (Rivera, 2002, pp. 342). For example, Rivera et al., (2006) found evidence of opportunistic behaviour on the part of ski areas with certification and Rogerson & Sims (2012) argue that many businesses see certification as a way to improve their 'green' reputation without actually implementing beyond compliance practices. Consumers are also sceptical of these claimed ambitions as was found by Robinot & Giannelloni (2010). Clearly, an inability to 'prove' the tangible environmental benefits of certification hinders the progress of building operator and customer confidence in either partaking in such schemes or in buying certified products

That said, the success of certification depends on consumer and operator support and some studies have tried to find evidence of such support (e.g. Rivera, 2002; Fairweather et al., 2005; Puhakka & Siikamaki, 2011; Esparon et al., 2013). Most of

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<sup>1</sup> 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.

these studies have looked at certification ‘holistically’, focussing on consumer perceptions of or WTP for certification. Esparon et al., (forthcoming) extended these discussions by specifically looking at visitors’ perceptions of the importance of eight core attributes of the *ECO* certification scheme and their perceptions of operator performance on those same attributes.

Since consumers have “*influences far beyond any other stakeholders*” (Chan, 2008, pp. 193), an understanding of their views is critical, but relatively little research has been done on operators’ perspectives of certification. To date, all we know is 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). Indeed, there is no information about the importance that tourism operators attach to specific attributes.

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 (Luo & Bhattacharya, 2006; Goetsch & Stanley, 2009).

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 our knowledge has not been done. 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).

The objectives of this paper therefore, are to help fill those gaps. In doing so, we build on Esparon et al.’s (forthcoming) study on visitor perceptions by extending the analysis<sup>2</sup> to include operator perspectives. We also use some indicators that

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<sup>2</sup> Unlike that study, here we do not segment our sample into accommodations, attractions, and tours, instead, we analyse collectively.

attempt to objectively validate perceptions of performance. Specifically, this paper considers the:

1. Alignment of values, i.e. operator and visitor attitudes with respect to importance; and the
2. Performance of operators using:
  - a. Operators' subjective view of performance;
  - b. Visitors' subjective view of performance; and
  - c. Objective indicators of performance

In the next section, we provide an overview of the *ECO* certification scheme and we describe our methods. Results are presented next followed by a discussion of the findings and its implications.

### **Selecting a study area and certification scheme**

Geographically, the Wet Tropics World Heritage Area (WTWHA) extends from near Cooktown on the far north Queensland coast of Australia, to Townsville (approximately 650kms further south) and it borders the Great Barrier Reef World Heritage Area (GBRWHA) along a considerable part of the coastline. Ecologically, the area is significant enough to have merited special protection: world heritage status was granted in 1988 (UNESCO, 2010). 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, 2009).<sup>3</sup>

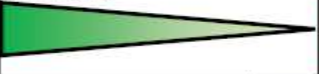
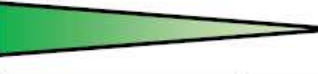
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<sup>3</sup> The WTWHA contains: 40% of Australia's bird species, 35% of Australia's mammal species, 60% of Australia's butterfly species, 20% of Australia's reptile species, 21% of Australia's cycad species, 29% of Australia's frog species, 65% of 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).



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, 2009). Such coexistence between a thriving tourism industry and this complex ecosystem makes it of special interest to the wider-world. Accordingly, it was selected as our case study area.

We had three key criteria for choosing a certification scheme: (1) it had to be relevant to the study area; (2) it had to encompass multiple domains of sustainability; and (3) it had to be applicable to all types of tourism products represented in the study area. The *ECO* certification scheme – described as one of the most long-standing schemes in the world (Wood & Halpenny, 2001; Buckley, 2002) – satisfied all three. The *ECO* certification scheme has been used as a blueprint for the development of other certification schemes and in Australia, it has been attributed with improving standards and professionalism in the ecotourism sector (Thwaites, 2007). It certifies any tourism experience that is nature-based or has a nature focus and businesses have a choice of three levels: Nature tourism, Ecotourism or Advanced Ecotourism. Each level requires businesses to satisfy all core criteria, with higher standards imposed for advanced certification (Ecotourism Australia, 2011).

Unlike other certification programs, *ECO* certification is product specific: 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 that are certified. However, in this paper, we 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.

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 Sure						Not Sure/Unable to judge
	Not Important at all		Very Important				Not well at all		Very well			
	1	2	3	4	5		1	2	3	4	5	
<b>INTERPRETATION</b> <i>e.g. Pre-tour materials such as brochures that explain the environment are provided</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>WORKING WITH LOCAL COMMUNITIES</b> <i>e.g. The tour operator purchases many goods and services locally, thus contributing to the local economy</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(a) Excerpt of Visitor Survey

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 Sure						Not Sure/Unable to judge
	Not Important at all		Very Important				Not well at all		Very well			
	1	2	3	4	5		1	2	3	4	5	
<b>INTERPRETATION</b> <i>e.g. Pre-tour materials such as brochures that explains the environment are provided</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>WORKING WITH LOCAL COMMUNITIES</b> <i>e.g. The tour operator purchases many goods and services locally, thus contributing to the local economy</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(b) Excerpt of Operator Survey

Figure 1: Importance and performance

## QUESTIONNAIRE DESIGN AND SAMPLE SIZE

We focused on eight core attributes of *ECO* certification: 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*). Central to the questionnaire design was ensuring the close alignment of importance and performance. Hence the same attribute that was used to gauge importance was also used to gauge performance (Figure 1a and b). Moreover, since we wanted to examine the alignment between visitor and operator perceptions on different attributes, the same attributes (and examples) that were used in the visitor surveys were also used in the operator surveys (Figure 1a and b).

Since *ECO* certification is product specific, for each target group (i.e. visitor and operator) we developed three types of questionnaires targeting accommodations, attractions and tours. We contacted operators of both *ECO* certified and non-*ECO* certified products to help distribute the visitor surveys and/or fill out the operator survey. We also supplemented our visitor sample by collecting data at the Cairns airport. In total, we collected data from 600 visitors and 48 tourism operators.<sup>4</sup>

## **ANALYSIS**

We used importance-performance analysis (IPA). This method incorporates both importance and performance data thus enabling one to look for disparities between performance (Martilla & James, 1977; Ainin & Hisham, 2008). Results of the IPA can thus highlight aspects of performance that require attention. This technique is most prominent in the analysis of customer/tourist data; to the best of our knowledge, it has not yet been used to assess business/operator. We performed non-parametric statistical tests on the differences between importance and performance and we present our results graphically, instead of the usual quadrants typical of IPA.

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<sup>4</sup> In early 2011, the region was battered by cyclone Yasi. Several tourism businesses were impacted, and some had to close down to allow the rebuilding process to begin. As such, tourism numbers were less, which adversely impacted our sample of participating tour operators and attractions.



Table 1 Values assigned to categorical responses measuring importance

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

### **THE ALIGNMENT OF PERCEIVED IMPORTANCE**

The procedure for assessing attributes followed that of Esparon et al., (forthcoming). 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 1) and the mean scores of each attribute were computed and then ordered (from 'most' to 'least' important).

Table 2 summarises the top three and bottom three attributes. 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.

Table 2 Comparisons of visitor & operator perceptions – The 'top 3' & 'bottom3' importance scores

	<b>Visitor</b>	<b>Operator</b>
Top 3	Nature Marketing Community	Marketing Nature Community
Bottom 3	Culture Conservation Customer	Interpretation Conservation Culture

To statistically examine the alignment of values, we 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.

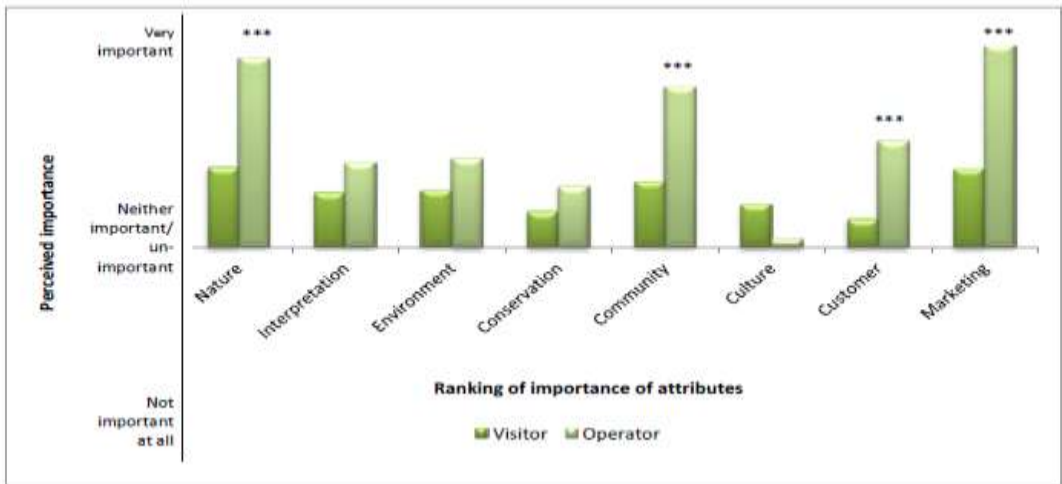


Figure 2: Differences & similarities on the importance of attributes between visitor & operator Asterisks show significant differences between operators' and visitors' perceptions at  $p < .001$

The results suggest that visitors and operators have similar values in four of eight attributes. However, operators valued *Nature*, *Community*, *Customer* and *Marketing* significantly more than did the visitors (Figure 2).

### SUBJECTIVE VIEW OF PERFORMANCE

As per the assessment of importance, we first examined visitors' and operators' (self-assessed) perceptions of performance individually, and segmented our analysis according to certification status. Here too, we 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). We 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'.



Figure 3: Differences & similarities on the performance of attributes between visitor & operator – all data

Self-rating of performance revealed highest scores for *Marketing*, followed by *Nature* and *Community* across both *ECO* and non-*ECO* certified operators. *ECO* certified operators rated their own performance higher than did the non-*ECO* certified operators. However, there were no statistically significant differences in self-rating of performance between the two groups of operators.

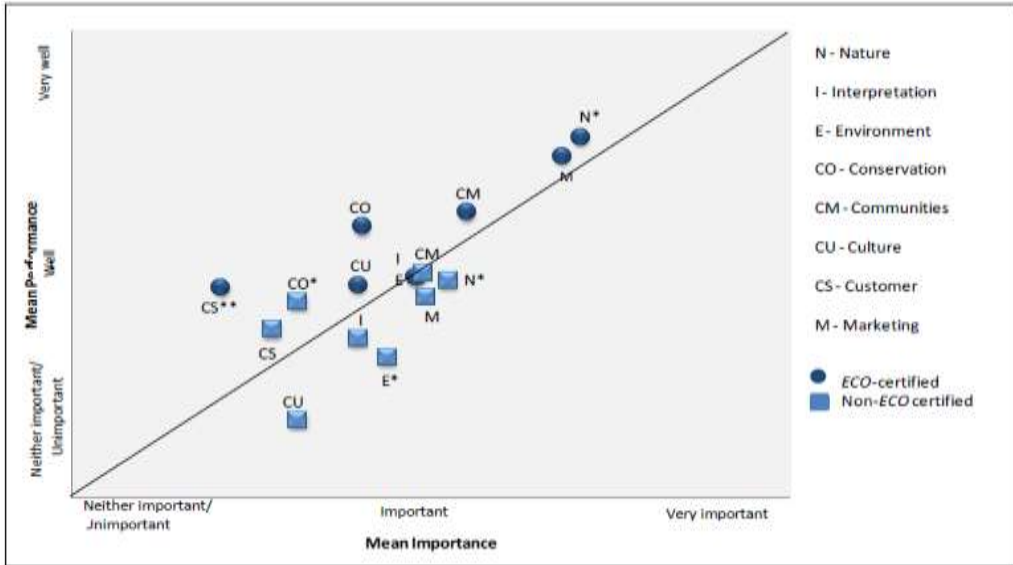
When we compared visitor and operator views of performance, we found statistically significant differences in five attributes. Visitors' evaluation of performance was significantly higher than those of the operator on *Conservation* and *Culture*, while operators rated their performance higher on *Nature*, *Community* and *Marketing* (Figure 3).

Asterisks show significant differences between operators' & visitors' perceptions at  $p < 0.05$ ,  $p < 0.01$  &  $p < 0.001$

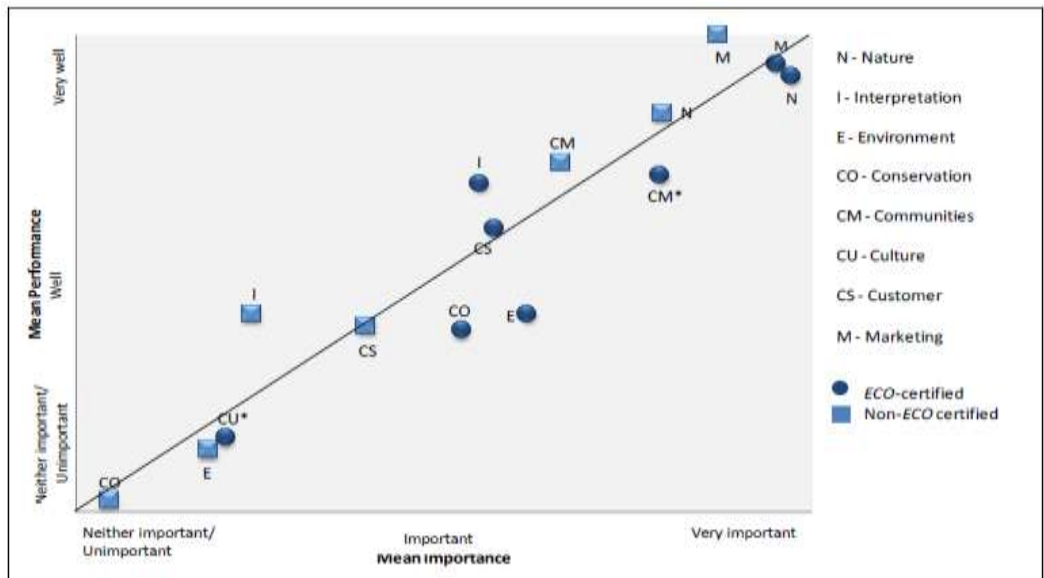
### **3.2.1 ASPECTS OF OPERATION NEEDING IMPROVEMENT**

To examine areas for improvement, we used the IPA and the Wilcoxon signed-rank test to identify differences in perception of importance and performance. In most cases, differences between importance and performance were statistically insignificant (based on visitors' perceptions) (Figure 4a). 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 (*Nature* and *Environment*) but performance scores on *Conservation* were higher than those on importance (Figure 4a).

When operator perceptions are considered, the performance of *ECO* certified operators is considered to be less than importance on *Community* and *Customer* (Figure 4b) – and these differences are statistically significant.



(a) Visitors' perception



(b) Operators' perception

Figure 4: Comparisons of importance and performance

Mean scores are graphed. Single & 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.

## **OBJECTIVE INDICATORS OF PERFORMANCE**

While learning more about operator and visitor perceptions of performance is clearly important, perceptions do not always align with reality. It can be argued that operators' self-assessment is biased and as was found in Esparon et al., (forthcoming), visitors often lack the necessary information to properly assess performance.

We therefore set out to select suitable indicators and examples to measure performance using more 'objective' data. We examined the assessment criteria used for *ECO* certification coupled with those used in the broader literature (Ceron & Dubois, 2003; Bell & Morse, 2008; Castley et al., 2008). We narrowed our focus to consider only indicators that closely aligned with the management objectives of the region of interest, while ensuring that the chosen indicators (particularly those pertinent to environmental performance) were measurable, understandable and feasible. The final list of indicators and examples encompassed three aspects of operator performance: (1) maintenance of customer satisfaction/experience, (2) contribution to the local and wider communities (social performance) and (3) contribution to the local and wider environments (environmental performance) (Table 2).

Table 2 A summary of comparison of performance on various objective indicators

<b>Attributes</b>	<b>Indicators</b>	<b>Category</b>
Customer	<ul style="list-style-type: none"> <li>• Obtaining feedback (informal and formal measures)<sup>5</sup></li> </ul>	CUSTOMER EXPERIENCE
Interpretation	<ul style="list-style-type: none"> <li>• Provision of interpretation (personal and non-personal)<sup>6</sup></li> </ul>	
Marketing	<ul style="list-style-type: none"> <li>• Responsible marketing (measures employed to ensure that marketing is accurate and leads to realistic expectations)</li> </ul>	
Community	<ul style="list-style-type: none"> <li>• Employment: Full-time equivalent</li> <li>• Employment: Indigenous employees</li> <li>• Donations to charities (financial)</li> <li>• Donations to community initiatives (financial)</li> <li>• Non-monetary contribution</li> </ul>	SOCIAL PERFORMANCE
Environment	<ul style="list-style-type: none"> <li>• Energy use</li> <li>• Green house emission</li> <li>• Waste</li> <li>• Carbon offset</li> </ul>	ENVIRONMENTAL PERFORMANCE

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<sup>5</sup> Examples of informal feedback include: discussion with customers; feedback forms and regular meetings/debriefs on operations between management and staff. Examples of formal feedback include: structured interviews with customers; review by tourism professionals and questionnaires.

<sup>6</sup> Examples of personal interpretation are: informative interaction with a guide (e.g. spotlighting); lectures by specialists; games or quizzes. Examples of non-personal interpretation are: pretour materials (e.g. briefing sheets, brochures); displays/interpretive signage; audio visuals, and reference materials.

Conservation	<ul style="list-style-type: none"> <li>• Contribution to conservation (financial and in-kind)</li> </ul>
Nature	NOT MEASURED
Culture	NOT MEASURED

### **A SYNTHESIS OF PERFORMANCE MEASURES**

Although we aimed to compare similar products (e.g. a non-certified bed and breakfast with its certified counterpart, or a non-certified river tour with its certified counterpart), the low number of surveys received and non-response on some key indicators did not permit comparisons to be made at such fine level of detail.<sup>7</sup> Thus, we limited comparisons between certified and non-certified operators to generic comments. Table 3 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’.

Table 4 Summary of statistically significant differences in perceptions of the performance of *ECO* certified compared to non-*ECO* certified operators across each attribute

Where there are significant differences, a description of how operators were perceived to be performing is given.

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

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<sup>7</sup> We received 48 operator surveys. Of these, 19 were from accommodations (10 *ECO* certified and 9 non-*ECO* certified), 5 from attractions (3 *ECO* certified and 2 non-*ECO* certified) and 24 from tours (10 *ECO* certified and 14 non-*ECO* certified). However, there were not enough similar businesses in each category to facilitate a ‘fair’ comparison (i.e. based on similar attributes, e.g. same size, same activities, etc.).



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.

Attributes	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 <sup>8</sup>	performance (self-assessed)	aspects of operation that need improvement	
Nature	<i>ECO</i> certified ‘better’ than non- <i>ECO</i> certified	<i>ECO</i> -certified performing ‘well’  Non- <i>ECO</i> certified performing ‘poorly’			
Interpretation	<i>ECO</i> certified ‘better’ than				<i>ECO</i> certified

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<sup>8</sup> The term ‘well’ indicates that performance exceeds importance; ‘poorly’ indicates that importance exceeds performance.

	non- <i>ECO</i> certified				'better' than non- <i>ECO</i> certified
Environment		Non- <i>ECO</i> certified performing ' <i>poorly</i> '			Non- <i>ECO</i> certified 'better' than <i>ECO</i> certified
Conservation		Non- <i>ECO</i> certified performing ' <i>poorly</i> '			<i>ECO</i> certified 'better' than non- <i>ECO</i> certified
Community				<i>ECO</i> -certified performing ' <i>poorly</i> '	<i>ECO</i> certified 'better' than non- <i>ECO</i> certified
Culture	<i>ECO</i> certified 'better' than non- <i>ECO</i> certified				
Customer		<i>ECO</i> -certified performing ' <i>well</i> '		<i>ECO</i> -certified performing ' <i>poorly</i> '	<i>ECO</i> certified 'better'

					than non- <i>ECO</i> certified
Marketing	<i>ECO</i> certified 'better' than non- <i>ECO</i> certified				<i>ECO</i> certified 'better' than non- <i>ECO</i> certified

This study found that generally, there is good alignment between the perceptions of visitors and operators. This information may prove useful in marketing campaigns geared to encourage tourism operators in joining certification programs. However, there may be reasons to be concerned given the fact that *Conservation* was ranked 7<sup>th</sup> in importance by both operators and visitors (out of eight attributes). Clearly, this is in contrast to the goals and objectives of the WTWHA as set out by the Wet Tropics Management Authority (WTMA). 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.

That *ECO* certified operators self-scored higher in performance across the majority of attributes, is of no surprise. 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: it is argued that 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 their own performance may be biased, the results nevertheless reflect visitors' perception of the performance of operators in the region.

Those points aside, several additional comments can be made from that part of the analysis which compares visitor and operator perceptions. On three attributes (*Nature, Community and Marketing*), operators perceived their performance to be better than visitors perceived them to be. 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 (Esparon et al., forthcoming), it is likely that customers will be unable to make appropriate or accurate assessments of operator performance.

When objective indicators are considered, in most areas, *ECO* certified firms showed better execution, while in others their performance was relatively poor. Whilst there is limited evidence to definitely confirm or refute the claim that certification improves performance,<sup>9</sup> the subjective indicators of performance generally indicated that *ECO* certified operators were outperforming 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

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<sup>9</sup> This is mostly due to relatively small sample of operators.

five year period, Rivera et al., (2006) found no evidence to conclude that ski areas adopting the *Sustainable Slopes Program* (SSP) displayed superior performance than non-participants in several areas of environmental protection.

Specific to our region of interest, research by Colmar Brunton (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. But, despite these positive affirmations, the study also found that tourism operators were significantly less likely to agree that they personally need to be more environmentally responsible in their businesses. Zeppel and Beaumont (2011)'s study concur: they found 28% of environmentally certified businesses already carbon offsetting and 37% planning to begin offsetting, while 34% did not consider offsetting necessary.<sup>10</sup>

Our findings corroborate 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 respondents was able to identify specific measures that were being implemented, i.e. on the ground actions that actively engage customers.<sup>11</sup> Overall, these findings reveal that despite operator concerns and stated intentions over emission issues of their business, actual implementation remains lacking.

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<sup>10</sup> Zeppel and Beaumont's study however did not compare those with and without certification.

<sup>11</sup> For example, guests participating in tree planting as part of the business' own carbon offset/bio-sequestration 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. This is clearly a low number in respect to the hundreds of operators known to operate in the area.

## **CONCLUSION & WIDER IMPLICATIONS**

We set out to examine the alignment between visitor and operator perceptions on the importance of different attributes of certification. We found 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. We also searched for evidence that certification improves performance. Evidence was sought in three ways: by looking at operators' subjective views of their own performance (i.e. self-assessed); by considering visitors' subjective views of operator performance; and by validating those perceptions of performance with actual objective measures (indicators). We found that *ECO*-certified operators self-scored higher in performance than their non-*ECO* certified counterparts, and visitor perceptions of operator performance corroborated. According to visitors, the performance of *ECO*-certified operators was significantly better on *Nature*, *Interpretation*, *Culture* and *Marketing*. Objectively, we are unable to conclude that certification improves performance; however, *ECO*-certified operators appear to be performing 'better' than their non-*ECO* certified counterparts on most attributes measured – *Environment* being the exception.

The lack of data on indicators provided by operators is an important limitation of the study, but it is a limitation of all previous research on certification in the tourism industry. If we are ever to assess the 'true' impact of certification on sustainability, then a baseline dataset needs to be established and backed by science: at present, tourism certification schemes lag others in this domain (the FSC and MSC certification programs for example, which certifies sustainable timber and fishery respectively, are well-known for their rigorous science). Importantly, certification providers need to publicize the contribution of certification. This could be done by perhaps making public an anonymous database of data collected from certified operators.<sup>12</sup> That such information is not

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<sup>12</sup> Font (2007) recommends that data is collected by agents independent from the actual certification program so as to ensure credibility. But, that may increase costs. In the short-run, it may be 'quicker' to

available to the general public means that the true impact of certification is essentially 'hidden'.

This information asymmetry must be addressed. As rightfully noted by Font (2007), certification programs must show how their actions contribute to their aims. The ability to demonstrate the measurable benefits of certification may not only contribute to greater confidence and consumer interest and operator participation in such programs (Liu, 2003; Dalton et al., 2008; Valor, 2008) but may also provide certification programs with the benefit of securing financial and promotional support, a requirement which has received much success in other industries (e.g. the Marine Stewardship Council) (Rome et al., 2006).

Undoubtedly, there is a clear need to obtain data with respect to environmental and social impacts and this is especially important in areas like the one focused on in this study: the WTWHA. As documented in the literature, the WTWHA contains ecologically sensitive ecosystems, and some sites have already experienced degradation from heavy usage (Talbot et al., 2003; Turton, 2005). Thus, managing the high volumes of visitation is clearly challenging. If *ECO* certification can be found to mitigate such impacts, then it could prove to be a useful management tool (e.g. via legislation) for tourist access to ecologically sensitive areas within the WTWHA. Alternatively, WTMA could devise its own certification scheme (similar to the PAN Parks certification)<sup>13</sup> tailored to suit its own requirements and geographical needs. Information from this study could be used as key inputs on what aspects needs special attention. But, until, or unless, better information is available, one cannot make a case for such radical public interventions.

Finally, the study found a lack of concern over some attributes, which are generally believed to be vitally important to the sustainability agenda. This suggests that there may be a need to consider using public awareness campaigns

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provide existing data, however in the long-run, the goal could be to get external agency to verify those data.

<sup>13</sup> The PAN Parks certification is one such example. This program aims to protect Europe's natural habitats and fragile ecosystems while balancing high quality tourism with environmental protection and sustainable local development. For more information see <http://www.panparks.org/what-wedo/mission> and Puhakka & Siikamaki (2011).

(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 (e.g. *Conservation*). Public awareness campaigns coupled with more and better information may thus help revitalise the business-to-consumer (B2C) marketing 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.

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