Marine and Tropical Sciences Research Facility

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An analysis of the competitiveness of the Great Barrier Reef tourism destination and a comparison with other reef tourism destinations

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Australian Government
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Reef & Rainforest RESEARCH CENTRE

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Acronyms Used In This Report

AUD........................Australian Dollar
CHARROA.............Cod Hole and Ribbon Reefs Association
CRC........................Cooperative Research Centre
EMC ....Environmental Management Charge
EU ....European Union
GBR ....Great Barrier Reef
GBRMPA ....Great Barrier Reef Marine Park Authority
GBRWHA...............Great Barrier Reef World Heritage Area
GDP........................Gross Domestic Product
IPCC.......................Intergovernmental Panel on Climate Change
NOAA.....................National Oceanic and Atmospheric Administration
NTO........................National Tourism Organisation
SCUBA...................Self Contained Underwater Breathing Apparatus
TNQ........................Tropical North Queensland
US ....United States (of America)
WRI ....World Resources Institute
WTWHA ....Wet Tropics World Heritage Area

Acknowledgements

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Introduction[1]

One of the key ways to ensure the sustainability of a tourism destination is to measure and build its competitiveness. Success is achieved when the destination is able to achieve the highest level of well-being for its residents on a sustainable basis (Ritchie and Crouch 2000). Destinations that do not evaluate themselves and their competitors will often encounter difficulties in the long run as markets change and the demand for destination goods and services evolves under the influence of technology and changing consumer preferences. One example of this failure is the emergence of a product gap where the tourism goods and services supplied do not appeal to an increasingly larger segment of the destination's tourism market. To remain competitive, destinations need to be constantly on the lookout for new ideas, changes in existing trends, new market sectors and, importantly, have a contemporary knowledge of developments in the destinations that are their main competitors. In this report, we examine the competitiveness of the Great Barrier Reef in the region that encompasses Tropical North Queensland (Port Douglas, Cairns and Townsville). For the purposes of this report the region is classed a destination and referred to as the Northern Great Barrier Reef (GBR).

Destination competitiveness is a specific form of competitiveness that focuses on the tourism industry, its products and services. As Ritchie and Crouch point out, "the tourism phenomenon represents a fundamentally different form of economic exchange than does the sale of physical resources" (1993: 35-36). Nonetheless, using traditional models of competitiveness is a useful guide to understanding destination competitiveness and therefore will be the starting point for this research, as well as providing an introduction to models that specifically examine tourism destinations' competitiveness.

In this report the destination is defined as the Great Barrier Reef region that has both a land and marine element. Previous research (Coghlan and Prideaux 2007) has found that visitors to the region list the reef as the main attraction (rated with a mean of 4.65 on a scale of 1 = *not at all important*, to 5 = *very important*), followed closely by the weather (3.77), native animals (3.63) and the rainforests (3.61). While this report specifically focuses on the marine component of the region, the importance of the other elements of the region's attractiveness 'bundle' should not be ignored.

Competitiveness: What is it and why do we want it?

From a national perspective, the ultimate goal of competitiveness is to maintain and increase the real income, usually defined on a national scale as the nation's standard of living. Competitiveness in this case can be measured at the national level as Gross Domestic Product per head of population and by the wealth of its citizens, but it is driven at a firm and industry level. For this reason firm-level competitiveness models are an ideal way to assess the competitiveness of the Great Barrier Reef as a destination and reef tourism as an industry.

Within competitiveness at a firm or industry level, the key components are defined as:

- The industry's attractiveness, which can be measured in terms of uniqueness (a product that is not found elsewhere), a fun index (how good a time the visitor had) and an exclusiveness index;

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[1] Much of the ideas presented in this introduction are based on those presented in Dwyer and Kim (2003) in their comprehensive review of destination competitiveness.

- Its ability to outposition its competitors;
- Its price levels based on perceived value for money paid by the visitor; and
- The manner in which its resources have been developed (resource-based competitiveness) using value-creating strategies that are not being simultaneously used by other competitors, and when these competitors are not able to duplicate the advantages based on such a strategy.

Some of the resources of a firm that are of importance include the skills of its employees, its assets, cash-flow and capital/investment (human, non-human and strategic), the structure of the organisation (flexibility, balance and dynamic aspects), organisational-environmental interface (strategic planning, customer-oriented offering) and firm-specific variables (core competencies, imitability of products, information, quality) as well as source advantages, superior human and non-human resources, and positional advantages within the market.

Collectively, these elements create an attraction or destination that is able to out compete its rivals through more effective product development, service delivery and marketing, and importantly by creating an experience that gives customers a high level of satisfaction. One measure of success is positive word of mouth references while a more tangible expression is the level of visitors and overall destination yield relative to other destinations in its competitor set, both domestically and internationally.

Destination competitiveness: Comparative and competitive advantage

Whilst the competitiveness of individual firms is an important element of the reef tourism industry, it is the destination competitiveness of the GBR that is of principle interest. This differs from firm and industry sector (i.e. dive sector) related competitiveness. A destination is described as an “amalgam of individual products and experience opportunities that combine to form a total experience of the area visited” (Murphy *et al.* 2000: 44). Destination competitiveness is based on both comparative advantage and competitive advantage.

The comparative advantage of a destination includes all the inherited or endowed resources of a destination, for example, its climate, scenery, flora and fauna. Within the comparative advantage of a destination it is possible to identify *natural elements* such as mountains, beaches, climate, rainforest and *heritage* and *cultural elements* including cuisine, handicrafts, belief systems, and so on. In this case, the Great Barrier Reef zone is one obvious natural endowed resource as is the Wet Tropics rainforests, the warm climate and the tropical lifestyle.

The various elements of destination competitive and comparative advantages come together in Heath’s (2003) model of destination competitiveness, where he identified the foundations of competition as being an essential base for competitiveness. These include: *Providing and Managing the Key Attractors* (e.g. history, culture, climate, events, entertainment, etc.); *Optimising the Comparative and Competitive Advantages*; *Addressing the Fundamental Non-negotiables* (e.g. personal, safety and health issues); *Providing the Enablers* (e.g. infrastructure such as airports, roads and signage, managing capacity); *Capitalising on the ‘Value Adders’* (e.g. location, value and destination linkages); *Ensuring Appropriate Facilitators* (e.g. appropriate airline capacity, accommodation, distribution channels, etc.); and *Focusing on the Experience Enhancers* (e.g. hospitality, service excellence, authentic experiences).

The factors identified as constituting the foundation of destination competitiveness are linked at many levels by continuous and transparent communication channels; balancing direct and indirect stakeholder involvement and beneficiation; information management; research and forecasting; and managing competitive indicators and benchmarks. To these are added a number of building blocks which make tourism 'happen' in a destination. These include a *Sustainable Development Policy and Framework* (policy and legislative framework, organisational and financing framework, resources and capabilities, investment climate, sustainable environmental principles) and a *Strategic and Holistic Destination Marketing Framework and Strategy* (destination image and branding, competitive positioning, target marketing/demand management, innovative marketing strategies, and visitor satisfaction management. Finally, the key success drivers that energise the destination are described as the 'people' part of destination competitiveness. These include a shared tourism vision and leadership guiding values and principles, placing strategic priority on the 'people' factor (political will, entrepreneurship, community focus and human resources development).

In addition, it is possible to identify *created resources* that collectively constitute the destination's competitive advantage. Created resources, sometimes referred to as built resources include hotels, attractions, airports and shopping districts, special events, the range of activities available, entertainment and shopping. Also, general infrastructure, quality of service, accessibility of the destination, hospitality and market ties are the supporting resources which allow tourism activity to take place and create a successful tourism industry.

Destination competitiveness: Other influential factors

In addition to competitive and comparative advantages, other elements also affect a destination's competitiveness. Some of these are obvious and quantifiable and include *price competitiveness*, particularly where the market is very price sensitive; exchange rates; government policies; industry competition; destination wage rates; and the influence of multinational enterprises. Less obvious and more difficult to measure are factors that include social, cultural and related factors described as: climate; morals; power of the state; cultural values; moral discipline; crime levels; the friendliness of local residents to visitors; and subjective factors such as travellers' perceptions.

Travellers' perceptions include those elements for which there is little quantifiable data, although measures may be achieved through visitor surveys of topics such as perceptions of relative price levels, perceptions of safety and/or security, views about comfort levels and aesthetic appeal of different types of tourism resources. Associated with travellers' perceptions are *demand conditions*, which include features of tourism demand-awareness, perception and preferences. These will depend on marketing activities and a match between tourist preferences and perceived destination product offerings. A more detailed description of these subjective factors can be found in models of destination choice which generally combine measures of the destination's attributes ('pull' measures) with the tourists' travel motivation ('push' factors).

The push-pull model detailed in Figure 1 illustrates the travel motivations that encourage tourists to select a particular destination. These motives are described as push factors and include a range of socio-psychological motives that influence individuals to travel. Push factors are internal to the person (Uysal and Jurowski 1994) while pull factors are external to the person. A number of push motivations have been identified, including escape, rest and relaxation, learning, status and prestige and social interaction (Dann 1977; Crompton 1979; Ryan 2003). Pull factors (Uysal and Jurowski 1994) attract tourists and include history, low cost, easy access, tourism attractions and natural environment and so on. This leads to the development of a 'beneficial image' which focuses on the "perceptions or impressions of a destination held by tourists with respect to the expected benefit or consumption values including functional, social, emotional, epistemic and conditional benefits of a destination" in tourist destination selection (Tapachai and Waryszak 2000: 38).

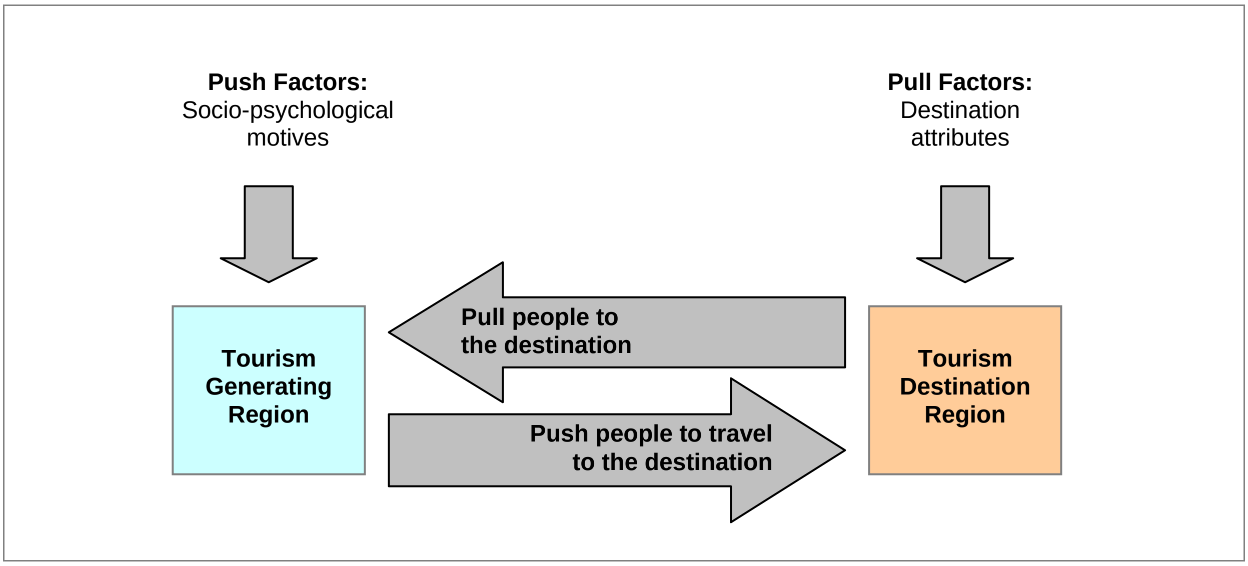

Figure 1: The Destination-Origin Push-Pull Model (Source: After Leaper 2004).

Situational conditions also play a role in destination competitiveness. These relate to economic, social, cultural, demographic, environmental, political, legal, governmental, regulatory, technological and competitive trends and events that impact on the way firms and other organisations in the destination do business, and present both opportunities and threats to their operations (David 2001).

Destination management factors include the activities of destination management organisations, destination marketing management, destination policy, planning and development, human resource development and environmental management (Ritchie and Crouch 2000). These factors can 'enhance the appeal of the core resources and attractors, strengthen the quality and effectiveness of the supporting factors and resources and best adapt to the constraints imposed by the [situational conditions]' (Crouch and Ritchie 1999: 149). Typically, destination management occurs at a number of levels that may not interact with each other. In the public sector the various levels of government (local or municipal, state/province/region, national and in some cases such as the EU, international) provide infrastructure, undertake planning and legislate on a range of issues that govern how the private sector is structure and undertakes its business activities. In the private sector individual firms undertake product development and marketing either cooperatively or in isolation. At a destination level the most effective level of marketing occurs when there is both cooperative marketing at the destination level and competitive marketing at the sector level (i.e. accommodation, tour, shopping and attraction).

Dwyer and Kim bring all of these elements together into a model that is presented in Figure 2. Within this Figure the elements that can be quantified and measured through existing data sets are marked with an asterisk and will be described in further detail in the methodology section of this report. The aim will therefore be to provide a relatively comprehensive overview of the Great Barrier Reef as an attraction within the tourism destination that for the purposes of this report is defined as the Northern GBR and includes Port Douglas and Cairns. As with any model of the nature illustrated, the complexity of the many relationships involved are reduced to a two-dimension model that is primarily illustrative in nature. Readers are referred to Appendix A for a more exhaustive list of Dwyer and Kim's (2003) indicators of destination competitiveness.

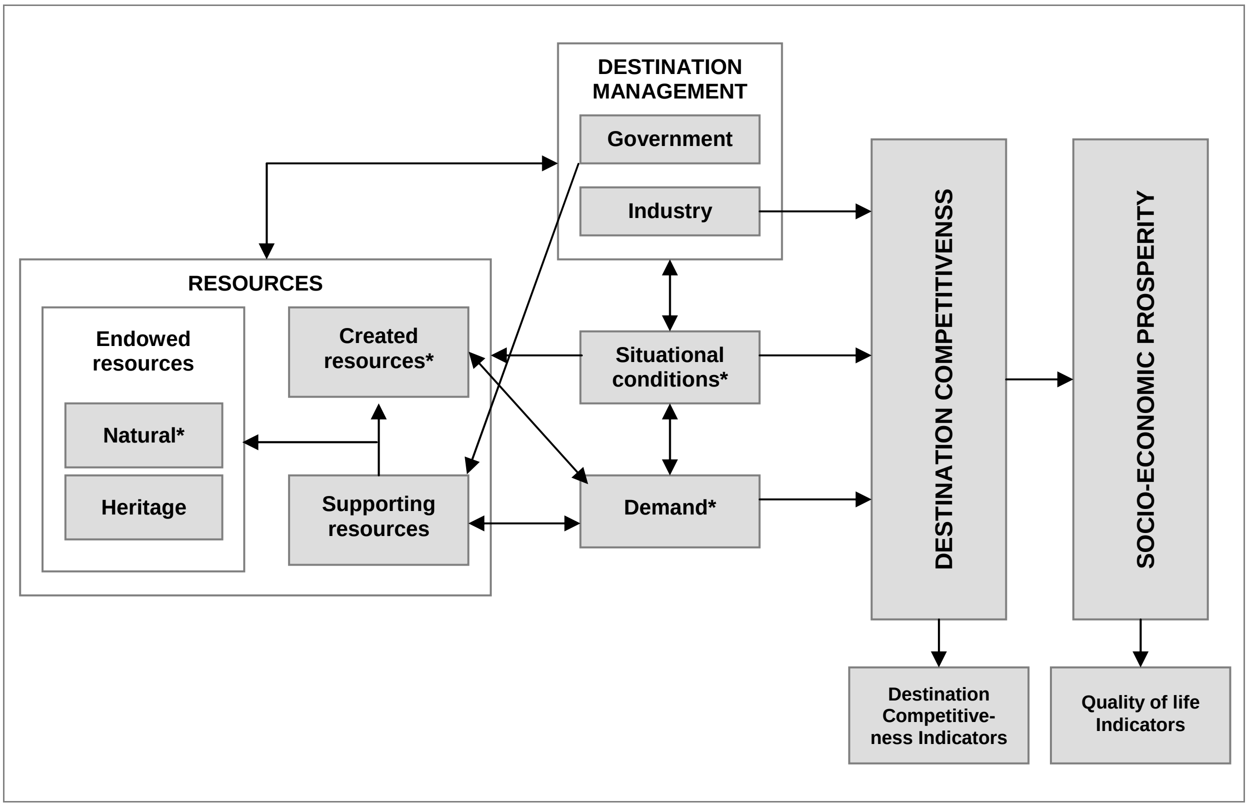

Figure 2: Dwyer and Kim's (2003) model of destination competitiveness.

Aims

The principle aim of this report is to draw together a range of data which have a direct influence on the competitiveness of the Northern GBR.

The indicators suggested by Dwyer and Kim (2003) and presented in Appendix 1 form the basis of the search for relevant data both within Queensland and as much as possible for other reef tourism destinations.

The indicators for which data are available and most relevant to an analysis of reef tourism include endowed natural resources, situation conditions, demand factors and market performance indicators.

Specifically, these include:

- **Endowed resources:**
  - Climate;
  - National parks/flora and fauna.
- **Demand factors:**
  - Destination awareness, perception and preferences.
- **Situational conditions:**
  - Destination location (exoticness)
  - Price competitiveness
- **Market performance indicators:**
  - Visitor numbers

No data has as yet been specifically collected on the other indicators listed by Dwyer and Kim, as they are not directly relevant to the stakeholders of this research. However, a future study with a broader scope land- and marine-based tourism, including cultural heritage tourism, food and wine, spa resort and so on, may usefully include the remaining indicators.

Methodology

To examine the competitiveness of the Northern GBR a range of methodologies were used, including both an analysis of primary data (visitor surveys and content analysis of diving/travel magazines and websites) as well as secondary data, through existing reports and studies on different aspects of (primarily) North Queensland as a tourism destination and projected images of the Great Barrier Reef tourism destination in popular media.

The limitations of the various types of data collected are provided below, and all results must be interpreted in the light of these limitations.

Primary data collection

The primary data came from two sources, (a) surveys completed by visitors to the Great Barrier Reef; and (b) a companion exit survey distributed at Cairns Airport, which showed that 79% of visitors to the region had visited the Great Barrier Reef during their trip, and 8.5% out of the remaining 21% had been to the Great Barrier Reef on a previous visit to the region (leaving only 12.5% of visitors to the region with no Great Barrier Reef tourism experience at all) (Prideaux and Falco-Mammone 2007).

The Great Barrier Reef visitor surveys are the main data collection tool for this study under the Marine and Tropical Sciences Research Facility Project 4.8.6 *Sustainable use and management of marine resources of the Great Barrier Reef, Objective (d) Identification of key trends and drivers of visitor patterns, including an assessment of the economic impacts of visitation and comparison of the Great Barrier Reef with international reef tourist attractions*[2]. The methodology for this research is explained in greater detail in the first technical report (Prideaux and Coghlan 2007), and is outlined here as well. The second source of primary data is a content analysis of diving and travel magazines that feature reef tourism destinations.

Visitor survey

The visitor survey is currently distributed by eleven operators across four regions (Port Douglas, Cairns, Townsville and Airlie Beach) and a total of 1,656 surveys have been collected since the start of the research project. The diversity of operators and locations ensures that nearly all the activities that are offered on the reef are represented, including pontoon trips, helicopter tours, all SCUBA diving activities (intro/resort, certified and training), helmet dives, snorkel tours, viewing chambers, semi-submersible tours, glass bottom boat tours, sailing and visiting the islands. The activities that are not represented include fishing, stays at islands resorts, and the dedicated diving live-aboard operations such as those offered by members of the Cod Hole and Ribbon Reefs Association (CHARROA). The diversity of collection sites enables the researchers to be reasonably confident that most types of reef experience are represented and the replication of similar types of operations within and between different regions allows for some comparative analyses to be carried out.

A copy of the survey is provided in Appendix B. Briefly, the information collected in the surveys include reef visitors' socio-demographic characteristics, travel patterns, motivations, activities, alternative destinations considered, previous reef tourism experience and satisfaction, including measures of expectations, best and worst experiences, recommendations to others, and value for money. The data analysed focus on:

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[2] Further information: http://www.rrrc.org.au/mtsrf/theme_4/project_4_8_6.html

- Travel patterns;
- Motivations for visiting the region;
- Alternative destinations considered;
- Previous experience of reefs;
- Comparison of the Great Barrier Reef with other reef tourism destinations; and
- Satisfaction measures, such as satisfactions scores on a 1-10 basis, critical incidents (best and worst experiences), and value for money and reef and trip expectations.

There are however several limitations to this approach. The first is that survey distribution and collection is entirely dependent on boat crews, which creates the potential for surveys to be misplaced or forgotten amongst other crew duties, and may lead to concerns over the randomization of sampling, both in terms of respondents and conditions under which distribution occurs (rough/calm seas, no or lots sunshine, poor/good water clarity). Whilst boat crews have been asked to maximise sampling randomisation (e.g. asking the crews to approach every fourth table on the larger boats, or every third seated person on the smaller boats, on set days of the month), it cannot always be guaranteed that staff, particularly new or casual staff, are following these instructions. The issue of randomization can also, to some extent, be addressed through large sample sizes, built up through time.

Content analysis of diving and travel magazines and websites

In order to gain a better understanding of where the North Queensland Barrier Reef Zone (Tropical North Queensland and the Whitsundays) sits as a reef tourism destination, a content analysis of media coverage of the Great Barrier Reef and other reef tourism destinations was conducted. Articles from three international diving magazines (two North American and one British) and one Australian diving magazine published between January and September 2007 were reviewed, as well as articles collected incidentally from other sources such as Qantas in-flight magazines, Cosmos and the Australian Geographic. Content analysis is "a research methodology that utilises a set of procedures to make valid inferences from text. These inferences are about the sender of the message, the message itself, or the audience of the message" (Weber 1990: 9).

Secondary data collection

In addition to primary data collection, a number of existing data sources and studies were reviewed to provide a more complete picture of the Great Barrier Reef and its tourism destinations. The information sought out was collected in response to Dwyer and Kim's (2003) list of destination competitiveness indicators. These are shown in Table 1 and include information from government departments such as the Bureau of Meteorology, the Great Barrier Reef Marine Park Authority (GBRMPA), CRC Reef technical reports, consultancy reports on tourism and related issues, industry reports and academic studies. In many cases, however it is important to note the distinction between the existence of certain (tourism) features and their appeal and use to tourists themselves. In this study, the latter, i.e. studies of perceptions and use are selected over simple presence/absence data. Wherever possible, comparative information is collected on other reef tourism destinations.

Table 1: Destination competitiveness indicators used in this report and source of information.

<table>
<tr><th colspan="2">INDICATOR type and name</th><th>Measure</th><th>Source</th></tr>
<tr><td rowspan="2">Endowed Resources</td><td rowspan="2">Natural</td><td>Climate</td><td rowspan="2">Visitor surveys</td></tr>
<tr><td>National Parks / flora and fauna</td></tr>
<tr><td rowspan="7">Situational Conditions

and

Demand Factors</td><td rowspan="3">Destination location</td><td>Perceived ‘exoticness’ of location</td><td rowspan="7">Content analysis of media (primary and secondary data) and visitor surveys</td></tr>
<tr><td>Proximity to other destinations</td></tr>
<tr><td>Distance from major origin markets</td></tr>
<tr><td colspan="2">Price competitiveness</td></tr>
<tr><td colspan="2">Destination awareness</td></tr>
<tr><td colspan="2">Destination perception</td></tr>
<tr><td colspan="2">Destination preferences</td></tr>
<tr><td>Market Performance Indicators</td><td>Visitor statistics (numbers)</td><td>Number of foreign visitors,
Average length of stay,
Rate of revisit</td><td>Visitor surveys and EMC data</td></tr>
</table>

Results

As stated in the methodology section, the results for this study are drawn from a wide range of sources. Wherever data arise from secondary sources, the source of the data is indicated in brackets, thereby distinguishing primary data from secondary data.

Natural resources

The first indicator of destination competitiveness proposed by Dwyer and Kim refers to *endowed resources*, particularly natural and cultural. We look first at natural resources, which include Tropical North Queensland (TNQ) as a nature destination, the climate, the Great Barrier Reef, the Wet Tropics rainforests and its associated tropical wildlife. Within this section of natural resources in TNQ, four elements are examined, (a) the natural environment and Wet Tropics rainforests, (b) tropical wildlife as a tourism attraction, (c) climate, and (d) the Great Barrier Reef. The results for all four natural resource indicators are summarised in Table 2.

a) **Natural environment and Wet Tropics rainforests:** Given the presence of two World Heritage Areas that adjoin each other – the Great Barrier Reef World Heritage Area (GBRWHA) and the Wet Tropics World Heritage Area (WTWHA) – the North Queensland Barrier Reef Zone is arguably a nature-based tourism destination. In several studies of motivations for visiting the region and its attractions, the natural environment and rainforests appear frequently in the top five motivations and attractions (Table 2).

b) **Tropical wildlife as an attraction:** Similar consideration can be given to wildlife as an attraction. Many of the results come from Prideaux and Coghlan's (2006) study of wildlife experience preference in TNQ. As above, however, other sources of data are also available and are shown in Table 2. For the most part, 76% of respondents (n = 379) were either *interested* (48%) or *very interested* (28%) in seeing wildlife whilst in TNQ. The majority of respondents wanted to experience wildlife in a captive setting (55%), while 42% preferred to experience wildlife in a natural or wild setting. The most popular species were iconic Australians such as the koala (4.33 mean score on a likert scale where 1 = *not at all interested* and 5 = *very interested*), saltwater crocodile (4.30), red kangaroo (4.29) and platypus (4.05). Interestingly, 47% of respondents had not (yet) visited a wildlife attraction during their visit, but of those who had, sixty percent were satisfied with their experience.

c) **Climate as an attraction:** Climate can be expected to play an important role both as a visitor attraction and as a major factor in the tourism experience. Figures 3(a), 3(b) and 3(c) illustrate the suitability of TNQ's climate for a tourism destination. The winter months in particular are predictably warm and sunny with low rainfall, whilst the summer months, which parallel the wet season, are much hotter with higher rainfall and consistent cloud cover. Again, Table 2 shows the importance of weather as an attractor and motivation to visit the region. In addition, however, the Great Barrier Reef visitor surveys also provide some indication of the importance of weather in the reef tourism experience. Since November 2006, Cairns has experienced unusually high cloud cover, wind speeds and more days with rain (though not necessarily more rain overall) than average. As a result, weather affected the experience of twenty percent of survey respondents, particularly in February and June 2007. Worst weather experiences included seasickness (82 respondents), rough seas (62), rain (21), cool temperatures (20), overcast/cloudy (17), windy (16), poor visibility (14), difficulty snorkelling/diving (7), dull colours (2) and, finally, the cancellation of activities (2) such as helicopter and glass bottom boat tours. Best weather experiences included sunshine (6 respondents), clear water/good visibility (5 responses), warm air temperatures (2 responses), not being seasick (1 response) and warm water temperature (1 response). Poor weather significantly lowers satisfaction scores (7.16 out of a possible 10 versus 8.93 out of a possible 10, where 10 is the highest score), the likelihood that reef and tour expectations were met and respondents' views on value for money. Interestingly, poor weather did not influence respondents' decisions to recommend a trip to the Great Barrier Reef to others, indicating that there are more elements involved in the reef trip that need to be explored in future studies.

d) **The Great Barrier Reef as an attraction:** The Great Barrier Reef is beyond any doubt the star attraction of the North Queensland Barrier Reef Zone. The results shown in Table 2 indicate that there is a certain level of variability in the importance placed upon the Great Barrier Reef as an attraction depending on the different market samples and not surprisingly, the Reef rated highest as a motivation for visiting the region by respondents to the visitor survey. The visitor survey also provides a wealth of other information regarding the reef as an attraction. For instance, for 71.5% of respondents, this was their first visit to the Great Barrier Reef, whilst 45% of respondents had visited other reefs in the past, most commonly Southeast Asian reefs (15%) and other Australian reefs (13.5%).

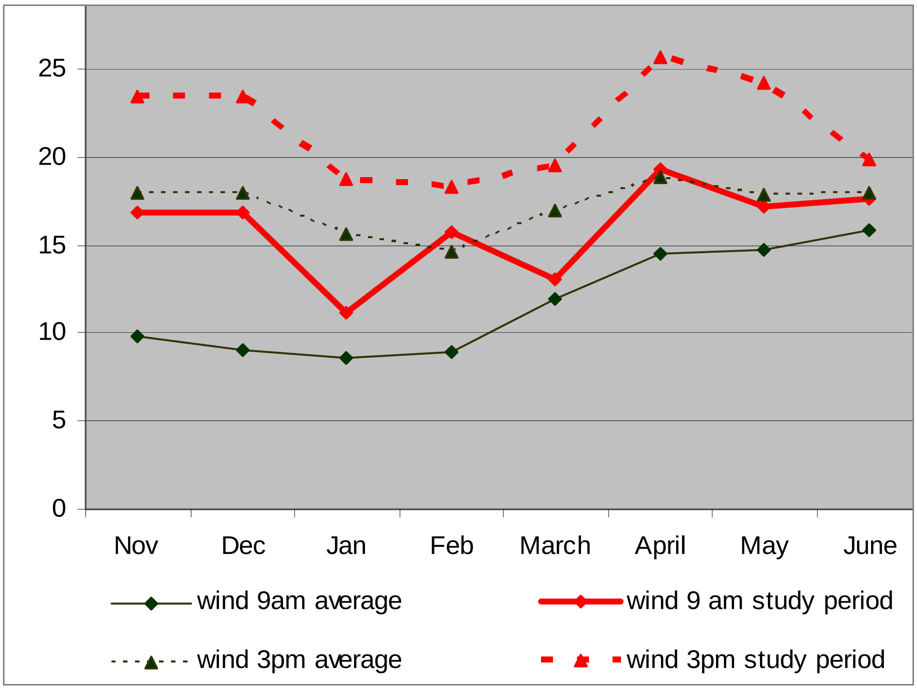

Figure 3(a): Wind speed (knots; 9:00am and 3:00pm readings) for 1945-2005 (black) and during the study period (red) in Tropical North Queensland (the survey region) (Australian Bureau of Meteorology).

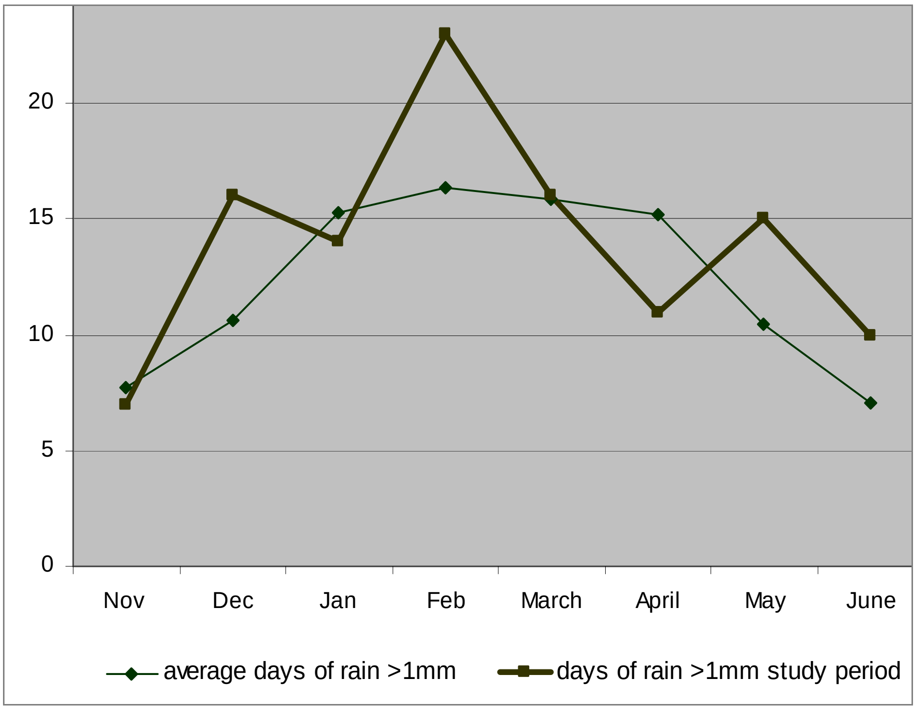

Figure 3(b): Days with rain between 1945 and 2005 (thin line) and during the study period (bold line) in Tropical North Queensland (the survey region) (Australian Bureau of Meteorology).

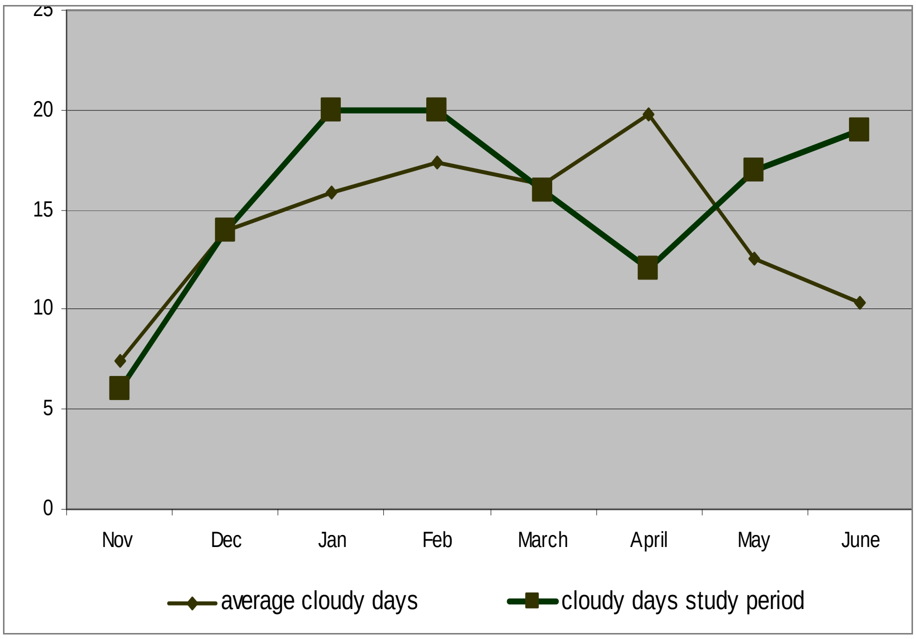

Figure 3(c): Days with cloud between 1945 and 2005 (thin line) and during the study period (bold line) in Tropical North Queensland (the survey region) (Australian Bureau of Meteorology).

Satisfaction with the reef experience rated 8.41 out of 10 (10 being the highest possible score), representing a slight drop from Moscardo's (2003) reported satisfaction of 8.6 out of 10. Some of the major features that affect satisfaction are the professionalism of the staff (mentioned by 26% of respondents), the natural environment (16%), the weather and sea state (13.5%), while some of the best experiences included being able to dive or snorkel (34%), seeing marine life (17%). The weather and seastate accounted for 32% of worst experiences on the reef. Nonetheless, 85.5% of respondents felt that they received value for money, and 89.5% of respondents said they would recommend the trip to others.

Table 2: Importance of the natural environment and Wet Tropics rainforests in Tropical North Queensland.

Source	(a) Natural environment	(b) Wildlife	(c) Climate	(d) Great Barrier Reef
Great Barrier Reef Visitor Survey	3.82[1]	3.62[1]	3.72[1]	4.66[1]
Tropical North Queensland Exit Survey	3.89[1]	3.81[1]	3.57[1]	4.50[1]
Prideaux *et al.* (2006)	2.13[1]	2.30[1]	2.83[1]	3.35[1]
	-	2.9%[2]	25%[2]	74%[2]
	4% / 0%[3]	4% / 0%	6.8% / 14.2%	29% / 0%
Falco-Mammone *et al.* (2006)	3.11[1]	2.90[1]	3.26	8.3%
	2.5%[2]	4.3%[2]	21%	12.4%
Prideaux and Coghlan (2006)	-	-	-	30.5%

[1] Likert-scale: 1 = *not at all important* / *not at all interested*, 5 = *very important* / *very interested*.
[2] Frequency at which respondents cited indicator as an attraction to visit Tropical North Queensland.
[3] Frequency at which this feature was cited as a best or worst experience whilst visiting Cairns.

Situational conditions and demand factors

In this section the reef experiences of visitors to the Great Barrier Reef based upon the visitor surveys and on the media portrayal of a selection of global reefs are examined. For the analysis of media portrayal of the reef, two sources of data have been used. The first are primary data based on a content analysis of magazine articles on different reef tourism destinations and the second is Moscardo and Pearce's study conducted through the CRC Reef between the years 1995 and 2004 (c.f. Moscardo 2000a, 2000b, 2000c and 2001; Moscardo and Pearce 2002).

For the purpose of this analysis, the different reefs of the world have been grouped according to ecological and tourism destination characteristics into eights regions, shown in Figure 4, and include Australia, Southeast Asia, the South Pacific, Micronesia, Hawaii, the Caribbean, Indian Ocean and Red Sea. These same areas were used in questions in the visitor survey to determine respondents' previous reef experiences.

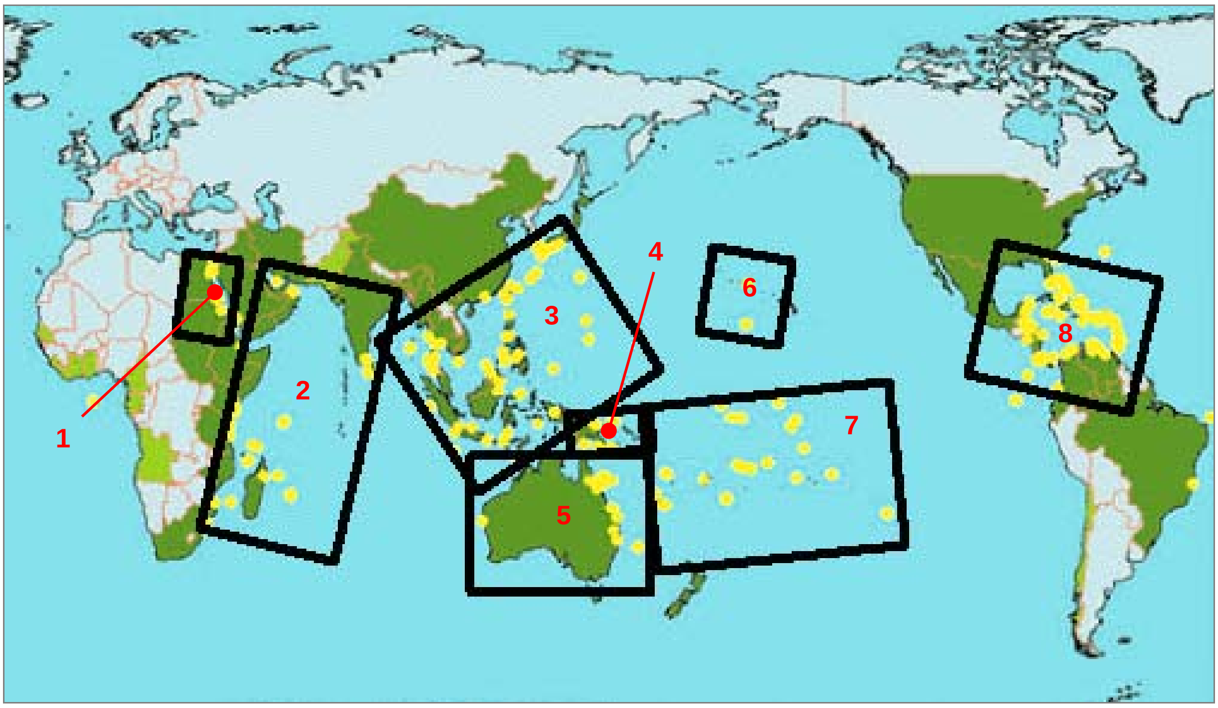

Figure 4: Reef tourism destinations: (1) Red Sea; (2) Indian Ocean; (3) Southeast Asia; (4) Micronesia (the Federated States of Micronesia – Kosrae, Yap, Pohnpei and Chuuk), the Republic of the Marshall Islands, the Republic of Palau, the Commonwealth of the Northern Mariana Islands, the Republic of Nauru, the Republic of Kiribati, the Territory of Guam, the Territory of Wake Island; (5) Australia; (6) Hawai'i; (7) South Pacific; and (8) Caribbean / Central America.

Results of the visitor survey

Referring to Table 2 and the situational and demand factor indicators proposed by Dwyer and Kim (2003), we find that within the visitor's survey several questions are of interest to us in order to examine the situational conditions and demand factors competitiveness indicators. Responses to these questions indicate the visitors' last vacation destination and alternative holiday destinations; previous reef experiences as well as other reefs visited; comparisons with other reef tourism destinations; and a number of satisfaction scores including whether their day out on the reef met their expectations, their satisfaction scores and their best and worst experiences. All of these responses serve to identify destination awareness, perception and preferences. In addition, responses to the question "Why did you choose this [tourism] operator today?" provide some indication of price competitiveness, and the respondents' origin indicates the distance from the source origin.

The first step in the analysis was to determine the origin of respondents in the visitor survey. The largest proportion of respondents was Australian (Figure 5). Other dominant source markets are the United Kingdom and Ireland (25.3%), North America (18.9%) and Europe (18.6%). As can be seen on the map, none of these three international source markets are geographically close to the Great Barrier Reef, and all require travel flight times of ten hours or more. The source markets that are close to the destination, e.g. New Zealand, and Asia, contribute a total of 3.6% of respondents. Also shown in Figure 5 is the most frequent reef destination of the Great Barrier Reef's source markets. A total of 88% of respondents had visited a reef before this trip, and nearly half of the respondents (45%) had visited other international or Australian (non-GBR) reefs before this trip (although for 71%, this was their first visit to the reef). The arrows in Figure 5 represent which reefs respondents had visited prior to their reef trip, whilst the figures on the arrow indicate the number of respondents from that source market who had visited the area.

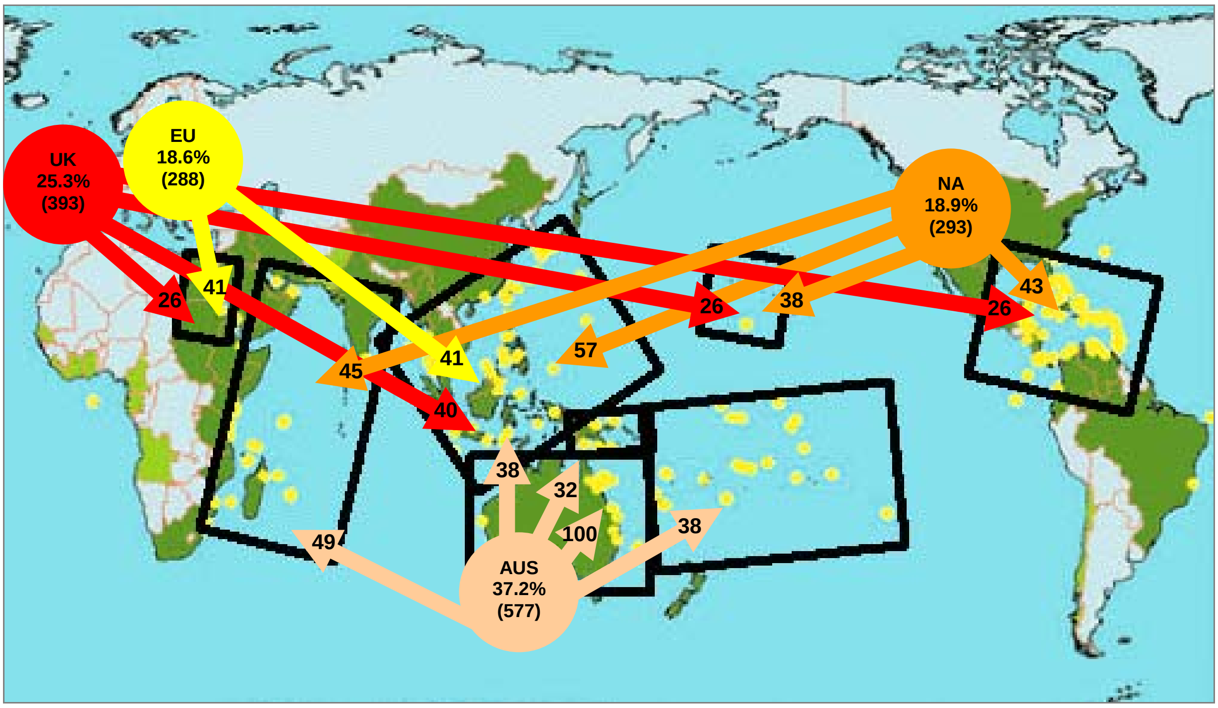

Figure 5: The origin of visitors to the Great Barrier Reef, and other reef destinations that these respondents have visited. UK = United Kingdom and Ireland; EU = Europe; NA = North America; AUS = Australia.

When asked to compare their reef experiences at other destinations to their trip to the Great Barrier Reef that day, survey respondents' comparisons of the reef destinations are relatively evenly split, with nearly half of the respondents saying that the Great Barrier Reef offers a similar experience to other reefs (Figure 6), whilst comparisons between specific destinations reveal that some of the reefs closest to the Great Barrier Reef, but not within Australia, are considered to be better than the reef that they visited that day (Figure 7).

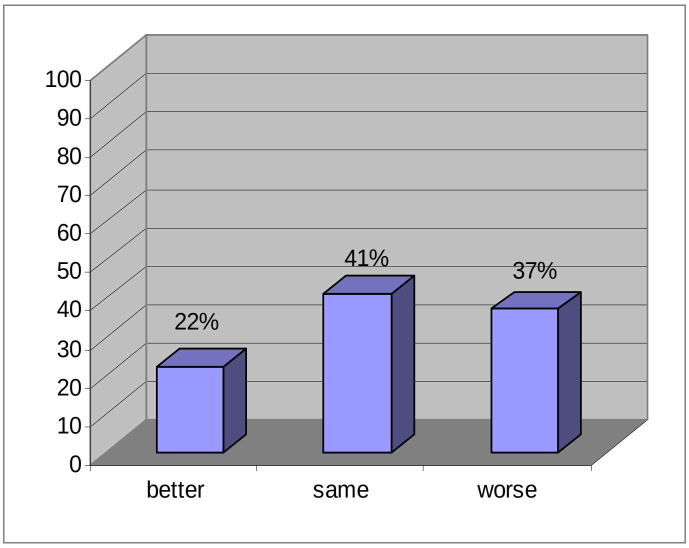

Figure 6: Survey respondents' comparison of the Great Barrier Reef to other reef destinations in response to the survey question, "Is __ reef better, the same, or worse than the Great Barrier Reef?".

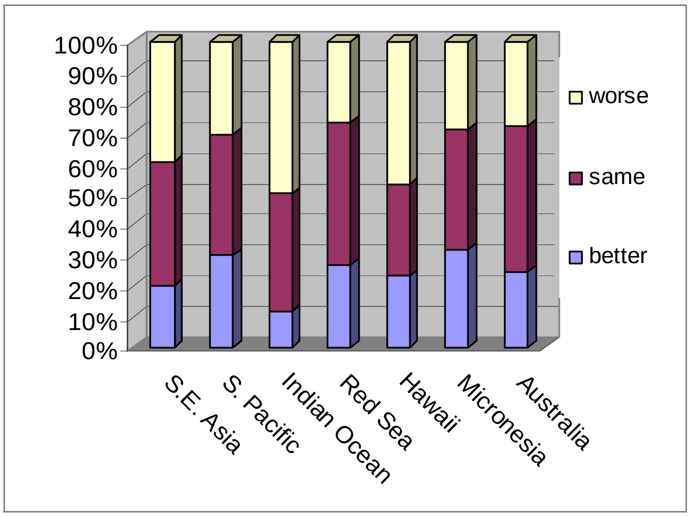

Figure 7: Survey respondents' comparison of the Great Barrier Reef with other specified destinations.

Interestingly, when asked how satisfied they were with their reef trip, it was noted that respondents with no prior reef experiences, or who had visited the GBR previously, had slightly higher (but not significantly so) satisfaction scores (mean of 8.44) compared to respondents who had visited other reefs beforehand (mean of 8.40 out of a possible 10). On the other hand, respondents who had visited reefs not situated within the GBR had significantly lower satisfaction scores (8.25) than respondents who had not visited any other reefs (8.59) ($t = 3.995$, $p<0.05$).

It must be noted, however, that despite variation in satisfaction scores, these generally remain high, with a mean of 8.41 and a standard deviation from the mean of 1.43. In comparison, Moscardo (2003) recorded a mean satisfaction score of 8.6. Moreover, over sixty percent of respondents said that both the reef and their day out on the reef strongly met their expectations (these two variables are significantly correlated, indicating that they are probably linked in the same dimensional space, and should be investigated in further detail), 85% of respondents felt that they had got value for money out of the trip and 89.5% of respondents said that they would recommend the trip to others. The factors that the respondents felt had the greatest influence on their experience include the marine environment, diving/snorkelling, staff/professional service, weather and the sea state and the food on board (Figure 8). Interestingly, each of these elements affect the reef tourism experience in a different way, e.g. although the marine environment was the most frequently cited factor overall, the staff had the strongest influence on overall satisfaction, whilst the diving and snorkelling were most frequently cited as the best experience of the day, and the weather the worst experience of the day.

Finally, when asked why they choose their particular operator for their trip to the reef, price did not feature very highly in the analysis of responses (11%), indicating perhaps that price sensitivity does not necessarily play an important role for most respondents. However, price sensitivity was significantly higher in some socio-demographic groups than others, based upon age, occupation and accommodation type. For instance, price was a major deciding factor in respondents of less than twenty years of age (with 25% citing it as a reason for choosing the trip) and in the 20-29 year age group (20% citing it as a reason). As age correlates with occupation (younger respondents are more likely to be students) and accommodation type (younger respondents are more likely to stay in backpackers' accommodation), these three variables are effectively telling the same story. There was no difference however, based on the respondents' country of origin.

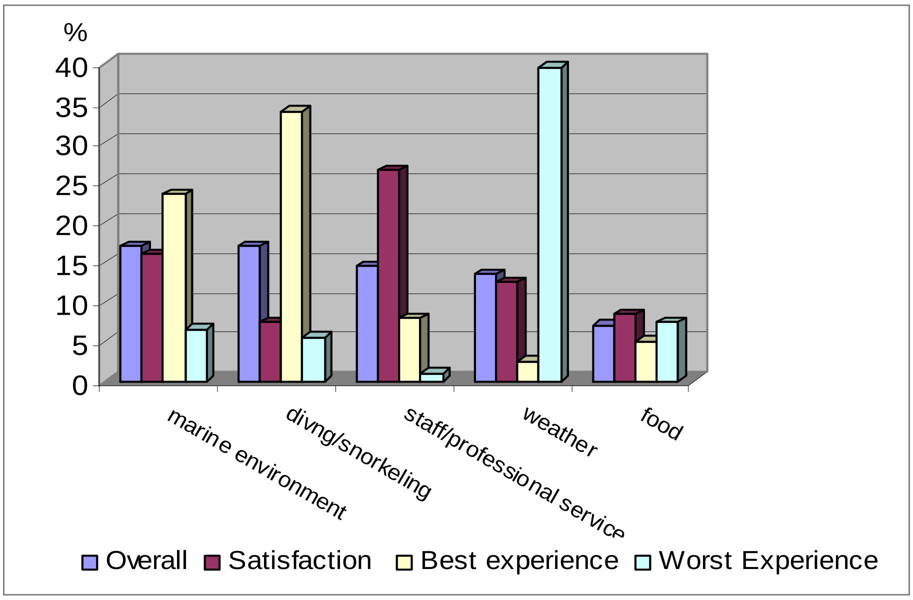

Figure 8: Factors that influence visitor satisfaction during their reef trip.

Content analysis of media representation of the Great Barrier Reef and other reef destinations

The results presented in this section have two sources. The first include primary data collected from diving and travel magazines published during the time the visitor surveys were distributed, whilst the second source is archival data collected by Moscardo (2000a, 2000b, 2000c and 2001) and Moscardo and Pearce (2002). The full results of the primary data collection are shown in Appendix C; while a summary of key results are provided in Table 3. For comparative purposes, Moscardo and Pearce's results are provided in Table 4.

A total of 94 reef tourism destination reviews were presented in the diving and travel magazines. Many were destination-specific articles, while four were themed reviews of best diving live-aboards, best reef destinations, and best getaway destinations. Two articles covered several similar destinations within the Caribbean. Comparing the frequency with which different destinations were reviewed, the Caribbean / Central America accounted for over half of these (n = 47), perhaps reflecting the North American bias in the magazine selection, and their preference for reef destinations over other types of diving destinations. The Caribbean and Central America also showed the greatest diversity of destinations within the region, with a total of seventeen countries represented – the most popular being Mexico (6), Bonaire (5), the Cayman Islands (4) and the Bahamas (4). Southeast Asia was also highly represented (n = 14), although nine of these reviews were focused on Indonesia. Other Southeast Asian destinations included the Philippines (3), Papua New Guinea (2), Malaysia (2), East Timor (1) and Thailand (1). The South Pacific (n = 7) destinations focussed on Fiji (4), Micronesia (6) on Palau (3), Australia (6) on the GBR (4), and the Indian Ocean (5) on the Maldives.

From the data presented here, it would appear that each of the eight reef tourism destinations appearing in travel and diving magazines position themselves slightly differently. Interestingly, Hawai'i does not appear as a destination in the material analysed, and the Red Sea does not feature heavily. It is possible in the latter case that extending the material to encompass French, Dutch and German magazines might increase the coverage of the Red Sea as a destination.

Table 3: Summary results from diving and travel magazine content analysis.

Region	Number of articles	Keywords / Themes	Marine attractions	Top side attractions
Atlantic	1	Intrepid divers, pristine, undiscovered gem, idyllic	Mainly macro-species	No crime, friendly locals, pastel colonial buildings, cobbled streets, coffee shops
Australia	5	Cosmopolitan, hassle free, big	Both macro and micro species, Yongala, sea plane and sand cays	Interpretation, rainforest, cafes, Port Douglas, Skyrail and Tjapukai
Caribbean	47	Accessible, escape, heaven, welcoming	Mainly micro species with turtles and rays	Jungle, cultural heritage, friendly locals, nightlife
Hawai'i	0	-	-	-
Indian Ocean	5	Pristine, wild, undeveloped	Mainly macro-species	Cuisine
Micronesia	4	Lush, healthy, stunning	Drift, wreck and wall diving, macro and micro species	Traditional villages, tropical rainforests, caves, temples, luxury resorts and tourism infrastructure
Red Sea	2	Magnificent, classic, cheap	Macro species, wrecks	Lots of hotels, dive shops and resorts
Southeast Asia	14	Adventurous, addictive, affordable, discovery	Mainly micro species, muck dives	Ecotourism, sustainable tourism, friendly locals, food and culture
South Pacific	7	Incredible, unbelievable, unique	Both macro and microspecies, deep water drop-offs	

In brief, while Australia is portrayed as a cosmopolitan destination with a variety of marine attractions and an extensive reef, other reef tourism destinations are variously labelled as *reef tourism classics* (the Red Sea), *easy getaways* (the Caribbean), *frontier destinations* (Indian Ocean), *affordable adventure destinations* (Southeast Asia), and finally, *off-the beaten track* and *authentic destinations*, offering relaxation, culture and top-end diving (Micronesia and South Pacific). This shows slightly different trends to the earlier media monitoring program, which covered the Great Barrier Reef, other Australian reefs, Pacific and Asia, where reports of the Reef focussed primarily on the wildlife, scenery and pristine environment, while Asia is a destination associated with luxury, sophistication, relaxation and high costs. The Pacific, however, retains some key characteristics of traditional culture and exotic locations, but was found to lack infrastructure and to be expensive.

In addition to this, several articles addressing the declining reef health in the Great Barrier Reef were also noted in travel and diving magazines. Many articles also appeared in the popular media after results of the Intergovernmental Panel on Climate Change (IPCC 2007) research into climate change impacts were leaked to the media. As these are not targeted specifically at travellers and tourism, they have been left out of the analysis and will be analysed in a separate report.

Table 4: Summary results of media content analysis by Moscardo and Pearce (2002).

	Destination		
	Great Barrier Reef	**Pacific**	**Asia**
Five most commonly mentioned positive features	• Wildlife • Coastal/island scenery • Calm/clear water • Variety of activities • Wildlife • Quality of coral • Seafood • Nice beaches • History • Pristine environment	• History • Seafood • Relaxing • Calm/clear water • Coastal/island scenery • Variety of activities • Wildlife • Culture • Quality of coral • Coastal/island • Friendly locals/staff • Romance	• Beaches • Calm/clear water • Luxury • Wildlife • Seafood • History • Culture • Friendly locals • Remote • Family place • Secluded • Undeveloped
Five most common descriptive words or phrases used	• Spectacular • Pure/white sand/beaches • Beautiful • Clear/clean water • Blue water • Secluded • Scenic • Relaxing • Luxurious	• Paradise • Traditional • Cultural • Spectacular • Beautiful • Exotic • Blue water • White sand/beaches • Friendly • Idyllic • Friendly	• Exotic • Beautiful • Sophisticated • Luxurious • Cultural • Undeveloped • Nice beaches • Romantic • Colourful • Scenic
Two most commonly mentioned negative features	• Environmental damage • Jellyfish • Weather	• Lack of facilities • Weather • Expensive	• Expensive • Overdeveloped • Sharks • Weather • Safety
Five most commonly mentioned activities	• Diving • Snorkelling • Marine wildlife viewing • Coral viewing • Fishing • Beach visits • Boating • Adventure sports • General sports	• General sightseeing • Diving/Snorkelling • Cruises • Beach visits • Walking • Seeing wildlife • Swimming • Boating • Relaxing • Walking • Fishing • Nightlife	• Snorkelling • Marine wildlife viewing • Cruises • Diving • General sightseeing • Watersports • Walking • Health spas • Relaxing • Shopping

Four reports are included here, two from Sport Diving Magazine in April and May 2007, an Australian diving magazine, one from a Qantas in-flight magazine, and one from Cosmos 2006, listing the top ten tourism destinations most likely to be affected by climate change. The topics covered in these four articles include coral bleaching and rising acid levels in the ocean, the decline of reef fish species that feed on corals, coral bleaching and changes in reef ecology over the next thirty years, the importance of monitoring and interpretation on the reef and finally the wide dispersal to the outer barrier reef of sediment and pollution after torrential rain, affecting living coral both in the inner and outer reefs. These reports of negative impacts on the Great Barrier Reef are not reflected in articles on the other reef tourism destinations, and may have implications for the competitiveness of the Great Barrier Reef in the future if the media portrayal of reef impacts continues to single it out. These are not features that were apparent in Moscardo and Pearce's media monitoring research in 2000 and 2001 (Moscardo 2000a, 2000b, 2000c and 2001; Moscardo and Pearce 2002), as climate change did not have the media exposure that it does now and one of the more severe bleaching events only occurred after this study was completed in 2002 (the first occurring on the Great Barrier Reef in 1998). During their study timeframe the negative impacts that were discussed in the media focussed upon weather, environmental damage (unspecified), and the presence of jellyfish (Appendix D).

Market performance indicators

As in the other sections, the results presented here are based on a triangulation approach, that is, several independent sources of data, which allows a more in-depth picture of market performance indicators to be constructed. The data used in this section arise from the current Great Barrier Reef visitor survey, as well as the visitor surveys distributed through the CRC Reef between 1995 and 2004 and Environmental Management Charge data from the Great Barrier Reef Marine Park Authority. As a reminder, Table 1 suggests that suitable market performance indicators include the number of foreign visitors, average length of stay and rate of revisit, as well as contribution of tourism to the economy. Wherever possible, comparisons with other destinations are provided.

The Great Barrier Reef

The visitor surveys indicate that the percentage of foreign visitors to the Great Barrier Reef is 65%. This is similar to other surveys of place of origin of visitors to North Queensland (e.g. Prideaux *et al*. 2006). Average length of stay in the region is fourteen nights, with a high range between no overnight stays to stays of over a year. Therefore the modal length of stay and median length of stay are also useful average measures, the first being four nights and the latter being 3½ nights. The rate of revisit to the region is high, at 75% percent, with 54.5% of respondents having visited the region two or three times previously. Not surprisingly domestic respondents have the highest level of repeat visitation (Figure 9). A different pattern emerges when patterns of repeat visitation to the reef itself are examined. Domestic visitors are proportionally less likely to return to the reef (Figure 9) whilst international visitors, particularly the North American and Asian visitors, are likely to have been to the Reef more than once[3].

These results can be compared to Moscardo and others' (2003) results which indicate that 39% of visitors are domestic and 34% are from the United Kingdom and Ireland. Repeat visitation to the reef was 31% – highest for the European market and lowest for the domestic

[3] It is important to remember that the first question asked visitors if they were repeat visitors to Port Douglas, Cairns, Townsville and Airlie Beach, whilst the second questions asked visitors if they were repeat visitors to the Great Barrier Reef as a whole regardless of the "jump off" point to the reef. This explains the different patterns of repeat visitation.

market, whilst 90% of respondents were first time visitors to that particular region. This indicates some slight changes in repeat visitation with European being the least likely international visitors to have previously visited the reef in the current visitors' survey. Length of stay appears to have been longer in Moscardo's sample, with many visitors staying 8 to 21 days (note, the figures in her report are based on visitor type, e.g. once only, intending repeaters, etc., and no overall figure is provided).

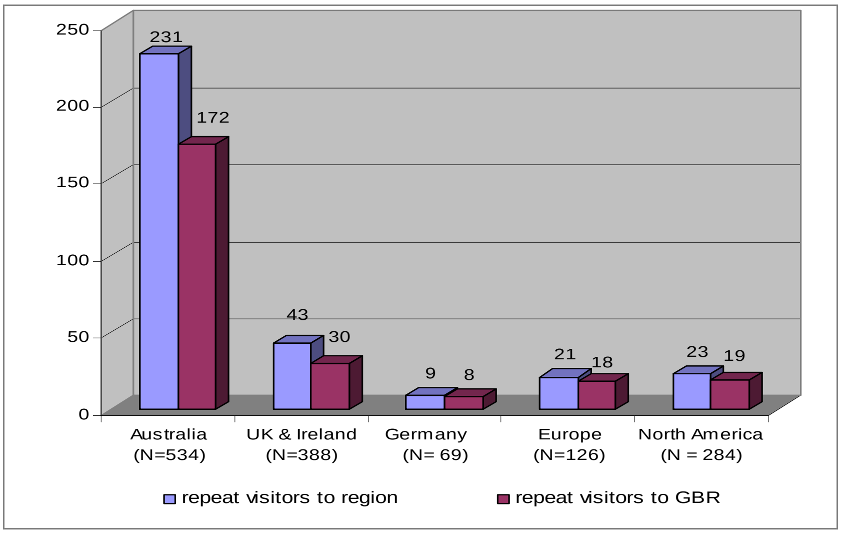

Figure 9: Number of repeat visitors to the region by visitor origin, and the number of those that had visited the reef before.

The data collected by the Great Barrier Reef Marine Park Authority through their environmental management charge (reef tax) indicates that reef tourism numbers have stayed relatively constant since 2001, with visitor day numbers reaching almost two million in 2005 (Figure 10).

A recent report by the economic consultancy firm, Access Economics (2007), indicates that the value of the Great Barrier Reef is approximately AUD$5 billion, and employs around 55,000 people in the region. Different figures are provided by Hoegh-Guldberg and Hoegh-Guldberg (2004) who found that 68% of the coastal Queensland's gross regional product is reef tourism related, amounting to a value of AU$1.4 billion.

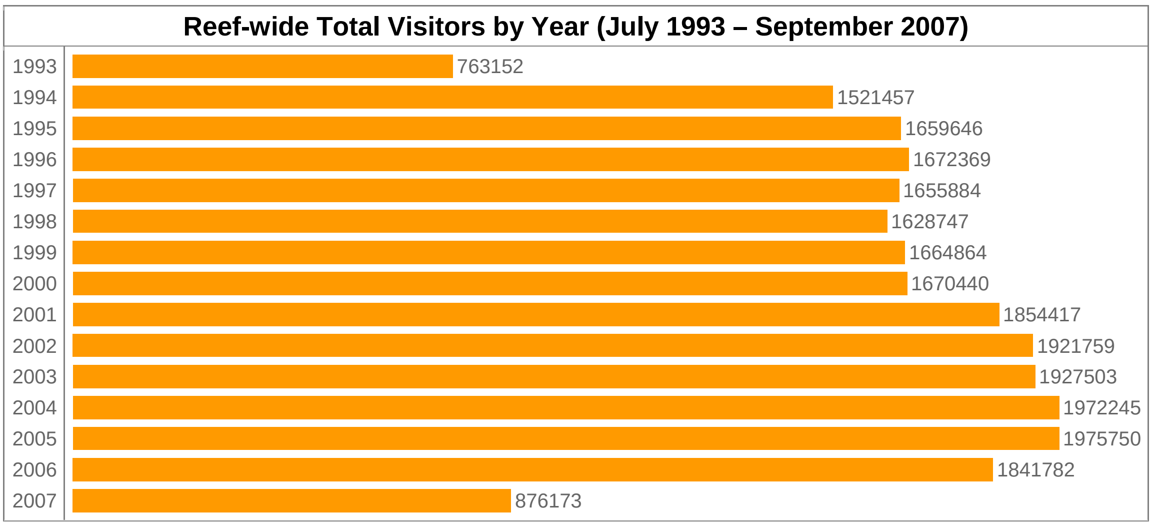

Figure 10: Visitor numbers to the Great Barrier Reef based on the Environmental Management Charge returns.

Other coral reefs: Ningaloo and international reefs

Currently some information is available regarding the Great Barrier Reef's competing destinations, most notably Ningaloo Reef in Western Australia and reefs in the United States. Whenever possible the most up-to-date and complete information on visitor numbers, length of stay and value of reef tourism to the local economy is provided. However, currently data is limited to specific marine protected areas or regions, with little generalised data available. So far, information gathered suggests that Ningaloo Reef currently has an approximate total of 94,000 (68,000 domestic and 25,800 international) visitors per year, based on Tourism Research Australia's 2005 National and International Visitor Surveys (Northcore and Macbeth 2006). Visitors stay an average of five to six nights.

The United States (US) provides the most comprehensive data on the value of its reefs, mainly Florida Keys, American Samoa and Hawaii. It is said to have 45 million reef-related visitors who contribute approximately US$17.5 billion to the local economy (NOAA 2002, cited in Kundis Craig 2007). Table 5 shows how this is partitioned between three US reef destinations.

Table 5: The tourism value of coral reefs in the United States (taken from Kundis Craig 2007).

All US Coral Reefs (2002; per year)	$17.5 billion (expenditures) 45 million tourists
Main Hawaiian Islands (2003 and 2007; per year)	$364 million added value (of which $304 million from snorkeling and diving)
Florida Keys (2007; per year)	4 million tourists $4.4 billion local sales ~$2 billion income ~$1.2 billion in tourism-related services
American Samoa (2007; per year)	$5 million economic benefit

By comparison, another US dominated market, the Caribbean, has 2.4 million divers visit it per year. Divers were estimated to have contributed US$2.1 billion, employing one in six people in the region (Burke *et al.* 2004). Other economic values of reef-based tourism are available for some regions, although in a much less comprehensive format. For instance, (reef-based) tourism contributes 45% of the Gross Domestic Product (GDP) of the Maldives with 615,000 visitors in 2004 (Souter and Linden 2000). In the Seychelles the tourism sector generates more than US$350 million in foreign exchange earnings contributing approximately two percent to the national GDP, with 565,000 visitors in 2004 and employing approximately fifty thousand people directly and an additional 65,000 indirectly (Souter and Linden 2000). Although data may be available for the remaining competing destinations, no comprehensive and comparable figures were found in the literature.

Discussions and Conclusion

The aim of this report is to examine aspects of the competitiveness of the Great Barrier Reef within the North Queensland Barrier Reef Zone defined as Tropical North Queensland. Both primary and secondary data sets were analysed.

It is apparent that there are numerous factors that together comprise destination competitiveness. The list of these factors outlined in Appendix A is exhaustive and would require considerable expense to evaluate for each destination and its competitor destinations. For the purposes of this report we first set out to establish the range of factors that together comprise destination competitiveness. These were discussed in Section 2, *Aims*. From this discussion it is apparent that there are two aspects of destination competitiveness that need to be analysed. The first is the composition of visitor flows, while the second is the level of satisfaction that visitors have with their experience. The first, the composition of visitor flows, is perhaps more important than the second. Visitor flows indicate who is coming and from where. To achieve competitiveness a destination must satisfy the existing segments that constitute its current market and to attract the new segments that are continually emerging. For example, if a destination specialised in the senior citizens market it would currently face the need to continue to offer value to the current seniors cohort comprising of the pre-war generation, in addition to offering new or reimaged products to the emerging seniors of the baby-boomer generation. If the needs of the new seniors are ignored that market will move elsewhere.

The second factor is inclusive of measures used to assess competitiveness. The first is the position of the Great Barrier Reef within the motivations given for visiting the study region. The Reef consistently ranked the most popular place to visit by the majority of visitors, typically around 65% for international visitors. Allied with the primary motivation for visiting the study region is the satisfaction score for reef visitors identified in visitor surveys conducted over the period 2003 to 2007. The satisfaction score for the period 2003 to 2007 were within the range of 8.6 and 8.44 and indicate that the Great Barrier Reef is providing a satisfying experience for its visitors.

Another measure of competitiveness is the rating given by respondents to the reef they visited on their trip to the Great Barrier Reef with other reefs previously visited. Only 22% indicated that other reefs were regarded as better while 37% rated other reefs visited as worse.

An assessment of the data presented here indicates that visitors to the Great Barrier Reef leave with a high level of satisfaction indicating that at one level the destination is competitive both nationally and internationally. However, the degree of competitiveness is not clear particularly for international visitors who are able to visit competing reefs closer to home. Here a cost advantage of low travel costs to closer reefs may reduce the overall competitiveness of the Great Barrier Reef. Moreover, it is not clear from the content analysis that the Reef enjoys a comparative advantage over its competitors. This may stem from the Reef not having an image that is as appealing as its competitors particularly in the Caribbean. Assessing comparative advantage will require additional data collected over a longer time period.

In the future it is possible that the strict enforcement of policies to protect the reef will give the Great Barrier Reef a comparative advantage over non-protected reefs. As non-protected reefs continue to decline in quality images of a more pristine reef, together with other images of the Great Barrier Reef experience including indulgence and other activities may allow the Reef to develop a comparative advantage over competing reefs.

References

Access Economics (2007) *The Economic and Financial Value of the Great Barrier Reef Marine Park, 2005-2006.*

Burke, L., Maidens, J., Spalding, M., Kramer, P., Green, E., Greenhalgh, S., Nobles, H. and Kool, J. (2004). *Reefs at Risk in the Caribbean*. World Resources Institute, Washington, D.C.

Coghlan, A. and Prideaux, B. (2007) *Reef Tourism Quarterly Reports for Townsville, Cairns and Port Douglas, Great Barrier Reef and the Whitsunday Regions*. Quarterly Tourism Barometers produced for the Marine and Tropical Sciences Research Facility, Cairns (http://www.rrrc.org.au/publications/tourism_barometers.html)

Crompton, J. (1979) Motivations for Pleasure Vacation. *Annals of Tourism Research* 6(4): 408-424.

Crouch, G. I and Ritchie, J. R. B. (1999) Tourism, competitiveness and societal prosperity. *Journal of Business Research* 44, 137-52.

Dann, G. (1977) Anomie, Ego-Enhancement and Tourism. *Annals of Tourism Research* 4(4), 184-194.

David, F. (2001) *Strategic Management: Concepts* (Eighth edition). Upper Saddle River, NJ: Prentice Hall.

Dwyer, L. and Kim, C. (2003) Destination Competitiveness: Determinants and Indicators. *Current Issues in Tourism* 6(5): 369-414.

Heath, E. (2003) *Towards a model to enhance Africa's sustainable tourism competitiveness*. Proceedings of the Australian Tourism and Hospitality Research Conference. Coffs Harbour, February.

Hoegh-Guldberg, H. and Hoegh-Guldberg, O. (2004) *Great Barrier Reef 2050: Implications of climate change for Australia's Great Barrier Reef*. World Wildlife Fund Australia.

IPCC (2007) Summary for Policy Makers. In: *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group 1 to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Solomon, S., Qin, M., Manning, Z., Chen, M., Marquia, K., Averyt, M., Tignor, M. and Miller, H. (Eds). Cambridge University Press, Cambridge, United Kingdom and New York.

Kundis Craig, R. (2007) *Fishers, divers, scientists, lawyers and marine protected areas: the US experience in protecting coral reefs*. Proceedings of the Fifth International Coastal and Marine Tourism Congress: Balancing marine tourism, development and sustainability. 11-15 September 2007, Auckland, pp. 307-321.

Leaper, N. (2004) *Tourism Management.* 3rd Edition, Pearson Education Press, Frenches Forest, NSW.

Moscardo, G., Saltzer, R., Galletly, A., Burke, A. and Hildebrandt, A. (2003) *Changing patterns of reef tourism*. CRC Reef Research Centre Technical Report No. 49. Townsville: CRC Reef Research Centre.

Moscardo, G. and Pearce, P. (2002) *The Great Barrier Reef Media Monitoring Project, Report 5: May – August 2001. Supplementary Report on Internet Users*. CRC Reef Research Project B2.1.2 Data Summary Report. Townsville: CRC Reef Research Centre.

Moscardo, G. (2001) *The Great Barrier Reef Media Monitoring Project, Report 4: January – April 2001.* Exploring Reef Science summary. Townsville: CRC Reef Research Centre.

Moscardo, G. (2000a) *The Great Barrier Reef Media Monitoring Project, Report 1: January – April 2000*. Exploring Reef Science summary. Townsville: CRC Reef Research Centre.

Moscardo, G. (2000b) *The Great Barrier Reef Media Monitoring Project, Report 2: May – August 2000*. Exploring Reef Science summary. Townsville: CRC Reef Research Centre.

Moscardo, G. (2000c) *The Great Barrier Reef Media Monitoring Project, Report 3: September – December 2000*. Exploring Reef Science summary. Townsville: CRC Reef Research Centre.

Murphy P., Pritchard, M. and Smith, B. (2000) The destination product and its impact on traveller perceptions. *Tourism Management* 21(1), 43-52.

Northcote, J. and Macbeth, J. (2006). Socio-economic impacts of sanctuary zone changes in Ningaloo Marine Park. Unpublished report. CRC for Sustainable Tourism.

Prideaux, B. and Coghlan, A. (2006) *Wildlife viewing in Cairns, Australia: Issues and Future Threats.* Proceedings of the IGU Commission on Tourism, Leisure and Global Change Pre-Congress Symposium. 30 June-1 July, Brisbane, Australia.

Prideaux, B. and Coghlan, A. (2007) *Reef Tourism: Establishment of Visitor Monitoring Structure.* Unpublished Report to the Marine and Tropical Sciences Research Facility. Reef and Rainforest Research Centre, Cairns (19pp.)

Prideaux, B. and Falco-Mammone, F. (2007) *Airport Exit Survey.* Quarterly Tourism Barometers produced for the Marine and Tropical Sciences Research Facility, Cairns (http://www.rrrc.org.au/publications/tourism_barometers.html)

Prideaux, B., Falco-Mammone, F. and Thompson, M. (2006) Backpacking in the Tropics: A review of the backpacker market in Cairns and their travel patterns within Australia. Tourism Monograph Series No 1, Cairns: James Cook University.

Ritchie, J. R. and Crouch, G. I. (1993) Competitiveness in international tourism: A framework for understanding and analysis. Proceedings of the 43rd Congress of Association Internationale d'Experts Scientifique de Tourisme. San Carlos de Bariloche, Argentina, 17-23 October.

Ritchie, J.R. and Crouch, G.I. (2000). The competitive destination: A sustainability perspective. *Tourism Management* 1: 53-64.

Ryan, C. (2003) *Recreational Tourism: Demand and Impacts.* Clevedon, Channel View.

Souter, D. W. and Linden, O. (2000). The Health and Future of Coral Reef Systems. *Ocean and Coastal Management* 43: 657-688.

Tapachai, N. and Waryszak, R. (2000). An examination of the role of beneficial image in tourist destination selection. *Journal of Travel Research* 39: 37-44.

Uysal, M. and Jurowski, C. (1994) Test the Push and Pull Factors. *Annals of Tourism Research* 21(4), 844-846.

Weber, R. P. (1990) *Basic Content Analysis*. Sage Publications: London.

Appendix A

Selected Indicators of Destination Competitiveness (taken from Dwyer and Kim 2003)

Endowed Resources
Natural:
• Comfortable climate for tourism
• Cleanliness/Sanitation
• Natural wonders/Scenery
• Flora and fauna
• Unspoiled nature
• National parks/Nature reserves
Culture/Heritage:
• Historic/Heritage sites and museums
• Artistic/Architectural features
• Traditional arts
• Variety of cuisine
• Cultural precincts and (folk) villages
Created Resources
Tourism infrastructure:
• Accommodation quality/variety
• Airport efficiency/quality
• Tourist guidance/information
• Local transport efficiency/quality
• Visitor accessibility to natural areas
• Convention/Exhibition facilities (capacity/quality)
• Food services quality/variety
Range of activities:
• Water based
• Nature based
• Adventure activities
• Recreation facilities
• Sports facilities
Shopping:
• Variety of shopping items
• Quality of shopping facilities
• Quality of shopping items
• Value for money of shopping items
• Diversity of shopping experiences
Entertainment:
• Amusement/Theme parks

• Entertainment quality/variety
• Nightlife
Special events/festivals
Supporting Factors
General infrastructure:
• Adequacy of infrastructure to meet visitor needs
• Health/Medical facilities to serve tourists
• Financial institution and currency exchange facilities
• Telecommunication system for tourists
• Security/safety for visitors
• Local transport systems
• Waste disposal
• Electricity supply
Quality of service:
• Tourism/Hospitality firms which have well defined performance standards in service delivery
• Firms have programmes to ensure/monitor visitor satisfaction
• Visitor satisfaction with quality of service
• Industry appreciation of importance of service quality
• Development of training programmes to enhance quality of service
• Speed/Delays through customs/immigration
• Attitudes of customs/immigration officials
Accessibility of destination:
• Distance/Flying time to destination from key origins
• Direct/Indirect flights to destination
• Ease/Cost of obtaining entry visa
• Ease of combining travel to destination with travel to other destinations
• Frequency/Capacity of access transport to destination
Hospitality:
• Friendliness of residents towards tourists
• Existence of resident hospitality development programmes
• Resident support for tourism industry
• Ease of communication between tourists and residents
Market ties:
• Business ties/trade links with major tourist origin markets
• Sporting links with major tourist origin markets
• Ethnic ties with major tourist origin markets
• Religious ties with major tourist origin markets
• Extent of foreign investment in local tourism industry
Destination Management
Destination management organisation:
• NTO acts as coordinating body for private and public sector tourism organisations

- NTO effectively represents views of all tourism stakeholders in tourism development
- NTO liaises effectively with private sector in tourism policy, planning and development
- NTO provides statistical information as input to tourism policy, planning and development
- NTO strategically monitors and evaluates the nature and type of tourism development

Destination marketing management:

- Reputation of NTO
- Effectiveness of destination positioning
- Strength/Clarity of destination image
- Efficient monitoring of destination marketing activities
- Effective packaging of destination experiences
- Links between destination tourism organisations and travel trade
- NTO identification of target markets
- NTO strategic alliances with other NTO
- Destination marketing is based on knowledge of competitor products
- Present ‘fit’ between destination products and visitor preferences

Destination policy, planning, development:

- Existence of formal long-term ‘vision’ for tourism industry development
- Destination ‘vision’ reflects resident values
- Destination ‘vision’ reflects tourism industry stakeholder values
- Tourism policy conforms to a formal destination ‘vision’
- Tourism planning and development conforms to a formal destination ‘vision’
- Tourism development is integrated into overall industrial development
- Ongoing tourism development is responsive to visitor needs
- Extent to which research findings are integrated into tourism planning and development
- Inventory of most significant attractors, facilities, services and experiences offered in destination
- Identification of major competitors and their product offerings
- Community support for special events

Human resource development:

- Public sector commitment to tourism/hospitality education and training
- Private sector commitment to tourism/hospitality education and training
- Training/education responsive to changing visitor needs
- Range/quality of tourism/hospitality training programmes

Environmental management:

- Public-sector recognition of importance of ‘sustainable’ tourism development
- Private sector recognition of importance of ‘sustainable’ tourism development
- Existence of laws and regulations protecting the environment and heritage
- Research and monitoring of environmental impacts of tourism

Situational Conditions

Competitive (micro) environment:

- Domestic business environment in destination
- Management capabilities of tourism firms and organisations

- Extent of competitive rivalry between firms in domestic tourism industry
- Level of cooperation between firms in destination tourism industry
- Links between tourism/hospitality firms and firms in other industrial sectors
- Entrepreneurial Qualities of local tourism stakeholders
- Access to venture capital
- Tourism/hospitality firms operate in ethical manner
- Firms use computer technology/commerce to achieve competitive advantage

Destination location:

- Perceived 'exoticness' of location
- Proximity to other destinations
- Distance from major origin markets
- Travel time from major origin markets

Global (macro) environment:

- The global business context
- Political stability
- Legal/Regulatory environment
- Government policies for tourism development
- Economic conditions in origin markets
- Sociocultural environment
- Investment environment for tourism development
- Technology changes

Price competitiveness:

- Value for money in destination tourism
- Exchange rate
- Air ticket prices from major origin markets
- Accommodation prices
- Destination package tour prices
- Price of destination visit relative to competitor destinations

Safety/Security:

- Level of visitor safety in destination
- Incidence of crimes against tourists in destination

Demand Factors

- Destination awareness
- Destination perception
- Destination preferences

Market Performance Indicators

Visitor statistics (numbers):

- Number of foreign visitors
- Growth rate of foreign visitors
- Market share of destination – world, regional
- Shifts in market share

- Average length of stay
- Rate of revisit

Visitor statistics (expenditure):

- Expenditure of foreign visitors (FX receipts)
- Growth rate of expenditure of foreign visitors
- Share of destination in total tourism expenditure – world, regional
- Shifts in expenditure share
- Foreign exchange earnings from tourism as percentage of total exports

Contribution of tourism to economy:

- Contribution of tourism to value added (absolute values and percentages, and rate of growth)
- Domestic tourism
- International tourism
- Contribution of tourism to employment (absolute numbers; percentage of total employment and rate of growth)
- Domestic tourism
- International tourism
- Productivity of tourism industry sectors

Indicators of economic prosperity:

- Aggregate levels of employment
- Rate of economic growth
- Per capita income

Tourism investment:

- Investment in tourism industry from domestic sources
- Foreign direct investment in tourism industry
- Investment in tourism as percentage of total industry investment(and trend)

Price competitiveness indices:

- Aggregate price competitiveness indices
- By journey purpose
- By tourism sector

Government support for tourism:

- Budget for tourism ministry
- Budget for NTO
- NTO expenditure on destination marketing (comparison with competitors)
- Support for transport infrastructure
- Industry programmes accessed by tourism industry
- Tax concessions
- Subsidies to industry
- Export marketing assistance
- Vocational education skills/training for tourism industry

Appendix B

Survey Instrument

Q1. Are you: O Male O Female

Q2. Where do you usually live? Australia *(postcode)* __________ Overseas *(country)*____________________

Q3. Please indicate your age group:

O Under 20 yrs O 20 to 29 O 30 to 39 O 40 to 49 O 50 to 59 O 60 to 65 O Over 65 yrs

Q4. How would you best describe your occupation: *(Please choose only one)*

O Self-employed O Professional O Domestic duties O Office/Clerical O Manual/Factory worker O Retail
O Student O Public Service O Management O Tradesperson O Service Industry
O Retired / Semi-retired O Other:__________

Q5. Which of these best describes your immediate travel party:

O Alone O Couple (partner/spouse) O Tour group O Club O Friends O Family with children O Relatives

Q6. Is this your first visit to Port Douglas? O Yes O No *If No, how many times have you visited Port Douglas?* ___

Q7. How many nights do you intend spending in Port Douglas? _____________ nights

Q8. What is your main type of accommodation during your visit to Port Douglas?

O Hotel/motel O Backpackers hostel O Holiday apartment/unit O Bed and breakfast
O Camping O Caravan park/cabin O Friends/relatives O Resort

Q9. What is your main type of transportation to Port Douglas?

O Air O Bus/coach O Private vehicle O Rented campervan/caravan
O Rail O Rented car O Cruise boat O Other: _______________________

Q10. Where did you find out about Port Douglas? *(Select all that apply)*

O Internet O Tourist guide books O Friends/family O Advertisements in print
O Advertisements on TV/radio O Travel Agent O Visitor centres O Been before
O TV documentary O Other *(please specify)*:__________________

Q11. Please tell us where you spent your last holiday: ____

Q12. Please list up to 3 other destinations you considered while planning your current holiday:

(1) __________________________ (2) _________________________________ (3) __________________________

Q13. Please indicate how important each of the features was in your decision to visit the Port Douglas area:

	Not at all important	Unimportant	Neutral	Important	Very important
Visit the Great Barrier Reef	O	O	O	O	O
Visit the rainforest	O	O	O	O	O
See Australian wildlife	O	O	O	O	O
Experience Aboriginal culture	O	O	O	O	O
Climate	O	O	O	O	O

	Not at all important	Unimportant	Neutral	Important	Very important
The price matched my budget	O	O	O	O	O
Experience the natural environment	O	O	O	O	O
Rest and relaxation	O	O	O	O	O
Meet new people	O	O	O	O	O
Visit the beaches	O	O	O	O	O
Taste tropical fruits	O	O	O	O	O
Visiting friends and relatives	O	O	O	O	O
Experience the outback	O	O	O	O	O
Go shopping	O	O	O	O	O
Visit the islands	O	O	O	O	O
Adventure activities	O	O	O	O	O
Business / conference / meeting	O	O	O	O	O
Try reef seafood	O	O	O	O	O
To go sailing	O	O	O	O	O

Q14. Please explain why you chose this reef operator today ____________________

Q15. Is this your first visit to the reef? O Yes O No *If No, how many times have you visited the reef?* ________

Q16. Are you here to dive the reef? O No O Yes *If Yes, how many dives have you completed before this trip?* ____

Q17. Have you visited any of the following reefs, and if so, how many times have you visited them?

__ Caribbean __ Hawaii __ Indian Ocean __ South Pacific
__ South-east Asia __ Micronesia __ Red Sea __ Ningaloo / other Australian reefs

Q18. How do the other reefs that you have visited compare with the Great Barrier Reef?

	Better	Same	Worse		Better	Same	Worse
South-east Asia is	O	O	O	Red Sea is	O	O	O
South Pacific is	O	O	O	Hawaii is	O	O	O
Indian Ocean is	O	O	O	Micronesia is	O	O	O
Caribbean is	O	O	O	Ningaloo	O	O	O

Q19. Did you notice if your reef operator is eco-certified? O Yes O No

Q20. Please pick from the following list words that describe your reef trip today:

O fantastic reef tour for all O adventure diving expedition O luxury live-a-board O fun diving
O introduction to the reef O a relaxing, fun filled day on the reef O disappointing

Q21. What activities have you participated in today?

O Swimming O Helicopter flight O Certified scuba diving O Resort/uncertified scuba diving
O Snorkelling O Visiting the islands O Overnight cruise O Glass bottom boat/semi-sub coral viewing
O Sailing O Marine biologist tour O Diver training course O Viewing marine animals

Q22. Have you visited the Great Barrier Reef at any other locations on this trip?

O No O Yes *If Yes, where did you go?* ____________________

Q23. On a scale of 1 (not at all satisfactory) to 10 (highly satisfactory) how would you rate your reef trip?

O 1 O 2 O 3 O 4 O 5 O 6 O 7 O 8 O 9 O 10

Q24. What factors influenced your satisfaction rating? ______________________________

____

Q25. What were the best features of the trip for you? ______________________________

____

Q26. What were the worst features of the trip for you? ______________________________

____

Q27. To what extent did the reef that you saw today meet your pre-trip expectations?

O Not at all O Not very O Somewhat O Very much

Q28. To what extent did the experience that you had today meet your pre-trip expectations?

O Not at all O Not very O Somewhat O Very much

Q29. Taking into account all the different elements of your trip today (comfort of the boat, quality and diversity of the reef, activities and interpretation available, professionalism of the crew, etc.), do you feel that you got value for your money?

O Yes O Unsure O No *If No, please explain:* ______________________________

Q30. Would you recommend visiting the Great Barrier Reef to prospective visitors?

O No O Yes O Unsure O Not to everybody: ______________________________

Appendix C

Content Analysis of the Great Barrier Reef and Competing Destinations

Country		Descriptive Words	Marine Attractions	Top Side Attractions
Atlantic	Sao Tome	*intrepid divers, pristine, undiscovered gem, idyllic*	whales, dolphins, blue marlin, sailfish, hammerhead sharks, vibrant coral reef	no crime, friendly locals, pastel colonial buildings, cobbled streets, coffee shops
Australia	Great Barrier Reef	*greatest, national symbol, romantic, Woodstock underwater, underwater metropolis, looks like a line at Starbucks.*	potato cod, whitetip, grey reef and silvertip sharks, sawfish, sand cays and islands, Yongala, scenic flights	Heron Island is covered in heavy vegetation and birds
	Great Barrier Reef	*wonderful, clean, friendly, familiar yet exotic, cosmopolitan*	reach the reef by high speed catamaran, pinnacles, puppy-like potato cod, manta ray, hammerhead, whitetip sharks, swimthroughs, bommies, shark feeding	regional urban centre, sidewalk cafes, The Esplanade [Cairns], quaint, Port Douglas, Tjapukia, Skyrail, Cape Tribulation, Daintree
	Great Barrier Reef	*accessible, explore, gentle, relaxing, wonder, quality, hassle free*	wall-to-wall fish, turtles, sharks, daisy corals, nudibranchs, banded pipefish, octopus, lionfish, decorator crabs, hammerheads, dolphins, morays, crayfish, mantas, drift dives, whales	interpretation, nesting sea turtles, snorkel tours, semi-subs, guided reef walks
	Great Barrier Reef	*awe and privilege, magic, initiated, stunningly beautiful.*	bommies, reef wall, reef shark, turtle, giant clams, bumphead parrotfish, seafan, nudibranch, ghost pipefish, seasnake, leafy scorpionfish, cuttlefish, crabs, pufferfish, stingray, mantis shrimp	ecotourism, complementary reef ecology lessons, sustainable use of natural resources
Caribbean	Honduras	*bargain, accessible, beginner*	longsnout seahorses, tunicates, sponges, wrecks	lush mountain ranges
	Tobago	*escape, heaven*	colourful sponges and invertebrates, wrasse, chromis, trapon, wahoo, rays, turtles	rich cultural heritage, small towns, oldest protected rainforest
	Belize	*supernatural, legendary*	turtles, sting rays, nurse sharks, moray eels, second longest barrier reef, inshore reefs	jungle, jaguars, thatched roof cabanas, underwater photography workshops, fish I.D. classes

Country		Descriptive Words	Marine Attractions	Top Side Attractions
Caribbean	Cayman Islands	*sublime, clear, easy, well-established, get away, underwater excitement, jaw dropping, legendary, vibrant, dramatic,*	healthy reefs, shallow reefs, deep walls, calm blue water, stingray city, swimthroughs, small canyons, sea fans hard corals, wall diving, wrecks.	family fun, bars, nightlife, restaurants, climbing rugged interior, beach bumming, nature reserves, bird watching.
	Turks And Caicos	*quaint, happy, close, charming, friendly, welcoming, gorgonians, sea fans, rope sponges, black corals, nassau groupers*	clear turquoise water, dive sites minutes away, hawksbill, marine park, close encounters, wall diving	friendly locals, bands, quaint lodging, old salt-era culture, compact town, diver-friendly, cafes, lighthouse museum
Indian Ocean	Maldives	*surreal spectacle, stunning*	pinnacles, channels, thousands of fish, soft corals, lionsfish, batfish, sharks, napoleon wrasse, turtles, tuna, eagle rays, jacks, whale shark	
	Monzambique	*wild, undeveloped, not for the timid*	potato cods, whale sharks, mantas, whales,	
	Christmas Island	*true gem, largest coral atoll, pristine*	pelagics, mantas, and sharks, dragon morays,	
	Cocos Islands	*unspoiled, pristine*	reef sharks, manta rays, turtles, dugongs, dolphins, steep dropoffs, and ship wrecks	Cuisine
Micronesia	Yap	*healthy, lush and teeming, experience of a lifetime*	reef fish, lionfish, clownfish, sharks, turtles, barracuda, manta rays, jacks, bumphead parrot fish, manta rays	stone money and traditional stick dancing
	Pohnpei	*lushest most dramatically stunning*	walls, long dives, 150 viz, diverse healthy reef, colourful pacific tropical fish, nudibranchs, rays,	luxury eco-resort, treetop bungalows with water beds to great food and killer views, mysterious ruins, interesting shops, craft village, good restaurants and bars, night life, sakau
	Palau	*amazing, incredible, bluest, clearest water, elusive, stunning, efficient, experts, professional*	lots of pelagics, barracuda, trevally, mandarinfish, coral trees, gorgonians, wrecks, giant clams, sharks, war relics, mantas, varied levels of diving, drift diving,	awesome above water scenery, emerald green islands, photo shops, internet café, restaurants, outrigger trips in marine lakes and channels, sunken sea planes, palauan temples and villages, bat caves, tropical rainforest.
Red Sea	Egypt	*awesome, magnificent, stunning*	coral gardens, walls, oceanic whitetip, thresher, and hammerhead sharks, other pelagics, wrecks like underwater museums	lots of resorts, hotels and dive shops
	Egypt	*classic, cheap*	whale sharks	

Country		Descriptive Words	Marine Attractions	Top Side Attractions
South East Asia	Indonesia	*adventurous, isolated, untouched*	walking shark	rare bird of paradise
	Indonesia	*addictive, discovery, elusive*	frogfish, octopus, stargazers, lionfish, nudibranchs, snake eels, pipefish, seahorses	
	Thailand	*affordable, cheap, spellbinding, exhilarating, excellent visibility*	big fish, grey reef sharks, whale sharks, towering spires, turtles, sea snakes, octopus, mantis shrimp, morays	locals who care about their reef, eco tourism training centre
	Papua New Guinea	*spectacular, something for everyone, truly amazing, superb, terrific, memorable*	reefs are in excellent condition, diversity of life, pygmy seahorses, Rhinopias, wrecks	
	East Timor	*leisurely, ,amazing, prolific coral, explore, heaven, exceptional, unusual, relax, kick back, chill out*	muck divers, coral reef, wrecks, big fish actions, deep wall coral walls, fringing reefs with easy access, dolphins, whale sharks, whales, hammerhead	very friendly and happy to assist tourists, stunning coastal scenery, fantastic local meals, ecotourism, local culture
South Pacific	Nuie	*incredibly beautiful, unique and diverse, dramatic, rugged, spectacular*	sharks, dolphins, pelagics, deep water drop offs, sea fans, hard coral gardens, turtles, rays, sea snakes, whales	lush virgin rainforest, native birds, spectacular extensive cave system
	Solomon Islands	*unspoiled, enticing, isolated, unbelievable diving*	second-highest diversity in the world, corals and sponges, sharks, sea snakes, cuttlefish, spotted eagle rays	lush growth
	Tonga	*emerald waters, white gold*	whales	golden beaches, thick vegetation
	Fiji	*action packed, exotic, energetic*	colourful corals, grass eels, clownfish, barracuda, lionfish, leafy scorpionfish, turtles	native bamboo huts, lush sea of leaves, sandy beaches, welcoming friendly locals, caverns
South Pacific	Fiji	*dream, unknown outpost, isolation, quietness, real, largely undived, efficient, exciting, adrenalin pumping*	endless coral, clear waters, hawksbill turtles, barracuda, hammerheads, mahi mahi, intact reef, supremely healthy reef and fish life as good as ever, well managed, sharks	jungle, traditional villages, perfect white sand beaches, culture and warmth of amiable people, school kids, women weaving grass mats, cultural interaction

Appendix D

The Great Barrier Reef Media Monitoring Project

Report 1: January to April 2000

Destination	Great Barrier Reef	Other Australian Destinations	Pacific	Asia	Other
Five most commonly mentioned positive features	Wildlife; Calm/clear water; Coastal/island scenery; Quality of coral; Variety of activities	Variety of activities; Wildlife; Beaches; Central location; Family Place	History; Culture; Coastal/island; Scenery; Friendly locals; Romance	Beaches; Luxury; Culture; Family place; Undeveloped	Luxury; Variety of activities; Romance; Culture; Scenery
Five Most common descriptive words or phrases used	Spectacular; Clear/clean water; Beautiful; Pure/white sand/beaches; Blue water	Beautiful; White beaches; Clear water; Safe; Scenic	Paradise; Spectacular; Beautiful; White sand/beaches; Blue water	Exotic; Sophisticated; Undeveloped; Colourful; Scenic	Quiet; White sand/beaches; Scenic; Romantic; Exotic
Two most commonly mentioned negative features	Weather; Jellyfish	Over developed; Expensive	Lack of facilities; Expensive	Expensive; Weather	Expensive; Weather
Most commonly mentioned activities	Diving; Snorkelling; Marine wildlife viewing; Coral viewing; Beach visits	Beach visits; Marine wildlife viewing; Other wildlife viewing; Watersports; Social activities/ nightlife	General sightseeing; Diving; Cruises; Beach visits; Swimming	Snorkelling; Cruises; General sightseeing; Watersports; Diving	Cruises; General Sightseeing; Snorkelling; Beach visits

Ten Most Commonly Mentioned Positive Features	Ten Most Frequently Used Descriptive Words / Phrases
Wildlife; Calm/clear water; Coastal/island scenery; Quality of coral; Variety of activities; Relaxing atmosphere; Beaches; Underwater scenery; Shipwrecks; Ease of access	Spectacular; Clear/clean water; Beautiful; Pure/white sand/beaches; Blue/sapphire/aquamarine water; Pristine; Tropical; Diverse; Popular; Windy/windswept;

Report 2: May to August 2000

Destination	Great Barrier Reef	Other Australian Destinations	South Pacific	Asia	Other
Five most commonly mentioned positive features	Wildlife; Coastal/island scenery; Variety of activities; Seafood; History	Wildlife; Rare Wildlife; Beaches; Coastal/island scenery; Calm/clear water	Seafood; Calm/clear water; History; Culture; Coastal/island Scenery	Calm/clear water; Seafood; Friendly locals	Wildlife; Value for money; Safe; Friendly locals
Five Most common descriptive words or phrases used	Pure/white sand/beaches; Blue water; Secluded; Pristine; Beautiful	Beautiful; Safe; Best beaches	Traditional; Beautiful; Cultural; Friendly; Idyllic	Beautiful; Luxurious; Nice beaches	Beautiful; Unique; Heritage
Two most commonly mentioned negative features	Weather; Environmental damage	Safety; Environmental damage	Lack of facilities; Expensive	Safety; Sharks	Safety; Overdeveloped
Most commonly mentioned activities	Diving; Snorkelling; Marine wildlife viewing; Fishing; Boating	Marine wildlife viewing; Boating; Fishing; Walking; Diving	General sightseeing; Diving; Snorkelling; Walking; Boating	Marine wildlife viewing; Diving; Sightseeing; Walking; Health spas	Cruises; Snorkelling; Diving; Shopping; Adventure sports

Ten Most Commonly Mentioned Positive Features	Ten Most Frequently Used Descriptive Words / Phrases
Wildlife; Coastal/island scenery; Variety of activities; Seafood; History; Friendly locals/staff; Relaxing atmosphere; Ease of access; Value for money; Beaches	Pure/white sand/beaches; Blue/sapphire/aquamarine water; Beautiful; Pristine; Tropical; Secluded; Adventurous; Friendly; Affordable; relaxed

Report 3: September to December 2000

Destination	Great Barrier Reef	Other Australian Destinations	South Pacific	Asia
Five most commonly mentioned positive features	Wildlife; Coastal/island scenery; Variety of activities; Nice beaches; Pristine environment	Variety of activities; Coastal/island scenery; Pristine environment; Nice beaches	Relaxing; Coastal/island scenery; Interesting/ different culture; Seafood; Friendly locals/staff	Luxury; Wildlife
Five Most common descriptive words or phrases used	Beautiful; Secluded; Scenic; Relaxing; Luxurious	Luxurious; Natural; Cultural; Beautiful; Good beaches	Cultural; Exotic; Blue water; Sandy beaches; Friendly	Beautiful; Cultural; Romantic
Most commonly mentioned activities	Diving; Snorkelling; Adventure sports; Fishing; General sports	Walking; Visiting beaches; Sightseeing; Snorkelling; Diving	Walking; Diving; Snorkelling; Fishing; Nightlife	Wildlife viewing; Sightseeing; Shopping

Ten Most Commonly Mentioned Positive Features	Ten Most Frequently Used Descriptive Words / Phrases
Wildlife; Coastal/island scenery; Variety of activities; Nice beaches; Pristine environment; Luxury; Seafood; Relaxing; Undeveloped; Interesting history	Beautiful; Secluded; Scenic; Relaxing; Luxurious; Golden beaches; Sophisticated; Gorgeous; Incredible; Turquoise water

Report 4: January to April 2001

Destination	Great Barrier Reef	Other Australian Destinations	Pacific	Southeast Asia
Five most commonly mentioned positive features	Coastal/island scenery; Variety of activities; Wildlife; Quality of coral; Nice beaches	Luxury; Nice beaches; Variety of activities; Coastal/island scenery; Shopping	Coastal/island scenery; Variety of activities; Wildlife; Quality of coral; Friendly locals	Wildlife; History; Remote/secluded; Friendly locals; Culture
Most frequently mentioned negative feature	Weather	Overdeveloped	Weather	Overdeveloped
Three most commonly mentioned activities	Coral viewing; Seeing wildlife; Diving	Swimming; Relaxing; Health spas	Diving; Seeing wildlife; Relaxing	Diving; Hiking; Relaxing

Further Information

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