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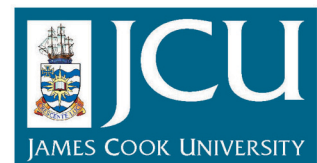
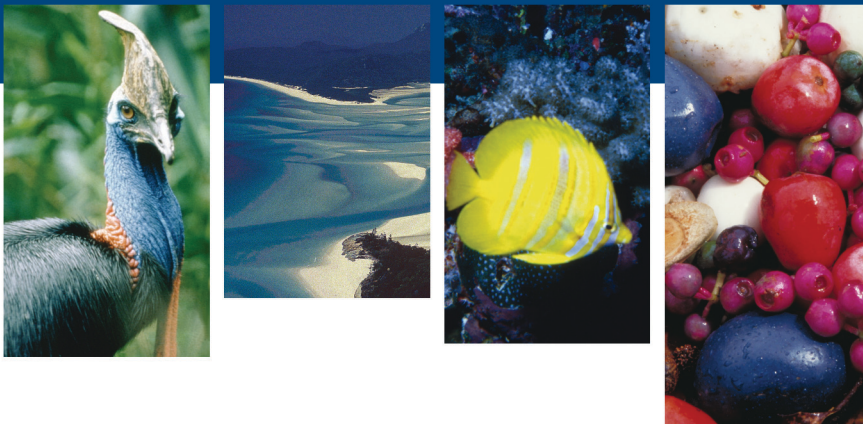
Marine and Tropical Sciences Research Facility



Reef Tourism First Yearly Report: November 2006 - October 2007

Quarterly Patterns of Reef Tourism on the Great Barrier Reef - Northern, Central and Whitsunday Areas

Alexandra Coghlan and Bruce Prideaux



Australian Government
**Department of the Environment,
Water, Heritage and the Arts**

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Acronyms Used In This Report

ACT	Australian Capital Territory
AMPTO	Association of Marine Park Tourism Operators
CHARROA	Cod Hole and Ribbon Reefs Association
CRC	Cooperative Research Centre
EPA	Environmental Protection Agency (Queensland)
GBR	Great Barrier Reef
GBRMPA	Great Barrier Reef Marine Park Authority
MTSRF	Marine and Tropical Sciences Research Facility
NSW	New South Wales
PADI	Professional Association of Diving Instructors
QPWS	Queensland Parks and Wildlife Service
RRRC	Reef and Rainforest Research Centre Limited
SCUBA	Self contained underwater breathing apparatus
UK	United Kingdom
VFR	“Visiting friends and relatives”

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- Association of Marine Park Tour Operators (AMPTO);
- Great Barrier Reef Marine Park Authority (GBRMPA);
- Many individual reef operators assisted the project with suggestions in the design of the survey instrument and through provision of staff to collect survey forms;
- Dr Noel Scott of The University of Queensland peer reviewed the survey instrument;
- Tourism Tropical North Queensland;
- Townsville Enterprise; and
- Tourism Whitsundays.

Introduction

This annual report forms part of a series of reports presented by James Cook University on reef tourism in the Great Barrier Reef. It is part of a research program being conducted under the Australian Government's Marine and Tropical Sciences Research Facility (MTSRF). The research described here falls under MTSRF's research program to identify *sustainable use and management of marine resources of the Great Barrier Reef* and specifically the *analysis of tourism use and impact on the Great Barrier Reef for managing sustainable tourism* (Program 4.8.6). This component of the research identifies annual visitor usage patterns of the Great Barrier Reef (GBR) to enable the identification of key trends and drivers of visitor patterns. The data presented in this report summarise the results of surveys collected between November 2006 and October 2007, as well as reviewing quarterly results in keeping with this project's tourism *barometers* (available from <http://www.rrrc.org.au/publications/index.html>), which are produced on a quarterly and regional basis.

Under the MTSRF program the research presented here is considered public research, which is stakeholder driven. The stakeholders for this project are deemed to be (i) local and regional tourism authorities such as Tourism Queensland, Tourism Tropical North Queensland, Townsville Enterprise, and so forth; (ii) industry, particularly marine tour operators and island resorts; (iii) natural resource managers such as the Great Barrier Reef Marine Park Authority (GBRMPA) and the Environmental Protection Agency (EPA) / Queensland Parks and Wildlife Services (QPWS). For more information on the development of the survey and stakeholder input, the authors recommend reading the technical report, *Reef Tourism: Establishment of a Visitor Monitoring Structure* (Prideaux and Coghlan, 2007) (available from http://www.rrrc.org.au/mtsr/theme_4/project_4_8_6.html).

The theoretical framework for this work is described in the methodology section of this research, as well as in the first and second technical report (Prideaux and Coghlan, 2006; Coghlan and Prideaux, 2007a). A total of 2,408 surveys were returned across the GBR. In order to provide stakeholder-relevant data, this report includes seasonal results across the four quarters starting in November 2006 as well as regional results from Port Douglas and Cairns (the Northern GBR section), Townsville (the Central section) and the Whitsunday region. The results include socio-demographic characteristics, travel behaviour, alternative destinations considered, motivations and planning, and reef experience. Each quarter of data for the different sections and the GBR as a whole are available online at http://www.rrrc.org.au/publications/tourism_barometers.html. Finally, this report also presents some of the peer-reviewed outputs to date from this research, which are listed at the back of this report.



Photo courtesy of B. Prideaux.

Methodology

The principle methodology for this research is visitor surveys distributed by participating marine tourism operators. Crew from these operators distribute and collect the surveys at four locations across the Great Barrier Reef (Port Douglas, Cairns, Townsville and Airlie Beach). Results are available in an aggregate form as well as regionally, as presented here. Currently, ten operators across the four locations are involved in this research, representing an array of operator types, sizes, activities, length of trip and markets.

The current sample of operators include activities and experiences 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. Activities not presented here include fishing, stays at islands resorts, and dedicated diving live-aboard operations in the Northern GBR offered by members of the Cod Hole and Ribbon Reefs Association (CHARROA). The latter is constrained by these operators' involvement in a parallel research project and issues of over-surveying of guests, who are after all, on vacation. Nevertheless, this cross-section of operator types enables the researchers to be reasonably confident that most reef experiences are represented and the replication of similar types of operations within and between different regions allows for some comparative analyses to be carried out as the need arises.

Data are collected on reef visitors' socio-demographic characteristics, travel patterns, motivations, activities, alternative destinations considered and satisfaction (including expectations and best and worst experiences). The survey is designed to provide market segmentation as well as baseline data to detect changes in patterns, take into consideration stakeholder needs (Coghlan and Prideaux, 2007b), provide comparisons to *CRC Reef* visitor survey data (Moscardo *et al.*, 2003) and respond to research gaps identified by Moscardo and Ormsby (2004). It adopts a marketing-based approach to triple-bottom-line tourism sustainability that examines the competitiveness of the destination and its natural resources as defined by Gunn's (1994) and Dwyer and Kim's (2003) model, as well as models of destination life cycles as defined by Butler (1980) and Prideaux (2003). These models all call for data to be collected on visitor socio-demographics, travel behaviour, motivations and activities as well as satisfaction.

Surveying is carried out on a monthly basis with surveys provided to the operators in the first week of each month. Operators receive a set number of surveys each month according to the number of passengers that they carry to the reef. However, no operator is asked to distribute more than sixty surveys each month to minimise pressure placed on crew and tourists' time and effort. Crew are encouraged to develop random sampling techniques to suit their boats and operations, e.g. distribute the surveys each Tuesday to every third passenger, and finally, tourists are offered complimentary postcards to thank them for completing the survey.

The survey is included in Appendix A as a reference. In addition, each quarter, one or several specific studies may be carried out on different topics, allowing stakeholders the opportunity to further interrogate the data or discuss their research needs with the authors.

Limitations

The methodology employed does include some limitations. First and foremost, whilst the crews are generally excellent at returning the surveys, survey collection and distribution is dependent upon their time constraints and some months may have lower return rates than others. As operator participation is voluntary, randomisation issues may also arise, as crews are not specifically trained in survey distribution and must distribute the surveys within the confines of their other duties. Current funding constraints prohibit the use of trained survey collectors. Secondly, the number of questions included in the survey is constrained both by operational requirements and ethical considerations such as over-surveying during leisure time. Given this context, this methodology is deemed acceptable under the circumstances.

Additionally, some specific markets might not have been captured. Many operators, such as Great Adventures market their product specifically to the Asian markets, and whilst the survey is being translated into Japanese it is not currently distributed in that language. Furthermore, some operators have expressed concern that as the survey is only as yet available in English, there is a strong bias towards Anglophone respondents. Again, this is a limitation of the methodology as boat crew cannot be expected to carry and distribute surveys in a range of languages, as well as issues of time, financial and human resources in terms of back-translation of open-ended questions. Previous researchers working on similar topics have also deemed that many foreign visitors to Australia have sufficient English language proficiency to complete a three-page survey in English (Moscardo, pers. comm.).

Further, two sub-sectors of the reef tourism industry are under-represented in this research. These are island resorts and the longer live-aboard dive operations that visit the outer reefs and Coral Sea. The latter is currently being researched under Objective (a), managed by Alastair Birtles, Tourism Program, James Cook University, and results from Tourism Research Australia (2007) suggest that few (7%) respondents undertook more than three dives (achievable during a day trip) during their stay in the GBR region. Nevertheless, efforts to increase sampling from these sub-sectors are underway, whilst information on their size and importance would strengthen this research and determine its representativeness. These limitations are acknowledged within the context of the research, and it is noted that whilst general trends may be recognisable and extrapolated, data represent only the respondents that completed the survey (as is the case in most research).

Findings

In this section, the findings for each quarter and the annual findings for the GBR as a whole, and for each region, are reviewed. Areas where clear patterns and trends throughout seasons or regions are emerging are highlighted with some explanation of the findings.



Photo courtesy of N. Johnson.

1. Respondents' socio-demographic characteristics

Gender and origin of respondents

Overall, there was not much variation between the percentages of male and female respondents throughout the year. Slightly more women (56%) than men (44%) completed the survey in the last quarter, compared to an annual average of 53% female respondents and 47% male respondents.

A large proportion of respondents are domestic visitors, although this is highly seasonal and varies between 33% and 49% according to the season as well as the region (Figure 1). Domestic rates of visitation were highest in Quarters 3 and 4 and lowest between November 2006 and April 2007. Queenslanders made up the largest group within the domestic respondents, with 36.25% in the last quarter and 35% overall. Other large groups of domestic respondents include respondents from NSW and the ACT, with 32% in the last quarter and 34% overall for the year, and Victoria (21.5% and 24% overall).

Regional variations also exist with a higher proportion of domestic visitors in Townsville and the Whitsundays than in Cairns and Port Douglas. In the case of Townsville, 51.8% of respondents were from Queensland and 25% were from NSW, whereas the Whitsundays had a total of 39% of respondents who came from Queensland, 34.5% from NSW and 18.3% from Victoria. This pattern of a higher Queensland percentage of domestic visitors to the southern States remains constant throughout the year.

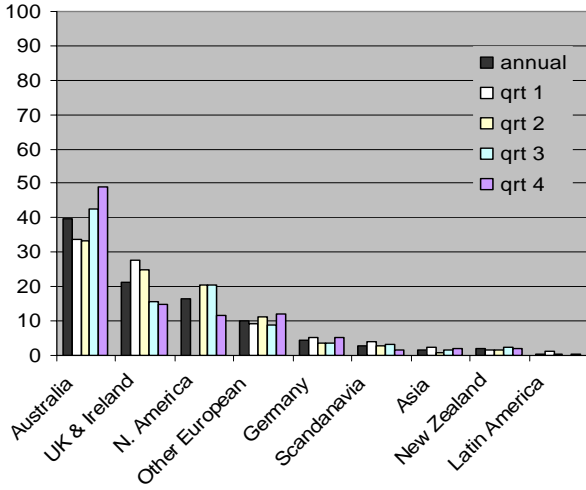
Box 1: Profile of visitors from the United Kingdom and Ireland

Whilst respondents from the United Kingdom and Ireland did not diverge greatly from the general sample in their age and occupation, it was noticed that these respondents were more likely to choose a backpackers' resort or hostel for their accommodation (31%). Hotels and holiday apartments were also popular choices, with 27.3% and 21.7% respectively.

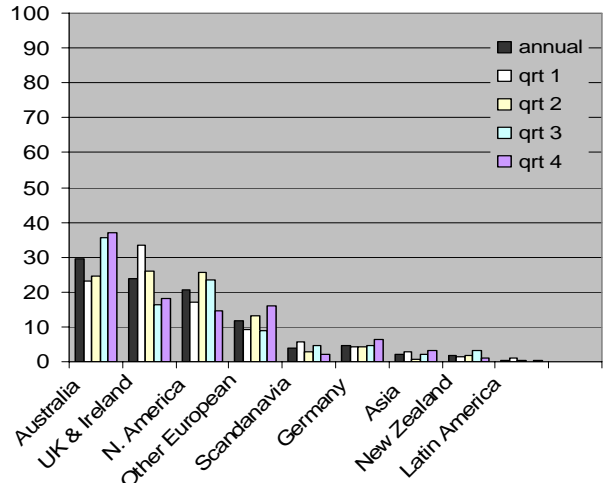
In addition, this segment of respondents was most likely to travel to the region by bus or coach, as a third of respondents selected this response. Their most frequent sources of information on the region were friends and relatives (44%) and guidebooks (41%). Also of note is the fact that at least a third (37.5%) of these respondents had visited other reefs previously, although few (18.4%) had visited the Great Barrier Reef before and fewer still were repeat visitors to the region (11%).



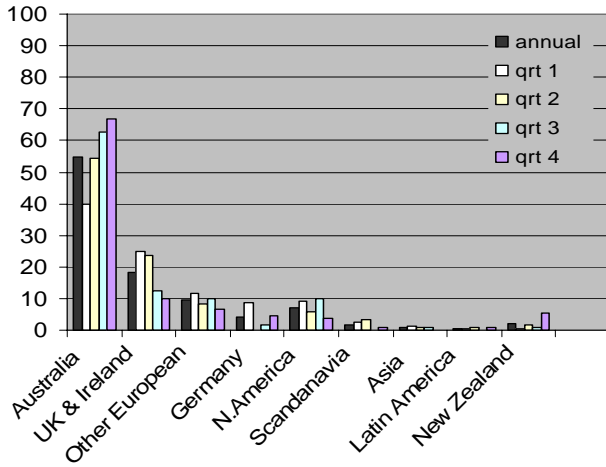
Photo courtesy of B. Prideaux.



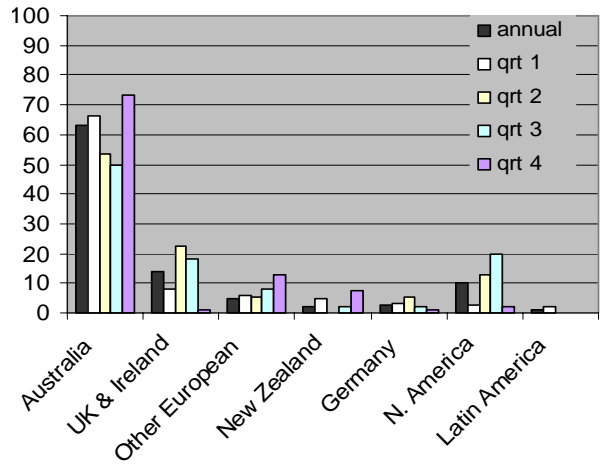
(a) Origin of respondents for whole sample.



(b) Origin of respondents in Port Douglas and Cairns.



(c) Origin of respondents in Townsville.



(d) Origin of respondents in the Whitsunday region.

Figure 1: Origin of respondents (as percentages).

Employment

In terms of employment, the most common responses were professionals and students. The overall annual percentages of the more common occupations of respondents were as follows:

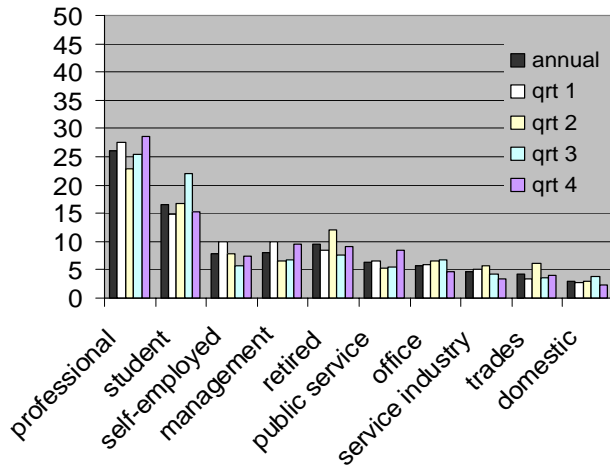
- Professional, 26%;
- Student, 16.6%;
- Retired, 9.5%;
- [In] management, 8%; and
- Self-employed, 8%.

Again, there are seasonality effects with the number of retirees peaking during the summer months (which are not the traditional 'grey nomad' season), and numbers of students peaking during the winter, or the Northern Hemisphere summer (holiday) months (Figure 2). There are also regional differences, with a larger student sample in the Whitsundays; more retirees in Cairns and Port Douglas; and finally, a higher number of public servants in Townsville.

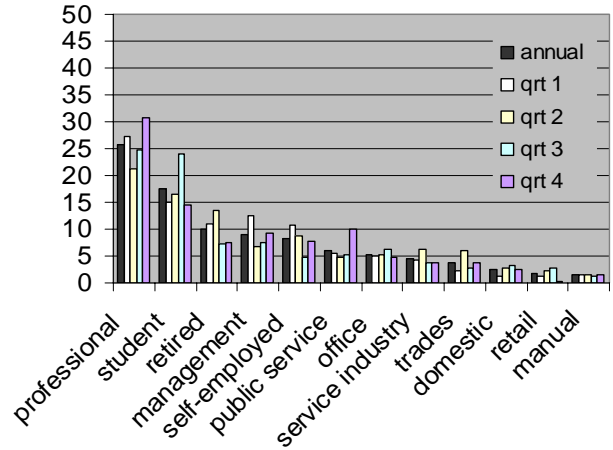
By comparing the international (N=1452) and domestic (N=955) markets, we find that the number of students, retirees and managers is slightly higher in the international market, whereas the domestic market includes more tradesmen, employees of the service industry or who are self-employed (Table 1).

Table 1: Comparison of domestic and international markets and respondents' occupations.

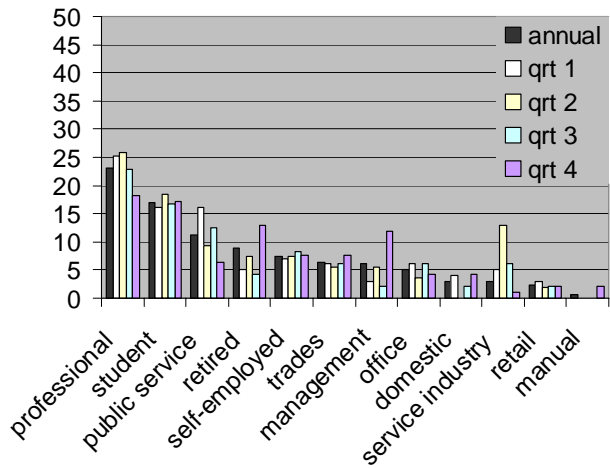
Occupation	Percentage of Respondents	
	Domestic	International
Professional	25.7%	26.2%
Student	12.3%	19.4%
Self-employed	9.6%	6.7%
Retired	7.7%	10.7%
Office	6.8%	5.2%
Management	6.5%	9.2%
Public Service	6.4%	6.4%
Service Industry	6.3%	3.5%
Trades	6.0%	3.0%
Domestic	3.9%	2.2%
Retail	2.8%	1.5%
Manual	1.4%	1.4%



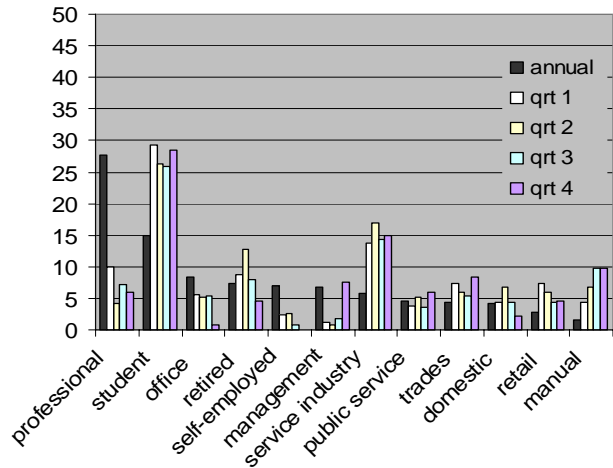
(a) Occupation of respondents for whole sample.



(b) Occupation of respondents in Port Douglas and Cairns.



(c) Occupation of respondents in Townsville.



(d) Occupation of respondents in the Whitsunday region.

Figure 2: Occupation of respondents (as percentages).

Age of respondents

The age of respondents remained steady over the year, with a strong tendency towards younger respondents in the 20-29 year age bracket. Cumulatively, 20-49 year olds made up over three quarters of the annual sample (68%), showing little variation across quarters or between regions (Figure 3).

Again, as in the occupation of respondents, we find that there are certain differences between the international market, which included a higher percentage of students and retirees, and the domestic market. Table 2 illustrates these differences, most notably the prevalence of 20-29 year olds in the international market, and respondents in the 40-49 year age bracket in the domestic market.

Table 2: Comparison of age groups of the domestic and international markets.

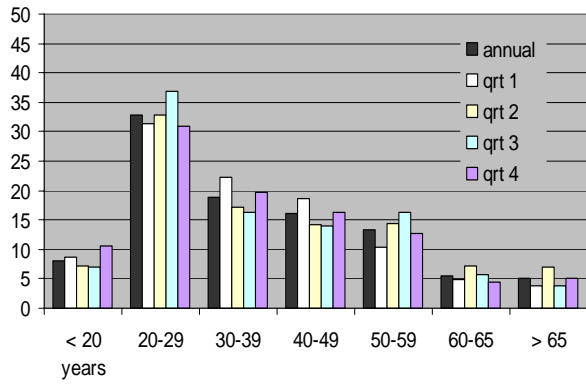
Age Group	Percentage of Respondents	
	Domestic	International
Under 20 years	8.0%	8.1%
20-29 years	29.2%	35.3%
30-39 years	19.9%	18.2%
40-49 years	19.6%	13.7%
50-59 years	14.9%	12.3%
60-65 years	4.1%	5.7%
Over 65 years	4.2%	6.6%



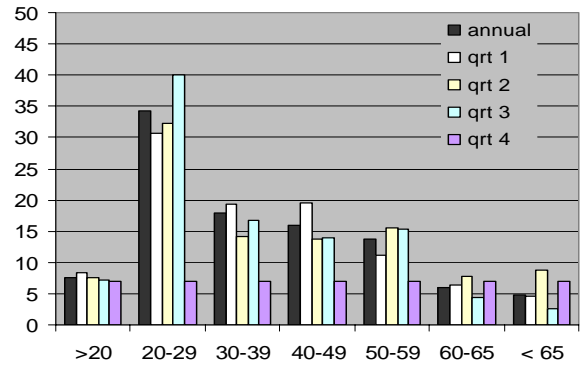
Photo courtesy of N. Johnson



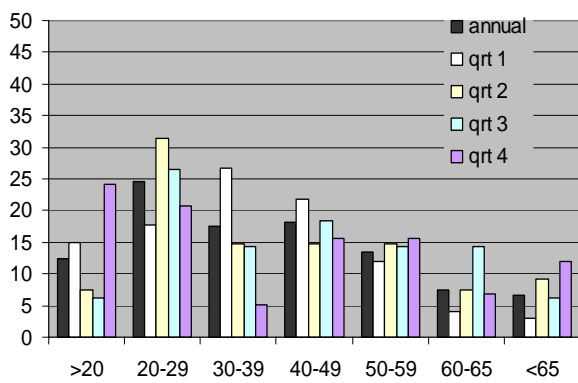
Photo courtesy of B. Prideaux.



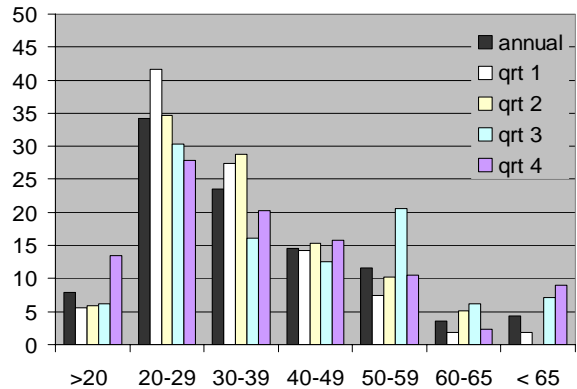
(a) Age of respondents for whole sample.



(b) Age of respondents in Port Douglas and Cairns.



(c) Age of respondents in Townsville.



(d) Age of respondents in the Whitsunday region.

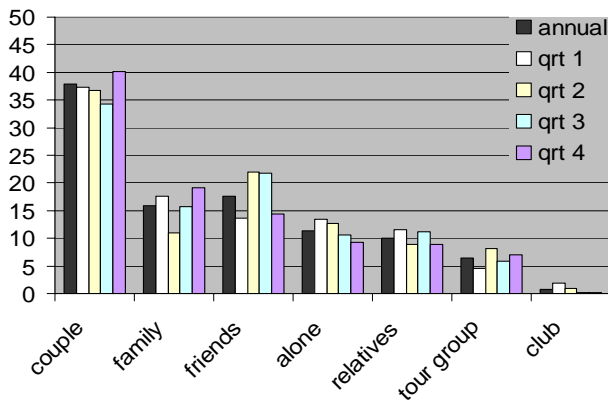
Figure 3: Age of respondents (as percentages).

2. Respondents' travel behaviour

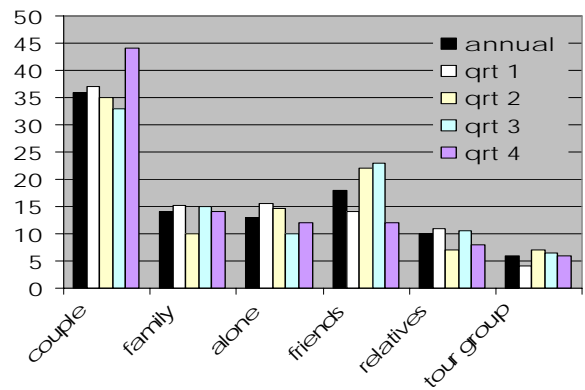
Travel party

The majority of respondents were travelling as a couple (38%), a pattern that remained constant throughout the year. Quarters 2 and 3 saw more respondents travelling with friends than either Quarter 1 or Quarter 4, a pattern similar to the number of student respondents across quarters (Figure 4).

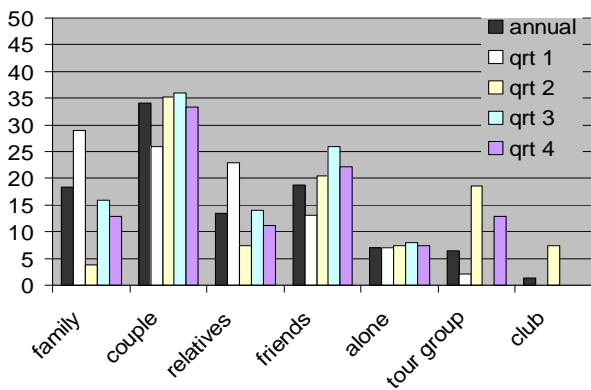
A comparison of international and domestic markets reveals that international respondents were more likely to be travelling alone than domestic respondents, whilst the opposite is true of domestic/international response comparisons for respondents travelling with family and relatives (Table 3). Germans were particularly likely to be travelling alone, whilst other Europeans were likely to be travelling with friends or family. North American respondents were the only group who regularly travelled in tour groups (Table 3).



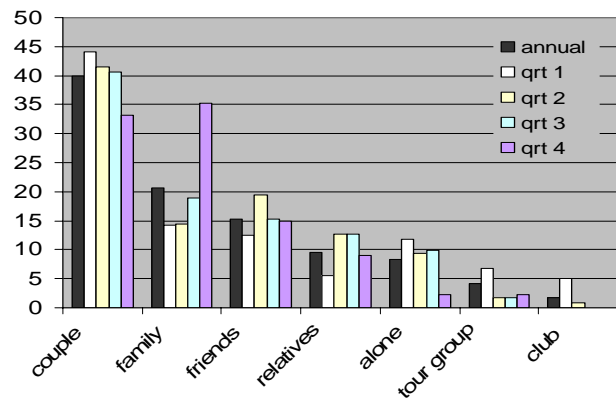
(a) Travel party of respondents for whole sample.



(b) Travel party of respondents in Port Douglas and Cairns.



(c) Travel party of respondents in Townsville.



(d) Travel party of respondents in the Whitsunday region.

Figure 4: Travel party of respondents (as percentages).

Table 3: Comparison of the travel parties of domestic and international markets.

Travel Party	Domestic Respondents	International Respondents					
		Overall	UK / Ireland	North America	Germany	Other (Europe)	Asia
Couple	38.8%	37.1%	41.1%	35.8%	35.9%	44.1%	31.6%
Family	21.2%	12.6%	12.0%	9.7%	2.9%	21.4%	13.2%
Friends	13.9%	20.1%	17.9%	19.4%	21.4%	33.6%	18.4%
Relatives	13.6%	7.5%	9.2%	8.2%	5.8%	4.6%	7.9%
Alone	6.4%	14.5%	13.2%	12.0%	27.2%	20.6%	23.7%
Tour group	4.3%	7.6%	6.1%	13.8%	5.8%	5.0%	5.3%
Club	1.5%	0.4%	0.6%	0.3%	0.0%	0.8%	0.0%

Box 2: Profile of Australian couples

Many of the Australian couples in this sample were repeat visitors to the region (40%), with a strong preference for holiday apartments and resorts. A quarter of these respondents used their own car to travel to the region and nearly half (42%) had visited other reefs prior to this trip to the Great Barrier Reef.

Couples' motivations to travel did not vary much from the general pattern, although rest and relaxation was more important here than for other groups of respondents (a mean score of 4.07 out of a possible 5, where 5 equals "very important" motivation). Good weather was also particularly influential in their satisfaction scores, emphasising the rest and relaxation aspect of their trip.

Previous visits and length of stay

For 72% of respondents, this was their first visit to the region. This figure is high and stays relatively constant throughout the year, with 84% of respondents on first visits in the second quarter and 69% first time visitors to the region in the fourth quarter. Repeat visitation was much higher amongst domestic respondents, accounting for 72% of repeat visitors. Of note, however, is the trend in Townsville, which has a much higher rate of revisitation (only 43.5% of respondents in Townsville were on their first visit).

Of those respondents who had visited the region previously, over half (58.5%) had visited once or twice before. Again, this revisitation rate was higher in Townsville, with 72% of respondents who had visited the area more than once before. The average length of stay for the complete sample was 13 nights, but only 7.5 nights for the last quarter. This represents a steady decrease in length of stay from 21 nights in the first quarter, to 11 nights in the second and third quarters, to seven nights in the final quarter. Regional differences were also noted with respondents staying longer in the Whitsundays (26 days) than in other regions. This could represent that 'backpackers' were staying longer in the region on working holidays.

Box 3: Patterns of repeat visitation to the region

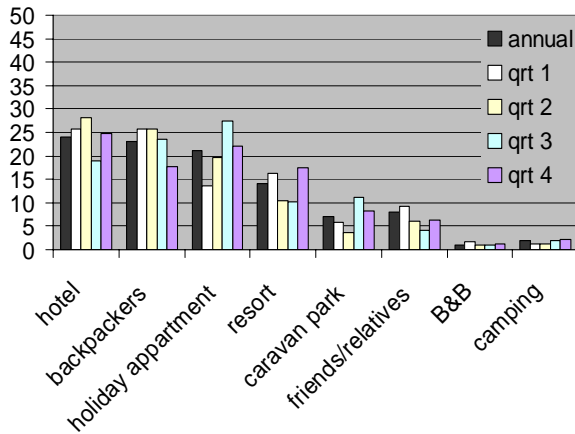
Patterns of revisitation were closely linked (to a statistically significant level) to two trends: the family holiday and/or VFR ("visiting friends and relatives") market; and the respondents' previous reef tourism experiences.

In the first case, respondents from Australia stayed with friends or relatives or in holiday apartments, and travelled by private vehicle. They were motivated to visit the region to visit friends and family, spend time with family and for rest and relaxation, however were less likely to be motivated to see the reef and tropical wildlife. This group of respondents was more likely to be repeat visitors (Appendix B).

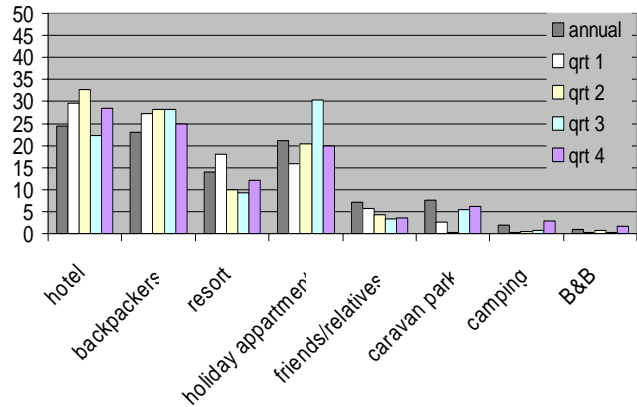
In the latter case, repeat visitors to the region had generally visited the GBR before and in many cases had also been to other reefs in the world (Appendix C). These respondents were also significantly more likely to be motivated to visit the region in order to see the GBR and to dive and snorkel the reef. However, there was no relationship between diving experience and repeat visitation (Appendix D).

Accommodation and transport

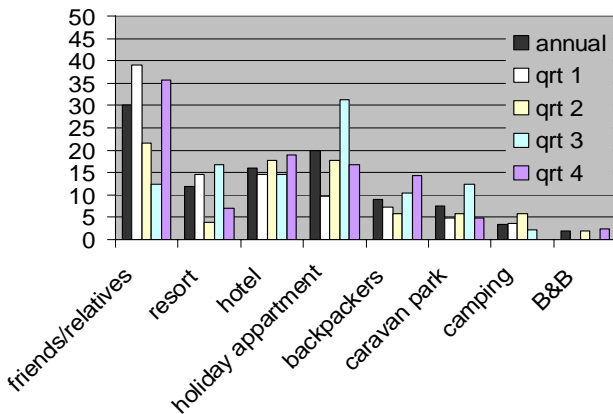
Patterns of accommodation also varied between sectors although remained relatively constant across the quarters. The Whitsundays and Townsville showed the greatest variation, in the first case highlighting the high proportion of backpacker respondents, and in the latter, the strong VFR (“visiting friends and relatives”) market. Seasonal patters in the importance of holiday apartments correspond to peaks of domestic visitors during school holidays (Figure 5).



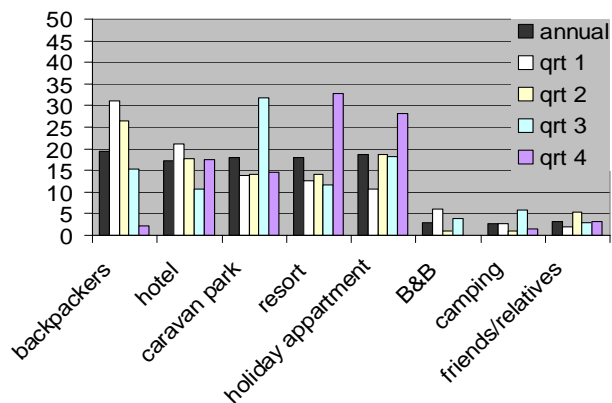
(a) Preferred accommodation for whole sample.



(b) Preferred accommodation in Port Douglas and Cairns.



(c) Preferred accommodation in Townsville.



(d) Preferred accommodation in the Whitsunday region.

Figure 5: Preferred accommodation arrangements of respondents (as percentages).

There are also some distinct differences between the accommodation preferences of domestic and international visitors. These are shown in Table 4, and most notably include a preference for holiday apartments in the domestic market and backpackers' hostels for international respondents.

Table 4: Comparison of the accommodation preferences of domestic and international respondents.

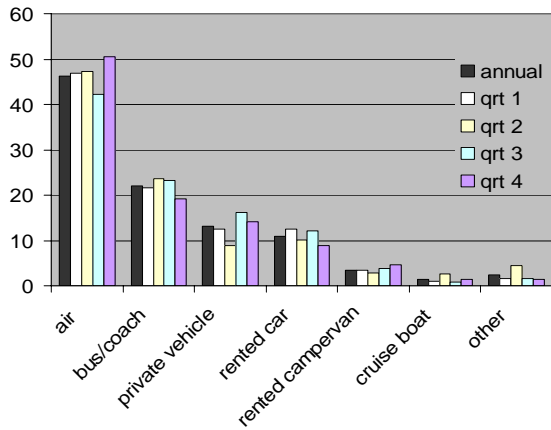
Accommodation Type	Percentage of Respondents	
	Domestic	International
Holiday apartment	28.3%	16.4%
Resort	20.1%	9.7%
Hotel	17.1%	28.9%
Friends / relatives	11.5%	3.9%
Caravan park	9.2%	5.8%
Backpackers' hostel	8.6%	31.7%
Camping	1.4%	1.8%

Patterns of transport were similar, with regional differences in the Whitsundays and Townsville again revealing the differences in market preferences. Many backpackers were travelling through the Whitsundays by coach, whilst the VFR market in Townsville was more likely to use their private vehicles to travel to their destination. Again, there are few seasonal differences, particularly for arrivals by plane and bus or coach, although the use of private vehicles does show some peaks in the later quarters in both Townsville and the Whitsundays.

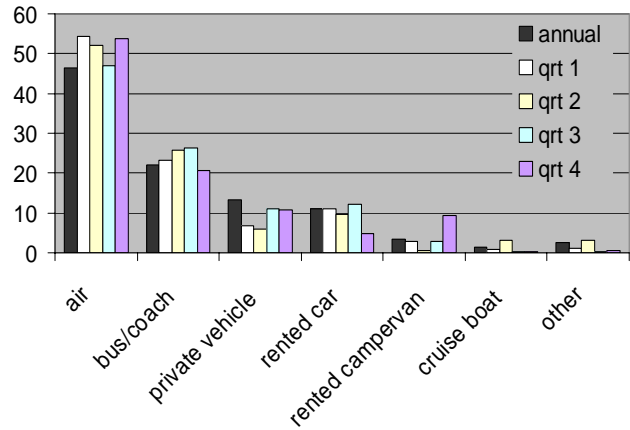
Not surprisingly, when the transport preferences of international and domestic visitors are compared, we find a higher proportion of domestic visitors travel using a private vehicle (25.4%) whilst international visitors are more likely to travel by bus or coach (27.7%) or rented campervan (5.3%).

Box 4: Profile of the self-drive market to Cairns

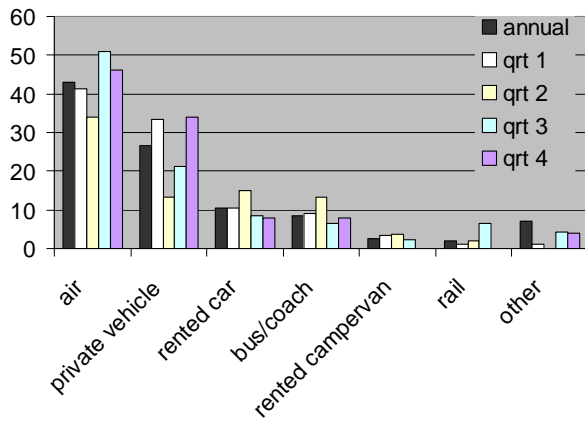
The socio-demographics and travel behavior of the self-drive market to Cairns is consistent with the Australian road trip holiday market. The characteristics of this market is that they are predominantly Australian (64%), within the 20-29 year age group (44.5%), with a variety of occupations including higher percentages of manual labourers and tradesmen.



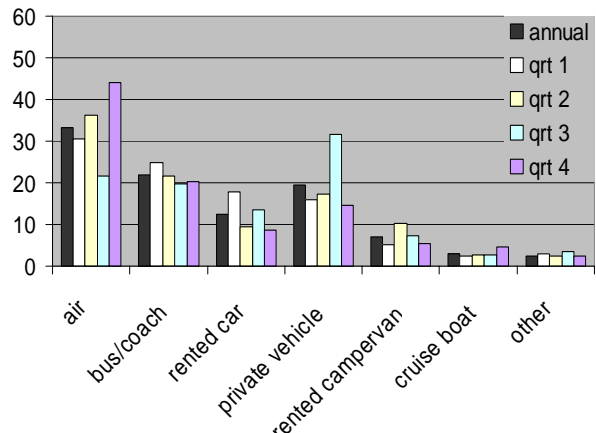
(a) Preferred transport for whole sample.



(b) Preferred transport to Port Douglas and Cairns.



(c) Preferred transport to Townsville.



(d) Preferred transport to the Whitsunday region.

Figure 6: Respondents' preferred mode of transport (as percentages).

Previous holiday location

The most popular single destinations given in response to the question, “Where did you spend your last holiday?” are provided in Table 5. A thematic / regional analysis of the same answers reveals trends that are shown in Table 6.

Box 5: Other reef tourism destinations

Only fourteen percent of respondents cited destinations which include reefs in response to the question on alternative holiday destinations considered. The most popular of these destinations included Fiji (14.4% of respondents); Cairns (13.7%); the Whitsundays (12.5%); Thailand (12.5%); Hawaii (4.3%); Port Douglas (4.3%); Townsville (3%); and the Caribbean (3%). Australian destinations (including Ningaloo) accounted for forty percent of responses, and were more common among the domestic market.

Table 5: Most popular single destinations for respondents’ previous holiday.

OVERALL RESPONDENTS	
France	3.6%
Gold Coast, Australia	3.6%
Spain	3.4%
Thailand	3.4%
New Zealand	3.4%
United States of America	3.2%
INTERNATIONAL RESPONDENTS	
France	6.4%
Spain	5.3%
Thailand	4.5%
United States of America	4.1%
Italy	3.8%
DOMESTIC RESPONDENTS	
Gold Coast	6.3%
Fiji	4.7%
Tasmania, Australia	3.9%
New Zealand	3.9%



Photo courtesy of B. Prideaux.

Table 6: Regional analysis of respondents' previous holiday destinations.

OVERALL RESPONDENTS (N = 521)	
Europe	25.0%
Australia, except Queensland	20.0%
Queensland, Australia	16.0%
New Zealand, the Pacific and South-east Asia	13.0%
North America, including the Caribbean	12.5%
Asia	7.0%
Africa and Latin America	6.5%
INTERNATIONAL RESPONDENTS (N = 265)	
Europe	40.0%
North America, including the Caribbean	19.0%
New Zealand, the Pacific and South-east Asia	11.5%
Africa and Latin America	10.0%
Queensland, Australia	4.5%
Asia	8.0%
Australia, except Queensland	7.0%
DOMESTIC RESPONDENTS	
Australia, except Queensland	34.0%
Queensland, Australia	28.0%
New Zealand, the Pacific and South-east Asia	15.0%
Europe	10.0%
North America, including the Caribbean	6.0%
Asia	5.0%
Africa and Latin America	2.0%

Alternative destinations considered

The most popular alternative destinations considered when planning this trip were relatively varied, with no clear patterns, although tropical and/or coastal destinations were popular (Table 7).

Table 7: Alternative destinations considered by respondents.

DESTINATION	
New Zealand	5.3%
Sydney, Australia	5.3%
Cairns, Australia	4.6%
Fiji	3.8%
Whitsundays, Australia	3.6%
Gold Coast, Australia	3.3%
Thailand	3.2%
Brisbane, Australia	2.6%
Darwin, Australia	2.5%

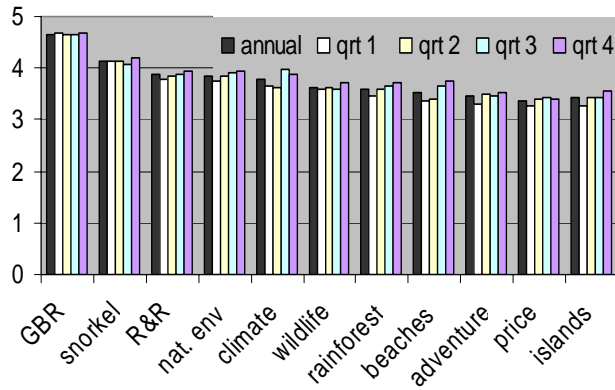
Motivations

The most important motivations (measured on a scale of 1 = not at all important, to 5 = very important) for visiting the region remain constant across regions and seasons. These include visiting the GBR, snorkeling and diving, resting and relaxing, and enjoying the natural environment and climate (Figure 7). Looking more closely at this last motivation, climate, we find that it increases in importance in the last two quarters of the year, times which should traditionally represent sunny, warm (not too hot or humid) weather in the Tropics, but were relatively unstable this year. This has important implications for satisfaction and value for money that will be discussed later.

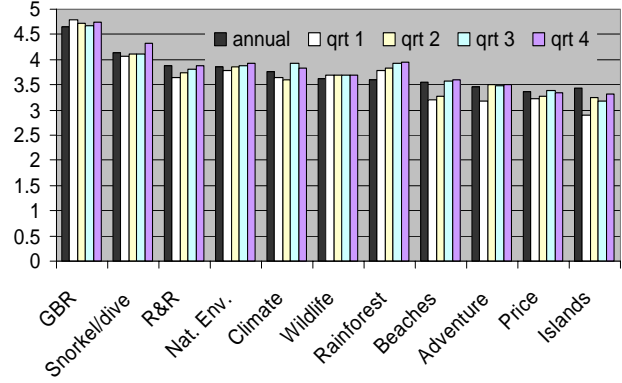
By comparing the motivations of domestic and international respondents, we find that one motivation, *enjoying the natural environment* remains consistently high for both markets, reaffirming Tropical North Queensland's position as a nature-based tourism destination, whilst adventurous activities remains of medium importance, and business of low importance to both markets (Figure 8). For the remaining motivations, (statistically) significant differences are noted in each case (see Appendix E for statistical values).



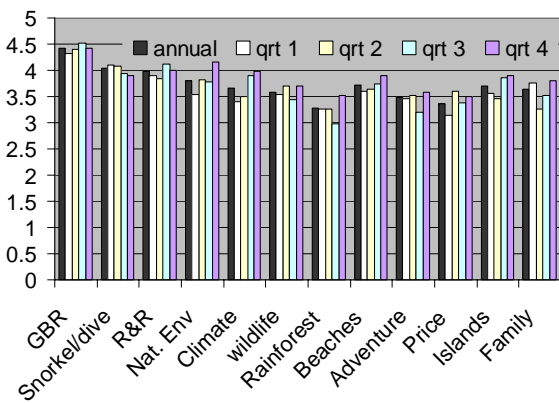
Photo courtesy of N. Johnson.



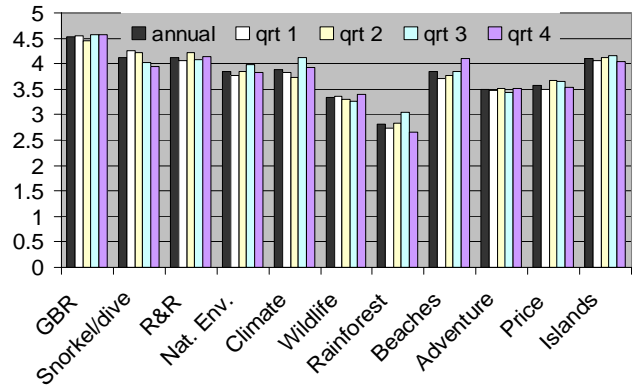
(a) Respondents' travel motivations for whole sample.



(b) Respondents' travel motivations, Port Douglas & Cairns.



(c) Respondents' travel motivations, Townsville.



(d) Respondents' travel motivations, Whitsunday region.

Figure 7: Respondents' motivations to visit (mean).

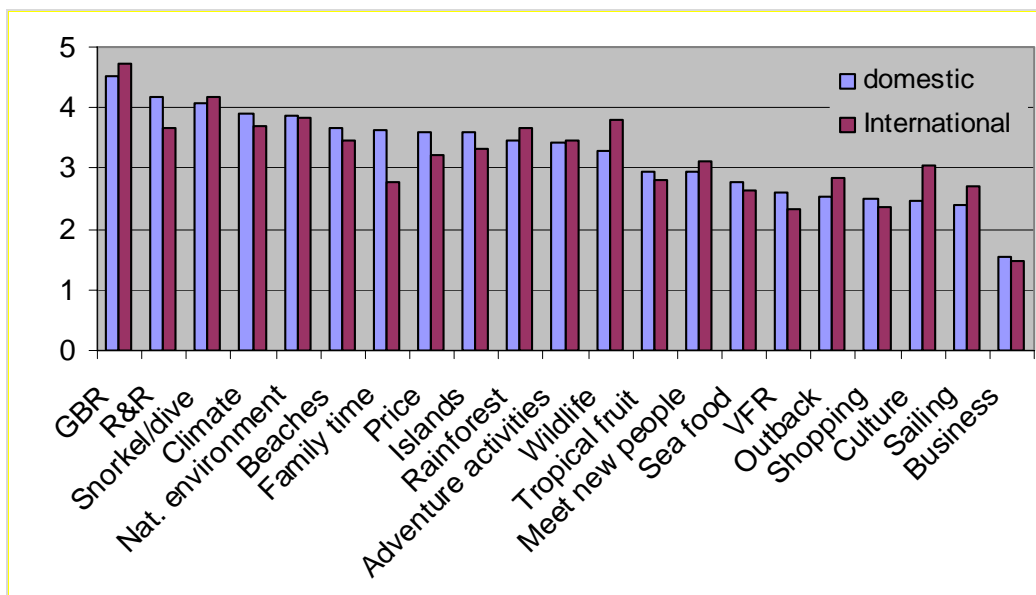


Figure 8: Comparison of domestic and international respondents' motivations to visit (mean).

Focus on Townsville and the VFR market

At least one fifth of respondents were highly or very highly motivated to travel to each of the regions in order to visit friends and relatives. However, Townsville has an above-average number of respondents who planned to visit friends and relatives (50% compared to 10-24% in other destinations). These respondents were most likely to be Australians (45.5% of respondents), or from the United Kingdom and Ireland (22.3%), between the ages of 20-39 years (49.1% of respondents) and travelling as a couple (35% of respondents).

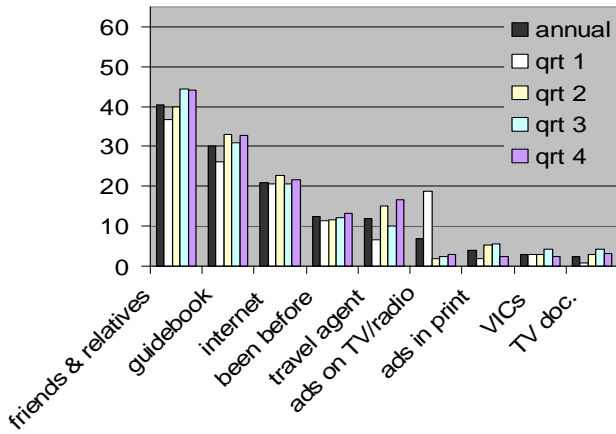
Just over a third of respondents had visited the region previously, indicating a higher percentage of repeat visitation for this market particularly within its domestic segment (57.5% of domestic VFR respondents had visited the region before), and many had been to the reef at least once before.

Accommodation preferences were varied, with a slight preference for staying with friends and family (22.5%) (again, particularly for domestic respondents [33.3%]). However, 21.4% of respondents chose to stay in hotels; 21.4% chose holiday apartments; and another 17.4% decided on a backpacker hostel. Transport to the region was predominantly by plane (42.7%), although 23.7% of respondents used their own vehicle to reach the destination. Whilst the selection criterion for this subset of respondents was their motivation to visit friends and relatives, seeing the GBR nevertheless remained the highest scoring motivation (4.60/5), whilst snorkelling (4.15), rest and relaxation (4.07) and seeing the natural environment (3.99) were also important motivations. In general, these respondents had a slightly higher satisfaction score than the overall sample (8.50 vs. 8.44) and were more likely to recommend the trip to others (93.7% vs. 90.2%).

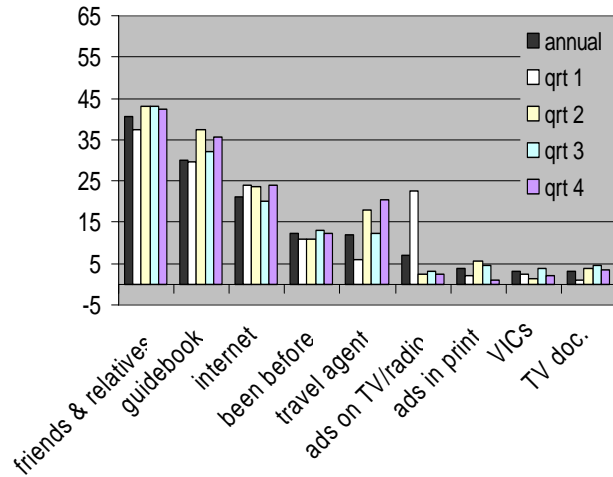
Information sources

The most popular **sources of information** on the region to be visited included *friends and relatives*, followed by *guidebooks* and *the internet*. Few variations to this pattern exist across regions or quarters, except in the case of television and radio advertisements, which substantially increased in the first quarter (in the six months following Tropical Cyclone *Larry*) in all the locations except Townsville, before decreasing again in the following quarters. It is also interesting to note that travel agents did not strongly influence destination selection.

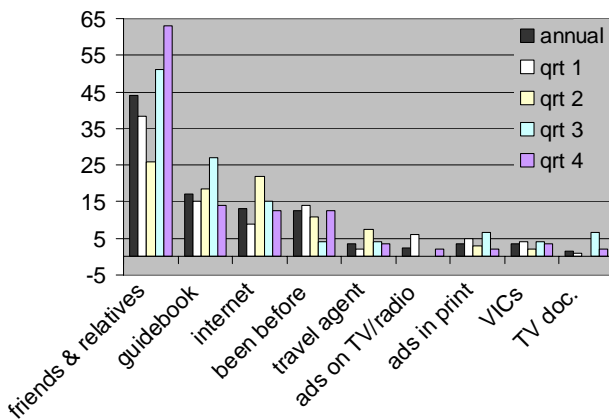
There were some slight variations in the use of information sources between domestic and international respondents. Domestic visitors were more likely to rely on information gained from previous trips to the region (21.6% of domestic respondents and only 6.1% of international respondents); whilst the international visitors were more likely to use guidebooks (39.5% of international respondents but only 15.8% of domestic respondents). Information from friends and relatives was equally important for both market segments (40%).



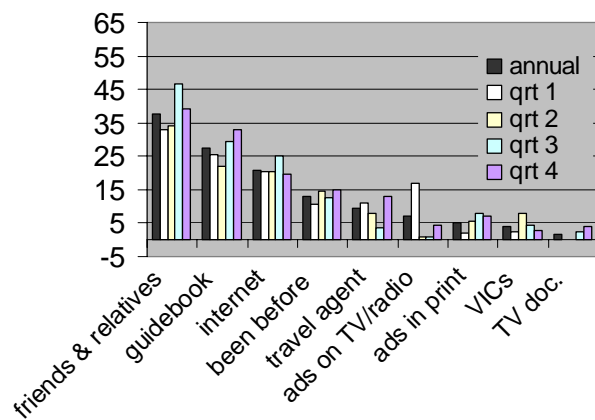
(a) Information sources for whole sample.



(b) Information sources of respondents in Port Douglas and Cairns.



(c) Information sources of Townsville respondents.



(d) Information sources of Whitsunday respondents.

Figure 9: Respondents' sources of information (as percentages).

Box 6: Profile of Internet users

The internet is recognised for its increasing importance in disseminating information to potential travelers, both through official travel websites and via informal, word-of-mouth and travel forums.

A profile based on socio-demographics and travel behavior indicates that internet users tend to be in the 30-49 year age group; are often students, managers or public servants; are travelling with their families; and are on their first visit to the region. These respondents are most likely to be travelling via a rented car or campervan; staying in hotels, resorts or at backpackers' hostels; and are less likely to be travelling in a private vehicle or staying with friends and relatives.

3. Respondents' reef experience and satisfaction

Previous visits to the reef

When asked if this was their first visit to the reef, the majority of respondents said yes; this was greatest in the summer months, where 73.2% of respondents indicated it was their first visit to the GBR; and lowest in the winter, where 69% had not visited the GBR before. This was also consistent across locations, although in areas where numbers of domestic visitors were high, more respondents had been to the reef before (in Townsville, 36% had been before, and in the Whitsundays, 33% of respondents had been to the reef before). There was also little variation across time in the different locations. Overall, international visitors were more than twice more likely to be visiting the reef for the first time than domestic visitors (Table 8).

Table 8: Percentage of respondents that were first-time visitors to the reef.

Survey Location	Annual	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Great Barrier Reef	70%	70%	73%	69.5%	69%
Port Douglas and Cairns	70%	70%	73.5%	69%	69%
Townsville	64.3%	60.4%	71.5%	72%	61%
Whitsundays	67.6%	70%	62%	62.5%	74%

Choice of tourism operator

The most common reasons for choosing a reef tour operator remained relatively constant throughout the year, with agents, both at respondents' accommodation and travel/tour agents being the most common reason for choosing an operator. Word of mouth was the second most important reason, whereas availability was more important than price, a trend that may become more important if length of stay continues to decrease, particularly in Townsville and the Whitsundays which have fewer operators that go to the reef than in the (combined) Cairns and Port Douglas region. In both of the former places, availability tends to be one of the more important factors in operator choice (28% and 25% respectively).

In general, domestic respondents also tended to choose operators based on their availability (16%) than international respondents (7.3%), who instead would rely on the recommendation of an agent (22.3% compared to 12.2%). No other noticeable differences existed between domestic and international respondents.

Table 9: Respondents' reasons for choosing their particular reef tour operator.

Reasoning	Annual	Quarter 4	Quarter 3	Quarter 2	Quarter 1
Recommended by travel agent	17.9%	19.0%	21.0%	19.2%	44.5%*
Recommended by a friend or relative, or other	18%	17.9%	16.5%	19.0%	
Availability	10.2%	13.8%	12.5%	7.7%	12.0%
Price	13.4%	12.8%	12.5%	13.8%	18.0%
Advertising	9.0%	8.9	8.5%	7.7%	-
Size of the operation	5.3%	8.7%	4.5%	5.7%	-
Tourism package	7.7%	6.8%	12.5%	8.8%	10.55
Type and range of activities offered	6.5%	5.5%	10.5%	7.2%	-

* No distinction was made in the first quarter between types of recommendations.

Focus on the Whitsunday region

Unlike respondents in other regions, those in the Whitsunday region were less likely to choose their operators based on the recommendation of a friend or relative (4.5%), but more likely to be far more price conscious, with a quarter of respondents using price in their decision making process.

Availability was another important consideration, as 12.5% cited this as a reason for choosing their operator, and both travel agents and advertising were mentioned by 10% of respondents. Another 10% said that the reef trip was part of a package tour.

Age and occupation were the most important variables in determining operator choice, with younger respondents and students most likely to give price as a response. First-time visitors were also (statically)* more likely to use travel agents' recommendations to make their choice. Nationality, gender, travel party and chosen accommodation type had very little influence in this question.

* (Chi-squared = 10.741, $p < 0.05$)

Diving profile

Whilst this project does not focus specifically on divers, recent interest in the diving market and requirement for more data on this sector prompted the authors to include a section on divers' profiles. The diving profile of respondents revealed some interesting trends, which must be considered within the limitations of the research methodology which did not include operators belonging to CHARROA, although the sampling methodology did include other live-aboard dive operations outside the Northern GBR.

The results show that when asked if they planned to dive the reef, only 36.5% of respondents said yes. This figure varied significantly between nationalities, with Europeans being the most likely to plan a dive (Figure 10). Of the respondents who did plan to dive, 31% had no previous diving experience; 26.1% had completed between one and four dives (i.e. were not certified divers); 12% had completed five to ten dives previously; and 28% had completed more than ten dives. This trend is repeated throughout the year, although Townsville and the Whitsundays have lower percentages of divers than Cairns and Port Douglas (Table 10).

Table 10: Diving profile of survey respondents.

Survey Location	Annual	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Great Barrier Reef	38%	35.5%	40%	36.5%	41%
Port Douglas and Cairns	38%	36%	40%	36.5%	41%
Townsville	22.5%	22.5%	19%	25%	23%
Whitsundays	29.5%	28.5%	39.5%	21.5%	29%

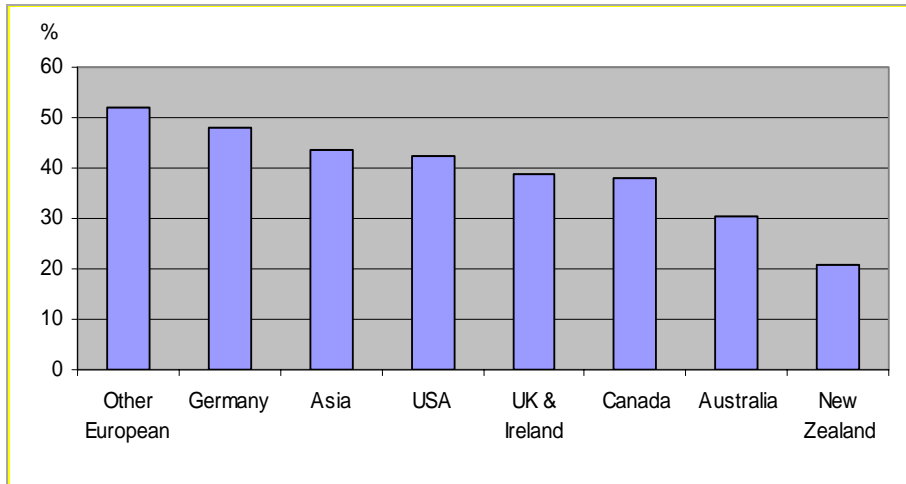


Figure 10: Profile of divers.

Box 7: Profile of divers

Whilst this research does not specifically target divers, a profile of those respondents that planned to dive the reef shows that they are often international visitors; professionals or students; and are travelling with their partner.

Just under half of those respondents who planned to dive were certified divers, and many (55%) had visited other reefs prior to visiting the GBR. Certified divers were also (statistically)* more likely to have considered other reef tourism destinations before choosing the GBR, and were motivated to visit the region in order to go to the GBR, to see the wildlife, and to snorkel and dive.

* (Chi-squared = 13.516, $p < 0.05$)

Visits to other reefs

Over 44% of respondents said they had visited other coral reefs before coming to the Great Barrier Reef. In the last quarter, this figure increased to 58% in Cairns and Port Douglas. The most commonly cited alternative destinations were South-east Asia (31.2%); the Indian Ocean (21%); the South Pacific Reefs (19.8%); Micronesia (17.5%) and other Australian Reefs¹. There were no clear patterns across different seasons and locations.

Figure 11 depicts the previous reef experiences of different market segments based on country of origin. Clearly, each market segment has distinctive reef visitation patterns, leading to different comparisons between reefs; North Americans were more likely to have visited the Caribbean, South-east Asia, and the Indian Ocean; European respondents had typically visited the Red Sea or South-east Asia; whilst respondents from the United Kingdom and Ireland had the most diverse travel patterns, with visits to the Red Sea, South-east Asia, Hawaii and the Caribbean. The domestic market on the other hand were most likely to have visited destinations closest to home, such as Micronesia, the South Pacific, Indian Ocean and South-east Asia.

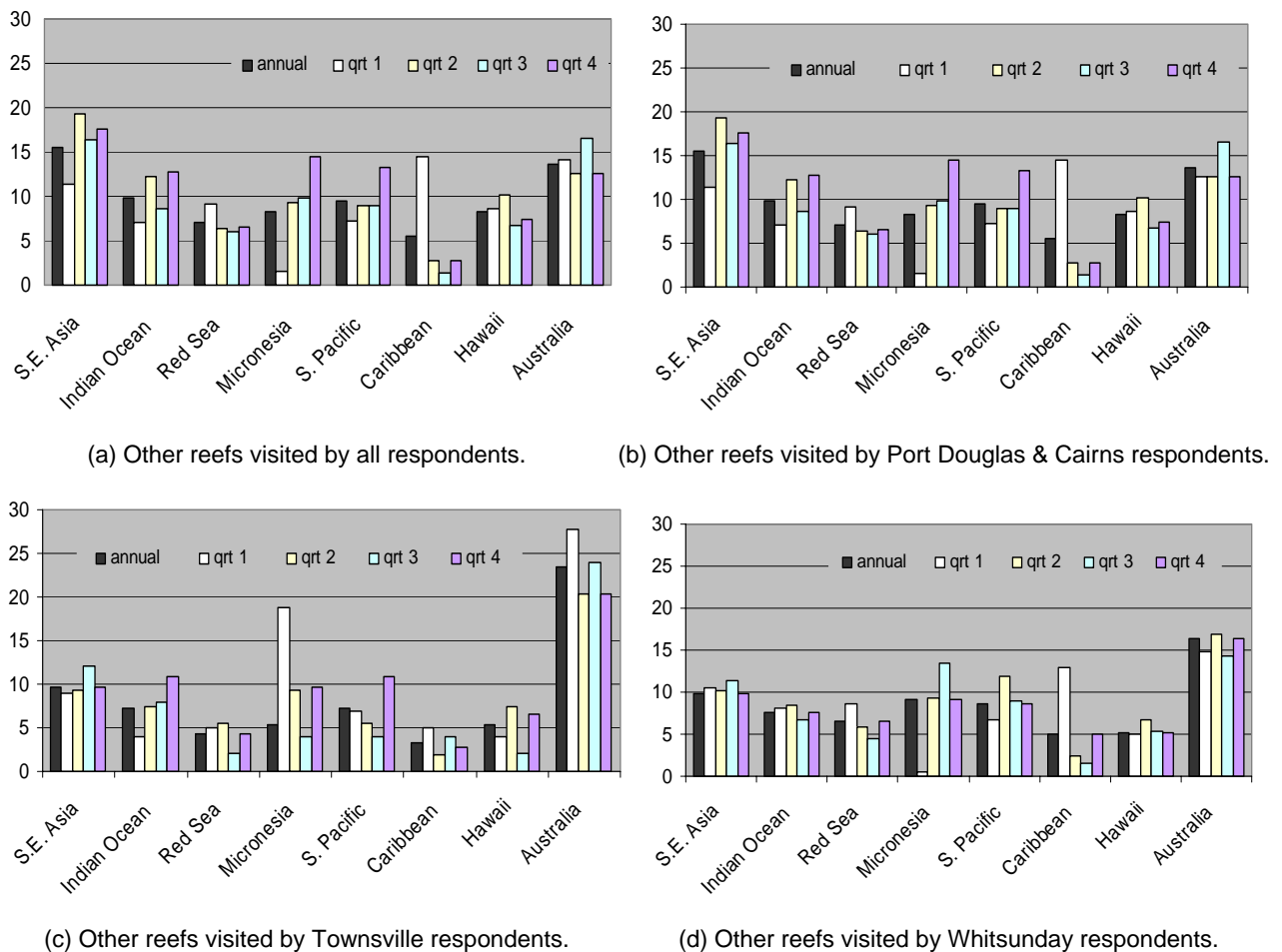


Figure 11: Other reefs that were visited by respondents (as percentages).

¹ Other Australian reefs were sometimes interpreted as other reefs *within* the GBR. This figure should be interpreted with caution.

Box 8: Effect of previous reef tourism experience on satisfaction with the GBR.

Previous experiences with reef tourism would appear to have a marked effect on respondents' satisfaction scores. A more detailed analysis noted that respondents with no prior reef experiences, or who had visited the GBR previously, had slightly higher (but no significantly so) satisfaction scores (mean of 8.44/10) than respondents who had visited other reefs beforehand (mean of 8.40/10). On the other hand, respondents who had visited reefs not situated within the GBR had significantly lower satisfaction scores (mean of 8.25/10) (Table 3) than respondents who had not visited any other reefs before (mean of 8.59/10). A result such as this encourages more investigation into what are the features that promote a satisfying GBR tourism experience for all visitors, regardless of their previous experience within the GBR and elsewhere.

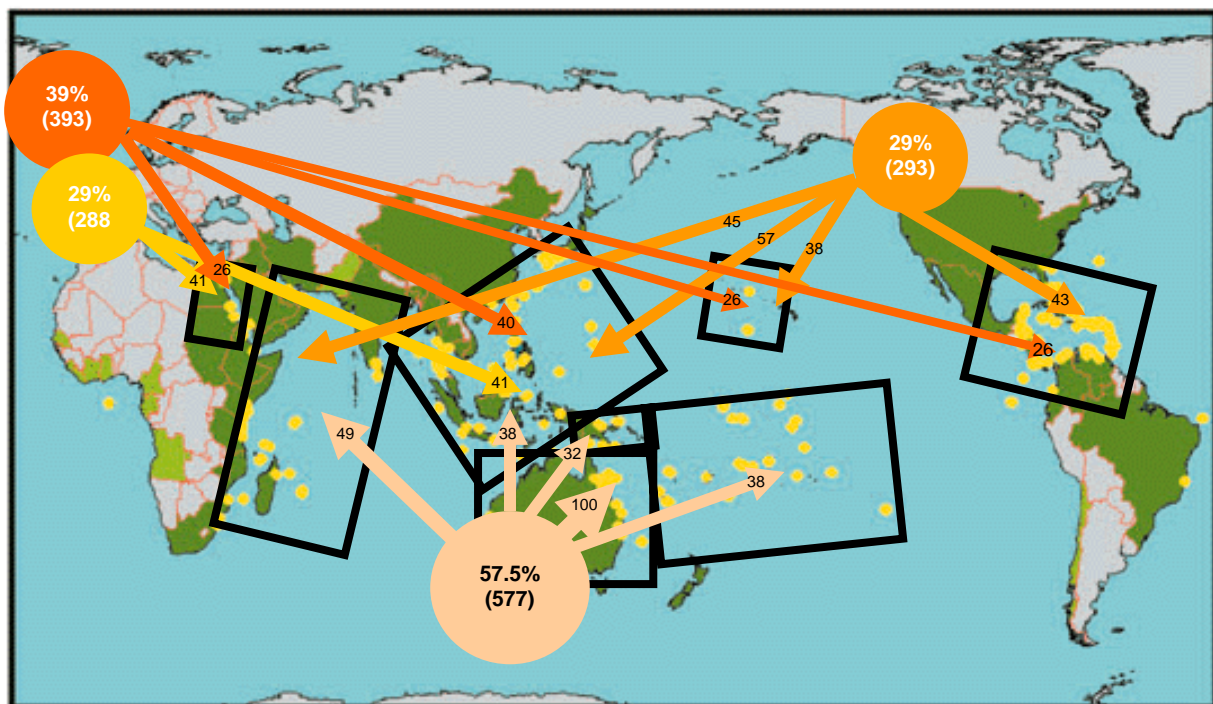


Figure 12: Previous reef visits to the Great Barrier Reef and worldwide according to visitor origin. The figure in the circle represents the percentage (and count) of respondents from that location, whilst the figures on arrows show the number of respondents who had previously been to different reefs around the world, according to their origin.

Perceptions of the reef trip

Perceptions of the reef trip remained remarkably consistent between seasons and sites, with some differences in Townsville that were generally perceived as an introduction to the reef and a relaxing, fun-filled day.

The figures did vary, however, according to the origin of the visitor, with domestic visitors less likely to feel that their trip was an introduction to the reef (16.3%) and more likely to see the trip as a day of relaxation and fun (50.3%). The combined elements of fun diving and adventure diving only made up 14% of the total number of statements selected by respondents.

Table 11: Respondents' perceptions of their chosen reef trip.

	Annual	Quarter 4	Quarter 3	Quarter 2	Quarter 1	Port Douglas / Cairns	Townsville	Whitsundays
"A relaxing, fun-filled day on the reef."	45.4%	43.5%	44.0%	40.0%	40.0%	41.0%	58.4%	50.6%
"A fantastic reef tour for all."	44.3%	40.0%	57.0%	43.5%	38.5%	40.3%	19.5%	50.6%
"Introduction to the reef."	21.2%	21.5%	26.0%	20.5%	22.0%	21.4%	41.6%	22.3%

Activities undertaken

The most common activities undertaken during the trip are shown in Table 12.

Table 12: Activities undertaken by reef tourists during their trip.

	Annual	Quarter 4	Quarter 3	Quarter 2	Quarter 1	Port Douglas / Cairns	Townsville	Whitsundays
Snorkelling	75.3%	79.0%	73.0%	75.0%	75.5%	72.5%	87.0%	79.0%
Swimming	46.2%	50.0%	40.0%	47.0%	44.0%	47%	55.0%	53.5%
View marine animals	39.0%	44.5%	45.0%	46.0%	24.5%	37.5%	35.5%	55.0%
Glass-bottom boat tour*	43.6%	44.5%	40.0%	45.5%	43.0%	42.0%	62.0%	65.0%

* Only those operators that offer a glass-bottom boat or semi-submersible tour were included in this figure.

An analysis of diving as an activity shows that a total of 36.9% of respondents went diving either as certified divers (18.3%), as divers on a training course (7.2%) or as resort/try divers (9.4%). This frequency varies according to the operator, location and origin, as international respondents were (statistically) significantly more likely to be certified divers or diver trainees. Table 13 highlights the difference in activities between international and domestic respondents.

Table 13: Comparison of the activities of domestic and international survey respondents during their reef trip.

Activity	Percentage of Respondents	
	Domestic	International
Snorkelling	78.0%	73.0%
Swimming	51.0%	43.0%
View marine animals	47.0%	33.5%
Glass-bottom boat tour	64.5%	61.0%
Certified diving	15.0%	21.3%
Resort diving	7.5%	11.2%
Diver training	3.6%	9.9%

Focus on Cairns

Cairns is recognised as one of the highest PADI certification centres of the world, with a great diversity of reef activities. Many tours include glass-bottom boats, adventure snorkel tours led by marine biologists, helicopter tours and transfers, sailing, island visits, underwater observatories, and so on. The results presented here indicate that whilst a popular activity, diving is the only one of many activities that do occur on the reef, and is surpassed in sheer volume of tourists by snorkelling (73.7%), swimming (46.5%) and undertaking glass-bottom boat / semi-submersible tours (48%). By way of contrast, 27% of respondents completed a certified dive, and 13% went on a resort dive.

Satisfaction levels and recommendations

The mean satisfaction score on a scale of 1 to 10 was 8.44. This score increased over the quarters from 8.41 in the first quarter to 8.58 in the final quarter. This pattern is repeated in Port Douglas and Cairns, as well as Townsville where the satisfaction score reached 8.75 in the last quarter, with 8.6 in the Whitsundays. When asked if the trip met their expectations, over 90% of respondents said the reef at least somewhat met their expectations, and 94% said the trip at least somewhat met their expectations. In addition, 86% of respondents felt that they achieved value for money, and 92% said they would recommend the trip to others. Interestingly, a significant drop in satisfaction was recorded when more respondents reported having experienced bad weather in response to the question about their worst experience during the trip (7.16/10 vs. 8.93/10). Further, value for money and recommendation rates also dropped and fewer respondents felt that the trip met their expectations in poor weather conditions, particularly in the third quarter, which is also when the travel motivation to enjoy the climate was highest.

The factors that influenced satisfaction and the best and worst experiences remained consistent across seasons and locations. The most important factor that **influenced satisfaction** was staff and their level of professionalism (at least 25% of respondents) and the natural environment (15%). The weather and sea-state affected the satisfaction of 10% of respondents in the first quarter and 21% in the last quarters. Finally, 10% of respondents cited diving and snorkeling as influencing their satisfaction. The tourists' best experiences on the other hand included diving and snorkeling for one third of all respondents, regardless of location and season. The marine life was the best experience for 10-20% of respondents, whilst the service and staff was the best experience for 10% of respondents. The tourists' worst experiences were predominantly limited to the sea-state, lowest in Quarter 4 at 17% and highest in Quarter 3 with 39%, but consistent across locations.

Box 9: Market differences in experiences

A more detailed analysis of best and worst experiences as well as satisfaction influences reveal that there are certain differences that exist between domestic and international markets, as well as within the international market itself. Most notably (due to their statistical significance) is the importance of weather influencing satisfaction for domestic respondents, whilst the satisfaction scores of international respondents were influenced by the snorkelling and diving (particularly for those respondents from North America) and the natural environment (more so for those respondents from Europe, including the United Kingdom and Ireland). The staff, on the other hand, was most likely to be cited as a best experience by the North American market (Appendix F). At present the Asian sample is too small to draw any significant conclusions, but similar differences between the importance of service, activities and the natural environment may also exist for this market.

Publication List – Year 1

Quarterly 'Tourism Barometers'

Great Barrier Reef – Quarters 1, 2, 3
Port Douglas / Cairns – Quarters 1, 2, 3
Townsville – Quarters 1, 2, 3
Airlie Beach – Quarters 1, 2, 3

Technical Reports

Prideaux, B. and Coghlan, A. (2006) Reef Tourism: Establishment of a visitor monitoring structure.

Coghlan, A. and Prideaux, B. (2007) Reef Tourism: An analysis of the competitiveness of the Great Barrier Reef tourism destination and a comparison with other reef tourism destinations.

Refereed Papers

Coghlan, A. and Prideaux, B. (2008) No pictures, no memory: Unravelling who takes photographs on the Great Barrier Reef. Proceedings of the 18th Annual CAUTHE Conference. Gold Coast, Australia. February 2008.

Coghlan, A. and Prideaux, B. (2007) Keeping an I (and 1.9 million others) on the reef: The sustainability of tourism on the Great Barrier Reef. 5th International Coastal and Marine Tourism Congress. AUT, Auckland, New Zealand. September 2007.

Coghlan, A. and Prideaux, B. (2007) Welcome to the Wet Tropics: The importance of weather in reef tourism. Cross-collaboration in hospitality and related services: synergies and future possibilities. James Cook University, Cairns. October 2007.

Conference Presentations

Coghlan, A. and Prideaux, B. (in press) What makes a good day out ojn the reef? Australian Coral Reef Society Annual Conference, Freemantle, WA. October 2007.

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These and related reports are available for download from the
Marine and Tropical Sciences Research Facility website:

<http://www.rrrc.org.au/mtsrfr>

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(Available at <http://www.rrrc.org.au/publications/downloads/486-JCU-Prideaux-B-et-al-2007-Reef-Tourism-Monitoring-Structure.pdf>)
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Appendix A

Survey Instrument

Q1. Are you: Male Female

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

Q3. Please indicate your age group:

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

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

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

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

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

Q6. Is this your first visit Cairns? Yes No *If No, how many times have you visited Cairns?* _____

Q7. How many nights do you intend spending in Cairns? _____ nights

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

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

Q9. What is your main type of transportation to Cairns?

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

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

Internet Tourist guide books Friends/family Advertisements in print
 Advertisements on TV/radio Travel Agent Visitor centres Been before
 TV documentary 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 Cairns:

	Not at all important	Unimportant	Neutral	Important	Very important
Visit the Great Barrier Reef	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visit the rainforest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
See Australian wildlife	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experience Aboriginal culture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all important	Unimportant	Neutral	Important	Very important
Climate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The price matched my budget	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experience the natural environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spend time with my family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meet new people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visit the beaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taste tropical fruits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visiting friends and relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experience the outback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Go shopping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visit the islands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adventure activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business / conference / meeting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Try reef seafood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To go sailing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

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

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

Q17. Have you visited any of the following reefs?

- 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Red Sea is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
South Pacific is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hawaii is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indian Ocean is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Micronesia is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Caribbean is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ningaloo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

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

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

Q21. What activities have you participated in today?

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

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

- No 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?
 1 2 3 4 5 6 7 8 9 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?
 Not at all Not very Somewhat Very much

Q28. To what extent did the experience that you had today meet your pre-trip expectations?
 Not at all Not very Somewhat 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?
 Yes Unsure No *If No, please explain:* _____

Q30. Would you recommend visiting the Great Barrier Reef to prospective visitors?
 No Yes Unsure Not to everybody: _____

Appendix B

Comparison of means of travel motivations between repeat and first-time visitors

Respondents were asked to rate 21 possible travel motivations on a Likert-scale from 1 (not at all important) to 5 (very important). Using a means test (T-test) to look for significant differences between the mean scores of repeat visitors and first-time visitors, we find that the following six motivations show significant differences between the two groups, e.g. *seeing the wildlife* and *the GBR* were significantly higher for first-time visitors than for repeat visitors.

	Significant	Mean score* for repeat visitors	Mean score* for first-time visitors
Spend time with family	t = 6.22, p<0.05	3.48	2.99
Visit friends and relatives	t = 6.98, p<0.05	2.85	2.31
See the Great Barrier Reef	t = -5.13, p<0.05	4.51	4.70
See Australian wildlife	t = -3.87, p<0.05	3.44	3.68
Experience Aboriginal culture	t = -4.87, p<0.05	3.79	3.77
Rest and relaxation	t = 2.88, p<0.05	3.97	3.87

* Scores represent average Likert-scale ratings from 1 (not at all important) to 5 (very important).

Appendix C

Comparison of frequencies between repeat visitors to the region and previous reef tourism experience

A chi-squared test was used to look for significant differences in the frequency of visits to reefs (either GBR or other reefs) between first-time visitors to the region and repeat visitors to the region. In both cases, it was more common that repeat visitors to the region had been to other reefs (GBR or other) than first-time visitors.

	Repeat visitor to the <u>region</u>	First-time visitor to the <u>region</u>	Repeat visitor to <u>reefs</u>	First-time visitor to <u>reefs</u>
Repeat visitor to the region	422	134	294	240
First-time visitor to the region	240	1502	726	936
Chi-squared	823.85, p<0.05		27.802, p<0.05	

Appendix D

Comparison of means for travel motivations for repeat visitors to the region who had or had not any previous reef experience

Respondents were asked to rate 21 possible travel motivations on a Likert-scale from 1 (not at all important) to 5 (very important). Using a means test (T-test) to look for significant differences between the mean scores of repeat visitors with or without previous reef experience we found that the following two motivations showed significant differences between the two groups, e.g. *seeing the wildlife* and *the GBR* were significantly higher for repeat visitors without any previous reef experience.

	T-test for Equality of Means				
	T-test values (t)	Degress of freedom	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Great Barrier Reef	-2.081	366.245	.038	-.161	.077
Snorkel and dive	-2.061	311.519	.040	-.223	.108

Appendix E

Comparison of means of travel motivations between international and domestic respondents

Respondents were asked to rate 21 possible travel motivations on a Likert-scale from 1 (not at all important) to 5 (very important). Using a means test (T-test) to look for significant differences between the mean scores of domestic visitors and international visitors, we found that the following eighteen motivations showed significant differences between the two groups, e.g. *seeing the wildlife* and *the GBR* were rated significantly higher for international visitors than for domestic visitors.

	T-test values (t)	Degrees of freedom	Sig. (p value)	Mean Difference	Std. Error Difference
Visit the Great Barrier Reef	-8.065	1588.134	.000	-.233*	.029
Visit the rainforest	-3.742	1852.391	.000	-.190	.051
See Australian wildlife	-10.650	1787.267	.000	-.497	.047
Experience Aboriginal culture	-12.563	1865.373	.000	-.594	.047
Enjoy the climate	4.304	1833.108	.000	.184	.043
The price matched my budget	7.900	1823.302	.000	.368	.047
Rest and relaxation	12.777	2071.384	.000	.528	.043
Snorkel and dive	-2.265	1960.749	.024	-.102	.045
Spend time with my family	12.777	1988.776	.000	.827	.065
Meet new people	-3.928	1882.696	.000	-.192	.049
Visit the beaches	3.818	1908.668	.000	.174	.046
Taste tropical fruits	2.785	1866.992	.005	.134	.048
Visiting friends and relatives	4.501	1820.341	.000	.282	.063
Experience the outback	-5.661	1899.730	.000	-.299	.053
Go shopping	2.488	1823.609	.013	.127	.051
Visit the islands	5.033	1925.639	.000	.247	.049
Try reef seafood	2.470	1865.837	.013	.139	.056
To go sailing	-5.612	2009.201	.000	-.313	.056

* Negative values indicate that international respondents rated this motivation as more important.

Appendix F

Comparison of frequencies between international and domestic visitors

In each of the following cases, a chi-squared test was used to look for significant differences in the frequency of the natural environment, the weather and snorkelling/diving in influencing visitor satisfaction; the frequency of staff as a best experience; and the frequency of weather as a worst experience.

1. Comparison of frequencies between international and domestic respondents for the frequency of the natural environment as a satisfaction influence. It was more frequently cited by international respondents than domestic respondents.

	Value	Degrees of freedom	Asymp. Sig.(2-sided)
Pearson Chi-Square	45.444(a)	22	.002

2. Comparison of frequencies between international and domestic respondents for the frequency of the weather as a satisfaction influence. It was more frequently cited by domestic respondents than international respondents.

	Value	Degrees of freedom	Asymp. Sig.(2-sided)
Pearson Chi-Square	18.355(a)	11	.074

3. Comparison of frequencies between international and domestic respondents for the frequency of snorkelling and diving as a satisfaction influence. It was more frequently cited by international respondents than domestic respondents.

	Value	Degrees of freedom	Asymp. Sig.(2-sided)
Pearson Chi-Square	38.153(a)	11	.000

4. Comparison of frequencies between international and domestic respondents for the frequency of staff as a best experience. It was more frequently cited by international respondents than domestic respondents.

	Value	Degrees of freedom	Asymp. Sig.(2-sided)
Pearson Chi-Square	20.899(a)	11	.034

5. Comparison of frequencies between international and domestic respondents for the frequency of weather as a worst experience. It was more frequently cited by domestic respondents than international respondents.

	Value	Degrees of freedom	Asymp. Sig.(2-sided)
Pearson Chi-Square	6.888(b)	1	.009

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Credits: **Southern cassowary** Wet Tropics Management Authority; **Hill Inlet in the Whitsundays** Department of Foreign Affairs and Trade - Overseas Information Branch; **Butterfly fish** Robert Thorn; **Rainforest fruits** Wet Tropics Management Authority; **Reef Tourism image** B. Prideaux.