



Changing Patterns of Reef Tourism

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Anne Galletly, Adrian Burke & Amy Hildebrandt

CRC Reef Research Centre
&
James Cook University

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*Established and supported under the
Australian Government's
Cooperative Research Centres Program*

CRC REEF RESEARCH CENTRE TECHNICAL REPORT NO 49

CRC Reef Research Centre Ltd is a joint venture between Association of Marine Park Tourism Operators, Australian Institute of Marine Science, Great Barrier Reef Marine Park Authority, Great Barrier Reef Research Foundation, James Cook University, Queensland Department of Primary Industries, Queensland Seafood Industry Association and Sunfish Queensland Inc.

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Tourism Program,
James Cook University

CRC Reef Research Centre was established and is supported under the Australian Government's Cooperative Research Centres Program. Its mission is to provide research solutions to protect, conserve and restore the world's coral reefs. CRC Reef Research Centre is a knowledge-based partnership of coral reef managers, researchers and industry. Partner organisations are:

- Association of Marine Park Tourism Operators
- Australian Institute of Marine Science
- Great Barrier Reef Marine Park Authority
- Great Barrier Reef Research Foundation
- James Cook University
- Queensland Department of Primary Industries
- Queensland Seafood Industry Association
- SUNFISH Queensland Inc.

A report funded by CRC Reef Research Centre.

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National Library of Australia Cataloguing-in-Publication
entry

Bibliography.

Includes index.

ISBN 1 876054 77 8.

1. Tourism - Queensland - Great Barrier Reef.

I. Moscardo, Gianna, 1962- . II. CRC Reef Research
Centre. (Series : CRC Reef Research Centre technical
report ; no. 49).

338.4791943

This publication should be cited as:

Moscardo G, Saltzer R, Galletly A, Burke A, Hildebrandt
A. 2003. *Changing Patterns of Reef Tourism*. CRC Reef
Research Centre Technical Report No. 49, CRC Reef
Research Centre, Townsville.

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Published by CRC Reef Research Centre Ltd., PO Box 772,
Townsville, QLD 4810 Australia

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EXECUTIVE SUMMARY

Consultation in August 2001 indicated a concern from members of the Association of Marine Park Tour Operators (AMPTO) about the number of Great Barrier Reef (GBR) visits being made with commercial operators in the Far North Queensland (FNQ) region. In response to these user concerns the research team developed a series of studies with the specific objective of describing and analysing changing patterns of reef tourism.

The first step in the analysis was to examine the Environmental Management Charge (EMC) returns in more detail to determine the exact nature of changes in reef visit numbers. The analysis showed that trends in the EMC returns differed across both the different sections of the Great Barrier Reef Marine Park (GBRMP) and the different boat size categories. This suggested changes in the patterns of reef visitation, both in terms of choice of operation and location, rather than a decline for one section or the park as a whole.

The research team developed a concept map of GBR visitation to assist in focussing the research on key factors that might be influencing reef visitation patterns. The concept map identified five factors that could be contributing to the changing reef visitation patterns.

- Changes in the markets coming to the GBR regions
- Changes in patterns of travel within GBR regions
- Changes in competition from non-reef tourism operations within the GBR regions
- Changes in competition within the GBR tourism sector
- Problems with the quality of either the reef destinations or reef operations resulting in poor recommendations and loss of business

The research team then identified and accessed available data to explore each of these factors in more detail.

Data were available from a Rainforest Cooperative Research Centre (Rainforest CRC) funded survey of visitors to the North and Far North Queensland (FNQ) regions. This survey analysed participation in, and demand for, nature-based activities. The results of the analyses of this survey data supported the findings of earlier studies showing that local, repeat and family groups were less likely to visit the reef. The results also support the proposal that gaps in information provision and/or access and limits in trip planning may contribute to lost opportunities to visit the reef. Additionally, cost was identified as a potential barrier to reef visitation.

Analyses of visitors in the 2001 GBR Visitor Analysis survey who had previously been to the GBR and/or who intended to visit again identified the following as key factors related to repeat reef visitation. Repeat reef visitors were:

- Younger
- More likely to be backpackers
- More likely to be interstate visitors
- More likely to be from North America/Europe if they were international visitors
- More likely to want to go, and actually go, diving
- More likely to seek smaller more specialised operations for their repeat trips

Three key themes emerged from analyses of the International Visitor Survey (IVS) data available for the period 1996 to 1999. Firstly, there was both an increasing number of international visitors and an increasing proportion of backpackers to the Whitsunday region. Secondly, there has been a change in the pattern of travel within Queensland over the 1996-1999 period, with more travellers arriving in Sydney and leaving from Cairns, so that more international visitors arrive in the Whitsunday region before they travel to Cairns. Thirdly, while the FNQ region had a higher proportion of package tour group visitors in 1999 than the Whitsunday region, there has also been a move to greater numbers of younger, independent travellers in the FNQ region.

Analyses of visitors' ratings of satisfaction with experiences in the different GBR regions over time did not find any major differences. Analyses of data available on

reef images and ratings of the quality of the reef environment for people who had visited the reef prior to being surveyed also found no major decline in perceptions of reef quality.

The final step in the analyses conducted for this report involved finding and surveying visitors to the Cairns region in 2002 who did not visit the GBR, and comparing and contrasting this group to a matching group who did visit the GBR. The results confirmed that Non-reef visitors were older, more likely to be domestic tourists with lower household incomes and were more interested in visiting friends and relatives. Non-reef visitors were also more likely to have visited the region before and to have been to the GBR on a previous trip. The main reasons given for not visiting the GBR were insufficient time, poor weather and having been before.

In summary, the EMC returns data show a decline in reef visits with large boats and this decline is particularly severe in the Cairns section. The EMC data also shows major growth in reef visits in the Central (Whitsunday) section, especially on smaller boats. This pattern is entirely consistent with the changes in international visitation. Thus the major contributing factor is changes in international visitation. But the analyses also identified a group of visitors to the coastal regions adjacent to the GBR who do not repeat a visit to the reef, seeing it as a 'Once in a Lifetime Experience'. An increase in these visitors to the adjacent coastal regions is also likely to make some contribution to the reef patterns that are seen.

Overall reef visits continue to grow, although at a much slower rate than predicted in the mid 1990s. This growth is also associated with a change in the patterns of reef visitation with visitors spreading out more along the coast and seeking smaller operations. The main contributing factors are changes in international visitation to Australia and an ongoing process based on repeat reef visitation. These forces are not within the control of reef operators, either individually or as a group, and thus present some major challenges for the GBR tourism sector.

INTRODUCTION

Background to CRC Reef Task B2.2

The overall objective of this task is to conduct strategic issue and/or site specific studies of visitor behaviour, perceptions or responses to management actions as requested by stakeholders. Specific research projects for each year of the project are decided in consultation with key stakeholders through the task associates. Each year the research team work with the project task associates and other users to determine the priority information needs related to reef tourism and develops a research study to address these needs.

Changing Patterns of Reef Tourism

Consultation in August 2001 indicated a concern from members of the Association of Marine Park Tour Operators (AMPTO) about the number of Great Barrier Reef (GBR) visits being made with commercial operators in the Far North Queensland (FNQ) region. Operators reported either a decline in visitor numbers or a decline in the growth of visitor numbers and sought an investigation into possible contributing factors. These issues were also raised by the Tourism and Recreation Reef Advisory Committee (TRRAC) which advises the Tourism and Recreation group of the Great Barrier Reef Marine Park Authority (GBRMPA). In response to these user concerns the research team developed a series of studies with the specific objective of describing and analysing changing patterns of reef tourism.

Overview of the Project

The following steps were undertaken to address the objective of describing and analysing changing patterns of reef tourism.

- Examine data on numbers of reef visitors available through the Environmental Management Charge (EMC) returns to determine patterns and trends in reef visitation.

- Develop a concept map or model of reef visitation in order to identify factors or variables likely to influence patterns of reef visitation.
- Determine sources of data available to study changes in these factors over time.
- Access and analyse the available data.
- Collect and analyse data on any factors that had not been previously measured within the constraints of the resources available to the project.
- Collate and interpret the results.

Background to Great Barrier Reef Tourism

The Great Barrier Reef (GBR) is a major tourist attraction for visitors coming to the coastal region along the North East coast of Australia. This World Heritage area has been an attraction for tourists since 1900 but in the early 1980s, the introduction of large, high-speed catamarans greatly increased the range of reef sites that could be accessed by tour operators for day trips. Growth in reef tourism from that time was substantial with an increase in annual visitor days from around 150,000 in the early 1980s to more than 1.5 million in the mid 1990s. In the decade to 1990 there was a tenfold increase in the number of reef tour operators carrying 35 times as many visitors to four times as many sites (Alcock et al, 1991). All predictions in the early 1990s were for continued strong growth and this was accompanied by concerns over the potential negative impacts of such continued growth (Kenchington 1991, ASTEC 1993, Cairns Region Tourism Strategy 1994). Much of this growth was based on visitors from Asia, particularly Japanese and South Korean visitors, on package tours, many of which included a reef trip in the Far North Queensland (FNQ) region. The Asian economic crisis in 1997, however, changed these patterns with an immediate drop in the numbers of visitors from Japan and South Korea and much slower growth in international visitation in the following years. This change was also accompanied by a decrease in the value of the Australian dollar improving the attractiveness of Australia as a destination for visitors from Europe and North America. In the years following 1997 there has continued to be an increase in visitors from these countries to Australia, particularly in the category of younger, independent, long stay travellers, also known as backpackers (Bureau of Tourism Research 2002).

Tourism to the GBR can be broken into the following main categories:

- Day trips on large catamarans to reef pontoons. Most of these operations are based in the FNQ region.
- A range of day trips to reef sites on a variety of different types of boats
- Day trips to islands and stays at island resorts. The Whitsunday region has a greater concentration of islands and so offers more of these type of operations than other areas.
- Trips focussed on diving. There are both day trips and longer trips and many are focussed on novice divers, especially backpackers.
- Longer cruises.
- Bareboat charters. This type of tourism is almost exclusively found in the Whitsunday region.
- Charter fishing.

Tourism is generally most concentrated in the FNQ and Whitsunday regions. The type of reef tourism varies in these regions. The Whitsunday region offers more island trips, a greater variety of day trips including reef and island locations and bareboat charters. The FNQ region has a greater proportion of larger day trips to reef pontoons.

Summary of Previous GBR Tourism Research

Despite the economic importance and scope of the reef tourism industry very little published research on tourism is available. There exist some studies on the economic contribution of tourism and other direct uses (see Driml and Common 1996, for an example), a limited number of studies on the environmental impacts of tourism (see Rouphael and Inglis 1997), and several studies of tourist experiences at specific sites. Examples of the latter include a study of visitors' reactions to use levels at Whitehaven Beach (Ormsby and Shafer 1999), a study of visitors' perceptions of ideal and actual coral reefs (Fenton et al. 1998), and a study of visitors' evaluations of reef pontoons (Moscardo 2001). The only large scale reef-wide studies of tourist markets and patterns of reef tourism have been produced by researchers in the CRC Reef Research Centre and much of this work has described the nature of

different reef tourism markets. Only two studies have been conducted that have examined patterns of use and changes in these patterns.

Moscardo (1999) and Moscardo and Woods (1998) report on an analysis of patterns of reef tourism based on a sample of more than 3000 visitors. This research identified and profiled three main groups of visitors based on their patterns of reef visitation. The first were those who visited the coastal regions adjacent to the GBR but who did not visit the GBR. These visitors were more likely to be residents of the local region and to be on short visits to the region and generally had low levels of participation in all types of commercial tourism activities. The second group visited the GBR once and did not intend to visit again either on their present trip or as part of a future trip to the region. These once-only visitors were older, had shorter stays in the region and, while interested in commercial tour activities in general, had lower levels of interest and participation in more physically demanding activities. The majority were first time visitors to the region and to the GBR. The third group were repeat reef visitors. These more regular reef visitors were the youngest, most active, most international, and had the longest stays in the region. Half of this group had been to the GBR on a previous trip to the region. In a more detailed analysis of these repeat reef visitors it was found that the majority of these visitors sought variety in their repeat trips. That is, most sought either a different location along the GBR coast for their repeat reef trips, or a different type of operation, or both. Less than a third sought a similar reef operation within the same region (Pearce and Moscardo 2001).

Overall there appear to be two main types of visitor. There are first time visitors to GBR coastal regions and the greatest proportion of these visitors travel to the GBR with a large day trip operator based in the FNQ region. Some of these visitors (27% in the 1999 study) repeat a reef trip either while in the region or on a subsequent visit and these visitors looked for a different type of operation for this repeat experience. Overall the tendency is to move to locations outside the FNQ region and to smaller more specialised types of reef trip. The second group are regular, domestic tourists who visit the GBR regions but who do not go to the GBR. In 1998 Moscardo and Woods predicted that over time there would be increasing demand for smaller and more specialised operations outside of the FNQ region. In addition, they suggested that if the proportion of visitors who had been to the coastal regions on a prior visit

increased then there might be a decline in demand for the larger day trip operations. Finally, Moscardo (1998) reported that visitors from different international markets had different levels of participation in different types of reef tour operations. Visitors from North America and Europe, especially backpackers, were more independent, travelled more throughout the GBR coastal regions and were more likely to seek variety in their reef experiences. Thus any change in the profile of international visitors away from Asian and towards North American and European market segments would probably be associated with an increase in demand for reef experiences outside the FNQ region.

There is little existing information available on patterns of reef visitation. The CRC Reef projects on tourist use of the GBR do provide some insights into these patterns. In summary an increase in repeat international visitors to the GBR coastal regions, especially backpackers and visitors from North America and Europe, would likely result in a shift of demand away from the FNQ region and larger operations towards other reef locations and smaller, more specialised operations.

PATTERNS OF REEF VISITATION (EMC Returns)

The first step in the analysis was to investigate actual patterns of reef visitation over time based on the Environmental Management Charge (EMC) returns. The EMC is a fee collected by tour operators for the Federal government. The charge is currently AUS\$4 per visitor per day with some limits on the overall charge for longer trips. Operators have been required to keep records of the numbers of visitors they take to the Great Barrier Reef Marine Park (GBRMP) each day and supply quarterly returns. Thus the EMC returns provide an estimate of the number of visitor days spent in the marine park. At the time of the conduct of this research project returns data were available for the period January 1996 to December 2000.

Figure 1 on the following page shows the trends in reef visit numbers over time for the GBRMP as a whole and the four main sections of the park individually. The EMC returns are reported separately for four different categories of boat size and changes in numbers over time for these boat size categories are presented in Figure 2. As can be seen the Cairns and Central (Whitsunday) sections account for the majority of reef visits. Figures 3 and 4 report the numbers for each of the boat capacity categories for each of these two sections separately.

Figure 1 shows a 2% decline in the total number of visits recorded for the GBRMP in 1997. This follows the Asian economic crisis which saw a major decrease in international visitors from Japan and South Korea. Since 1997 there has been a steady increase in overall numbers and in the year 2000 the total EMC returns showed a 16% increase in numbers from 1996. This trend in total numbers is not, however, even across all the sections. The 1997 decline occurred entirely in the Cairns section and while the total numbers have been increasing in the Cairns section since 1997, in 2000 they were still lower than in 1996. The total EMC returns for the Central/Whitsunday section show no decline and the figures for 2000 represent a 43% increase from 1996.

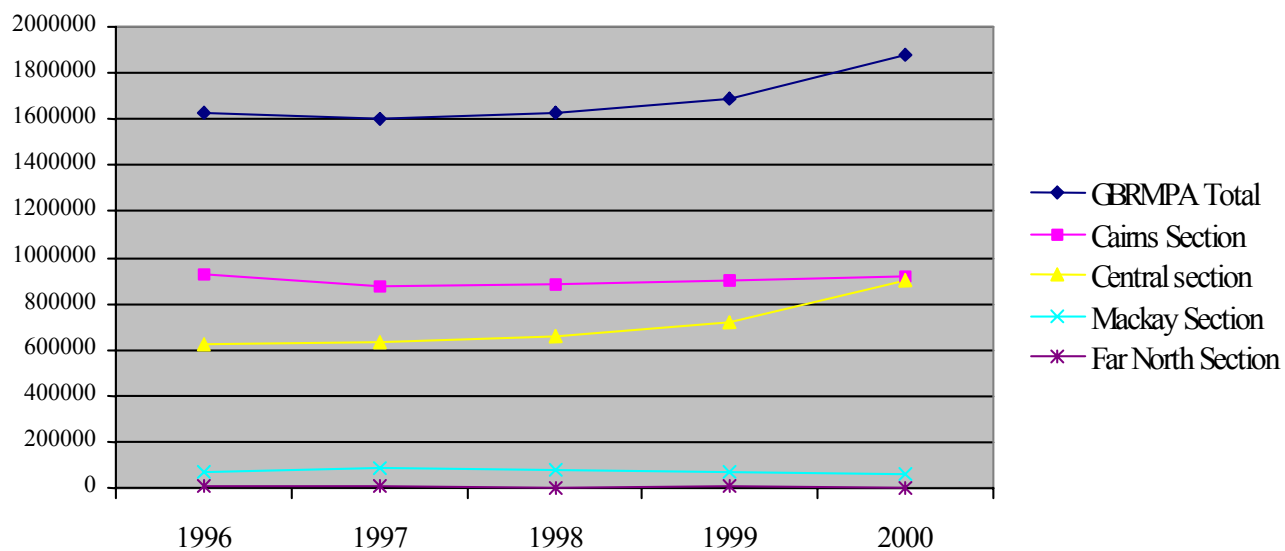


Figure 1: Reef Visitor Days 1996-2000 GBRMP Total and Four Main Park Sections

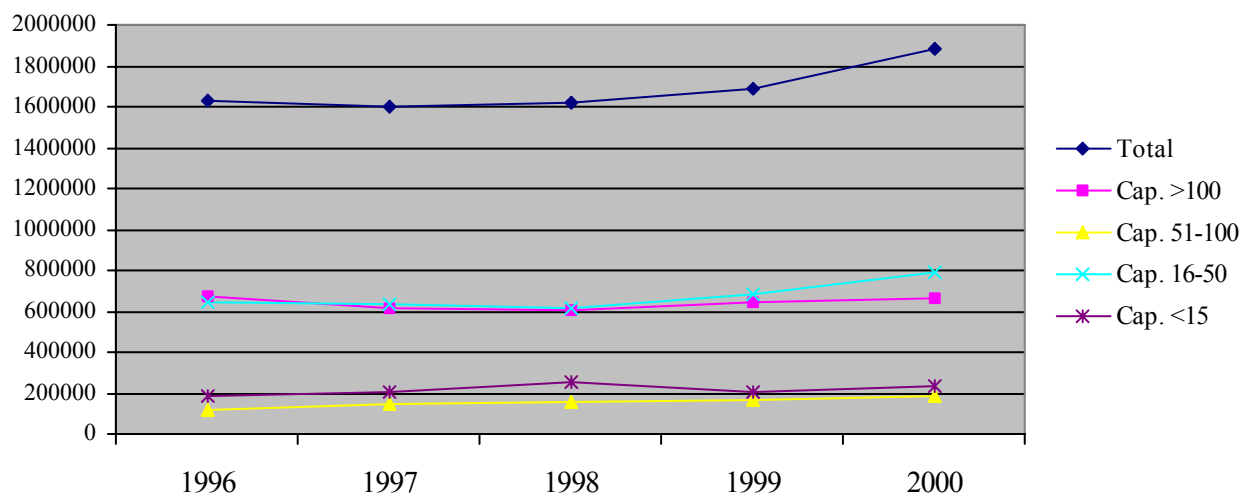


Figure 2: Reef Visitor Days 1996-2000 GBRMP Total and Four Categories of Boat Capacity

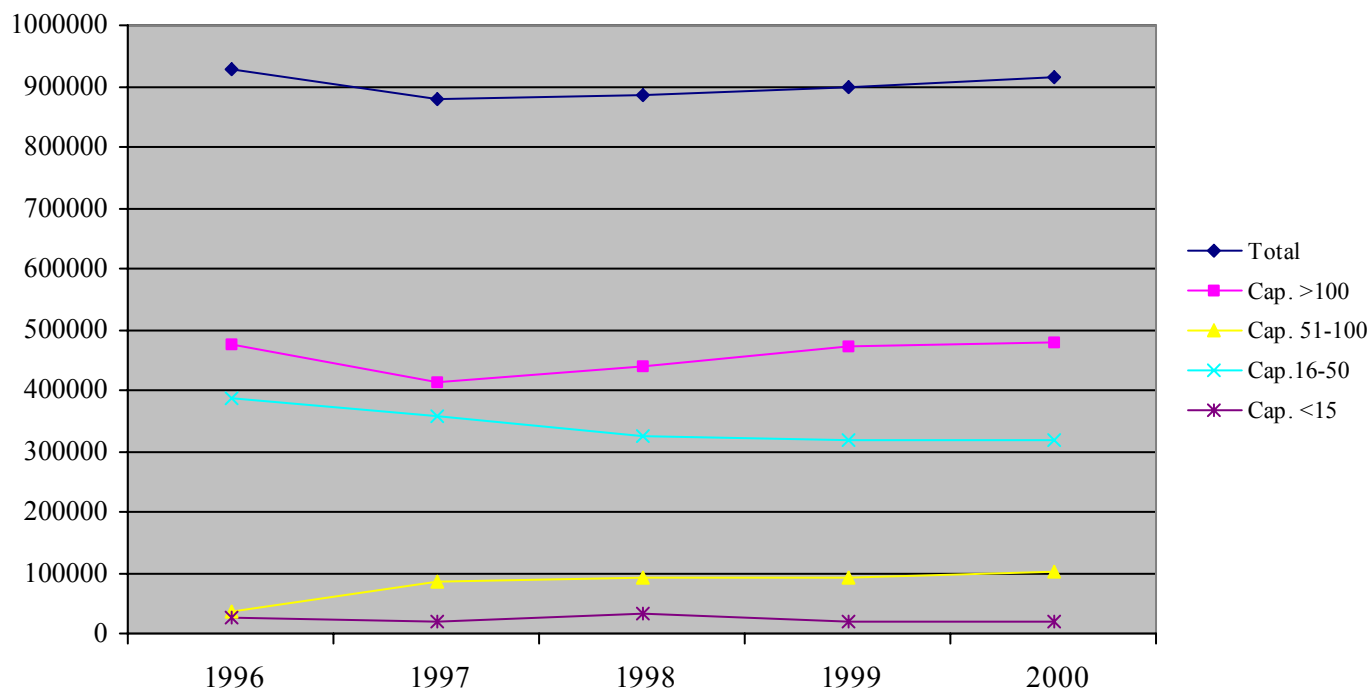


Figure 3: EMC Returns for the Years 1996 to 2000 for the Cairns Region

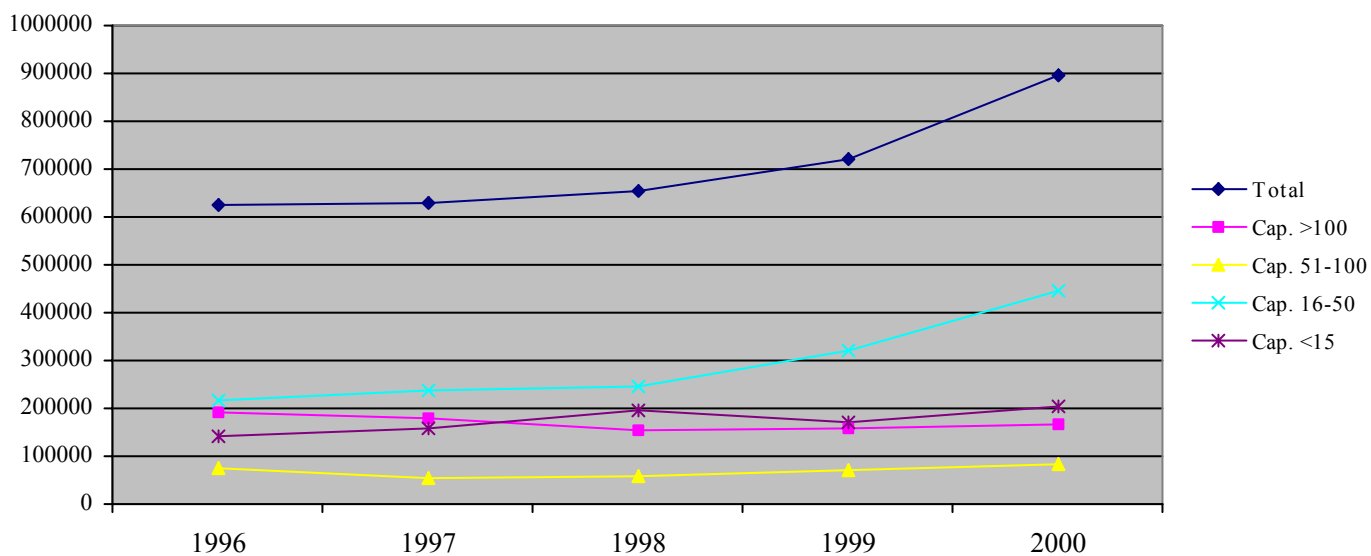


Figure 4: EMC Returns for the Years 1996 to 2000 for the Central Section (Includes Whitsundays)

Figure 2 shows that growth in numbers has been strongest for reef visits with boats in the category of 16 to 50 capacity. Reef visit numbers for the largest capacity boats declined in both 1997 and 1998 and although increasing again in 1999 and 2000, the 2000 level was still lower than that recorded for 1996. Further investigation of the boat capacity categories in the two different sections shows further discrepancies. The Cairns section data (Figure 3) shows steady growth in visits for the 51 to 100 capacity category and a major decline in the 16 to 50 capacity category. The data for the Central/Whitsunday section (Figure 4), however, shows major growth in the number of reef visits taken in the 16 to 50 capacity category and a slight decline in the largest capacity.

The following table (Table 1) lists the number of individual boats submitting an EMC return in each of the boat capacity categories for the Cairns and Whitsunday regions. As can be seen the number of boats in several categories has increased and in the Cairns region this could be further contributing to the perceptions of individual operators that visitor numbers have declined.

Table 1: Individual Boat Numbers 1996 and 2000 for Cairns and Central Sections*

	Cap. <16	Cap. 16-50	Cap. 51-100	Cap. >100
Cairns 1996	75	92	7	16
Cairns 2000	117	74	9	21
Whits. 1996	186	82	14	19
Whits. 2000	326	130	17	25

* Any vessel submitting an EMC return for at least one quarter in the year was included in these figures.

In summary, the trends in the EMC returns differ across both the different sections of the GBRMP and the different boat size categories, suggesting changes in the patterns of reef visitation, both in terms of choice of operation and location, and not simply a decline for one section or the park as a whole.

A CONCEPT MAP OF GREAT BARRIER REEF TOURISM

The analysis of the EMC returns data indicated that there are complex changing patterns of reef visitation and not simply a drop in visit numbers overall. The next step in the project was to develop a concept map that describes reef visitation as a system in order to identify factors that may be contributing to the changing reef visitation patterns. Figure 5 is the concept map that was developed. This model recognises that the arrival of a visitor at a specific reef location with a particular reef tour operator is the result of several decisions.

The first step is to choose to visit the GBR region rather than some other destination. Thus changes in the competitiveness of the GBR region and/or other destinations could therefore alter the composition and nature of markets to the region.

The second decision is where to travel within the GBR region. Thus a second factor potentially contributing to changing patterns of reef visitation is changes in patterns of travel in the coastal areas adjacent to the GBR.

The third decision that must be made is to actually visit the reef rather than, or in addition to, participation in other activities. This suggests that changes in the availability and cost of non-reef tourist attractions and activities could influence reef visitation patterns. Images of the quality of the available reef operations could also influence this decision.

Finally, the visitors must choose a particular reef operation based on suitability, availability, image and recommendations. Two factors could influence decisions at this stage. The first is the availability of suitable reef operations and images of the quality of reef operations.

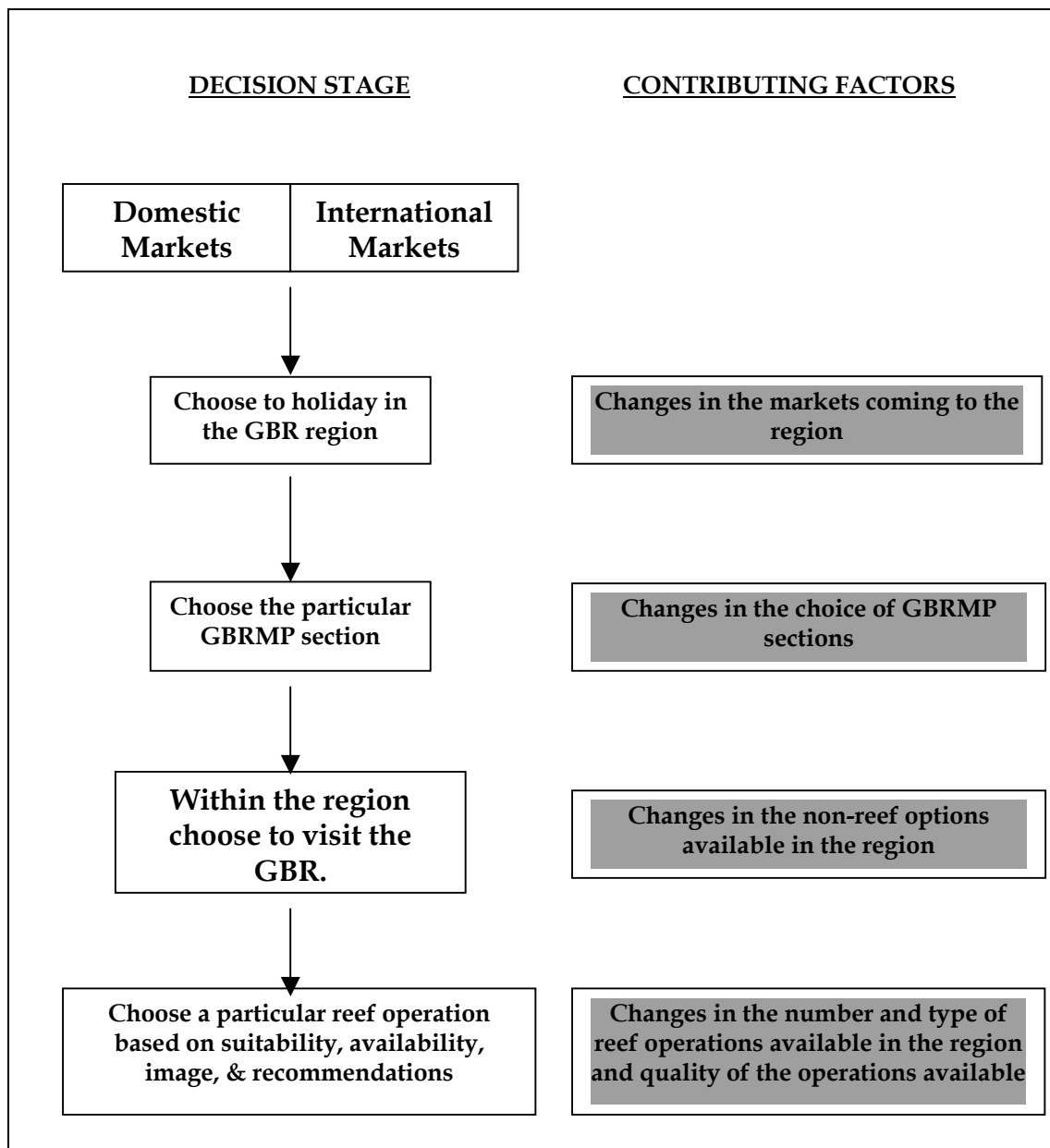


Figure 5: Concept Map of GBR Visitation

The concept map identified five factors that could be contributing to the changing reef visitation patterns.

- Changes in the markets coming to the GBR regions
- Changes in patterns of travel within GBR regions
- Changes in competition from non-reef tourism operations within the GBR regions
- Changes in competition within the GBR tourism sector
- Problems with the quality of either the reef destinations or reef operations resulting in poor recommendations and loss of business

Previous research on patterns of repeat visitation suggested that changes in the proportion of repeat visitors to the regions adjacent to the GBR could be a major factor in these analyses. Further, research into characteristics of non-reef visitors also provided some guidance for factors to consider. This research was, however, dated and so the research team sought more recent data that might provide characteristics of both visitors to the GBR region who do not visit the GBR and repeat GBR visitation.

Using these five factors and the need to understand existing non-reef and repeat visitors as a guiding framework, the research team conducted a search of existing visitor data that could be used to investigate these factors over time. Table 2 lists the data that was identified and the analyses conducted. After identifying the available and relevant data the team began a series of analyses to look for changes over time.

Table 2: Existing Data Sets and Analyses

Factor	Data	Analyses
Understanding current reef and non-reef visitors to the GBR coastal regions	2001 Tourism Demand survey conducted for the CRC Rainforest. Data collected by the CRC Reef tourism team	Comparing visitors to the FNQ region who stated they had been to the GBR to those that hadn't in order to list market features that may be important in other analyses.
Understanding repeat reef visitation	CRC Reef GBR Visitor Analysis Survey 2001	Looking at patterns of actual and planned repeat reef visitation to predict reef travel over time
Changes in international tourist markets to the region	International Visitor Survey Data available from the Bureau of Tourism research (BTR) for 1996, 1998, and 1999 only.	Comparing visitors who went to the FNQ or Whitsunday regions in 1996, 1998 & 1999.
Perceived quality of reef operations	CRC Reef GBR Visitor Analysis surveys 1996, 1998 and 2001.	Comparing FNQ reef visitors 1996 and 2001 and Whitsunday visitors 1998 and 2001 focussing on satisfaction ratings.
Perceived quality of reef destinations	CRC Reef telephone surveys 1997 to 2001	Looking at reef images and perceived quality of reef destinations of respondents who had been to the GBR in the previous year
Changes in reef markets over time	CRC Reef GBR Visitor Analysis surveys 1996, 1998 and 2001.	Comparing FNQ reef visitors 1996 and 2001 and Whitsunday visitors 1998 and 2001 focussing on changing demographic and travel behaviours

This search of available resources also revealed a number of gaps in the information that could be used. More specifically:

- There is no data available on domestic visitors to the GBR regions for the time period 1996 to 2000.
- There is no existing data available on the changes in non-reef competitors within the GBR regions although anecdotal evidence suggest a growth in options available for visitors to the Cairns region.

- None of the existing data sets provides direct evidence as to why people who visit a GBR region do not visit the GBR.

It was decided that the latter gap was the most serious and so in addition to the analyses of existing data the research team conducted a survey of visitors exiting the Cairns region, targeting visitors who did not go to the reef while in the region. The aim of this survey was to seek specific information from non-reef visitors on their reef images and barriers to their taking a reef tour.

UNDERSTANDING CURRENT REEF AND NON-REEF VISITORS TO THE GBR COASTAL REGIONS

Background to the CRC Rainforest Tourism Demand Study

This project was conducted with funding from the Rainforest CRC with the aim of providing data on tourist use of, and demand for, nature-based recreational experiences in the North and Far North Queensland regions for the Queensland Parks and Wildlife Service (QPWS) and the Wet Tropics Management Authority (WTMA). The survey questions followed the format of those previously used in telephone surveys of resident demand for recreational activities in South East and Central Queensland (State of Queensland 1998).

The data in this case were collected with self completion questionnaires distributed to visitors at major transport nodes throughout the region. The study included the departure lounges of Cairns Airport, long distance bus travellers between Townsville and Cairns, passengers on ferries out of Townsville, and tourists travelling by road and stopping at Cardwell, a community located approximately midway between Cairns and Townsville and a regular stopping point for road travellers. In each location survey interviewers approached all people passing or stopping at a certain point or all people on each ferry or bus available. Potential participants were firstly asked if they were staying away from home for at least one night to limit the sample to tourists, and those that qualified were then asked to participate. A total of 1165 completed surveys were available for analysis with a response rate of 50%. The survey was conducted in English only, during the months of September and October, which typically have good weather and high levels of tourism in the regions.

Aims of the Analysis

The aims of this analysis were:

- to determine the overall level of participation in reef activities in the North and Far North Queensland region,
- to determine demand for more reef activity opportunities, and

- to compare tourists to the regions who do and do not participate in reef activities to determine potential barriers to participation in reef-based tourism.

Results

Levels of participation in, and demand for, Reef-Based Tourism Activities

The survey included a question asking if respondents had participated in a variety of commercial tourist activities while in the region. The list provided include the following reef-based options:

- a large boat (>100 passengers) day trip the reef
- a small boat (<100 passengers) day trip to the reef
- a diving trip to the reef

The survey then asked people who had participated in an activity if they would have liked to have participated more than they did, and those who hadn't participated if they would have liked to do it at all. In each case reasons for not participating were requested. Table 3 shows the levels of participation and demand for the three reef-based activities. Overall, 57% of the sample had participated in at least one of the three reef-based options listed in the survey. The data also indicated that there was a group of tourists to the region who wanted to participate in reef activities but did not (16% of the total sample) and a group who did participate but wanted to do more (12%). Table 4 lists the reasons these visitors gave as barriers to reef-based activity participation.

Table 3: Reef-Based Tour Activity Participation and Demand

Activity*	% Who participated**	% Who participated & wanted more	% Who did not participate*	% Who did not participate but wanted to
Small Boat Trip	33%	3%	59%	5%
Large Boat Trip	24%	3%	71%	2%
Diving Trip	23%	6%	62%	9%

* Multiple responses allowed. **Excludes those who wanted to participate or participate more

Table 4: Barriers to participation in Reef-Based Tour Activities

Barriers	% People who have been and want more	% People who haven't been but wanted to
Large Boat Trips		
Not enough time	75%	66%
Couldn't afford to	25%	22%
Didn't have equipment	-	1%
Couldn't get to setting	-	5%
Poor weather	-	1%
Not available in suitable form	-	5%
Small Boat Trips		
Not enough time	69%	46%
Couldn't afford to	30%	40%
Didn't have equipment	-	3%
Couldn't get to setting	-	7%
Poor weather	1%	1%
Not available in suitable form	-	3%
Diving Trips		
Not enough time	42%	51%
Couldn't afford to	46%	37%
Didn't have equipment	5%	2%
Couldn't get to setting	4%	6%
Poor weather	-	2%
Not available in suitable form	3%	2%

Overall, there appear to be two main barriers to participation in reef-based activities, time and money. Insufficient time can result from two forces, competition from other activities available in the region and problems with trip planning. Visitors with insufficient information about the tour options available in a region can make decisions that limit their capacity to participate in the activities they desire. In addition to these two major reasons, a small number of respondents stated that they either could not get to the setting or what was available was not suitable. This suggests that for some visitors access in terms of things like transport to departure

points and the timing and style of the available operations could be a problem. Again this problem could also reflect gaps in information provision.

Comparison of Reef and Non-Reef Visitors

The survey included a number of questions which provide information on demographic profiles (see Table 5), participation in other activities in the region (see Table 6), and travel behaviour (see Table 7). The following points can be highlighted in these tables:

- Non-reef visitors are more likely to be repeat visitors to the region who come from within the state.
- Non-reef visitors are more likely to be travelling alone or in a family group
- Non-reef visitors are more likely to travel in private vehicles and generally participate less in most tourist activities.
- Non-reef visitors are less likely to visit information centres and more likely to make their plans from day to day.

These results support the findings of earlier studies showing that local, repeat, family groups were less likely to visit the reef. The results also support the proposal that gaps in information provision and/or access and limits in trip planning may contribute to lost opportunities to visit the reef.

Table 5: Demographic Profiles of Reef and Non-Reef Visitors 2001

Demographics	Reef Visitors %	Non-reef Visitors %
Age		
<30 years	49%	47%
31-40	16%	19%
41-50	10%	12%
51-60	14%	12%
>60 years	11%	10%
Usual Place of Residence*		
International	71%	49%
(UK/Ireland)	(34%)	(23%)
(Other European)	(21%)	(16%)
(USA/Canada)	(11%)	(5%)
Interstate	17%	22%
Intrastate	12%	29%
Travel Party*		
Alone	18%	27%
Couple	43%	35%
Family	12%	15%
Friends	21%	17%
Family & friends	3%	3%
Other	3%	3%

* Goodman and Kruskal's Tau indicates a statistically significant relationship at $p < 0.05$ level

Table 6: Participation in Other Activities in the Region – Reef and Non-Reef Visitors

Participation in Other Activities	Reef Visitors %	Non-reef Visitors %
Rainforest Day Tours*	57%	24%
Visitor Information Centre*	52%	43%
Aquarium/Zoo*	51%	26%
Local Craft/markets*	47%	32%
Environmental Centre*	25%	13%
Indigenous Performance*	24%	6%
Historic Building/site*	23%	18%
Museum	22%	19%
Bird/wildlife Tours*	16%	6%
Local Festival*	12%	16%
Outback Tour	10%	7%
Farm Centre*	9%	6%

* Goodman and Kruskal's Tau indicates a statistically significant relationship at $p < 0.05$ level

Table 7: Travel Behaviours of Reef and Non-reef Visitors

Travel Behaviours	Reef Visitors %	Non-reef Visitors %
Been to the region before?*		
No	75%	55%
Yes	25%	45%
Transport Within the Region*		
Private vehicle	15%	27%
Private vehicle with caravan	2%	6%
Rental vehicle	26%	19%
Coach/bus	47%	37%
Plane	4%	4%
Other	6%	7%
Approach to Trip Planning*		
Part of package tour	9%	5%
Organise most activities before trip	16%	14%
Organise some activities before trip	26%	25%
Use information on arrival to plan	24%	17%
Make plans day to day	25%	39%

* Goodman and Kruskal's Tau indicates a statistically significant relationship at $p < 0.05$ level

UNDERSTANDING REPEAT REEF VISITATION

Background to the GBR Visitor Analysis Data

This data was collected in 2001 using a self completion questionnaire distributed to passengers on reef tour operations on the return sector of their reef tour. A total of 2215 completed surveys were available for analysis with a response rate of 75%. The reef operations surveyed included a variety of sizes and types of boat, as well as different trip lengths and purposes. Visitors were surveyed on large and small day trip operations, island trips, overnight cruises, diving trips and bareboat charters. Locations and operations were chosen from various reef departure points between and including Port Douglas and the Whitsundays. On day trips questionnaires were distributed by research staff who approached all passengers during the return to port. On bareboat cruises the passengers were given a mail-back questionnaire at the end of the charter. On overnight operations the questionnaires were handed out by the tour staff on the return leg in the same manner as for the day trips. Surveys were conducted in English, Japanese and Mandarin.

Aims of the Analysis

The aim of this analysis was to explore patterns of repeat reef visitation in order to identify factors that might influence the behaviour of tourists to the GBR regions.

Results

The GBR Visitor Analysis survey offered more than 100 variables for analysis and so it was decided to report here only those analyses that were found to be statistically significant at the $p < 0.01$ level. Statistical tests used were t-tests, ANOVAs, chi-squares and Goodman and Kruskal's Tau.

Level of Repeat Reef Visitation

About a third of all the respondents (31%) were returning to the GBR on this trip. Of those people that had been to the GBR before (N=681), the majority were returning

only for the first or second time (Table 8). Over 90% of the first time GBR visitors were also visiting the region where they were surveyed for the first time¹. Intention to visit the reef again was high with 46% of respondents indicating that they would definitely return and 35% indicating that they would visit again if they returned to the region.

Repeat visitors included those that had visited the GBR on a previous occasion and/or those people that are planning to visit the GBR again (regardless of the geographic location of the visits in either case). Based on these dimensions, four visitor categories were identified:

- Once only visitors (no previous visits and no intention to return)
- First time visitors who intend to repeat (intending to repeat)
- Visitors who had been before but don't intend to repeat again (previous repeaters)
- Repeat visitors who intend to repeat again (regular repeaters)

Visitors were defined as intending to repeat if they stated that they would 'definitely' visit again or if they would visit again if they returned to the region. The distribution of the four visitor categories is identified in Table 9. Using this categorisation, 86% of the sample were actual repeat visitors or planning to be repeat visitors.

Table 8: Previous GBR Experience (N=681)

Previous GBR Visits	% of those who had been before
1	51%
2	19%
3-5	18%
>5	13%
6-10 years	10%
> 10 years	13%

¹ Regions surveyed were Port Douglas, Cairns, Mission Beach, Townsville, and the Whitsundays

Table 9: Repeat Visitor Categories

	Frequency	%
<i>Group 1:</i> Once only visitors (no previous visits and no intention to return)	296	14%
<i>Group 2:</i> First time visitors who intend to repeat (intending to repeat)	1162	55%
<i>Group 3:</i> Visitors who had been before but don't intend to repeat again (previous repeaters)	104	5%
<i>Group 4:</i> Repeat visitors who intend to repeat again (regular repeaters)	548	26%

Factors Relating to Repeat Visitation

A number of analyses were conducted to compare the demographic characteristics of the four visitor groupings. The following characteristics are those where the analyses indicated a statistically significant difference at the $p=0.01$ level. According to the results (see Table 10):

- Intending to repeat and regular repeat visitors were younger
- Australian visitors were more likely to actually repeat a reef visit
- Of those international visitors who intended to repeat, US/Canada made up the highest proportion
- Of those international visitors who actually repeated (previous and regular), Europeans made up the highest proportion
- Regular repeaters were more likely to have experience with other coral reefs

Table 10: Demographic Characteristics of Repeat Visitors

Demographics	Once only visitors	Intending repeaters	Previous repeaters, not returning	Regular repeaters
Age (mean years)	44	36	49	40
Visitor Origin				
International Visitors	70%	72%	34%	42%
Interstate Visitors	25%	22%	50%	30%
Queensland outside region	3%	3%	8%	13%
Queensland inside region	2%	3%	8%	15%
Other	15%	10%	-	5%
Have visited other coral reefs	34%	38%	34%	45%

Table 11 presents differences between the four repeat groups on trip-related variables. Visitors were compared on the basis of how they planned their activities/ trip, which factors were important in the selection of their reef tour, the benefits they desired from a reef trip, and their sources of information about the GBR. The findings suggest that:

- Actual repeaters (previous and regular) were more flexible in their planning approach
- Regular and intending repeaters placed more importance on price, opportunities to snorkel, and opportunities to dive in their selection of a reef trip
- Intending repeaters placed a higher importance on learning, experiencing nature, and escape
- Regular repeaters placed less importance on rest and relaxation
- Actual repeaters (previous and regular) were less likely to obtain information about the GBR from friends/family and travel agents and more likely to obtain information from previous experience

Table 11: Trip Planning Behaviours of Repeat Visitors

Planning Factors	Once only visitors	Intending repeaters	Previous repeaters, not returning	Regular repeaters
Approach to Trip Plannin				
I chose an already organised package tour	24%	19%	23%	14%
I organise most activities/places before trip	17%	18%	9%	16%
I had planned some activities/places before trip	25%	25%	24%	24%
I used information obtained on arrival to plan trip	18%	24%	23%	23%
Most of my plans were made from day to day	16%	14%	21%	23%
Importance of Factors for Tour Choice*				
The price matched my budget	3.2	3.2	3.0	3.5
It offered opportunities to snorkel	3.2	3.8	3.0	3.8
It offered opportunities to dive	2.4	2.8	1.8	2.8
Desired Benefits From a Reef Trip*				
Nature and Learning	4.1	4.4	4.0	4.2
Novelty & excitement	3.7	3.0	2.5	3.9
Escape & relaxation	3.2	3.5	3.3	2.6
Sources of Information About the GBR				
Friends/Family	41%	43%	31%	32%
Travel Agent	26%	21%	22%	14%
Been Before	2%	2%	40%	46%

*Average score on a scale where 1=not at all important and 5=very important

Table 12 presents factors relating to the visit during which respondents were surveyed. According to these results:

- Regular repeaters spent more time away from home on their holidays (they have longer trips)
- The Whitsunday region had the highest proportion of actual repeaters (previous and regular)
- Large day trips had the highest intended repeaters while actual repeaters (previous and regular) were more spread across all the categories
- Regular and intending repeaters had the highest participation rate for snorkelling and diving and lower rates for the underwater observatory, glass bottom boat, and semi-submersible tours

Table 12: Current Reef Visit Features for Repeat Visitors

Current Reef Visit Features	Once only visitors	Intending repeaters	Previous repeaters, not returning	Regular repeaters
Length of trip away from home on this trip				
< 7 days	16%	13%	14%	18%
7 days	9%	6%	13%	9%
8-14 days	20%	25%	33%	25%
15-21 days	22%	20%	7%	13%
22-31 days	15%	16%	16%	12%
> 31 days	17%	20%	17%	23%
Location of Reef Visit				
Cairns	39%	37%	24%	25%
Port Douglas	33%	27%	24%	23%
Mission Beach	3%	2%	14%	5%
Townsville	6%	12%	11%	12%
Whitsundays	18%	22%	27%	36%
Type of Reef Experience				
Trips to pontoon	72%	59%	42%	34%
Island trips	14%	20%	46%	35%
Dive trips	5%	6%	2%	9%
Bareboats	<1%	2%	2%	9%
Overnight trips (other than dive)	2%	2%	1%	2%
Other small-medium boat day trips	5%	10%	7%	11%
Activities Participated in				
Swimming	40%	54%	43%	53%
Snorkelling	54%	70%	43%	67%
Scuba diving-certified	9%	12%	7%	18%
Glass bottom boat	40%	34%	35%	23%
Semi-submersible tour	46%	38%	36%	25%
Underwater observatory	32%	25%	20%	16%
Fishing	3%	5%	5%	11%
Island-based activities	7%	9%	13%	16%

Visitors were also asked a number of questions about how satisfied they were with aspects of their reef trip, and if they would recommend the visit to family or friends. Table 13 shows that repeaters were more satisfied with their overall reef experience.

Intending repeaters tended to be more satisfied than the other groups with the overall environment, the fish, the coral, and marine life other than fish and coral. Previous Repeaters who do not intend to return (Group 3) tended to be less satisfied than the other groups with the fish, the coral and marine life other than fish and coral.

Respondents were further asked to rate various aspects of their reef experience (see Table 14). Significant differences were found for two of these aspects. Regular repeaters were more likely to believe that there were too many other boats and Once-only visitors were more likely to believe that there were not enough activities available.

Table 13: Trip satisfaction and Repeat Visitors

Satisfaction Item	Once only visitors	Intending repeaters	Previous repeaters, not returning	Regular repeaters
Overall enjoyment of the GBR experience ¹	7.9	8.9	7.6	8.7
Overall environment ²	4.2	4.4	4.1	4.2
The coral ²	4.1	4.4	3.6	4.0
The fish ²	4.1	4.4	3.8	4.2
Marine life other than fish & coral ²	3.6	3.8	3.1	3.7

¹ Average score on a scale where 1=not at all satisfied and 10=very satisfied.

² Average score on a scale where 1 = not at all satisfied and 5=very satisfied

Table 14: Repeat Visitor Ratings of the Reef Experience

Aspect	Once only visitors	Intending repeaters	Previous repeaters, not returning	Regular repeaters
Number of other boats				
Too few/not enough	3%	2%	0%	<1%
About right	61%	65%	68%	67%
Too many/too much	3%	4%	1%	7%
Did not matter	33%	29%	31%	25%
Number of activities available				
Too few/not enough	14%	8%	11%	4%
About right	74%	82%	77%	81%
Too many/too much	3%	1%	4%	3%
Did not matter	9%	9%	7%	12%

Summary

Analyses of visitors in the 2001 GBR Visitor Analysis survey who had previously been to the GBR and/or who intended to visit again identified the following as key factors related to repeat reef visitation.

Repeat reef visitors were:

- Younger
- More likely to be backpackers (younger, longer stay, independent travellers)
- More likely to be interstate visitors
- More likely to be from North America/Europe if they were international visitors
- More likely to want to go, and actually go, diving
- More likely to be found on a wider range of type of reef tour operation

CHANGES IN INTERNATIONAL TOURIST MARKETS TO THE FAR NORTH QUEENSLAND AND WHITSUNDAY REGIONS

Background to the International Visitor Survey (IVS)

The IVS is conducted by the Bureau of Tourism Research (BTR) and involves surveys conducted with departing tourists in the exit lounges of international airports in Australia. The survey is conducted in multiple languages and interviews are conducted throughout the year. The survey includes questions about the places visited while in Australia. These answers are coded according to the tourist regions used by the federal and state governments. For the purposes of the present project profiles were generated for two groups of international visitors – those who said that they visited the Far North Queensland (FNQ) region, centred on Cairns, and those who had visited the Whitsunday region.

At the time of completing this report data were available for the years 1996, 1998 and 1999. The following questions could be compared for the time periods 1996 and 1999.

- Age
- Country of residence
- Travel party type
- Length of stay in Australia
- Accommodation used
- Arrival and departure cities
- Transport to the region
- Travel to other states

More details on the IVS can be obtained from the BTR (<http://btr.gov.au>, accessed May 2002).

Aims of the Analysis

The main aim of the analyses conducted with the IVS data was to examine differences over time in the composition and characteristics of international visitors

to the FNQ and Whitsunday tourist regions. A secondary aim was to compare and contrast the international markets to these two regions.

Results

Overall numbers of International Visitors to the Regions

The IVS data indicated an increase in the numbers of international visitors to each of the two regions adjacent to the GBR (see Table 15). In the case of the FNQ region there was 10% increase from 1996 to 1999, while in Whitsunday region the number of international visitors more than doubled in the same time period (increase of 127%).

Table 15: Estimated number of International Visitors to GBR Regions

Region	1996	1997	1998	1999
Far North Qld	690,000	731,200	704,000	755,800
Whitsunday	87,000	175,900	176,300	197,700

Changes in Market Profiles 1996-1999 Whitsunday Region

Table 16 provides the profiles for international visitors to the Whitsunday region for 1996 and 1999 on those questions that can be compared over the time period. Several trends can be identified.

- The market was younger in 1999 with 73% aged less than 29 years compared to 60% in that category in 1996.
- Visitors were more likely to come from Europe (58% in 1999 compared to 33% in 1996) and less likely to come from Asia in 1999 (11% compared to 36% in 1996).
- Visitors were less likely to be travelling in a tour group (7% in 1999 compared to 13% in 1996).
- Visitors were staying longer in Australia in 1999 (67% stayed for more than 4 weeks) than in 1996 (43% stayed for more than 4 weeks).
- Visitors were more likely to stay in a backpackers or youth hostel in 1999 (47% compared to 11% in 1996).

- Visitors were more likely to have entered Australia through Sydney and less likely to have arrived in Cairns in 1999 than in 1996. Visitors were also more likely to be departing Australia through Cairns in 1999.
- Visitors were much more likely to use rental car or campervans and buses to travel to the Whitsunday region in 1999.

Overall, there was a major increase in the number of international visitors to the Whitsunday region between 1996 and 1999 and much of this can be attributed to substantially higher levels of visitation by younger, long stay European travellers or backpackers. In addition, changes in the patterns of arrival and departure city data suggests that more international visitors were moving north along the Eastern Australian coast from Sydney and thus more visitors were arriving in the Whitsundays before they visited Cairns.

Table 16: Changes in International Market Profiles 1996-1999 Whitsunday Region

Characteristics	1996	1999		Characteristics	1996	1999
Age				Time in Australia		
< 29 years	60%	73%		<8 nights	20%	9%
30-59 years	26%	20%		8-28 nights	37%	24%
>60 years	14%	7%		>28 nights	43%	67%
Country of Residence				Accommodation Used		
Germany	16%	12%		Hotel/Motel/Resort	62%	24%
UK/Ireland	12%	28%		Backpackers/hostel	11%	47%
Other Europe	21%	30%		Rented apartment	1%	1%
USA/Canada	12%	13%		Caravan/campervan	6%	13%
Japan	31%	10%		Boat	20%	13%
Other Asia	5%	1%		Friend/relative	-	1%
New Zealand	1%	2%		Other	-	1%
Other	2%	4%				
With a tour group?				First visit to Australia?		
Yes	13%	7%		Yes	81%	84%
No	87%	93%		No	19%	16%
Travel Party				Transport*		
Adult couple	46%	31%		Private Vehicle	11%	8%
Family	4%	3%		Rental car/camper	5%	16%
Group friends/family	18%	17%		Airline	15%	13%
Alone	31%	49%		Long distance bus	3%	27%
Other	1%	-		Other	66%	36%
Arrival City				Departure City		
Sydney	47%	51%		Sydney	51%	51%
Melbourne	7%	11%		Melbourne	12%	7%
Brisbane	18%	17%		Brisbane	13%	11%
Cairns	20%	12%		Cairns	7%	19%
Other	8%	9%		Other	17%	18%

* Transport to the region

Changes in Market Profiles 1996-1999 FNQ Region

Comparisons of market profiles for 1996 and 1999 for the FNQ region are presented in Table 17. Compared to the Whitsunday data there are fewer differences between the profiles of the two years. The following trends can be identified:

- The market was younger in 1999 with 51% aged less than 29 years compared to 46% in that category in 1996.
- Visitors were staying for a shorter time in Australia in 1999 (58% stayed for less than 4 weeks) than in 1996 (71% stayed for less than 4 weeks).
- Visitors were slightly more likely to stay in a backpackers or youth hostel in 1999 (27% compared to 22% in 1996).
- Visitors were more likely to be departing Australia through Cairns in 1999 (40% compared to 26% in 1996).
- Visitors were much more likely to use rental car or campervans, airlines and buses to travel to the FNQ region in 1999.

Overall, there have been some slight changes in the market profiles for the FNQ region with a small increase in younger travellers using backpacker hostels and travelling by bus. Overall, there appeared to be more independent travellers with much higher levels of use of rental vehicles and campervans. As in the previous section there was a major increase in the use of Cairns as the place for departing Australia supporting the trend that visitors seem to be more likely to travel north along the Eastern Australian coast visiting the FNQ region at the end of their Australian trip.

Table 17: Changes in International Market Profiles 1996-1999 FNQ Region

Characteristics	1996	1999		Characteristics	1996	1999
Age				Time in Australia		
< 29 years	46%	51%		<8 nights	15%	20%
30-59 years	31%	35%		8-28 nights	43%	51%
>60 years	23%	14%		>28 nights	42%	29%
Country of Residence				Accommodation Used		
Germany	14%	13%		Hotel/Motel/Resort	55%	50%
UK/Ireland	16%	19%		Backpackers/hostel	22%	27%
Other Europe	21%	24%		Rented apartment	3%	3%
USA/Canada	21%	14%		Caravan/campervan	12%	12%
Japan	14%	15%		Boat	3%	4%
Other Asia	8%	6%		Friend/relative	3%	3%
New Zealand	5%	4%		Other	2%	1%
Other	1%	5%				
With a tour group?				First visit to Australia?		
Yes	12%	13%		Yes	76%	72%
No	88%	87%		No	14%	28%
Travel Party				Transport*		
Adult couple	40%	40%		Private Vehicle	12%	7%
Family	6%	8%		Rental car/camper	6%	28%
Group friends/family	20%	16%		Airline	15%	30%
Alone	33%	35%		Long distance bus	3%	12%
Other	1%	1%		Other	64%	23%
Arrival City				Departure City		
Sydney	44%	41%		Sydney	36%	35%
Melbourne	9%	8%		Melbourne	9%	6%
Brisbane	8%	10%		Brisbane	7%	8%
Cairns	27%	30%		Cairns	26%	40%
Other	22%	21%		Other	32%	11%

* Transport to the region

A comparison of FNQ and Whitsunday 1999 Market Profiles

The final set of analyses conducted with the IVS data was a comparison of the 1999 international market profiles for the two regions. Table 18 contains these comparisons. In 1999 the Whitsunday region had a greater proportion of backpackers in its international market reflected in more visitors aged less than 29 years, longer stays in Australia, higher use of backpacker hotels, and higher use of long distance buses for transport to the region. International visitors to the Whitsunday region were also more likely to arrive and leave Australia through Sydney. By way of contrast, more visitors to the FNQ region were likely to arrive and depart Australia through Cairns itself and to use airlines to travel to the region. There were higher proportions of the market in Cairns with previous Australian travel experience and who were travelling as part of a tour. These results suggest a higher proportion of tour groups and visitors on more structured or packaged holidays in the FNQ region.

Summary

Three key themes emerged from these analyses. Firstly, there was both an increasing number of international visitors and an increasing proportion of backpackers to the Whitsunday region. Secondly, there has been a change in the pattern of travel within Queensland over the 1996-1999 period with more travellers arriving in Sydney and leaving from Cairns so that more international visitors arrive in the Whitsunday region before they travel to Cairns. Thirdly, while the FNQ region had a higher proportion of package tour group visitors in 1999 than the Whitsundays, there has also been a move to greater numbers of younger, independent travellers in the FNQ region.

Given what has been previously noted in the studies of repeat reef visitation and in the comparisons of reef and non-reef visitors these changes would support increasing reef visits in the Whitsundays and increasing numbers of visits with smaller boats. This is consistent with the EMC returns analyses.

Table 18: A comparison of International Market Profiles 1999 FNQ and Whitsunday Regions

Characteristics	Whitsunday	Cairns		Characteristics	Whitsunday	Cairns
Age				Time in Australia		
< 29 years	73%	51%		<8 nights	9%	20%
30-59 years	20%	35%		8-28 nights	24%	51%
>60 years	7%	14%		>28 nights	67%	29%
Country of Residence				Accommodation Used		
Germany	12%	13%		Hotel/Motel/Resort	24%	50%
UK/Ireland	28%	19%		Backpackers/hostel	47%	27%
Other Europe	30%	24%		Rented apartment	1%	3%
USA/Canada	13%	14%		Cara/campervan	13%	12%
Japan	10%	15%		Boat	13%	4%
Other Asia	1%	6%		Friend/relative	1%	3%
New Zealand	2%	4%		Other	1%	1%
Other	4%	5%				
With a tour group?				First visit to Australia?		
Yes	7%	13%		Yes	84%	72%
No	93%	87%		No	16%	28%
Travel Party				Transport*		
Adult couple	31%	40%		Private Vehicle	8%	7%
Family Group	3%	8%		Rental car/camper	16%	28%
Friends/family	17%	16%		Airline	13%	30%
Alone	49%	35%		Long distance bus	27%	12%
Other	-	1%		Other	36%	23%
Arrival City				Departure City		
Sydney	51%	41%		Sydney	51%	35%
Melbourne	11%	8%		Melbourne	7%	6%
Brisbane	17%	10%		Brisbane	11%	8%
Cairns	12%	30%		Cairns	19%	40%
Other	9%	21%		Other	18%	11%

* Transport to the region

PERCEIVED QUALITY OF REEF OPERATIONS AND DESTINATIONS

Sources of Information on Perceived Reef Tourism Quality

One of the factors that can lead to a decline in visitor numbers to a tourist site is a poor quality experience that results in negative images passed onto other potential visitors. It is important to note that this factor involves more than just current visitors having a negative experience. This information has to be available to potential visitors before they make their decisions. For negative images to be a viable explanation of a decline in visitation, evidence of three things is required:

- that previous or current visitors actually have a negative experience;
- that these negative experiences are promoted through various communication channels; and
- that the potential visitors use these channels before they make the decision to visit.

The research team identified two sources of data that could inform this issue of whether or not declines in use of different types of reef tour operation in particular regions could be attributed to negative perceptions of the quality of either the reef operations or the reef sites they visit. The first of these was the 2001 GBR Visitor Analysis data described in the section on repeat reef visitation. The 2001 data is part of an ongoing project, which has collected data on GBR tourists since 1995. This data therefore offers the opportunity to investigate any problems that visitors might have with their experiences and if reef visitors' satisfaction has changed over time. In addition this data allow for an investigation of the information sources used by GBR visitors.

The second data source identified was another CRC Reef task, this time consisting of a series of telephone surveys conducted in 1997 and 2001 with both residents of the coastal regions adjacent to the GBR and the eastern capital cities of Brisbane, Sydney, Canberra and Melbourne. It is possible in this data to identify people who have been to the GBR and to examine their perception of its quality and overall environmental status. In addition any changes in these perceptions can be tracked over time from

1997 to 2001. More details on the survey methodology used in these studies can be found in Green et.al. 1999.

Aims of the Analysis

The aims of the analyses of these two data sources were to examine changes in the images of the quality of the GBR environment over time, and to look at reef visitor satisfaction and changes in satisfaction over time. The analyses also examined patterns of reef visitor use of information sources.

Results

Images of Reef Quality 1997-2001

The telephone survey asked people to rate the state of the GBR now on a four point scale from 1 meaning very good, through 2 for good, 3 for poor to 4 indicating very poor. The survey also included questions about whether or not the respondent had been to the GBR and when their last visit was. Table 19 shows the mean scores on this scale for 1997 and 2001 for three types of visitor – those who had never been to the GBR, those who have been within the last 5 years and those who had been but their last visit was more than 5 years ago. A series of parametric and non parametric (Kruskal Wallis) analyses of variances were conducted and these revealed that there were no significant differences between the three types of GBR visitor in 1997 but there were in 2001. The pattern in both years, however, was the same. Visitors who had been more recently to the GBR have a more positive view of the quality of the GBR environment. In other words, the results suggest that actually visiting the GBR did not result in a negative image of the quality of the environment. The results also show, however, that, people who haven't been recently or who have never been, do have slightly more negative images and this could be a barrier to visitation. Reasons given for not visiting the GBR, however, tend not to support this conclusion. The main reason given for not visiting by respondents who had not been to the GBR and who did not plan to go included too expensive, I'm too old and it isn't an appealing destination.

Table 19: Perceived State of the GBR 1997-2001

Visitor Group	1997	2001
Visitors who have been to the GBR within the last 5 years	1.9*	2.0
Visitors who have been to the GBR more than 5 years ago	2.1	2.3
Visitors who have never been to the GBR	2.1	2.3

* Scores are mean rating on a scale from 1 – very good to 4 - very poor.

Reef Visitor Satisfaction 1996-2001

The GBR visitor analysis survey includes a question asking visitors to rate their satisfaction with the overall reef experience on a scale from 0 indicating not at all satisfied, to 10 for very satisfied. Table 20 lists the mean scores on this scale and the likelihood that visitors would recommend a reef trip to others, for data collected from tourists on reef operations in the FNQ region in 1996 and 2001 and in the Whitsunday region in 1998 and 2001. Overall, visitor ratings of satisfaction have remained consistently high. There was no change in the ratings for the FNQ region between 1996 and 2001 and an increase for the Whitsunday region over the period 1998 to 2001.

Summary

Analyses of visitors' ratings of satisfaction with experiences in the different GBR regions and over time did not find any major differences. Analyses of data available on reef images and ratings of the quality of the reef environment for people who had visited the reef prior to being surveyed also found no major decline in perceptions of reef quality.

Table 20: Reef Visitor Satisfaction 1996-2001

Measure of Satisfaction	FNQ region 1996	Whitsunday region 1998	FNQ region 2001	Whitsunday region 2001
Would you recommend this reef trips to others?				
Yes, definitely	82%	73%	73%	79%
Probably	15%	24%	23%	18%
No	-	1%	1%	2%
Don't Know	3%	2%	3%	2%
Mean Score out of 10 on the satisfaction scale	8.8	8.5	8.8	8.7

BARRIERS TO VISITING THE GREAT BARRIER REEF

Aims of the Analysis

All of the analyses conducted in the previous sections have been secondary analyses of existing data sets. These analyses have been useful in both outlining the changing patterns of visitation to the GBR over time and in suggesting some of the factors underlying these patterns. But none of these surveys had directly asked visitors to the regions adjacent to the GBR who do not visit the GBR why they don't go. The aim of the present study was to do exactly this. The aim of this analysis was to identify a sample of visitors to the Cairns region who have not visited the GBR while in the region and to ask them why they didn't go.

Data Collection Methods

Visitors were surveyed at the departure lounge of the Cairns domestic airport during May 2002, and various accommodation places in Cairns during July 2002. The study involved the collection of 191 questionnaires from visitors who had been to the Great Barrier Reef or islands on this trip to Cairns (referred to as the Reef sample). A total of 289 questionnaires were also collected from visitors who had not been and did not plan to go to the GBR on this trip to Cairns (referred to as the Non-Reef sample). There was an overall response rate of 66%. The survey was conducted with English speaking visitors only. The target sample sizes were set at 150 visitors for the Reef category and 250 in the Non-Reef group. Once the target sample size had been reached in the first category no further surveying was conducted with this group. The Reef group was not the primary focus of the study but responses from reef visitors were necessary to provide direct comparisons on key variables. As with the repeat reef visitors analyses all statistical test were set at the $p < 0.01$ level.

Results

Demographic Profiles of Reef and Non-Reef Visitors

Males and females were evenly distributed across the two samples. Non-reef visitors were significantly older (mean = 46 years) than the reef visitors (mean = 39 years). Table 21 shows that Non-reef visitors were more likely to be over 60 years of age, while Reef visitors were more likely to be in the under 21 and 21-30 year age groups. Non-reef visitors were more likely to be Australians from interstate with annual household incomes between \$21,000 and \$40,000. Reef visitors, on the other hand, were more likely to be international tourists with an annual household income of over \$100,000. In both samples, the majority of respondents were travelling with their spouse or partner. Reef visitors were also more likely to be travelling with friends. Less than 6% of either sample had children travelling with them.

Factors Influencing the Decision to Visit the Cairns Region

Respondents were asked to rate the importance of various reasons for visiting the Cairns region. Table 22 shows that for Reef visitors the most important factors were *'a chance to visit the GBR'*, *'chances to see wildlife/birds I don't normally see'*, and *'opportunities to visit the rainforest'*. Non-reef visitors gave the highest importance to *'warm sunny weather'*, *'opportunities to visit the rainforest'*, *'chance to escape a busy life'* and *'outstanding scenery'*. As would be expected, the chance to visit the GBR was significantly more important for the Reef sample (mean = 3.4) than for the Non-reef sample (mean = 2.4). Seeing the GBR was still of some importance to the Non-reef sample however, suggesting that perhaps some of these visitors had planned to go to the reef but were unable to do so for some reason. The opportunity to visit family and friends was significantly more important to Non-reef visitors (mean=2) than to Reef Visitors (mean=1.4).

Table 21: Demographic Profiles of Reef and Non-Reef Visitors 2002

Variable	Reef Visitors	Non-reef Visitors
Age group		
< 21 years	10%	5%
21 – 30 years	40%	19%
31 – 40 years	14%	13%
41 – 50 years	7%	17%
51 – 60 years	14%	17%
> 60 years	16%	29%
Visitor Origin		
International visitor	76%	27%
Interstate visitor	17%	48%
Queensland resident	7%	26%
Usual Residence		
Australia	24%	74%
UK/Ireland	39%	12%
Other Europe	16%	7%
US/Canada	18%	3%
Other	4%	5%
Travelling With		
Alone	18%	14%
Spouse/partner	45%	58%
Family	7%	11%
Friends	21%	10%
Family & Friends	5%	4%
Other	1%	2%
Annual <u>household</u> income before tax		
Under \$20,000	14%	16%
\$21,000 - \$40,000	15%	24%
\$41,000 - \$60,000	15%	20%
\$61,000 - \$80,000	11%	12%
\$81,000 - \$100,000	13%	14%
Over \$100,000	32%	14%

Table 22: Factors Influencing Choice of Destination

Factors	% giving very important rating		Mean*	
	Reef Visitors	Non-reef Visitors	Reef Visitors	Non-reef Visitors
A chance to visit the GBR	60%	17%	3.43**	2.39
Chances to see wildlife/birds I don't normally see	45%	25%	3.13	2.70
Opportunities to visit the rainforest	44%	34%	3.13	3.04
Access to wilderness and undisturbed nature	36%	24%	3.05	2.81
Outstanding scenery	34%	32%	3.13	3.05
Chances to escape a busy life	34%	34%	2.84	2.83
Outdoor adventure activities	29%	21%	2.79	2.49
Opportunities to increase my knowledge	24%	17%	2.85	2.60
A place I can talk about when I get home	24%	21%	2.63	2.54
A wide variety of things to do	23%	18%	2.88	2.73
Warm sunny weather	21%	38%	2.66	3.05
Opportunities to experience Indigenous culture	15%	13%	2.43	2.04
Pleasant rural scenery	14%	17%	2.54	2.60
A place that provides good value for money	14%	18%	2.53	2.47
Opportunities to visit family/friends	10%	21%	1.43	1.95**
Interesting small towns & villages	6%	13%	2.10	2.42
Activities for the whole family	5%	10%	1.69	1.88
A fashionable place to go	5%	4%	1.47	1.46
Good nightlife/entertainment	3%	6%	1.75	1.71

*Respondents were asked to rate each factor on a four-point scale (1 =Not at all important, 2=somewhat important, 3=important, 4=Very important).

**Significant at $p \leq .01$

Features of this trip to the Cairns Region

The most popular activities among both groups were rainforest trips, beach visits, shopping, visiting local markets and scenic drives (Table 23). Reef visitors were more likely than Non-reef visitors to have gone on a wildlife viewing tour ($\Phi = -2.27$) during their visit to the region. Reef visitors also participated in significantly more activities overall (mean=6.7) than Non-Reef visitors (mean=5.7). There were no significant differences between the two groups, however, for the average number of nights spent in the region. Nineteen percent of the Reef sample had been to the

Cairns region before, while 60% of those in the Non-reef sample had visited the Cairns region before. When looking at visitors who had been to the region before, there were no significant differences between the two samples for the mean number of previous visits to the region.

Table 23: Features of this trip to the Cairns region

	Reef Visitors	Non-Reef Visitors
Activities		
Visited the rainforest	86%	74%
Visited the beach	78%	66%
Went shopping	76%	75%
Visited a local market	69%	61%
Went on a scenic drive	68%	70%
Went on Skyrail	45%	35%
Visited a museum/art gallery	42%	27%
Went on the Kuranda train	39%	32%
Went wildlife viewing with a tour	36%	16%
Went wildlife viewing – not on a tour	35%	28%
Went on a lake/river cruise	32%	25%
Visited a historic site	28%	10%
Went white water rafting	9%	5%
Visited a wildlife park/zoo	-	17%
Total nights in the region		
1 – 2 nights	6%	10%
3 – 4 nights	43%	23%
5 –7 nights	26%	35%
8 – 14 nights	17%	15%
21 nights	5%	7%
>21 nights	4%	10%

Previous Reef Experience

Twenty percent of the Reef visitors and 47% of the Non-reef visitors had previously visited the GBR. The average number of previous GBR visits for those who have been did not differ significantly between the two samples. Within the Reef visitor group, 73% had been to the GBR once or twice before, with nearly half the trips in the

last three years (Table 24). Within the Non-reef visitor group that had previously been to the reef, 25% had been three or more times before. Nearly half of all previous trips by Non-reef visitors had been undertaken over six years ago. For both groups, most visitors travelled with a reef tour company during their previous GBR trip. Thirty-seven percent of the Reef visitors and 38% of Non-reef visitors had visited a coral reef other than the GBR.

Table 24: Previous Reef Experience

Variable	Reef Visitors	Non-Reef Visitors
Previous GBR visits*		
1	47%	50%
2	26%	25%
3-5	21%	19%
6-10	5%	2%
>10	-	4%
Years since last visit*		
This year	24%	2%
1 year ago	5%	10%
2 years ago	14%	19%
3-5 years ago	24%	20%
6-10 years ago	16%	25%
11-20 years ago	14%	17%
More than 20 years ago	3%	7%
Visits to Other Coral reefs		
Western Australia	4%	17%
Caribbean	10%	5%
Africa	6%	2%
Red Sea	4%	4%
South East Asia	8%	6%
South Pacific	5%	13%
Other reef	9%	4%

* Note that the percentages are based on the number of people who had previously been to the GBR in the Cairns region

GBR Information Sources and Images

The most common sources of information about the GBR for Reef visitors were friends/family, books/library, other travellers, and articles in newspapers/magazines (Table 25). Among the Non-reef respondents, the most common information sources were friends/family, articles in newspapers/magazines, and brochures/pamphlets picked up within the region. The Reef sample were more likely to have obtained information about the GBR from a tour operator/company ($\Phi=-.237$), books/library ($\Phi=-.178$), or a travel agent ($\Phi=-.172$). The Non-reef sample were more likely to cite 'been before' as their most important information source ($\Phi=.162$).

Table 25: GBR Information Sources and Images

GBR Information Source*	Reef Visitors	Non- Reef Visitors
Friends/family	29%	28%
Books/library	28%	14%
Other travellers	27%	23%
Articles in newspapers/magazines	26%	28%
Tour operator/company	25%	8%
Brochures/pamphlets picked up within the region	23%	27%
Travel agent	23%	10%
Accommodation	21%	15%
Brochures/pamphlets picked up outside the region	18%	20%
Booking/information centres in the region	16%	15%
The Internet	16%	8%
Been before	11%	23%
I had no information	5%	9%
Automobile Association	<1%	5%

* Respondents were asked to list the three most important sources

Respondents were asked to list three words that they would use to describe the Great Barrier Reef. There were no major differences between Reef and Non-Reef visitors in the words they used to describe the GBR. The five most commonly used words were beautiful, colourful, interesting, awesome, and large.

Reasons for not going to the Reef

Non-reef respondents were asked to indicate the reasons why they did not visit the reef or islands on this trip to Cairns. Table 26 shows that the most common reasons given for not going to the GBR on this trip were 'I didn't have enough time', 'bad weather &/or the sea was too rough', 'I couldn't afford it' and 'I've been before and it was a once in a lifetime experience'. Respondents who gave more than one answer were then asked to indicate which of the reasons they listed was the most important reason for not visiting the reef or islands off Cairns. A total of 116 respondents gave more than one reason and within this group the most important reasons for not going to the GBR were 'been before and it was a once in a lifetime experience', 'couldn't afford it', and 'didn't have enough time'.

Table 26: Reasons for not going to the GBR on this trip

Reason	% of Sample
I didn't have enough time	24%
Bad weather/sea too rough	17%
I couldn't afford it	16%
I've been here before and it was good, but it's a 'once in a lifetime' experience	16%
I get seasick	14%
There were too many other things to do	10%
I've already visited the reef or islands on my way here to the Cairns region	12%
I'm planning to visit the reef or islands somewhere else	11%
I've been before and there's nothing new to do	8%
I'm not very interested in the reef/islands	5%
I believe the reef in this area has been damaged	4%
Other people with me didn't want to go	4%
I've been before and it wasn't all that good	1%
I couldn't find a tour that suited my schedule	1%
I couldn't find a reef/island tour that offered what I wanted	0%

Summary

- Visitors that did not go to the reef on this trip to Cairns were more likely to be older, interstate visitors, and with an annual household income of between \$21,000 and \$40,000.
- In deciding to visit the Cairns region, the Non-reef sample gave the highest importance to *'warm sunny weather'*, *'opportunities to visit the rainforest'*, and *'a chance to escape a busy life'*. The Reef sample, on the other hand, gave the highest importance to *'a chance to visit the GBR'*, *'chances to see wildlife/birds I don't normally see'*, and *'opportunities to visit the rainforest'*. The two groups only differed significantly, however, on two of the factors: *'a chance to visit the GBR'* (which was more important to Reef visitors) and *'opportunities to visit family and friends'* (which was more important to Non-reef visitors).
- The Reef visitors were more likely than the Non-reef visitors to have gone on a wildlife tour while in Cairns and participated in significantly more activities overall.
- Twenty percent of the Reef sample and 47% of the Non-reef sample had visited the GBR or islands on a previous trip to this region. Just under 40% of both samples had visited a coral reef other than the GBR.
- The Reef sample were more likely to have obtained information about the GBR from a tour operator/company, books/library, or a travel agent, while the Non-reef sample were more likely to cite *'been before'* as their most important information source.
- The three main reasons why the Non-reef visitors did not go to the reef were *'I didn't have enough time'*, *'bad weather &/or the sea was too rough'* and *'Been before and it's a once in lifetime experience'*.
- The majority of all respondents would like to return to the Cairns region in the future. Non-reef visitors were more likely to return to the region within the next 12 months but Reef visitors were more likely to go to the reef if they returned to the region.

SUMMARY OF MAIN FINDINGS

Trends in Reef Visit Numbers

The analysis of the EMC returns showed a drop in the number of reef visits for the entire GBRMP in 1997 but then a return to growth with an overall increase of 16% from 1996 to 2000. For the Cairns section there was a drop in 1997 in reef visits and then a return to growth. This growth has, however, been much slower than for the rest of the GBRMP and in 2000 the total number of reef visits for the Cairns section was still below the 1996 level. The Central section (includes the Whitsundays), by way of contrast, experienced continuous and substantial growth with an overall increase of 43% from 1996 to 2000. Over the entire GBRMP there was growth in the number of reef visits taken on a boat in the 16-50 capacity category. The largest boat capacity (>100) experienced a fall in visit numbers in 1997 and then growth but the 2000 levels were still below the numbers recorded for 1996. When looking at both section and boat capacity there was a fall in visits in the Cairns section for the largest boats but steady growth for the 51-100 boat category. In the Central section there was major growth in visit numbers in the 16-50 capacity group and growth overall in the less than 15 and 51-100 capacity categories.

The EMC returns data also showed an increase in competition within the GBR tourism sector in terms of the number of vessels operating. Over the 1996 to 2000 time period there was an increase in the number of vessels submitting an EMC return in virtually all categories.

Trends in IVS Data

The IVS data showed an overall increase in international visitor numbers to both the Whitsunday and FNQ regions for the 1996 to 1999 time period. This growth was substantial for the Whitsunday region with an overall growth rate of 127%. The corresponding figure for the FNQ region was 10%. In addition the analyses indicated that over time international visitors to the Whitsunday region became

- Younger

- More likely to be from Europe
- More likely to be independent travellers
- More likely to stay in hostels
- More likely to have longer stay in Australia
- More likely to have arrived in Sydney and be departing from Cairns

Over the 1996 to 1999 time period international visitors to the FNQ region became:

- Slightly younger
- More likely to have shorter stays in Australia
- More likely to have been to Australia before
- More likely to be independent travellers.

Although there were some similar trends in the two regions in 1999, the FNQ region had more package tourists and a lower proportion of backpackers than did the Whitsunday region. Additionally, the information on city of arrival and departure suggested a change in the pattern of travel in Queensland with more visitors arriving in Australia in Sydney and travelling north along the Queensland coast. This meant that more international travellers were arriving in the Whitsunday region before the FNQ region.

Main Types of Reef Visitor

Three sets of tourist data were available for analysis of the characteristics of reef versus non-reef visitors and patterns of repeat reef visitation. There was considerable consistency between these three sets of analyses and with earlier studies conducted on other data sets. The consistency of findings across several studies with data collected at different times and places and in different ways lends considerable support to these findings. In summary two types of reef visitor can be identified and profiled from these studies. Table 27 summarises the profiles of these two groups. The first are labelled the “Once in a lifetime” group and refers to visitors who travel to the GBR once only. Many of the visitors who did not go the GBR during the trip on which they were interviewed fell into this category. The second group are repeat reef visitors or “Reef Enthusiasts”. When considering the results reported in Table 27

and the trends identified in the IVS analyses we can see that over the time period 1996 to 1999 the number of international visitors to the Whitsunday region with the same characteristics as the Reef Enthusiasts has been increasing.

Table 27: Characteristics of Two Main Reef Visitor Markets

Once in a Lifetime	Reef Enthusiasts
<ul style="list-style-type: none"> • Tend to be on repeat visits to the region • More likely to be in a family group • Usually travelling in a private vehicle • More likely to be domestic visitors • More likely to be intrastate visitors • More interested in relaxation • Less likely to go to visitor information centres • More likely to make plans day to day • Tend to have their one reef experience on a pontoon trip • More likely to say that there were not enough activities • Use fewer information sources relying more on having been to the region before • More likely to be visiting friends and relatives • Their GBR experience was often more than 5 years ago • Tend to have lower incomes • Engage in fewer commercial tourist activities of any type 	<ul style="list-style-type: none"> • Most likely to be first time visitors to the region • More likely to be international visitors especially from Europe and North America • Younger • Have more experience with coral reefs in general • Seek opportunities to snorkel and dive • Have longer stays in the region • More physically active • Have higher incomes • More likely to go on dive trips • Over time they move from larger to smaller operations • In their repeat reef experiences they seek variety both in the location and type of operation

Barriers to Reef Visitation

The two studies on barriers to reef visitation also found some consistent results.

Firstly both studies identified a small but substantial group of non-reef visitors who stated either:

- that they wanted to participate in reef activities but couldn't (16% of the CRC Rainforest recreation demand study sample), or

- that opportunities to visit the GBR were very important in their decision to visit the FNQ region (17% of the 2002 study focussed on barriers to visitation).

In addition these analyses identified the increasing competition within the GBR tourism sector as a factor. Twenty-three percent of those surveyed in the FNQ region stating that either they had visited the GBR at another location on the way to the FNQ region or were visiting after they left the FNQ region. Five key barriers to reef visitation were identified:

- Time available
- Cost
- Having been before and believing it is a once in lifetime experience
- Poor weather/fear of seasickness
- Access to the appropriate type of experience

Experience Quality

No significant changes in perceived reef quality were found amongst Australian reef visitors. Overall, the majority of all those sampled thought that the state of the GBR was good or very good. In addition no significant differences were found in the ratings of satisfaction given to reef operations over time or between the different regions. In addition in the 2002 study of barriers to reef visitation only 4% of the respondents said that they didn't go to the GBR because they believed the reef was damaged. Further only 1% said they had been before and they didn't enjoy the experience.

Factors Not Analysed

The following factors or groups were not able to be analysed because data either does not exist or is not available.

- International visitors' perceptions of reef quality.

- Changes in the domestic tourist markets to the coastal regions adjacent to the GBR
- Changes in competition from tourist activities and attractions on the mainland. Anecdotal evidence suggests growth in the number of new and refurbished attractions in the FNQ region. This is supported by one of the findings of the 2002 barriers to reef visitation study. In this study 10% of the respondents stated that one of the reasons they didn't visit the GBR was because there were too many other things to do in the region. There is, however, evidence to contradict this. Non-reef and Once in Lifetime reef visitors had consistently low levels of participation in all commercial tourism activities.
- Most of the studies reported were conducted with English speaking visitors only. Barriers to reef visitation for Asian visitors are unknown.

CONCLUSIONS AND IMPLICATIONS FOR GBR TOURISM

Factors Influencing Reef Visitation Patterns

In the analyses of the various factors related to reef visitation the following major themes have emerged. There have been changes in the international visitor markets to the FNQ and Whitsunday regions. These changes are consistent with a rise in reef visits in the Central/Whitsunday section, particularly for smaller boats. This is a clear and consistent pattern that is likely to be the main contributor to the reef visitation patterns that exist. An overall increase in the proportion of international visitors who have been to Australia before and a change towards more European visitors and more backpackers are the main factors underlying a move away from larger boats and a wider spread of locations for reef visits.

There have been changes in the patterns of travel along the GBR coast. The IVS data also indicates a move away from arriving in Cairns to greater use of Sydney as the main arrival city for international visitors. Thus a greater number of international visitors arrive in the Whitsunday region before they visit Cairns.

There is increased competition both within the reef tourism sector and from non-reef tourist attractions. There are an increasing number of vessels operating which for the Cairns section would contribute to greater pressure on individual operators. In addition there has been an increase in the Cairns region in other tourist attractions and for at least some visitors this limits their participation in reef activities.

There exists a set of barriers to reef visitation which include cost, available time, access and a belief amongst some tourists that a GBR visit is a once in a lifetime experience. The issues of time and access appear to be related to limited use of information sources and less systematic planning approaches. At core these are all related issues. For some regional visitors the cost of a reef trip is one of the reasons contributing to the perceptions that a GBR trip is a once in lifetime experience. In addition it seems that many of these visitors base this judgement on their one reef experience of a reef pontoon day often taken more than 5 years ago. These visitors do

not seek information and so are likely to be unaware of the range of reef experience options and perhaps even of current prices for reef trips.

In summary the EMC returns data show a decline in reef visits with large boats and this decline is particularly severe in the Cairns section. The EMC data also shows major growth in reef visits in the Central/Whitsunday section, especially on smaller boats. This pattern is entirely consistent with the changes in international visitation. Thus the major contributing factor is changes in international visitation. But the analyses also identified a group of visitors to the coastal regions adjacent to the GBR who do not visit the reef seeing it as a once in a lifetime experience. An increase in these visitors to the adjacent coastal regions is also likely to make some contribution to the reef patterns that are seen.

Challenges for GBR Tourism

It is difficult for either individual reef tour operators or the reef tourism sector as a whole to have much influence on the nature of international visitation to Australia. One option which might have long-term effects is to work with the relevant tourism promotion organisations to encourage more package tourists, especially from Asia, to come to Australia. The commencement of the new Australian airlines operations to Cairns may go some way towards this goal. But at this point in time with the terrorist threats a major factor in international travel it is virtually impossible to predict travel patterns.

It is also likely that over time Asian visitors will develop more travel experience and confidence and begin to behave like the independent North American and European visitors. Reef tourism offers a somewhat unusual situation. Visitors often have their first reef experience on a large boat to a reef pontoon and for some visitors this is clearly such a positive experience that they become Reef Enthusiasts. In other tourism sectors, such as hotels and transport, high satisfaction is associated with repeat business for the specific company. In the GBR tour case high satisfaction is related to repeat business but not with the same company. Reef Enthusiasts develop both the confidence and the motivation to seek more reef experiences especially on a smaller more specialised type of operation. In a contradictory fashion a successful

large boat operation loses itself business. One answer, albeit an expensive one, is diversification within businesses.

Another challenge is to encourage the Once in a Lifetime visitors to repeat a reef experience when they return to the adjacent regions. Given their interest in relaxation and disinterest in the more strenuous outdoor activities, repeat reef visitation for this group is likely to be with larger boats. One issue that could be explored is the provision of information about reef opportunities. Many of these visitors appear to make decisions about what they will do based on limited and out of date information. Promotional campaigns which emphasise how reef operations have changed over time and that the GBR is itself a very diverse and dynamic place may be a possible route to encourage a repeat visit amongst this group. Clearly addressing the issue of cost is also necessary for this group.

Overall reef visits continue to grow, although at a much slower rate than predicted in the mid 1990s. This growth is also associated with a change in the patterns of reef visitation with visitors spreading out more along the coast and seeking smaller operations. The main contributing factors are changes in international visitation to Australia and an ongoing process based on repeat reef visitation. These forces are not within the control of reef operators, either individually or as a group, and thus present some major challenges for the GBR tourism sector.

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LIST OF ACRONYMS

AMPTO:	Association of Marine Park Tour Operators
ANOVA:	Analysis of Variance
BTR:	Bureau of Tourism Research
CRC:	Cooperative Research Centre
EMC:	Environmental Management Charge
FNQ:	Far North Queensland
GBR:	Great Barrier Reef
GBRMP:	Great Barrier Reef Marine Park
GBRMPA:	Great Barrier Reef Marine Park Authority
IVS:	International Visitor Survey
QPWS:	Queensland Parks and Wildlife Service
TRRAC:	Tourism and Recreation Reef Advisory Committee
WTMA:	Wet Tropics Management Authority