GREAT BARRIER REEF TOURISM

A REVIEW OF VISITOR USE

S. M. Driml

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Great Barrier Reef Marine Park Authority

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EXECUTIVE SUMMARY

The main aim of this report is to present information on tourism to the Great Barrier Reef. The report focuses on the three major modes of tourism in the Great Barrier Reef, these are: tourism on commercial passenger vessels, island resort tourism and recreational use of private boats.

Information on tourism in Australia, Queensland and mainland North Queensland adjacent to the Great Barrier Reef is included in order to place Great Barrier Reef tourism in context.

Data show that tourism in Australia both from international and domestic sources is increasing. International arrivals grew by 12.5 percent from 1985 to 1986 while domestic tourism measured by visitor nights grew by 3 percent in the same year. (Section 2).

The Great Barrier Reef and adjacent mainland attracted around 182 700 international visitors and 2 290 000 domestic trips in 1985. This was 16 percent of international visitors to Australia and 4 percent of Australian domestic trips. (Section 2)

There were around 275 commercial passenger vessels operating in the Great Barrier Reef Region in 1984/85. These vessels carry passengers for 1.2 million visitor days per annum. Expenditure by charter boat passengers was $35 million in 1984/85. (Section 4)

Island resorts catered for around 151 000 visitors staying for 790 000 visitor nights in 1984/85. Tourists spent around $84 million in that year. (Section 5)

Private motor boats provide around 690 000 visitor days access to the reef. Boat owners spent approximately $68 million per annum on recreational boating in the Great Barrier Reef Region in 1984/85. (Section 6)

The total expenditure by tourists visiting the Great Barrier Reef Marine Park and islands was around $187 million in 1984/85. Tourism expenditure is increasing in real terms by about 10 percent each year. (Section 3)

Keywords: Tourism, Great Barrier Reef, island resorts, charter boats, private boats.

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ABBREVIATIONS USED

ABS	Australian Bureau of Statistics
ATC	Australian Tourist Commission
BIE	Bureau of Industry Economics
DTM	Domestic Tourism Monitor
IAER	Institute of Applied Environmental Research
IVS	International Visitor Survey
QDHM	Queensland Department of Harbours and Marine
QTTC	Queensland Tourist and Travel Corporation

1. INTRODUCTION

As one of the natural wonders of the world, the Great Barrier Reef has been written about, photographed and filmed so it is familiar to Australians and to many other people around the world. Some of these people have visited the Great Barrier Reef, coming from overseas and within Australia, and others are fortunate to live adjacent to the reef, having it as their recreational "backyard". Others plan to visit in the future.

This report discusses all recreational use of the Great Barrier Reef, recreation by a variety of users undertaking a range of activities. The report examines visitor numbers, modes of access, activities, trends in use and also economic characteristics of uses. This information is basic to the understanding of human use of the Great Barrier Reef and to the task of planning, managing and monitoring the Great Barrier Reef Marine Park.

Under the Great Barrier Reef Marine Park Act 1975, an area known as the Great Barrier Reef Region has been designated, and 98.5 percent of this Region has been declared a Marine Park. The Marine Park is a multiple use area and all allowed uses are being incorporated within zoning plans. The only activities which are specifically prohibited throughout the Marine Park are oil exploration, mining (other than for approved research purposes), littering, spearfishing with SCUBA and the taking of large specimens of certain species of fish.

The objectives of the zoning plans, as specified under the Act, can be summarized as "conservation with reasonable use". In the planning and management of the Marine Park therefore, both human use demands and natural environment constraints must be balanced.

Recreation is the "activity" that brings most people into the Marine Park. The only other economically important use of the Great Barrier Reef, and one which brings a reasonable number of people into the region, is commercial fishing. Recreational use of the reef ranges from extractive recreational fishing to "look don't take" activities like coral viewing. All human activities have the potential to impact the environment.

Before turning to the body of this report, some definitions are warranted. The term "recreation" is used interchangably with "tourism" in this report in order to emphasise that both people who live adjacent to the Great Barrier Reef and those who travel some distance are considered. Actually, all recreational users of the Great Barrier Reef come under the Bureau of Industry Economics' definition of a "tourist" as:

"A person who undertakes travel, for any reason, involving a stay away from his or her usual place of residence for at least one night; or

A person who undertakes a pleasure trip involving a stay away from home for a least four hours during daylight, and involving a round trip distance of at least 50 km; however for trips to national parks, state and forest reserves, museums, historical parks, animal parks, and other man-made attractions, the distance limitation does not apply." (Bureau of Industry Economics, 1984)

According to this definition, all overnight and day visitors to the Reef Region are "tourists", though some people, including local recreational fishermen who have been visiting the reef all their lives, may object to that term.

It is important early on to define the area on which this report is focused. The Great Barrier Reef Region was defined by the Great Barrier Reef Marine Park Act 1975 and includes an area of approximately 350 000 sq km. The Region (shown as Figure 1) commences at low water mark on the Queensland coast and around the majority of islands. A small number of islands which are under Commonwealth tenure are included in the Great Barrier Reef Region.

An area described as "within the outer boundaries of the Great Barrier Reef Region" incorporates the marine area and all islands and cays regardless of jurisdiction. This area may be considered an entity with respect to recreational use. It is this area on which this report concentrates. For the purposes of this report, the area "within the outer boundaries of the Great Barrier Reef Region", specifically including islands and cays, will be termed the "Reef Region".

Closely associated with the Reef Region are the Queensland coastal towns and cities. These locations accommodate permanent residents who may visit the Reef Region, and also have a considerable amount of tourism infrastructure. The extent to which tourism to coastal Queensland is dependant on the Great Barrier Reef is unknown. Surveys of tourists staying in coastal Queensland destinations have found that attractions to the area included: "sunny weather" and "scenery" as well as "the Great Barrier Reef" (Cameron McNamara, 1983).

It would be exaggerating to claim that tourism in coastal Queensland was all due to the presence of the Great Barrier Reef. By concentrating on the "Reef Region" area, those people travelling from permanent or tourist accommodation on the mainland coast to the Great Barrier Reef will be emphasised in this report.

Tourism on the mainland is only discussed briefly in this report.This report presents new data which have been collected specifically on recreation in the Reef Region and thus a description of recreational use of the Great Barrier Reef proper can be presented for the first time.

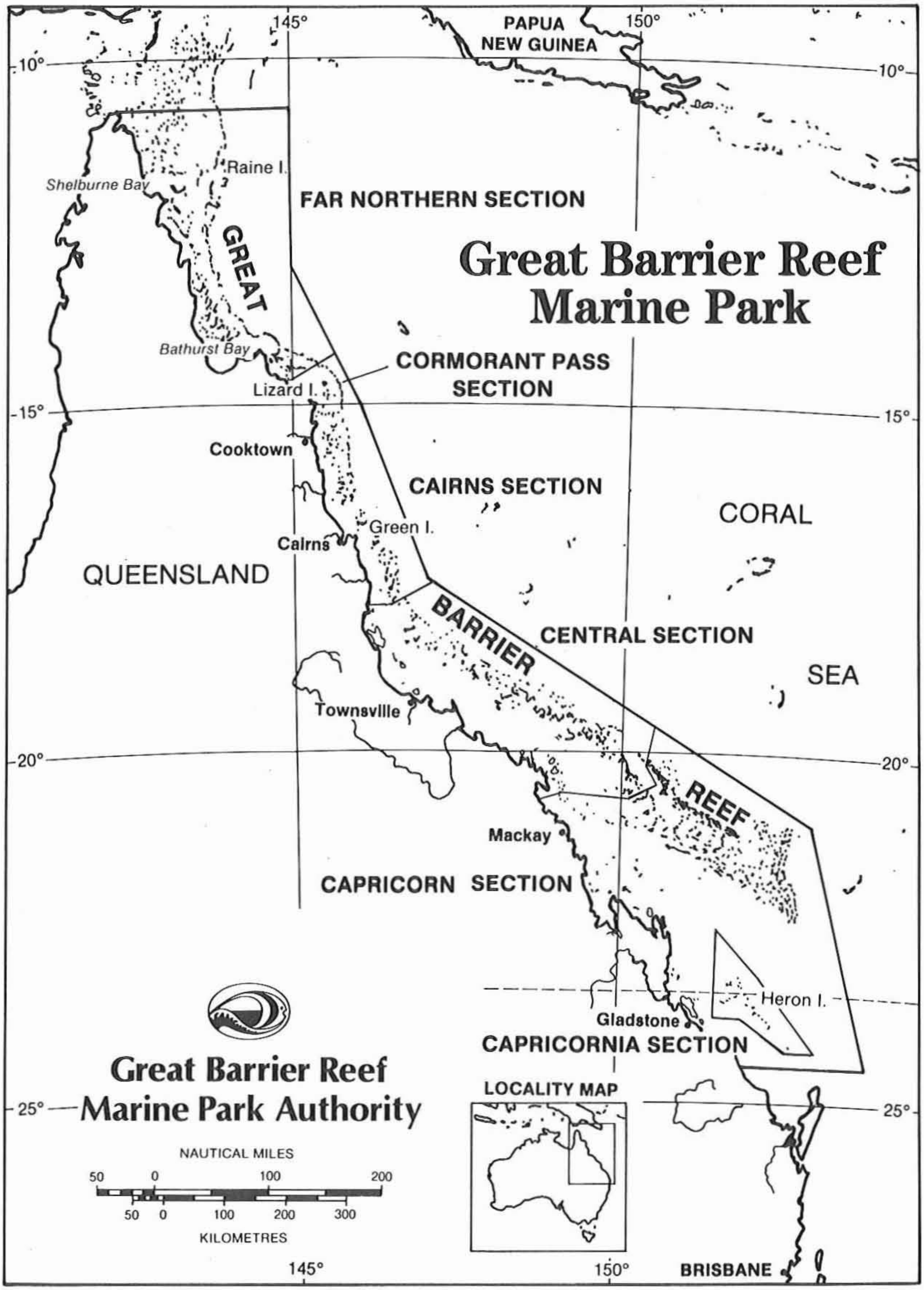
The people who undertake recreation in the Reef Region do so via a variety of modes of access and undertake a variety of activities once within the Reef Region. In order to describe use of the Reef Region, several approaches are taken. Firstly, all recreational users are considered according to origin - international or domestic - in the discussion in section 2. This presentation includes data on tourism in Australia and Queensland, to allow Reef Region tourism to be placed in context. A summary of Reef Region tourism appears in section 3.

Detailed descriptions of tourist activities in the Reef Region are given in sections 4 to 6. The division of these descriptions is larely along the lines of access. The commercial passenger services described in section 4 provide the largest number of visitor days to the Reef Region. Day trips and trips overnight or longer are offered and a range of marine-based recreational activities are enjoyed by passengers.

Accommodation at island resorts is investigated in section 5. The people staying on islands participate in many marine activities and so are important in any consideration of recreation in the Great Barrier Reef Marine Park. Access to the Reef Region by private boats constitutes the third major division of reef recreational use and is discussed in section 6.

Most of this report has a bias towards describing tourists in terms of statistics and tourism in terms of industries and economic impact. This is a function of the type of research undertaken thus far into tourism; very little has been done yet on tourists' attitudes, wants and experiences. This aspect of Great Barrier Reef tourism is the subject of current research and so consideration of this important dimension of tourism is left for a future volume.

Figure 1. Map



145°
PAPUA
NEW GUINEA
150°
10°
Raine I.
Shelburne Bay
FAR NORTHERN SECTION
GREAT
Great Barrier Reef
Marine Park
Bathurst Bay
CORMORANT PASS
SECTION
Lizard I.
15°
Cooktown
CAIRNS SECTION
CORAL
Green I.
Cairns
QUEENSLAND
BARRIER
CENTRAL SECTION
SEA
Townsville
20°
REEF
Mackay
CAPRICORN SECTION
Heron I.
Gladstone
CAPRICORNIA SECTION
Great Barrier Reef
Marine Park Authority
25°
LOCALITY MAP
NAUTICAL MILES
50 0 100 200
50 0 100 200 300
KILOMETRES
145°
150°
BRISBANE

2. THE CONTEXT - TOURISM IN AUSTRALIA

As noted already in this report, the term "tourist" really includes all recreational users of the Reef Region. Therefore, the analysis in this section of the report of the origin of tourists to the Reef Region includes all users, from those who make day trips to those staying on island tourist resorts. The analysis of the origin of tourists in this chapter is separated into descriptions of international tourism and domestic tourism in Australia, Queensland, the mainland adjacent to the reef, and the Reef Region.

2.1 INTERNATIONAL TOURISM

International Tourism to Australia

Visits to Australia by people from overseas topped the one million mark for the first time in 1984 at 1 015 100 visits (Australian Tourist Commission (ATC), 1986a). Preliminary data from the ATC put the numbers of visits from overseas to Australia in 1986 at 1 429 300 (ATC, pers comm.), an incease of 25 percent over the previous year. The economic importance of international visitors is as a source of foreign exchange earnings. Australia experiences a financial deficit as there are more Australian visits overseas each year than overseas visits to this country. In 1984 the ratio was 1.417 million Australians visiting overseas to 1.015 million international visits to Australia (ATC, 1986b).

Having only 0.34 percent of world tourism arrivals (ATC, 1986b), Australia has potential to improve inbound tourist numbers. Increases in recent years are shown on Table 1.

Table 1. International visitor arrivals.

Year	Number of visitors	Percentage change
1979	793 345	
1980	904 558	+14.0
1981	936 727	+3.6
1982	954 674	+1.9
1983	943 900	-1.0
1984	1 015 100	+7.5
1985	1 142 600	+12.5
1986	1 429 300	+25.0

(Australian Tourist Commission, 1986a)

The major data source on international visitors is the Australian Tourist Commission's International Visitor Survey (IVS). This survey relies on data on arrivals and departures provided by the Australian Bureau of Statistics (ABS) to define the population of visitors. A sample of visitors (6 226 in 1984) are interviewed on their departure at international airports. The resulting statistics on visitors to Australia are published annually. The bulk of the following descriptions of international tourism to Australia, Queensland and the Reef Region is drawn from the International Visitor Survey.

The majority of visitors to Australia in 1984 cited "holidays" (43 percent) and "visiting relatives" (27 percent) as their reason for travelling to Australia. Business travel accounted for only 14 percent of visitors, while 17 percent of visitors stated "other reasons" (ATC, 1986a).

New Zealand continues to be the major source of visitor arrivals to Australia, though the percentage of the total arrivals contributed by New Zealand has fallen from 34 percent of arrivals in 1980 to 23 percent in 1984 (ATC, 1981, 1986a).

Table 2. Country of origin of visitors, 1984.

Country	Number of visitors	Percentage
New Zealand	234 400	23
United States	161 300	16
U.K. & Ireland	149 600	15
Asia	146 700	14
Europe	124 000	12
Japan	87 900	9
Canada	34 500	3
Other	76 700	8
Total	1 015 100	100

(Australian Tourist Commission, 1986a)

The average length of stay in Australia was 30 nights (in 1984). Visitors to Australia may stay at more than one destination during their visit. Visitors spent one or more nights in the various states as shown below (the figures add up to more than 100 percent). Also shown are visitor nights (where the figures add up to 100 percent).

Table 3. States visited, 1984.

State	Percentage of visitors	Percentage of visitor nights
New South Wales	69	31
Queensland	30	21
Victoria	36	22
South Australia	12	6
Western Australia	13	11
Australian Capital Territory	12	4
Northern Territory	6	3
Tasmania	3	2

(Australian Tourist Commission, 1986a)

Information on expenditure by overseas tourists in Australia has been compiled by the Bureau of Industry Economics from IVS data. Foreign tourists spent approximately $1 030 million directly and contributed a further $500 million in airfares accruing to Australia in 1981/82. As mentioned previously, Australians travelling overseas caused a larger payment of around $2 400 million. When this expenditure is adjusted for payments to Qantas and that retained by the Australian travel agents, the net outflow was $666 million in 1981/82 (BIE, 1984).

Overseas tourism in Australia accounts for around 17 percent of the employment and income produced by tourism in Australia; that was 57 800 jobs and just under 1 percent of Gross Domestic Product (GDP) at factor cost in 1981/82.

International Tourism to Queensland

In 1984, Queensland ranked third of the states after New South Wales and Victoria in terms of the number of international visitors to Australia who visited the state, and also in terms of visitor nights. Around one third of international tourists visited Queensland. The state accounted for over one fifth of the visitor nights (Table 3).

Figures for 1985 put Queensland's share of international visitors at 32 percent of visitors to Australia, or 365 500 people. This is an increase of 61 000 visitors over 1984, and represents a 20 percent increase in international visitors to Queensland (ATC, pers comm.).

Queensland's share of visitor nights remained at 21 percent in 1985, and this represents an increase of half a million visitor nights in 1985 to 6.8 million.

As part of the IVS, visitors are asked if they visited a number of specified locations - the list is not exhaustive of possible locations. For Queensland, the nominated locations along with the percentage of visitors to Australia and the approximate number of visitors this represents (for 1984) are shown in Table 4.

Table 4. Visits by international tourists to specified locations, 1984.

Place visited	Number of visitors	Percentage of visitors to Australia
Brisbane	253 768	25
Gold Coast	172 562	17
Sunshine Coast	111 658	11
Cairns/Green Is/ Atherton Tablelands	91 356	9
Lone Pine Sanctuary	71 055	7
Townsville/Magnetic Is	60 900	6
Sea World	60 900	6
Currumbin Bird Sanctuary	60 900	6
GBR/Whitsunday Is	60 900	6
Rockhampton/Mackay/ Heron Island	60 900	6
Coral Reef	50 753	5
Toowoomba/Darling Downs/ Wineries	40 600	4
Dreamworld	30 452	3
Marybrough/Bundaberg/ Fraser Island	30 452	3
Outback Queensland	30 452	3
Grundys	20 300	2
Stradbroke/Fraser Is/ Moreton Island	20 300	2

(Australian Tourist Commission, 1986a)

International Tourism to the Great Barrier Reef

The IVS for 1984 and 1985 records the percentage of visitors who stay in the "Great Barrier Reef Region". This region is defined to include the mainland adjacent to and islands of the Great Barrier Reef (this is not the same as the "Reef Region" used in this report). During 1984, this region attracted 14 percent of international visitors, this being 142 000 people who spent at least one night in the region (ATC, 1986a). Preliminary figures for 1985 indicate this percentage has risen to 16 percent, or 182 700 people (ATC, pers comm.).

The increase of 40 700 people staying in the Great Barrier Reef Region is a 28 percent increase over 1984. The number of visitor-nights spent in the Great Barrier Reef Region is recorded by the IVS at 7 percent of visitor nights in Australia; this being 2.28 million visitor nights in 1985 (ATC, pers comm.).

According to the IVS, around 9 percent of international visitors or 91 000 people in 1984 visited "Cairns/Green Island". Smaller percentages of international tourists visited other locations within the Reef Region. These visits do not necessarily represent an overnight stay. It is not possible to tell from the published figures whether the visitors to Cairns/Green Island and other locations within the Reef Region are the same people or discrete groups, but it is likely that there is considerable overlap between the groups (ATC, 1986a).

The situation in 1980 as recorded by the IVS was that 4.2 percent of international visitors visited Green Island (ATC, 1981). Thus the figures indicate a doubling of visits to the Great Barrier Reef in the vicinity of Cairns. Information on visits to other Reef Region destinations was not sought in that earlier survey.

The development of international airports in Townsville and Cairns in recent years has considerably increased the number of international departures and arrivals through these cities. International flights to Townsville began in 1981 and Cairns International Airport opened in 1984 (though international flights, mainly from and to Papua New Guinea had landed in Cairns prior to 1984).

The following table shows an increase in passenger movements through these airports and includes people arriving in and leaving Australia, and in transit.

Table 5. International passenger movements.

Airport	1980/81	1981/82	1982/83	1983/84	1984/85
Townsville	4 718	14 879	30 324	28 094	23 745
Cairns	14 280	14 784	15 428	26 766	40 948

(Australian Bureau of Statistics, various years)

2.2 DOMESTIC TOURISM

Domestic Tourism in Australia

Tourism within Australia by Australians is termed "domestic tourism". The definition of a tourist presented earlier emcompasses day trippers as well as those people on extended trips away from home. The data available on domestic travel for Australia as a whole however, only covers trips of at least one night away from home, and it is this information which is presented here on "domestic travel" in Australia.

As travel is not restricted to holiday travel but includes business travel and travel for other reasons, it is not surprising that a large amount of domestic travel occurs within Australia. The number of domestic trips estimated for 1985/86 was 54.1 million trips (Queensland Tourist and Travel Corporation (QTTC), per comm.).

The growth in domestic trips averaged 3.6 percent annually over the years 1978/79 to 1983/84, but has slowed recently.

Table 6. Australia, domestic travel.

Year	Number of trips	Percentage change
1978/79	45 809 000	
1979/80	48 916 000	+6.8
1980/81	51 754 000	+5.8
1981/82	52 663 000	+1.7
1982/83	52 961 000	+0.5
1983/84	54 757 000	+3.4
1984/85	54 100 000	-1.1
1985/86	54 120 000	+0.03

(Queensland Tourist and Travel Corporation, various years)

The major source of information on domestic travel in Australia is the Domestic Tourism Monitor (DTM), a national survey funded by the State and Commonwealth Governments. This survey has been undertaken annually since 1978/79.

The survey is conducted within a weekly omnibus survey of households. All trips completed by respondents in the two months prior to the survey are recorded. The sample size used for the survey (75 616 in 1984/85) is sufficient to obtain acceptable estimates of trips on a statewide basis and for large regions but the reliability of estimates for small regions such as the "Reef Region" is relatively low. The definition of a trip used in the DTM is;

> "a stay of one or more nights, but less than three months away from home. It includes a journey of at least 40 km from home, for any reason - holidays, business, to visit friends and relatives - except where the journey is related to such things as semi-permanent employment". (QTTC, 1985a)

The destination recorded is the main destination (the place where most nights are spent). The travel information is recorded for persons over 14 years of age (QTTC, 1985a).

The Australian Bureau of Statistics (ABS) conducted a one-off survey of domestic travel and tourism for 1983. This survey was conducted by personal interview of approximately 35 000 people who travelled during the year. Twelve monthly samples were conducted in which all trips returned from in each month were recorded. A "person trip" was defined as;

> "a journey in Australia which involved a person aged 15 or over staying away for at least one night from a usual place of residence" (ABS, 1985b).

Thus the ABS survey and the DTM cover basically the same population and use basically the same methodology (differences may be most evident in the sampling adopted).

It is not surprising the ABS estimate of 52 million trips during 1983 is close to the DTM estimate of 54.7 million for 1983/84. The origin and destination of trips by state is shown in Table 7.

Table 7. Number of domestic trips, 1983/84.

	Domestic Tourism Monitor		Australian Bureau of Statistics	
	origin	destination	origin	destination
New South Wales	19 038 000	19 689 000	18 201 000	18 998 000
Victoria	14 931 000	13 103 000	14 139 000	12 724 000
Queensland	9 825 000	10 159 000	8 539 000	8 822 000
South Australia	4 173 000	4 224 000	4 438 000	4 447 000
West Australia	3 974 000	4 079 000	4 459 000	4 395 000
Tasmania	1 499 000	1 644 000	1 097 000	1 264 000
ACT	750 000	919 000	1 017 000	795 000
Northern Territory	567 000	596 000	236 000	279 000
Unstated		344 000		402 000
Total trips	54 757 000	54 757 000	52 126 000	52 126 000

(Queensland Tourist and Travel Corporation, various years; ABS, 1985b)

The major findings of the ABS survey relate to purpose of trip, transport, accommodation and duration for all domestic travel in Australia.

The ABS survey found that the main purposes for trips were holiday or recreation (42 percent) visiting friends or relatives (35 percent) and work or business (16 percent). Trips for "other" purposes made up 7 percent of all trips (ABS, 1985b).

The main mode of transport used was car. The ABS survey found that 80 percent of trips were made by car. Other transport modes provided minor proportions of transport as follows; aircraft 5.6 percent, trains 4.5 percent, buses 3.7 percent, other 5.8 percent (ABS, 1985b).

Homes of friends or relatives provided the majority of accommodation (52 percent) with hotels or motels providing 16 percent, caravan parks or camping grounds providing 11 percent, rented houses or flats providing 6 percent and "other" facilities providing 15 percent of accommodation (ABS, 1985b).

Short trips of 1 or 2 nights constituted over half (56 percent) the number of trips. One night trips alone made up 31 percent of trips while trips of 2 to 7 nights constituted a further 56 percent of trips. Longer trips of 8 to 14 nights (8 percent), 15 to 21 nights (3 percent) and more than 21 nights (2 percent) made up a small portion of all trips (ABS, 1985b).

Thus a picture of domestic travel in Australia emerges where most trips are short in duration and for the purposes of holidays but where the majority of travel occurs outside "tourist facilities" with most travel being by car and most accommodation being found with friends and relatives.

In order to measure expenditure by domestic tourists, the BIE commissioned a major survey throughout Australia. The survey was conducted by telephone and respondents were asked to record their expenditure on trips in the previous two weeks. The sample size was 22 063 persons. The total expenditure reported has been adjusted for imports, transfers and taxes. Estimates were made for employment and income generated.

A total of 52.3 million trips and 89 million day trips were estimated for 1981/82. Total direct expenditure by people who undertook overnight trips was $8 200 million and expenditure by day trippers was $1 800 million. A further $1 100 million was spent on travel related equipment (for example, second homes and vehicle costs).

Approximately 282 000 jobs were generated by domestic tourist expenditure. This was 4.3 percent of Australia's workforce. Tourism expenditure by Australians represented 3.9 percent of GDP at factor costs. (BIE, 1984).

Domestic Tourism in Queensland

It is possible to describe the total number of domestic tourists, both daytrippers, and people staying away one or more nights, for Queensland due to the existence of two complementary data sources. The DTM, described previously (QTTC, 1985a), provides information on trips involving at least one night away from home. A recent survey undertaken for the Queensland Tourist and Travel Corporation (QTTC, 1985b) investigated the important daytrip segment of domestic tourism in Queensland.

Discussion of the DTM information on travel involving at least an overnight stay is presented first. This data is a subset of that for Australia as a whole and may be compared with that in the previous section. The second topic in this section is daytrip participation by Queensland residents.

Trips overnight or longer

Queensland attracted 20 percent of trips (with at least an overnight stay) made in Australia in 1984/85 and was the third most visted state after New South Wales (34 percent) and Victoria (23 percent) (preliminary figure, QTTC, 1986). Domestic travel with Queensland as a destination is predominately intrastate with 80 percent of Queensland trips originating in the state in 1984/85. Queenslanders generated 8.5 million trips in their own state in 1984/85 with a further 2.1 million trips being made to Queensland from other states. (QTTC, 1986a). The growth of travel within Queensland is shown on Table 8. Preliminary figures show virtually no growth during 1985/86.

Table 8. Queensland trips, origin and destination.

Year	Trips with Queensland as origin	Trips with Queensland as destination	Percentage change - trips with Queensland as destination
1978/79	7 587 000	7 765 000	
1979/80	8 702 000	8 720 000	+ 12.3
1980/81	8 850 000	8 960 000	+ 2.7
1981/82	9 118 000	9 625 000	+ 7.4
1982/83	9 312 000	9 737 000	+ 1.2
1983/84	9 825 000	10 159 000	+ 4.3
1984/85	10 170 000	10 600 000	+ 4.3
1985/86	n.a.	10 610 000	0

(Queensland Tourist and Travel Corporation, various years)

The most popular trip purpose was for pleasure/holiday (45 percent) followed by visiting friends or relatives (26 percent), business (16 percent). A range of other purposes make up 13 percent of trips. (QTTC, 1985a).

As for Australia as a whole, car, private and rented, was overwhelmingly the most used transport in Queensland,being used for 81 percent of trips. Air (9.8 percent), bus (5.4 percent) train (2.8 percent) and other transport (1 percent) were also used. (QTTC, 1985a).

The most popular form of accommodation used on trips to and within Queensland was the house of friends or relatives (42 percent). In descending order of use, other accommodation facilities used were; hotel/motel/guest house (28 percent), caravan park/camping ground (14 percent), rented/own flat or house (13 percent) and other (3 percent) (QTTC, 1985a)

The largest single number of trips (32 percent) were only of one nights duration. Together trips of one and two nights away from home make up 57 percent of all trips. Trips of 2 to 7 nights constitute 54 percent of trips, 8 to 14 nights 9 percent of trips, 15 to 21 nights 3 percent of of trips and trips of over 21 nights make up 3 percent of all trips. (QTTC, 1985a)

For the purposes of the DTM, Queensland has been divided into 15 regions. These are listed below along with the estimated number of trips to each region and the percentage of trips to/within Queensland (1983/84). Because the sampling adopted for the DTM is not suited to producing reliable statistics for small regions, the figures in Table 9 should be treated as indicative only.

Table 9. Trips to Queensland regions, 1985/86.

Region	Number of trips	Percentage of trips
Gold Coast	2 069 000	19.5
Brisbane	2 398 000	22.6
Sunshine Coast	1 395 000	13.1
Gympie/Maryborough	562 000	5.2
Brisbane Valley/Hinterland	350 000	3.2
Toowoomba/Stanthorpe	1 040 000	9.8
Bundaberg	212 000	1.9
Rockhampton/Gladstone	620 000	5.8
Mackay	329 000	3.1
Whitsunday Islands	85 000	0.8
Townsville	592 000	5.5
Cairns	690 000	6.5
Northern Barrier Reef Islands	32 000	0.3
North West Queensland	82 000	0.7
Central/South West Queensland	154 000	1.4
Total	10 610 000	100.0

(Queensland Tourist and Travel Corporation. Preliminary figures)

According to the BIE study of tourism expenditure, Queensland gained a quarter of all domestic tourism expenditure. This was higher than the proportion of trips with Queensland as a destination recorded in the BIE study (19 percent). Around $2 096 million was spent in Queensland in 1981/82. (BIE, 1984)

Day trips

An estimated 60.5 million visitor days were spent in day trips in Queensland in 1984/85. This figure (unlike other data presented) includes children. Adult day trippers represent around 80 percent of day trippers or around 48 million visitor days (QTTC, 1985b).

The QTTC definition of a day trip can be summarized as;

> "a day outing lasting more than four hours and covering at least one meal period where the trip is mainly for pleasure, recreational or educational purposes." (QTTC 1985b)

This definition is less restrictive than that adopted by the BIE and thus more trips are recorded as daytrips. Data were collected by personal interviews as part of an omnibus survey. A total of 7 693 interviews were conducted of people who had taken day trips and the sample was stratified to provide representation over Queensland regions (QTTC, 1985b).

The origins and destinations of day trips were estimated as shown in Table 10. Ten regions were defined within Queensland for this survey. Eighty percent of day trips were intra-regional.

Table 10. Day trips, Queensland regions.

	Number of trips origin	destination	Percentage by destination
Gold Coast	5 788 000	9 145 000	15.1
Brisbane/Ipswich	36 755 000	29 903 000	49.4
Sunshine Coast	1 927 000	3 818 000	6.3
Darling Downs	2 567 000	2 906 000	4.8
Maryborough/Bundaberg	1 898 000	1 614 000	2.7
Rockhampton/Gladstone	2 726 000	2 765 000	4.5
Mackay/Whitsunday	1 247 000	1 278 000	2.1
Townsville/Bowen	1 777 000	1 905 000	3.1
Cairns/Tablelands	4 081 000	3 966 000	6.6
Western Queensland	1 312 000	1 320 000	2.2
Not Stated	453 000	1 911 000	3.2
Total	60 531 000	60 531 000	100.0

(Queensland Tourist and Travel Corporation, 1985b)

The activities undertaken on day trips have been grouped under a number of headings. Visiting friends and relatives emerged as the most popular activity providing 26 percent of visitor days. Table 11 describes visitor days for activities classified into eight categories.

Table 11. Main day trip activities, 1984/85.

Activities	Percentage of visitor days
Visit friends/relatives	25.9
Beach/water related	21.0
Picnic/BBQ	9.0
Pleasure shopping	8.7
Driving, sightseeing, walking, cruise, flight, tour	12.1
Spectator sport	5.9
Entertainment, theme park, showground, rodeo, fair	5.3
Other	12.1
Total	100

(Queensland Tourist and Travel Corporation, 1985b)

Day trip destinations reflected the activities undertaken, with the beach being popular (19 percent), along with parks and recreation grounds (14 percent) but the major destination was a private home (35 percent of visitor trips).

Car was the main means of transport taken on day trips supplying 88 percent of transport (private 87 percent, rented 1 percent). Other transport was; bus/coach (4.5 percent), rail (1.8 percent), other (6 percent).

Expenditure by people on day trips was estimated from the survey. A total of $1 123 million was estimated to have been spent according to the categories listed in Table 12.

Table 12. Expenditure, Queensland day trips, 1984/85.

	$ million	Percentage
Food, meals, snacks, beverages	416	37.1
Pleasure shopping	177	15.7
Excursion packages	82	7.3
Admission fees, hire charges	55	4.9
Bus, train, taxi, local transport	27	2.4
Souvenirs, cigarettes, camera, film etc	17	1.5
Car use (estimated based on distance travelled)	349	31.1
Total	$1 123	100.0

(Queensland Tourist and Travel Corporation, 1985b)

Domestic Tourism to the Great Barrier Reef and Adjacent Mainland

The Queensland coastal cities and towns from Bundaberg north lie adjacent to the Reef Region. These centres are tourist destinations in their own right and also contain the majority of vessels and air services which provide access to the Reef Region.

It cannot be claimed that the tourist infrastructure and economic activity in coastal centres is totally due to the presence of the reef. Other attractions (the hinterland, the weather), visits to friends and relatives and business also generate travel to coastal North Queensland. The contribution of the Great Barrier Reef in drawing tourists to the adjacent mainland can only be hinted at in some attitudinal and market research studies that have been undertaken and this is a subject requiring further research.

It is worth considering tourism in mainland regions for two reasons. Most importantly, a proportion of the tourists to this area are attracted directly or indirectly by the presence of the Great Barrier Reef. Secondly, statistics for the "Reef Region" alone, have only recently become available. Investigation of any trends over time will have to draw on data available over a longer time period on visitation to the Reef Region and adjacent mainland. Information is presented on both domestic travel and day trips.

Trips overnight or longer

In a report prepared for the Great Barrier Reef Marine Park Authority, Claringbold et al. (1984) assembled the sparse data available and estimated that there had been a forty fold increase in visitation to the Reef Region and adjacent mainland over the period 1946 to 1980. Though subject to differences in methodologies involved in producing statistics over time, this figure indicates a significant increase in popularity of the area as a tourist destination.

It is not claimed that this type of increase is unique to this region. The world and Australia as a whole have seen an increase in propensity to travel over the post-war period due to factors including, increases in disposable income, leisure time and car ownership and decreased relative prices of transport and services.

The only comparable data on domestic travel to the Reef Region and adjacent mainland is that which arises from the Domestic Tourist Monitor, which has been conducted using standard methodology since 1978/79.

Unfortunately, the DTM is not suitable for use with small population sizes, it is a survey designed to determine national and state wide trends, and the sample size is insufficient to allow accuracy for small areas. A number of "DTM regions" (Rockhampton/Gladstone, Mackay, Whitsunday Islands, Townsville, Cairns, Northern Barrier Reef Islands), make up the Reef Region and adjacent coast. The sample taken for each of these regions is too small to generate reliable data on visitor numbers. If the data reported on visitor numbers to each DTM region are added together, a more reliable measure is gained, but one which still requires caution in interpretation. The DTM figures for 1978/79 to 1985/86 are listed in Table 13 below, together with standard errors.

Table 13. Trips to the Reef Region and adjacent mainland

	Estimated number of trips*	Approximate standard error**	Approximate range of trip numbers
1978/79	1 689 000	±160 000	1 529 000 to 1 849 000
1979/80	1 986 000	±190 000	1 796 000 to 2 176 000
1980/81	1 576 000	±160 000	1 416 000 to 1 736 000
1981/82	2 354 000	±200 000	2 154 000 to 2 554 000
1982/83	2 218 000	±200 000	2 018 000 to 2 418 000
1983/84	2 048 000	±190 000	1 858 000 to 2 238 000
1984/85	2 290 000	±200 000	2 090 000 to 2 490 000
1985/86	2 348 000	±200 000	2 148 000 to 2 548 000

*DTM regions 42 to 47
**Approximated based on information on standard error of DTM, Appendix B, Queensland Tourist and Travel Corporation, 1985a.
(Queensland Tourist and Travel Corporation, various years)

From the data in Table 13 (where it must be stressed standard errors are approximated only) the trend in visits is an increase in latter years over the 1978/79 visits. Around 2.3 million visitor trips per annum are made to this area. This constitutes approximately 23 percent of trips in Queensland and 4 percent of trips in Australia, based on 1984/85 data.

Day trips

Day trip origin and destination within Queensland regions was presented in Table 10. The regions adjacent to and including the Great Barrier Reef are; Rockhampton/Gladstone, Mackay/Whitsunday, Townsville/Bowen and Cairns/Tablelands. Over 9 million day trips were made with these regions as a destination in 1984/85. These regions together contributed 16 percent of Queensland day trips by origin and destination.

2.3 SUMMARY

This section has been organized to allow tourism in the Reef Region to be seen in some perspective in terms of tourism in Australia and Queensland. The information on tourist numbers and expenditure highlights the trends occurring and which are likely to affect Reef Region tourism.

Generally there is growth in all areas of tourism. It is unfortunately difficult to compare tourism across the elements of international and domestic, and for Australia, Queensland, and the Reef Region, because of the different units in which it is measured (number of people, number of trips and number of visitor days). Nevertheless, the data presented show the trends for each of the populations investigated.

International visits to Australia have increased by 26 percent in total over the five years to 1985. Over the same time, international visits to Queensland grew by 51 percent. Australians are travelling more, domestic travel increased by 10.5 percent over the five years to 1984/85 and domestic travel with Queensland as a destination was up by 21.5 percent over the same five years.

Table 14. Trip numbers and visitor nights*.

	Trips	Visitor nights
Australia		
International	1 142 600	32 600 000
Domestic	54 120 000	248 700 000
Total	55 262 600	281 300 000
Queensland		
International	365 500	6 846 000
Domestic	10 610 000	58 250 000
Total	10 975 500	65 096 000
Great Barrier Reef and adjacent mainland		
International	182 700	2 282 000
Domestic	2 348 000	15 130 000
Total	2 530 700	17 412 000

*International figures for 1985, Domestic figures for 1985/86 (Australian Tourist Commission, 1986; Queensland Tourist and Travel Corporation, preliminary figures)

Tourism in Australia, international plus domestic, contributed 5.2 percent of employment (340 000 jobs) and 4.8 percent of GDP at factor cost. The expenditure (net of indirect taxes and imports) which produced this effect was $7 000 million in 1981/82 (BIE, 1984).

In Queensland, which received a quarter of this expenditure ($2 270 million net), tourism contributed 7.7 percent of the State's employment in 1981/82 (76 600 people) (BIE, 1984).

Recent years have seen a steady increase in travel and tourism in Australia. The significant event of the devaluation of the Australian dollar in late 1984 is predicted to keep more Australians in Australia and to make this country more attractive to overseas tourists. Preliminary data presented in this chapter confirm an increase in overseas visitors. There was virtually no change in the number of domestic trips recorded for 1984/85 and 1985/86, however visitor nights spent in domestic travel rose by 3% for the period.

None of the published data presented in this chapter provide adequate information on visits to or expenditure in the Reef Region. A description of Reef Region tourism has been completed based on studies of components of Reef Region tourism. This report now turns to more direct focus on Reef Region tourism by first presenting a summary of Reef Region tourism and then considering the component parts of reef tourism activity.

3. TOURISM WITHIN THE "REEF REGION"

The approach taken to provide information on tourism in the Reef Region (waters and islands of the Great Barrier Reef, excluding the mainland) has been to build the story from the ground up using specific studies of components of Reef Region tourism. These studies are summarized in this section and are discussed in some detail in the following sections.

Effort to date has been focused on collecting information on the three large avenues of visits to the Reef Region - commercial passenger vessels (charter boats), island resorts and private motor boats.

A number of less well patronized activities/modes of access are not covered in this report. Approximately 80,000 visitor days are spent in island camping each year. Access to islands for camping is via commercial passenger vessel or private boat. Air services to the reef provide in the vicinity of 10,000 visitor days per annum. Reliable estimates are not currently available for the minor components of tourism represented by yachts and private boats from outside Queensland.

What is a meaningful unit by which to describe visitor use of the Reef Region?

Visits to the reef may be made by people who only visit once in a year and by people who make repeat visits within a year. Visits may last one day or longer. Thus the number of "different individual people who visit" is a meaningless statistic (and is virtually impossible to record).

The number of "visits" does not describe the intensity of use of the Reef Region (as the length of visit is an important factor) however this statistic may be compared with data from the DTM, IVS and similar publications.

"Visitor days" seems the most appropriate measure of tourist usage of the Reef Region. The limitation to this concept is that on a particular day a tourist may, for example, travel on a charter boat and stay at an island resort. As the estimates of visitor numbers and days have been collected according to facility - island resorts, charter boats, private boats - a certain amount of double counting occurs.

The measure of use according to facility is particularly useful as this is the most obvious way to collect data over time to monitor tourism usage.

For 1984/85, there were 151 000 visitors who stayed at island resorts. The average length of stay was just over five nights making 790 000 visitor days. (QTTC, 1986).

Commercial passenger vessels carried approximately 1 110 100 passengers in 1984/85. As the overwhelming majority of trips were day trips, the number of visitor days are estimated at 1 274 000.

Although trips in private boats often last for more than one day, the average length of trips is one day (6 hours fishing) (Hundloe, 1985). Thus the number of visits is the same as the number of visitor days. This is estmated at 690 000 for 1984/85.

More detail on the sources and characteristics of the data in Table 15 is presented in the following sections.

Table 15. Reef Region, Visitor days by facility, 1984/85.

Facility	Visitor days
Island resorts	790 000
Charter boats	1 274 000
Private boats	690 000

An important aspect in the gathering of data on Reef Region tourism has been to record economic information. The emphasis has been on measuring expenditure by tourists on their recreational experience. This data are shown in Table 16.

Table 16. Reef Region, expenditure by tourists.

Facility	Expenditure 1981/82 $	Expenditure 1984/85 $
Island Resorts	46 000 000	84 000 000
Charter Boats	26 000 000	35 000 000
Private boats	43 000 000	68 000 000
Total	$115 000 000	$187 000 000

In economic analysis terms, measuring expenditure only is one-sided as the costs of providing the services are not enumerated and thus the net economic effects (contribution to net national benefit) have not been calculated. However expenditure data is useful in a number of ways. The gross expenditure data may be manipulated to provide some economic indicators using input-output multipliers calculated previously for Reef Region activities (Driml 1987a). Thus the employment created by tourism expenditure may be calculated (Table 17).

Table 17. Reef Region, employment (direct plus indirect).

Facility	**Employment**	
	1981/82	**1984/85**
Island Resorts	2 224	4 116
Charter boats	1 004	1 330
Private boats	1 214	1 915
Total	4 442	7 361

Expenditure on tourism in the Reef Region has been found to be roughly $200 million per annum. This figure represents strictly that expenditure involved in visiting the offshore islands and reefs. It does not include travel to North Queensland, nor does it include accommodation or other expenses on mainland North Queensland. Obviously much of the tourism expenditure in mainland North Queensland is associated with reef tourism, including where people stay on the mainland and make day trips to the reef. This aspect of Reef Region tourism has not been yet been sufficiently researched to allow the size of this "support" expenditure to be calculated.

The $200 million expenditure on reef tourism is around 7 percent of total Queensland expenditure of $2 800 million (as measured by the BIE, inflated to 1984/85 dollars). Reef tourism makes up a small 2 percent of Australian tourism expenditure $8 600 million (BIE inflated to 1984/85 dollars).

Whilst the Reef Region tourism may seem insignificant in Australian terms, it is not unimportant in Queensland or regionally. Tourism is becoming increasingly important in Queensland. The expenditure by people staying in commercial accommodation establishments in Queensland was $1 059 million in 1984/85 (QTTC, 1986b) while the output of the sugar industry in that year was $782 million. (ABS, 1986).

4. COMMERICAL PASSENGER VESSELS

In 1984/85 there were around 275 commercial vessels operating to take passengers to the Great Barrier Reef. Although generically termed "charter boats" these vessels offer a range of services from water taxis to extended cruises.

Around 1 274 000 visitor days on the reef were generated in 1984/85 in charter boats. This is the largest single component of recreational visits to the Great Barrier Reef.

Limited charter activity in the Reef Region early this century was bought to a halt during World War II when fishing and tourist boats were impounded. Following the war, charter activity continued to be mainly weekend fishing trips. The 1950's saw an increase in "adventure" trips (including fishing, crocodile hunting in the north) plus an increased interest in sightseeing and underwater activities. The equipment for snorkelling and SCUBA diving became available in the 1950's (Burns et al., 1984). By 1980, there were around 120 commercial vessels operating from ports adjacent to the Reef Region. The earnings of this fleet were around $20 million for 1980 (Hundloe, 1985).

The Great Barrier Reef Marine Park Authority manages the operation of tourist facilities and tourist programmes including commercial passenger vessels in the Marine Park. Due to obvious growth of this industry the GBRMPA commissioned a detailed survey of the industry to provide information for planning, managing and monitoring the Great Barrier Reef Marine Park.

This study of the Great Barrier Reef charter boat industry was undertaken by the Institute of Applied Environmental Research, Griffith University (IAER, 1986). The research was undertaken by interviewing the population of charter boat operators. Information was collected on the type and location of operations and on some economic characteristics of the industry.

Operations were categorised into eight types encompassing the range of commercial charter activities available.

Scheduled day trips

The largest number of visitor days, around 826 400 in 1984/85, are generated on "scheduled day trips" which operate on set timetables to set destinations. Such trips are available from all major ports adjacent to the Great Barrier Reef. A variety of vessel types are involved and a variety of activities undertaken.

Around 40 percent of scheduled day trips in 1984/85 were undertaken on large, high speed catamarans. These have been progressively introduced to the Great Barrier Reef since 1982 and by May 1986 there were 15 catamarans (over 20 m in length and with passenger capacities from 130 to 300 passengers) operating. Twelve of these catamarans are included in the 1984/85 figures for scheduled day trips. These catamarans travel to reefs or resort islands. On reef locations, passengers may disembark onto anchored pontoon facilities. Passengers may spend a few hours swimming, snorkelling, SCUBA diving or, on some reefs, reef walking.

A new type of coral viewing vessel, the "semi-submersible" was first introduced in 1983. These vessels allow passengers to be seated under water level and view coral and marine life through sloping glass panels in the hull of the "sub". The vessel does not actually dive under the water but can be manoeuvered through reef lagoons and along reef edges with passengers observing below water level. This provides a different, and probably superior, perspective to conventional glass-bottom boats. A semi-sub now accompanies every reef-based large catamaran operation.

The catamaran day trips provide the opportunity for people to travel to the reef quickly and in relative comfort and to view reef life without the necessity to get wet. This application of technology to extend a reef experience to a broader cross section of the population is one of the significant developments in reef tourism in recent years.

Other scheduled day trips are undertaken by 47 vessels offering a range of trip types. All major ports host vessels which provide day trips for fishing, snorkelling, diving or sightseeing trips to islands. Most trips offer a combination of activities. In the Whitsundays, a number of yachts offer day sailing trips. Only half a dozen scheduled day trips are dedicated fishing trips.

Unscheduled day charters

Around 30 vessels offer unscheduled day trips, that is they are available for day charter on an opportunistic basis. Such trips are available from most major ports. Destinations may be flexible depending upon the wants of the charterers, who usually charter as a group. The range of activities available is as wide as for scheduled day trips but there is more emphasis on fishing. Included in the unscheduled day trips category are vessels of the Cairns game fishing fleet which are too small to be in survey for overnight passengers and which may work to motherships or island resorts.

Scheduled extended trips

This is a small component of the charter fleet at 14 vessels. Most of the vessels are monohulls, lengths range from 16 to 35 m and passenger numbers range from 6 to 40. Scheduled extended trips in 1985 operated out of Mackay, Shute Harbour, Townsville and Cairns.

Generally trips are up to one week in duration and operate a fairly set route. Each vessel offers a range of activities, diving, snorkelling and island visits. Generally cruising/sightseeing are emphasised. None of these are specialized fishing trips.

Unscheduled extended charters

Sixty-seven vessels offer unscheduled extended charters. Vessels providing this service operate out of all major ports and usually are chartered by groups of people. The vessels are mostly conventional motor driven single hulled vessels (lengths range from 13 to 21 m) and sleep 6 to 20 people. Trips may last up to 21 days though most are for one week or less.

Many of these vessels offer specialized fishing trips to more remote locations including the outer reef, and are flexible in destination depending upon the success of fishing. The majority of the Cairns game fishing fleet falls within this category. Other vessels offer specialized SCUBA diving trips and are fitted with air compressors. Unscheduled extended charters account for over 500 000 visitor days per annum.

Water taxi

"Water taxi" is the term given to a small number of speedboats which are run on a hire basis to transport people and goods from the mainland to islands or between islands. The water taxis are fast monohulls or catamarans with powerful outboard motors. Taxis may make several trips in one day.

Bareboats

In 1984 there were 85 bareboats operating in the Reef Region, over 80 of these in the Whitsundays. By 1986, the number operating in the Whitsundays had grown to 151. (Whitsunday Marketing Services, 1986). Bareboats are hired out on a sail yourself basis, though inexperienced sailors may hire the services of a skipper. Most bareboats are sailing boats (though at least one bareboat company is introducing motorized cruisers).

Seven major bareboat hire companies operate in the Whitsundays. The area lends itself to yachting with sheltered waters and a variety of destinations in the bays of the numerous islands.

Floating hotel

At the time of the survey there was one vessel, a 34 m ex navy Fairmile, operating as a floating hotel. It was moored within the lagoon of Hardy Reef and passengers were ferried out and back on other vessels. The floating hotel accounted for only 1 500 visitor days but is mentioned here because it provided a distinctly different operation. During the Cairns game fishing season August to October, a number of vessels operate as mother ships providing overnight accommodation. Interest in the floating hotel concept has since led to a vessel being moored at Michaelmas Cay, a large vessel has been constructed to operate in conjunction with an island resort and a proposal exists for a five storey floating hotel at a reef off Townsville.

Ferry

The demarkation between ferries and scheduled day trips is difficult to determine in some instances. Ferries have been defined as services which transport people to and from island resorts plus boats/barges which carry campers to islands. The majority of the people travelling on ferries are resort guests, rather than day trippers. Seventeen ferries operate in the Reef Region, carrying passengers for 209 200 visitor days.

All vessels

The information on trip types, vessels and visitor numbers is summarized in Table 18. Scheduled day trips generate by far the greatest number of visitor days with large catamarans contributing around half the scheduled day trip visitor days.

Table 18. Number of vessels, passengers, visitor days, 1984/85.

	Number of vessels*	Passenger numbers	Visitor days
Scheduled day trip	58	826 400	826 400
Scheduled extended trip	14	11 500	43 400
Unscheduled day charter	29	17 000	17 000
Unscheduled extended charter	67	13 100	52 700
Taxi	5	30 600	30 600
Bareboat	85	10 600	93 200
Floating hotel	1	700	1 400
Ferry	17	209 200	209 200
Total	276	1 119 000	1 274 000

*Principal activity

Table 19. Percentage of vessels, visitor days.

	Percentage of vessels	Percentage of visitor days
Scheduled day trip	21	65
Scheduled extended trip	5	3
Unscheduled day charter	11	1
Unscheduled extended charter	24	4
Taxi	2	2
Bareboat	30	7
Flaoting hotel	1	1
Ferry	6	16

Information on the home ports of vessels (Table 20) throws light on the concentration of tourist activity. The Whitsundays carries the greatest number of commercial passenger vessels - many of these are bareboat yachts.

Table 20. Vessels by home port.

Home port	Numbers of vessels
Bundagerg	4
Gladstone	22
Rosslyn Bay	15
Mackay	9
Whitsundays*	137
Bowen	3
Townsville	26
Lucinda	1
Cardwell	4
Mission Beach	3
Innisfail	6
Cairns	39
Port Douglas	9
Total	276

*Shute Harbour, Airlie Beach and Islands

Many vessels offer a range of recreational activities. Over half the vessels offer fishing as an activity while diving is undertaken from half the vessels. The activities in which passengers can participate are listed in Table 21, along with the percentage of vessels which nominated these activities as important (adds up to more than 100 percent).

Table 21. Activities offered by charter boats.

Activities	Percentage of boats involved
Fishing	55.5
Diving	50.6
Snorkelling	41.6
Cruising/sightseeing	34.4
Beach activities	22.0
Reef activities	21.1
Taxi and ferry	15.5
Game fishing	10.5
Shelling/oystering	7.2
Sailing	6.2
Resort activities	4.0
Sailboating	3.8

Economic characteristics

Economic information gained from this survey focused on the current market value of vessels and revenue from fares. Current vessel market value was based on estimates by operators. Unfortunately operators may overestimate the amount of money they would actually obtain from the sale of their vessel and business, so this figure should be treated as indicative only.

Table 22. Market value of vessels.

Vessel type	Number of boats	Market value
Bareboats	85	$8 670 000
Other	193	$49 500 000
Total	278	$58 179 000

Revenue information was gained from operators, or was estimated based on trip numbers, passenger numbers and fares in those cases where operators did not supply a figure for revenue. Sales of other goods (drinks, T-shirts) or services (air fills, diver training) are not included.

Table 23. Annual revenue.

Vessel Type	Number of boats	Market value
Bareboats	85	$4 369 000
Other	193	$30 687 000
Total	278	$35 056 000

Marine Park Sections

The Great Barrier Reef Marine Park is currently divided into six "Sections" for planning and management purposes. The number of vessels in home ports adjacent to the Marine Park Sections and estimated visitor days are shown on Table 24.

Table 24. Vessels by Marine Park Section, 1984/85.

Marine Park Sections	Number of vessels by home port	Estimated visitor days
Far Northern	nil	minimal
Cairns/Cormorant Pass	52	254 000
Central	174	768 000
Capricorn/Capricornia	50	252 000
Total	276	1 274 000

The commercial passenger vessel sector is an important component of Great Barrier Reef activities in that this sector provides the greatest number of visitor days in the Reef Region. It is an industry undergoing recent and current technological change and, in some areas at least, expansion which has the potential for significant management implications.

5. ISLAND TOURIST RESORTS

Island resort tourism is the predominant reason for human occupation of islands in the Reef Region. However, only 2 percent of islands and cays of the Reef Region are involved. Twenty-four "resorts" are currently operating on 16 continental islands and three coral cays.

Resorts may be defined as self contained accommodation facilities where meals and a bar are provided for guests. Other facilities offered by individual resorts define their characteristics. One resort is world famous for game fishing, while others emphasise diving or general watersports. While one resort per island is the norm, some islands house a number of facilities. Private ownership of accommodation is available on some islands. Magnetic Island is an exception to all other resort islands in that in some respects it is a suburb of Townsville and has a considerable permanent population (around 2 000 people) as well as holiday accommodation and a number of resort facilities. The Australian Bureau of Statistics classifies five of the facilites on Magnetic Island as "resorts".

The standards and price of accommodation vary from commercial camping facilities to "international" standard establishments. To some extent, the resort market is segmented, though the low cost end of the market is less well catered for.

The list of activities available at island resorts is long and diverse, as marine based, island based and resort orientated activites are offered. Included are swimming, snorkelling, fishing, diving, sailing, windsurfing, boating, paraflying, water skiing, reef walking, coral viewing, sunbaking, bushwalking, tennis, golf, horseback riding, eating, drinking, dancing, and relaxing.

Island resort tourism is perhaps the best documented of Reef Region uses, though gaps in statistical information exist. An estimate of the number of visitors to island resorts in 1947 put the number at 5 000 (Claringbold _et al_,. 1984). Current resort visitation is around 150 000 guests _per annum_ (QTTC, 1986 b) and so a thirty-fold increase in resort visitation has occurred in just under forty years.

Reliable statistics have been collected and published by the ABS since 1976. Resort infrastructure has increased significantly since that year, with the number of rooms available more than doubling (Table 25).

In the two years from 1983 to 1985, the number of rooms has increased by 26 percent and the number of beds has increased by 27 percent (ABS, various years). The reduction in resort numbers in 1986 is due to closure of resorts for re-development.

Table 25. Island resort infrastructure.

Year*	Number of resorts	Number of rooms	Number of beds
1976	19	785	2175
1977	18	841	2421
1978	19	930	2660
1979	19	936	2655
1980	19	1030	3020
1981	19	1038	3172
1982	21	1143	3508
1983	22	1297	3971
1984	22	1403	4271
1985	24	1635	5057
1986	22	1536	4805

*June quarter figures
(Australian Bureau of Statistics, various years)

Tourism to island resorts has kept pace with expansion of facilities with a 101 percent increase in visitor nights from 1976/77 to 1985/86. Growth in visitor nights has accelerated in recent years with a 17.5 percent increase from 1983/84 to 1984/85. The year 1984/85 to 1985/86 saw more moderate growth with a 6.5 percent increase in visitor nights (ABS, various years).

Table 26. Visitor nights, island resorts.

Year	Visitor nights	Percentage change
1976/77	375 600	
1977/78	409 300	+ 8.9
1978/79	439 200	+ 7.3
1979/80	524 600	+19.5
1980/81	552 100	+ 5.2
1981/82	553 200	+ 0.2
1982/83	552 400	- 0.1
1983/84	604 300	+ 9.4
1984/85	709 800	+17.5
1985/86	756 100	+ 6.5

(Australian Bureau of Statistics, various years)

Currently, a considerable amount of investment is being made in building new island resorts and in the re-development and extention of existing resorts. Plans to build or extend resorts are reported to exist for 14 islands (Peat, Marwick, Mitchell Services, 1986). Current plans have been projected to lead to a doubling of rooms available from 1 440 to around 2 880 at a cost of $650 million (Hogarth, 1986). This expansion is planned over a number of years and not all plans are certainties. Concrete examples of recent development include the Hamilton Island Resort which opened in 1983 and the re-development of the Hayman Island Resort in 1985/86.

Island resorts enjoy relatively high occupancy (over 50 percent of rooms) all year round, with peak season extending from July to January. Room occupancy in 1985 is shown on Table 27.

Table 27. Room occupancy, island resorts, 1985.

Month	Occupancy rate (percent)
January	76.3
February	53.6
March	57.0
April	56.7
May	59.5
June	51.1
July	66.1
August	79.5
September	80.0
October	75.9
November	71.4
December	67.5

(Australian Bureau of Statistics, various years)

A second source of statistics on people staying in island resorts has become available since 1982/83. This information is provided by the QTTC as part of their statewide survey of accommodation in commercial establishments (Cameron McNamara, 1983; QTTC, 1985c; 1986b, 1986c). The ABS quarterly survey of island resorts gathers information from resort operators while the QTTC survey relies on survey forms filled in by a sample of guests.

The QTTC survey covers "establishments offering hotel or motel type facilities". The ABS figures on the number of visitor nights spent at island resorts are generally lower than those from the QTTC but are reasonably close. The QTTC figures also show a significant increase in island resort tourism with a 36 percent increase from 1982/83 to 1985/86 being contributed to greatly by the growth between 1983/84 and 1984/85 of 20 percent.

Table 28. Visitor nights, island resorts.

Year	Australian Bureau of Statistics	Queensland Tourist and Travel Corporation
1982/83	552 389	600 000
1983/84	604 266	660 000
1984/85	709 800	790 000
1985/86	756 100	820 000

(Australian Bureau of Statistics, various years; Cameron McNamara 1983; Queenland Tourist and Travel Corporation 1985c, 1986b, 1986c).

To place these figures in perspective, it is useful to compare them with data on tourism in commercial accommodation for Queensland as a whole, and the mainland regions adjacent to the Great Barrier Reef.

Accommodation facilities in terms of rooms available in hotels/motels as recorded by the ABS are shown in Table 28. Great Barrier Reef island resorts are recorded with the adjacent mainland statistical divisions, so double counting does occur in this table.

Thus, the total Great Barrier Reef island resorts plus adjacent mainland provide 11 279 guest rooms, or 42.7 percent of Queensland's hotel and motel accommodation capacity.

Table 29. Rooms available, Queensland and selected regions, June 1986.

	Number of guest rooms	Percentage of state total
Great Barrier Reef Islands	1 536	5.8
Fitzroy Statistical Division	2 341	8.8
Mackay Statistical Division	2 480	9.4
Northern Statistical Division	2 028	7.7
Far North Statistical Division	2 894	11.0
Queensland	26 308	100.0

(Australian Bureau of Statistics, 1986)

In terms of visits, the Great Barrier Reef and adjacent mainland regions attracted 26 percent of the Queensland total visitor numbers and 23 percent of visitor nights in 1985/86 (QTTC, 1986b). Once again, double counting occurs in Table 30 as the visitors to island resorts are also included in the totals for the mainland regions.

Table 30 . Visits to Queensland and selected regions, 1984/85.

	Visitor numbers	Visitor nights	Visitor nights as a percentage of the Queensland total
Great Barrier Reef Island Resorts	150 000	820 000	2.9
Rockhampton/Gladstone	510 000	1 220 000	4.3
Mackay/Proserpine	370 000	1 450 000	5.1
Townsville/Bowen	500 000	1 200 000	4.2
Cairns/Tablelands	410 000	2 860 000	10.1
Queensland	6 630 000	28 180 000	100.0

(Queensland Tourist and Travel Corporation, 1986c)

The increases in visitors to Great Barrier Reef island resorts should be put into perspective. Visits to island resorts increased at a slightly slower rate over the last three years than did visits to Queensland. The increases for Queensland mean that at current rates, the number of people staying in commercial accommodation would double in less than eight years.

Table 31. Queensland and selected regions, change in visitor nights.

	Percentage change visitor nights			
	1982/83 to 1983/84	1983/84 to 1984/85	1984/85 to 1985/86	Three year average
Great Barrier Reef Island Resorts	+10	+19.6	+ 3.7	+11.1
Rockhampton/Gladstone	-10	+43	+ 5	+12.6
Mackay/Proserpine	-14	+11.6	+16	+ 4.5
Townsville/Bowen	-4	+10.4	+13.2	+ 6.5
Cairns/Tablelands	+15	+18.4	+23	+18.6
Queensland	+ 7.6	+21.3	+15.3	+14.7

(Cameron McNamara, 1983; Queensland Tourist and Travel Coporation 1985c, 1986b, 1986c)

A considerable amount of information on people who visit island resorts may be gained from the QTTC survey. The majority of tourists, as would be expected, state the purpose of their visit as holiday/recreation. The main means of transport is by air and this may be compared with travel in Queensland in general which is overwhelmingly by car.

Table 32. Trip purpose.

Year	Holiday/recreation %	Business %	Other %
1982/83	94	1	5
1983/84	87	3	10
1984/85	93	1	6

(Cameron McNamara, 1983; Queensland Tourist and Travel Corporation 1985c, 1986b)

Table 33. Main transport used.

Year	Air %	Bus %	Car %	Other %
1982/83	64	20	15	1
1983/84	62	7	27	5
1984/85	67	12	19	3

(Cameron McNamara, 1983; Queensland Tourist and Travel Corporation 1985c, 1986b)

Island tourist resorts attract a greater proportion of overseas and interstate visitors than does Queensland as a whole. In 1984/85 the visitor composition was interstate 63 percent, Queensland 19 percent and overseas 18 percent.

Table 34. Origin of visitors.

Year	Queensland %	Interstate %	Overseas %
1982/83	21	58	21
1983/84	31	43	27
1984/85	19	63	18

(Cameron McNamara, 1983; Queensland Tourist and Travel Corporation 1985c,1986b, 1986c)

The attractions of island resorts include the climate, the reef, the scenery, the resort entertainment and the opportunity to relax. In answer to the question "what were the two most important features that attracted you to this island?" the following were given as the top five attractions.

Table 35. Attractions to island resorts.

Percentage of visitors nominating attractions					
1982/83	%	1983/84	%	1984/85	%
Barrier Reef	21	Warm sunny weather	19	Warm sunny weather	24
Warm sunny weather	15	Barrier Reef	16	Barrier Reef	16
Tropical scenery	15	Relaxing quiet place	9	Relaxing quiet place	11
Entertainment	8	Beach, water activities	8	Beach, water activities	10
Beach, water activities	5	Entertainment	7	Entertainment	7

(Cameron McNamara, 1983; Queensland Tourist and Travel Corporation 1985c, 1986b)

Survey respondents were also asked to list the activities that they had participated in over the last 24 hours. The top five activities are listed along with the percentage of respondents who participated in these activities.

Table 36. Activities at island resorts.

Percentage of visitors participating in activities					
1982/83	%	1983/84	%	1984/85	%
Relaxing indoor/ outdoor	75	Relaxing indoor/ outdoor	77	Swimming/ snorkelling	78
Swimming/ snorkelling	69	Swimming/ snorkelling	74	Relaxing indoor/ outdoor	72
Walk/stroll	64	Walk/stroll	52	Walk/stroll	54
Boat trip	32	Boat trip	42	Boat trip	46
Sailing/ Windsurfing/ water skiing	20	Tennis/golf	32	Sailing/skiing	31

(Cameron McNamara, 1983; Queensland Tourist and Travel Corporation 1985c, 1986b)

Evidence points to the Great Barrier Reef and marine based activities being important in attracting people to island resorts and keeping them occupied once there. However the above statistics also point to the importance of other factors in attracting visitors.

Economic characteristics

The economic contribution of island resort tourism has not been overlooked in the available statistics. The ABS gathers information from resort operators on takings from accommodation. The ABS survey covers only the accommodation component of takings and operators responding to the questionnaire are asked to separate out other components, for example, food and drinks. The QTTC survey, in recording visitors expenditure, includes a wider range of items and more correctly estimates the total outlays on island tourism.

The items on which data on spending is gathered are; accommodation including meals and drinks, hire charges, local excursion fares and shopping. Excluded is the cost of travel from the visitors home to the island. As most island resorts include meals in the tariff, the two surveys measure different items under the heading "accommodation". For 1984/85, the QTTC figure is twice that of the ABS and this is a reasonable outcome given the definitions adopted.

The ABS figures for annual accommodation takings since 1976/77 have been converted to 1984/85 dollars in Table 37, along with the percentage change in real terms. The 1985/86 takings from accommodation figure (not shown in Table 37) is $35.9 million (in 1985/86 dollars), representing a 13 percent increase in real terms over 1984/85.

Table 37. Takings from accommodation.

Year	Takings $	Percentage change
1976/77	10 543 000	
1977/78	12 740 000	+21
1978/79	13 879 000	+ 9
1979/80	15 216 000	+10
1980/81	17 673 000	+16
1981/82	19 173 000	+ 8.5
1982/83	19 266 000	+ 0.5
1983/84	21 703 000	+13
1984/85	29 217 000	+35

(in 1984/85 dollars)
(Australian Bureau of Statistics, various years)

Over the period 1976/77 to 1984/85, takings grew in real terms by 177 percent and this is double the rate of growth of visitor days (89 percent) for the same period. A significant period of growth in the island resort industry recently is confirmed by a 50 percent increase in real terms in takings over the two years 1982/83 to 1984/85.

The total visitor spending on island resort holidays estimated by the QTTC survey in 1984/85 was $84 million. The increase in expenditure in real terms of 12 percent from 1982/83 to 1983/84 and 33 percent from 1983/84 to 1984/85 parallels visitor-night increases.Preliminary figures for 1985/86 put visitor spending at $100 million (in 1985/86 dollars), representing a 9 percent increase in real terms over 1984/85 (QTTC, 1986c).

Table 38. Tourist expenditure*, island resorts.

Year	Accommodation $ M	Beverages $ M	Hire $ M	Excursions $ M	Other $ M	Total $ M	Change %
1982/83	37	6.7	2.2	3.4	6.7	56.0	
1983/84	44	7.3	2.1	4.2	5.2	62.8	+12
1984/85	58	9.3	2.4	6.8	7.1	83.6	+33

*in 1984/85 dollars
(Cameron McNamara, 1983; Queensland Tourist and Travel Corporation 1985c, 1986b)

The expenditure figures do give an indication of the relative size of the industry. They do not tell the whole story regarding net benefits generated, as costs of running island resorts are not included. Further research is required before the full economic picture is available.

Marine Park Sections

Table 39 lists island tourist resorts and accommodation facilities within the Reef Region, by Marine Park Section.

Those accommodation facilities which are cabin, camping or domitory style or are flats (Magnetic Island) without bar and dining facilities are not included as resorts. Information is not publicly available on the number of visitor days provided by individual accommodation facilities. The Central Section encompasses the bulk of island accommodation, with almost three quarters (73%) of available rooms. Islands of the Capricorn/Capricornia Sections provide àlmost one quarter (23%) and the islands of Cairns/Cormorant Pass Sections contribute the remaining 4% of island resort rooms.

Table 39. Island resorts and accommodation facilities, 1986.

Resort Island	Rooms
Far Northern Section	
Nil	
Cairns/Cormorant Pass Sections	
Lizard Island	32
Green Island	30
Fitzroy Island	5 plus dormitory accommodation
Central Section	
Dunk Island	98
Bedarra Island	16
Hinchinbrook Island	23
Orpheus Island	25
Magnetic Island	
4 "Resorts"	157
total commericial accomm.	400
Hayman Island	under construction
Hamilton Island	290
Daydream Island	78
South Molle Island	202
Long Island	
Whitsunday 100	34
Palm Bay	9
Hook Island	cabins
Lindeman Island	86
Capricorn/Capricornia Sections	
Brampton Island	100
Newry Island	5
Great Keppel Island	
Great Keppel Island Resort	172
Wappaburra Haven	12 cabins plus tents
Youth Hostel	42 beds
Camping Connection	tent accommodation
North Keppel Island	cabins
Heron Island	85
Lady Elliott Island	30

6. PRIVATE BOATS

Privately owned boats are a means of access to the Reef Region for people living on the adjacent coast. Both day and extended trips are made, and the majority of trips involve recreational fishing.

This recreational activity has been described in detail in a Great Barrier Reef Marine Park Authority publication on fisheries of the Great Barrier Reef (Hundloe, 1985) and so only a brief description is presented here.

The availability of small fiberglass and aluminium boats and outboard motors since the 1960's has contributed to growing numbers of people owning pleasure boats. Registrations of private motor boats increased by 337 percent from 1968 to 1986 in the towns and cities adjacent to the Great Barrier Reef, and this is close to the growth rate for Queensland as a whole (343 percent) (QDHM 1981, 1984, 1986). In the six years from 1980 to 1986, registration of private boats in cities and towns adjacent to the Great Barrier Reef exhibited an average increase of 5 percent per annum. In 1986, approximately 33 600 private motor boats were registered in the coastal towns and cities from Bundaberg to Cooktown.

Surveys carried out in 1980 found that around 60 percent of these boats are used for recreational fishing within the Reef Region. A further 18 percent of boats were used for fishing elsewhere (rivers, lakes etc) and 22 percent of boats were not used for fishing at all. This 22 percent includes boats used to travel to the Reef Region but where no fishing was undertaken. Thus over 60 percent of private motor boats or over 20 200 boats in 1986 travel to the Reef Region.

The number of private boats visiting the Reef Region is boosted by boats from elsewhere. A small number of boats are towed to places adjacent to the Reef Region whilst others, mainly yachts, travel by sea from ports outside the region.

Other than recreational fishing activities undertaken include boating, sailing, snorkelling, diving, shell collecting and island camping.

Not all boats that enter the Reef Region travel far from the coast. Over a third of trips from all ports south of Cairns are made to within 5 km of the coast. Only from north of Townsville, where the reef is closer to the coast, do small boats travel to the outer reef.

Boats which travel to the Reef Region range in length from 3 to 20 metres, with motor power ranging from 2.2 kw to twin motors with a total of 224 kw.

The average number of fishing trips undertaken each year was found from the survey to be 13.2 trips. When this number of trips is undertaken by 20 200 boats a total of 266 000 trips to the Reef Region are made per year. To calculate total visitor days the unlikely figure of 2.6 passengers per trip is used as this is the average number of people on each boat. Total visitor days per annum approximate 690 000.

Economic characteristics

Unlike resort guests or charter boat passengers, people visiting the reef in privately owned boats do not have to pay a fee to a commercial operator. Monetary outlays are required to purchase boats, fishing gear, fuel etc. Information on these costs was collected and the average outlays are listed in Table 40. The figures collected in the 1980 survey have been updated by inflating to 1985/86 dollars and multiplying average annual expenditure by the higher number of registered boats. The number of boats visiting the Reef Region in 1980 was estimated at 15 000 boats. This has grown to 20 200 boats in 1986.

The total annual expenditure on boats and equipment is estimated at $71 million in 1985/86 dollars or $68 million in 1984/85 dollars.

Table 40. Annual expenditure, private boats.

	Average* $	Fleet cost** $
Boats, motors, trailer	1815	36 663 000
Boat equipment	77	1 555 400
Boat maintenance	416	8 403 200
Fishing gear	102	2 060 400
Boat insurance	94	1 898 800
Boat licence fees	77	1 555 400
Vehicle fuel	247	4 989 400
Boat fuel	531	10 726 200
Bait	113	2 282 600
Ice	48	969 600
Incidentals	26	525 200
Total	3546	71 629 200

*Inflated from 1980 prices to 1985/86.
** Based on a fleet of 20 200 boats.

Marine Park Sections

An estimation of private motor boat usage of sections of the Marine Park is based on the number of boats registered in home ports adjacent to the Marine Park sections and the information that generally 60 percent of these boats are used in the Marine Park.

Table 41. Private motor boat usage of Marine Park Sections.

Marine Park Section	Number of boats using Section	Visitor days number	Visitor days percentage
Far Northern	minimal		
Cairns/Cormorant Pass	4 255	145 100	21
Central	6 380	221 100	32
Capricorn/Capricornia	9 574	324 800	47
Total	20 209	691 000	100

Private motor boat usage, though maybe not usually thought of as "tourism", is a significant recreational use of the Reef Region. Local residents are the main users of this type of access to the Reef Region and recreational fishing is the major activity.

7. TOURISM, PAST, PRESENT AND FUTURE

A report such as this, largely based on presentation of statistics, gives a snapshot of the situation at present (at the time of latest available statistics). Also the report draws together historical precedents. While the time series statistics describe past and present tourism, they are not explanatory. To enable reasonably confident predictions for the future to be made it would be necessary to model the determinants of demand for tourism and supply of tourism services. This complex task has not yet been undertaken for the Reef Region, so predictions for future tourism activity levels are largely based on extrapolation of past performance.

In order to provide some conclusions for this report, a summary of statistics on Reef Region tourism to date is presented and then some issues which will be important for future tourism in the region are briefly introduced.

The background to Reef Region tourism is world wide tourism. Internationally, travel (measured by arrivals) increased by 23 percent from 1977 to 1984 (ATC 1986(b)). World tourism is expected to increase steadily at a rate of 2.5 percent per annum to 1995 (ATC 1986(b)).

Tourism has become an important, and in some cases the largest, foreign exchange earner for many countries (Mathieson and Wall, 1982). For Australia, inbound tourism is the country's eighth most important foreign exchange earner. (ATC 1986(b)).

Despite this, a "tourism deficit" is experienced in Australia as more people travel overseas and spend more money overseas than the country gains from inbound tourism, though this gap seems to be closing (DSRT, 1985).

In recognition of the current and potential contribution of international tourism to Australia as an "export" good, the Commonwealth and State governments are promoting travel to Australia and encouraging Australians to holiday at home.

International tourism to Australia has increased in terms of the number of visitors at an averge rate of 6.4 percent per annum over the five years to 1985. This is ahead of the average growth rate for the world. The increase in international arrivals in 1986 was a high 25 percent. Australia's increased popularity as a destination has been attributed to "the devaluation of the Australian dollar, improvements in the standard of infrastucture and associated services and the perception of our country as a politically stable and safe place to visit." (National Australia Bank 1986).

Domestic tourism is also growing at a steady rate of 3.6 percent per annum (for the five years from 1979/80). For Australia, domestic tourism is by far the greatest source of tourist activity. Over 54 million domestic trips are made annually compared with 1.5 million visits from overseas.

Queensland attracts around one third of international visitors and one third of Australian domestic trips. Over the five years to 1985, the rate of increase of overseas visits to Queensland was 51 percent, double that for Australia (26 percent). Domestic travel with Queensland as a destination increased by 21.5 percent over the five years to 1984/85. This was twice the rate of increase of domestic travel in Australia as a whole (10.5 percent).

The Great Barrier Reef and adjacent mainland is the destiniation of 182,700 overseas visitors, 16 percent of visitors to Australia. Around 2.3 million domestic trips or 4 percent of the Australian total have their destination on the Reef Region and adjacent mainland.

It is not only the 151,000 people who stay on island resorts (for 790,000 visitor nights in 1984/85) who make up reef region tourists. The commercial boat (and to a much lesser extent air service) sector provides an important means of access to the reef. The majority of trips taken are day trips. Those boats provide the link between people staying in mainland accommodation and the reef. This commercial passenger boat sector has virtually doubled in terms of boat numbers in the last 5 years to provide 1.2 million visitor days per annum. This industry provides the greatest number of visitor days to the Reef Region. It is a somewhat diverse industry composed of a number of vessel types offering a number of different trips and activities.

To include private boat access to the reef as "tourism" may be stretching the concept a bit far, though these visitors fall within the adopted definition of "tourists". Private boats are largely used by residents of the adjacent mainland, who spend around 690,000 visitor days in the Reef Region each year.

The economic value of tourism to the Reef Region measured as gross output is around $200 million. This value is increasing in real terms by 10% per annum.

It is interesting to explore how many visitors to the Reef Region actually visit coral reef formations. The Reef Region as defined is composed of islands, reefs and water. Only three island resorts are located on coral cays, the remainder being on continental islands. The continental islands all have some reef structures fringing them but the degree of reef development varies from island to island.

It has been estimated that 75 percent of visitor days spent by island resort tourists and commercial boat passengers are actually spent in the vicinity of islands and fringing reefs rather than on the mid shelf and outer shelf platform reefs. (Driml, 1987 b).

An estimation of visitor days where people may experience reefs other than fringing reefs includes; tourism to Green Island and reef (the single most heavily visited reef) large catamaran trips to reef locations, other day trips to reefs and extended fishing and diving trips. The estimate is 300,000 to 400,000 visitor days per year.

Private boat access to reefs is not included in this estimate. The majority of private boat activity is within 5 km of the coast, except in the Cairns area. Private boat and recreational fishing activity focuses on features including the mainland coast, islands, fringing reefs, submerged reefs and shoals, and platform reefs.

The above estimation attempts to put coral islands and reefs usage in perspective and emphasises the importance of fringing reefs in providing important reef recreational resources. As has been emphasised elsewhere in this report, the Great Barrier Reef is only one, albeit important, of a number of factors that attract people to holiday in this area of the world.

This summary brings us conveniently to some issues concerning the future of Reef Region tourism. The background and trends of tourism generally in the world, Australia, Queensland and the Reef Region have already been discussed in this report.

Trying to predict the future for Reef Region tourism is somewhat akin to crystal ball gazing. Tourism, being a discretionary or luxury activity is sensitive to fluctuations in domestic and international economic conditions. Important determinants of the level of tourist activity are disposable income, exchange rates and prices - the combinations of which may encourage or dissuade tourism.

Two issues worth expanding upon here, because they will affect both the demand and supply side of tourism in the Reef Region and therefore the face of tourism in years to come, are technological change and environmental quality.

Technological Change

Technological change is important for Reef Region tourism. The reef is an exceptional recreational resource, however the marine environment presents difficult access. The most spectacular coral reef formations are some distance from the mainland, and they are mostly underwater. Not everyone is happy or comfortable in a boat. Wet or windy weather is a deterrant and a proportion of the population are excluded by virtue of ability or preference from snorkelling or SCUBA diving.

The introduction of large fast catamarans over the past five years has increased reef access significantly. The development of semi-submersible vessels has improved coral viewing for those who do not wish to venture under water. The popularity of these trips indicate that they are catering for a demand to see the reef in comfort and safety.

These developments indicate the potential effects of technological change. Of course other changes including the improvements in motor boat technology and the development of SCUBA diving (along with relative price changes) have had impacts on the recent history of reef use.

The latest technological innovation is the floating hotel with the first one due to be installed in mid 1987. Whether this will change the face of reef tourism will depend on user acceptance of the concept.

While other innovations in marine access are on the drawing board, a reverse concept is being introduced with the Great Barrier Reef Aquarium in Townsville, bringing the marine environment onto land. The complex, which will include the worlds largest living coral reef in an aquarium and an interpretive area, will cater for people who cannot visit the reef and for those who wish to learn more.

Environmental Quality

The retention of environmental quality in the Reef Region will be important to some tourists and not so important to others. Those who want luxury accommodation and sunshine may not care about other environmental amenity. Other visitors who are in whole or part attracted by the particular environmental characteristics of the region will demand a quality experience. As visitors become more educated about the reef through the media and interperative efforts of government and the tourist industry, they will demand to see what they have been promised.

The industry and those controlling it will need to pay particular attention to design and operation in the reef environment. The principle that ultimately it is in the interests of the tourist industry to protect the resource on which it depends has been emphasised by the Great Barrier Reef Marine Park Authority (Kelleher, 1986). Careful and co-operative management is required to allow development of tourism within the limits placed by the environment and competing uses for the Great Barrier Reef Marine Park.

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