

# Benefits and costs of tourism for remote communities

Case study for the Carpentaria Shire in north-west  
Queensland

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Source of the photographs and maps:

Plate 1: Alexander Herr

Plates 3, 4 and 11: Colin Mayocchi

All other Plates: Romy Greiner

## **Abbreviations and Acronyms**

|        |   |
|--------|---|
| ABARE  | Australian Bureau of Agricultural and Resource Economics  |
| ABS    | Australian Bureau of Statistics                           |
| COAG   | Council of Australian Governments                         |
| CSIRO  | Commonwealth Science and Industrial Research Organisation |
| GSD    | Gulf Savannah Development                                 |
| TS-CRC | Tropical Savannas Co-operative Research Centre            |
| QDPIF  | Queensland Department of Primary Industries and Fisheries |
| FRDC   | Fisheries Research and Development Corporation            |

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## EXECUTIVE SUMMARY

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### Context

This report summarises the results of a research project funded by the Tropical Savannas Co-operative Research Centre (TS-CRC) and the Commonwealth Science and Industrial Research Organisation (CSIRO) Sustainable Ecosystems. The research was carried out with the support of Carpentaria Shire Council and the tourism industry of Carpentaria Shire.

The research project studied the relationship between tourism and Carpentaria Shire, as a host region and a host community.

Tourism has become a significant industry in Carpentaria Shire since sealed roads ensured easy access by travellers. The regional community is small and tourism has profound impacts. Tourism is dynamic in terms of the number and types of tourists who visit a destination. A clear understanding is required of the factors and relationships shaping tourism development and impact in Carpentaria Shire. To that effect, a model is developed that defines the key factors and relationships relevant for Carpentaria Shire. The model guides data collection and analysis and enables conclusions to be drawn for planning, policy and management at the regional scale.

### Community perceptions

Tourism provides up to 15% of employment in the shire. The regional community is united in their appreciation of the employment opportunities and private and public investment related to tourism. Residents also see predominantly positive social and lifestyle impacts of tourism – only residents in Karumba perceive congestion. However, tourism is perceived to have major negative impacts environmentally, specifically on fish stocks and on freshwater supplies. The vast majority of residents think that tourism, overall, is a good thing for the region.

### Visitor market

During the 2002/03 financial year the research team interviewed 510 travel parties, or 1378 visitors to Normanton and Karumba. Those respondents were staying at commercial accommodation places. The number of visitor nights captured by the survey was almost 50,000.

On the basis of the socio-demographic characteristics of respondents, five key visitor segments emerged:

1. Retirees
2. Couples
3. Families
4. Family or travel groups and
5. Singles.

Key differences between visitor segments relate to their usual residence, duration of stay, activity pattern and reasons for visiting. A majority of respondents were retirees, who are part of the 'grey nomads' phenomenon. Retirees stay for an average of 10.5 weeks in the region. They typically come from southern states, stay in their caravans and are on low household incomes. Other visitor segments originate predominantly in (northern) Queensland and stay for one to two week periods.

All visitor segments, with exception of singles, come to fish. And fishing is the most regularly undertaken activity, mostly by the person's own boat, but also from the riverbank and beach, and to a lesser extent on charter fishing tours.

### Visitors and visitor days

It is specifically important to know how many tourists are visiting, how much they spend, how that expenditure flows through the local economy, how many people gain employment in tourism and how much fish the tourists catch.

The number of tourists staying in commercial accommodation in Normanton and Karumba during 2002/03 was approximately 14,000. The

number of visitor nights was approximately 280,000.

Applying various assumptions, the number of total annual overnight visitors to Carpentaria Shire might be as high as 25,000.

The estimate of 14,000 total visitors is well below the locally cited number of 80,000 to 100,000 visitors and also well below the potential for 60,000 visitors derived from international and national visitor statistics for Tropical North Queensland. The estimate is, however, entirely plausible as it equates to an occupancy rate of just below 50% for the year for accommodation in Karumba and Normanton.

It is important to note that this estimate does not include the following types of visitors:

1. visitors staying within the Shire but outside Normanton and Karumba
2. visitors staying with family or friends
3. visitors to special events, excluding fishing competitions, such as rodeos
4. most commercial tours passing through town and possibly staying overnight, and
5. day visitors to the Shire.

Visitors to Normanton and Karumba stay for long periods of time, much longer than the average interstate visitor to Queensland, who stays for three days only. The 280,000 visitor nights are thus equivalent to 93,000 'average' visitors.

On the basis of visitor nights (for commercial accommodation), retirees are the largest tourist segment (37% of visitor nights). On the basis of travel parties and visitors, families are the largest tourist segment (36% of total visitors).

Tourists equate to about 800–1000 additional residents, adding a further 25-30% demand for infrastructure and services on top of that generated by the resident population.

### **Tourism impact**

Tourists inject in excess of \$11 million into the Shire economy, with total economic impact, through businesses sourcing labour and other inputs locally, worth up to \$14.1 million.

An estimated 180 persons are employed in tourism, directly or indirectly, in Normanton and Karumba. This is equivalent to 10% of workforce and 16% of the working population in Carpentaria Shire.

Resource use by tourists through fishing as high as 330 tonnes of fish, which is equivalent to a mean commercial catch landed in Karumba.

### **Implications for planning and management**

Tourism is dynamic and destinations continuously change in terms of visitor numbers and types of visitors. Destinations have the opportunity to influence the direction and speed of this change. The data presented here provides valuable information to underpin planning, management and investment to support thinking about what kind of tourism the community in Carpentaria Shire wants for their region and how to work towards achieving that objective.

A combination of planning, management and policy, with cooperation from various stakeholders is required. This specifically includes the Shire Council, tourist operators, the indigenous community, Gulf Savannah Development, Tourism Queensland and Queensland State Government departments.

Increasing benefits to the regional community from tourism will largely depend on the region diversifying its tourist product away from fishing while safeguarding fish stocks, thereby offering tourist anglers satisfying fishing experiences. This is a necessary condition for ongoing tourism success and attention to fish management is urgent. Fishing is the major motivation of all current visitor segments, except for Singles. Repeated anecdotal evidence – though not as yet backed up by data – suggests that recreational catch has been declining and that there is visitor dissatisfaction.

Improving the variety and quality of facilities and services available to tourists broadens the appeal of a destination. The current visitor market in Carpentaria Shire is not very enthusiastic about most ideas for new tourist facilities and activities. However, some ideas appeal sufficiently to visitors to suggest that their implementation will generate additional

employment and revenue for the region. At the same time, these investments could serve to broaden the tourist product and appeal of the region to non-fishing visitors, which in time will enable further business opportunities.

The resident population was concerned about perceived negative impacts on environmental aspects of the region, including the availability of fresh water and refuse generation. It is possible to mitigate this impact. Importantly, planning for services must be guided by the overall demand, not just demand by the resident population. Tourists add as many as 800–1000 “resident equivalent”, effectively increasing demand for services in the Shire by 25–30% over a calendar year.

Another way is to provide incentives for tourists to minimise water use and waste generation. It is also possible to generate revenue from tourists to support the development of infrastructure that is better equipped to service both residents and visitors.

Further embedding the region in broader destination marketing and ‘theming’ provides another avenue of attracting different types of tourists. Themed roads such as the “Savannah Way” are being marketed for the 4WD enthusiasts and ‘adventurers’ and help to attract more short-term visitors. The Savannah Way, following a route between Cairns and Broome, also connects savannah regions across northern Australia in a meaningful manner.

### **Lessons for remote destinations**

The research results presented in this report contain important messages that are relevant beyond the case study.

Savanna destinations offer an essentially nature-based tourist product. In the process of enjoying the natural resources, tourists consume them, along with other services and resources, and more intangible aspects of the tourism product such as local culture and the feeling of place. It is essential to consider this resource use in the context of the benefits that tourism generates for host communities. Taking stock is specifically important due to the incremental growth of tourism. Facts and knowledge that allow an

assessment of net benefit are essential ingredients for the design of appropriate plans and management actions. These facts include tourist numbers, tourist market, visitor profiles and activities, amount of tourist spending and resource extraction. It is equally important to understand what segments of the general tourist market are absent from the destination.

Planning and management will gain in importance as one of the key tourist segments, the grey nomads, will significantly swell in numbers over the coming decades. Demand-driven changes to infrastructure, such as sealing roads, will shift tourist pressures into new areas.

Equalling tourist numbers to tourist success is a dangerously flooded concept for small host communities right across the tropical savannas. This is so because key segments of the tourist market stay for long periods of time, spend little and extract large amounts of resources. Therefore ‘visitor days’ is proposed as a more meaningful measure.

The focus for savanna destinations needs to be on yield, net benefit, and the distribution of benefits and costs. Maximising net benefits is a challenging task for savanna communities as it involves changing the tourist product, attracting different/more diverse tourist markets, adding secondary benefits from money re-spent locally, combating seasonality of visitation, monitoring and managing tourist impact, and ensuring that resident needs are not neglected over tourist demands. However, the key to ensuring tourism futures for savanna communities lies in safeguarding the natural resources, for tourists, local and others to enjoy into the future.



---

# 1 INTRODUCTION

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## 1.1 Summary

This section provides important context for the research presented in this report. Tourism has become a significant industry in Carpentaria Shire since sealed roads have ensured easy access by travellers. The regional community is small and during the peak season 30% of persons counted in the Shire were visitors, in some areas up to 60% of enumerated population were non-residents. Tourism is dynamic in terms of the number and types of tourists who visit a destination. Little is known about tourism in the Shire: there are only anecdotal estimates of numbers of visitors. A clear understanding is required of the factors and relationships shaping tourism development and impact in Carpentaria Shire. To that effect, this report illustrates tourism as a systems model, which defines the key factors and relationships relevant for the types and magnitudes of impacts that tourism generates. The model guides data collection and analysis and enables conclusions to be drawn for planning, policy and management at the regional scale.

## 1.2 Background of this report and scope

This report summarises the results of a research project funded by the Tropical Savannas Co-operative Research Centre (TS-CRC) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Sustainable Ecosystems. The research was carried out with the support of Carpentaria Shire Council and tourism businesses in Carpentaria Shire.

The research project studied tourism activity in Carpentaria Shire, its effects on the local economy, the community and the regions natural resources. It sought to:

1. Develop an understanding of the factors shaping tourism in this savanna region;
2. Estimate the benefits and costs that tourism generates; and
3. Investigate avenues in which the Shire can increase community benefits from tourism

in the broader context of ecologically sustainable development.

The idea for the project was developed during meeting of community representatives with TS-CRC researchers in Normanton in February 2002. Subsequently local government, the tourism industry and other stakeholders assisted in framing research questions. Research commenced in June 2002.

This report provides a summary overview of the research results. There are additional scientific publications, which focus on aspects of the research and methodological detail. Reference to these publications is provided in this report. Additional publications are under development.

## 1.3 Aim of research project

The aim of the research project was to contribute to developing avenues for communities in the tropical savannas to improve the net benefits they derive from tourism. The guiding question was: How can communities, agencies and tourist bodies promote and manage tourism in a way that:

1. Provides necessary advantages for the people in savanna regions;
2. Promotes sustainable tourism development; and
3. Complements broader regional development strategies?

In determining how to generate prosperity for communities in the tropical savannas, the research project aimed to:

1. Provide new data and understanding about tourists to the region, resource use and values assigned to tourist experience, and willingness-to-pay for access to natural resources (eg. fishing, nature reserves), infrastructure and services;
2. Design and assess strategies and policies to maximise regional benefits from tourism; and

3. Work within regional planning frameworks and processes to improve regional development strategies with reference to tourism development.

There were a number of hypotheses derived from the project aims, which were used to test whether new visitor scenarios could in fact increase the overall benefit of tourism to the host community. The following questions were used in this research project:

1. Who are the visitors to the region?
2. What impact do visitors and visitor mix have on the resource use within the region and what economic contribution do they make?
3. What are the net benefits from tourism: How do the economic benefits of tourism compare to the resources that visitors take or utilise in the host community?
4. Does the wider community have an appreciation for tourists and are people realising some of the 'net benefits' of tourism?
5. Would a change in visitor mix generate a greater net benefit to the host community?
6. Would new tourist activities offer a means for generating more income and better distributing the tourist dollar within the host community?

Answers to these questions will provide a much improved understanding of tourism in the Carpentaria Shire so that informed decisions can be made on future tourism planning and management.

#### **1.4 Base knowledge of tourism in Carpentaria Shire**

Anecdotal evidence suggests that as many as 80,000 people might visit Carpentaria Shire every year. While this is not a large number when compared to other tourist destinations, the impact is profound since the host community is small.

Table 1 shows that during the peak tourist season, in August, which coincides with the Australian

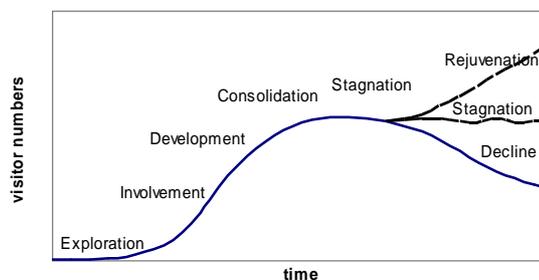
Bureau of Statistics (ABS) Census, up to 60 per cent of persons counted in some parts of the Shire were visitors. Across the Shire, visitors accounted for 29 per cent of persons counted (= enumerated population).

#### **1.5 Tourism benefits**

Tourism is dynamic. The number and types of people who visit a destination change over time, as does the destination itself. This change is governed by some common underlying principles.

Butler (1980) developed the 'life-cycle' model of tourism to show – and explain – the way in which destination changes over time. He noted that tourism at a particular destination often starts with the arrival of just a few 'adventuresome' individuals; individuals who are typically followed by larger and larger numbers of 'less adventuresome' tourists. This dynamic is captured in Figure 1.

In general, the early 'explorers' have inherently different likes, dislikes, and behaviour patterns than those travelling en-masse, they are drawn to the region by different attributes, travel in different ways, and seek different facilities. Regional tourism therefore tends to develop dynamically and interactively. The early adventurers attract other visitors, but the presence of more visitors makes the region less attractive to the early adventurers, hence that part of the market declines. Whether total visitor numbers increase, decrease, or remain the same over time, will depend upon whether the emergent segments are larger, smaller, or of similar size to the declining segments.



**Figure 1: Destination life cycle**

(after Butler, 1980)

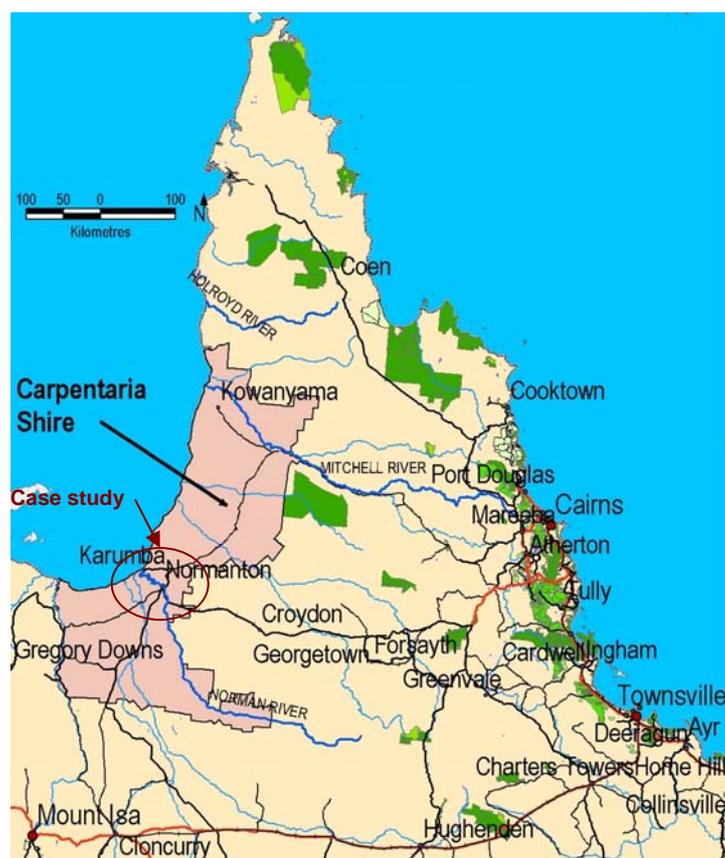


Plate 1: Locality map of Carpentaria Shire and case study

Table 1: Persons and visitors in Carpentaria Shire during the August 2001 Census

(data source: ABS, 2002)

| Major centre within collection district | Total persons counted<br>(a) | Visitors from Australia<br>(b) | Visitors from Overseas<br>(c) | Visitors as part of enumerated population (%)<br>(d)=(b+c)/a | Proportion international visitors (%)<br>(e)=c/b |
|---|------------------------------|--------------------------------|-------------------------------|--|--|
| Jacks Pocket / Inkerman                 | 85                           | 52                             | 3                             | 65   | 5  |
| Burke and Wills Roadhouse               | 148                          | 90                             | 0                             | 61   | 0  |
| Karumba                                 | 1,349                        | 803                            | 17                            | 61   | 2  |
| Delta Downs / Glencoe                   | 180                          | 85                             | 6                             | 51   | 7  |
| Augustus Downs                          | 101                          | 20                             | 3                             | 23   | 13   |
| Normanton                               | 1,452                        | 268                            | 16                            | 20   | 6  |
| Mitchell River Community                | 648                          | 66                             | 0                             | 10   | 0  |
| Kowanyama                               | 894                          | 45                             | 0                             | 5  | 0  |
| <b>Total for Carpentaria (S)</b>        | <b>4,857</b>                 | <b>1,429</b>                   | <b>45</b>                     | <b>29</b>  | <b>1</b>   |



The project completed five different surveys, collecting data on the socio-economic aspects of tourism in the region and on-farm diversification into tourism. Key aspects of each of the five socio-economic surveys are summarised in Table 2.

### 1.7 Participatory research

The research was undertaken in close liaison with decision makers at the regional and local government level and with tourism promotion

and regional development organisations to maximise knowledge transfer into relevant planning and management processes.

Media releases and fact sheets were compiled throughout the project to ensure stakeholders and the community were aware of project activities and to communicate research findings. A community meeting was held in Karumba, February 2003, to discuss interim project findings and enable feedback to be considered in the remaining research period.

**Table 2: Summary description of surveys conducted**

|                         | Visitor survey   | Community survey   | Business survey  | Consumer survey                             | Grazing survey  |
|-------------------------|--|--|--|---|---|
| Target                  | Tourists   | Residents  | Business managers  | Shoppers (tourists and residents)           | Graziers who diversify into tourism                           |
| Scope                   | Socio-economic profile, expectations, activities, preferences                        | Perceived economic, social and environmental benefits & costs of tourism | Employment, business income and expenses, location of transactions | Expenditure on groceries                    | Business profile, expectations, strategies, management issues |
| Design                  | Structured, tick questions, rating questions, number questions, open-ended questions | Rating questions, open questions   | Structured, tick questions, number questions, open-ended questions | Structured, tick questions, number question | Semi-structured interview                                     |
| Collection method       | Face-to-face   | Face-to-face   | Face-to-face   | Face-to-face                                | Face-to-face  |
| Stratification criteria | Tourist seasonality, location, accommodation type                                    | Location, ethnicity, gender, age, profession                             | All tourist-related businesses                                     | At grocery shops                            | All properties with tourism                                   |
| Duration                | ~20 minutes  | ~ 5 minutes  | ~30 minutes  | 1 minute                                    | ~40 minutes   |
| When conducted          | July 2002<br>September 2002<br>February 2003<br>April 2003                           | November 2003  | September 2003   | September 2003                              | November 2003   |
| Sample size             | 510 travel parties (1378 tourists)   | 73 residents   | 27 businesses  | 128 total;<br>71 residents<br>57 tourists   | 6 pastoral lessees / managers                                 |

The project team has been in constant liaison with the local council to advocate project activities and findings. Project material has been compiled and presented at Shire council meetings in February 2003, November 2003 and May 2004.

The project has established close linkages to industry and stakeholders. Multiple strategies

were pursued for delivering research outcomes. The project and results have been discussed with Gulf Savannah Development, Tourism Queensland, Savannah Guides, the Tourism CRC, and James Cook University.

## **1.8 Terminology**

A 'tourist' is defined as someone who travels for pleasure or recreation. In this report 'tourist' is used interchangeably with 'visitor'. This seems appropriate because the view taken is from the perspective of a host region and the focus of the study is on those visitors to a given destination who visit for pleasure purposes. The term visitor also seems more appropriate in the context of describing long-stay tourists.

## **1.9 Structure of report**

This report is organised into five sections.

Section two of this report presents background information about the case-study area and introduces tourism as viewed by the host community.

Section three describes the current visitor market in the Carpentaria Shire.

Section four integrates all the information obtained during the course of the research project to estimate the Shire-wide outcomes from tourism.

Section five provides interpretation of the results and recommendations for tourism planning and management. It summarises key learnings from the project and raises research questions that have emerged as a result of this work.

Section 6 concludes the report with thoughts as to how the findings of this study are more generically relevant to communities across Australia's tropical savannas and outback regions.



**Plate 2: Members of the tourist survey team**

(from left to right: Colin Mayocchi, Riki Gunn, Donna Peebles, Natalie Stoeckl)



**Plate 3: Community liaison**

(Romy Greiner reporting preliminary results and discussing them with community, February 2003)



**Plate 4: Client reporting**

(Romy Greiner reporting progress and preliminary results to Carpentaria Shire Council, November 2003)

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## 2 THE CARPENTARIA SHIRE COMMUNITY AND TOURISM

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### 2.1 Summary

Tourism provides up to 15 % of employment in the Shire. The regional community is united in their appreciation of the employment opportunities and private and public investment related to tourism. Residents also see predominantly positive social and lifestyle impacts of tourism – only residents in Karumba perceive congestion. However, tourism is perceived to have major negative impacts environmentally, specifically on fish stocks and on freshwater supplies. Indigenous member of the community also perceive tourism-induced price increases to goods. The vast majority of residents think that tourism, overall, is a good thing for the region.

### 2.2 Tourism in the Carpentaria Shire

In the past, the economic development of the Gulf region has been primarily based on cattle production and mining.

Normanton was initially settled as the main port for the Gulf and was used extensively to transport gold mined in the Croydon area. Today, it has an estimated resident population of about 1197 (ABS 2002), and is the administrative centre of Carpentaria Shire (Plate 1).

In the early 1990s the road into Carpentaria Shire was sealed, which made Karumba the only location on the Gulf of Carpentaria accessible by bitumen. With the road came the tourists. Tourism in the Shire has been gaining momentum in the past ten years. Karumba, with an estimated resident population of approximately 529 (ABS 2002), is the tourism hub of the Shire. It is renowned for its fishing and seafood industry. It is also an important access point for large vessels for transporting zinc and livestock.

Apart from fishing there are few distinct tourist attractions. There are some historic buildings in Normanton, including the Purple Pub, the old

Burns-Philp warehouse and the old gaol. There is the replica of “Krys”, an 8.5 metre crocodile, and the “Gulflander” train runs to Croydon once a week.



**Plate 5: Matilda Highway between Burke-and-Wills Roadhouse and Normanton**



**Plate 6: Typical tourist 'rigs' parked outside Burke-and-Wills Roadhouse**



**Plate 7: Purple Pub Normanton**



Plate 8: Burns Philp warehouse Normanton



Plate 9: The Gulflander train



Plate 10: Travel group with crocodile replica in Normanton

The workforce of the Shire is small and the profile is quite different from the Australian average (Table 3). Government is by far the largest employer in the Shire. The chief employing government agency is the Carpentaria Shire Council. Primary industries employ close to 15% of the workforce,

compared to the national average of 4%. Employment in trade, manufacturing, and cultural and recreational services are significantly lower than the Australian average.

Adding up employment in the tourism-related industries, including Accommodation, Cafes and Restaurants; Cultural and Recreational Services; and Retail Trade; tourism contributes directly and indirectly to 15% of employment in the Shire.

Table 3: Employment, by industry

(Source: ABS, 2002 and 2003; selected industries only)

|  | Carpentaria Shire |                | Australia      |
|--|-------------------|----------------|----------------|
|  | Persons employed  | Proportion (%) | Proportion (%) |
| Agriculture, Forestry and Fishing      | 226               | 14.7           | 4.0            |
| Mining                                 | 27                | 1.8            | 0.9            |
| Manufacturing                          | 28                | 1.8            | 12.2           |
| Wholesale Trade                        | 17                | 1.1            | 5.3            |
| Retail Trade                           | 91                | 5.9            | 14.6           |
| Accommodation, Cafes and Restaurants   | 76                | 4.9            | 4.9            |
| Government, Administration and Defence | 609               | 39.6           | 4.5            |
| Cultural and Recreational Services     | 3                 | 0.2            | 2.4            |

Tourism is highly seasonal and follows the weather pattern, which is typically tropical. The ‘dry’ season (winter) is from April to September; the ‘wet’ season (summer) is from October to March. The dry season is favoured by most tourists since there is minimal rainfall and the temperatures and humidity are low. The wet season is very hot with the average maximum temperatures of around 36°C and high humidity levels. Roads may become impassable after monsoonal rains.

While bringing money into the local economy, there are also downsides to tourism. During the scoping of the research, the research team found numerous accounts that in Karumba, for

example, the resident population is faced with water restrictions during the dry season to ensure that potable water is freely available to tourists.

Anecdotal evidence suggests that fish stocks may be in decline and congestion in some areas may be lowering the recreational use values for local residents. The perception is also that the net benefits of tourism are not distributed fairly within the host community. There is a large indigenous community in the Shire of Carpentaria – approximately 60% of the population – which has virtually no involvement in the tourist industry.

### 2.3 Host community and tourism

A community survey was conducted to establish how the people of the Carpentaria Shire perceived impacts of tourism. The data were collected from 73 interviews completed during November 2003.

The sample represents a diverse cross-section of the community. Overall, 59% of respondents were from Normanton, and 41% from Karumba; 23% of respondents were indigenous; 58% were female; 37% had lived in the region for less than 5 years and 30% for more than 25 years. The sample specifically included “professionals” in the Shire (26% of sample), including key personnel in the council office, schools and TAFE, hospitals, police, indigenous organisations and banks.

It is important to note that the sample of respondents does not provide a numerically true representation of the total population in Carpentaria Shire. Specifically, indigenous people were under-represented and people in professional positions over-represented.

Respondents were asked to rate the impact of tourism on 29 attributes (8 economic, 14 social/lifestyle, 7 environmental), on a scale from -2 (large negative impact) to +2 (large positive impact). This quantitative questionnaire was further complemented by a qualitative survey of professionals to get a detailed

understanding of how tourism impacts come about.

Figure 3 shows the mean values of perceived impact for each attribute across the sample. It paints a very distinctive picture of tourism impact, with clearly perceived economic and also social benefits, but clearly perceived negative environmental impacts.

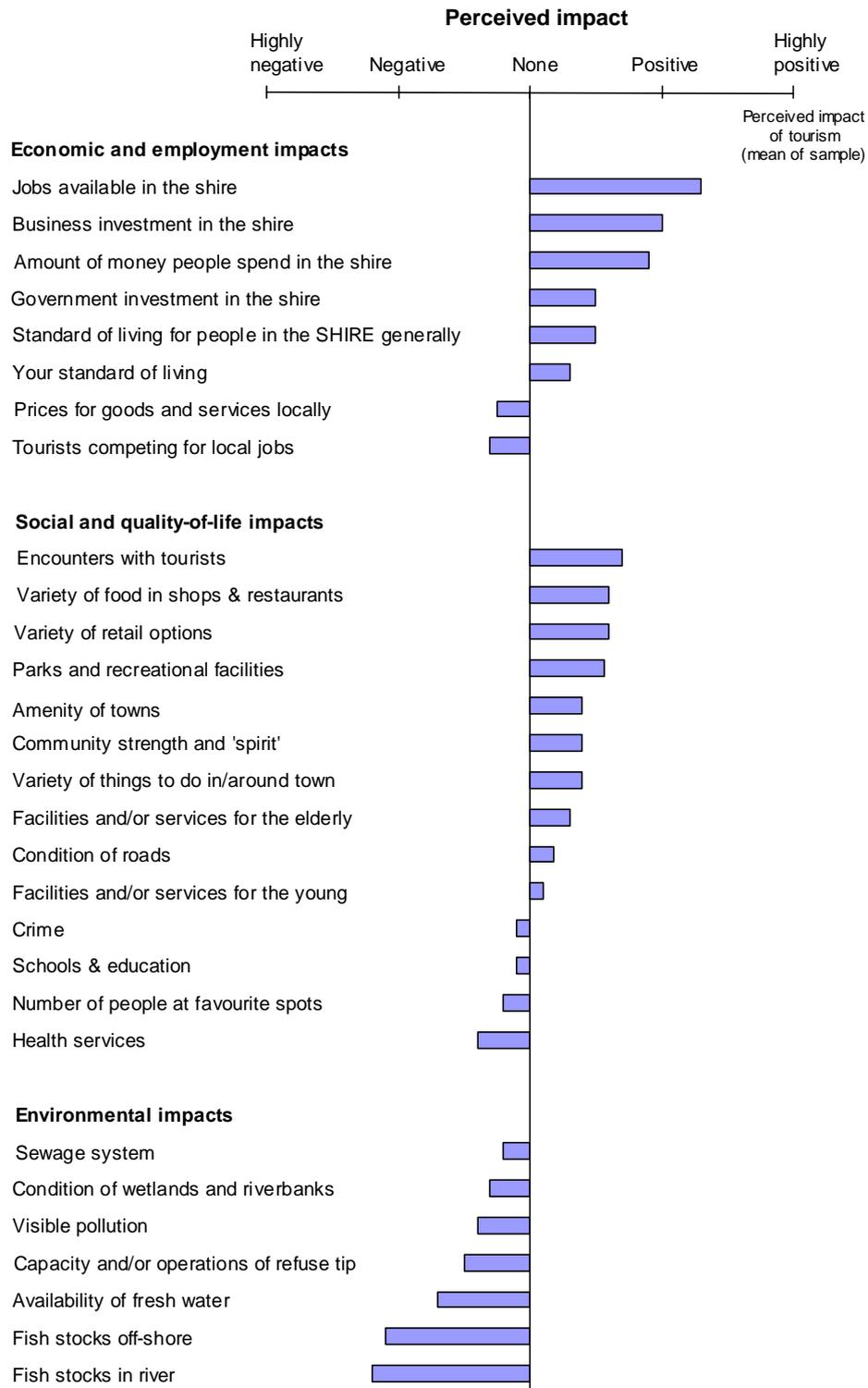
The local community perceives highly positive effects in terms of local employment (despite some competition from tourists for jobs during peak season) and business activity, as well as government spending in the region. There is a perceived small negative effect on prices of goods.

The host community derives a net social benefit from tourism. Social interactions with visitors and the fact that businesses and local government cater for visitors with increased product range and services were perceived as benefits. However, residents were sensitive to congestion and demands placed by (predominantly retiree) visitors on health services.

Respondents rated tourism as highly detrimental to fish stocks in rivers and estuaries. They also perceived that tourists were having a negative impact on the availability of the fresh water and that rubbish and sewage strained the local infrastructure.

The rating questions were complemented by the questions that whether, overall, respondents thought that benefits of tourism outweighed negative impacts. The vast majority of respondents (78%) answered this answer in the affirmative.

To test whether different segments of the community perceived tourism differently, the respondents were classified into groups according to location in Shire (Normanton – Karumba), ethnicity (indigenous – non-indigenous), location and ethnicity, gender, gender and ethnicity, age, length of residency in the Shire and occupation. The data were tested for statistically significant differences between groups.



**Figure 3: Impacts of tourism perceived by residents of Carpentaria Shire**  
(unweighted means of responses)

**Table 4: Tourism impact rating by ethnicity by location: mean values and statistically significant differences**

- (note (1): superscripts provided only for attribute means where significant differences between respondent groups were detected.  
Different superscripts indicate statistically significant group means (5%): Kruskal-Wallis test.  
(2): unweighted means are provided for each category of attributes for respondent groups as a way of gauging magnitude of impact perceived by category)  
(3): overall tourism assessment: 1=benefits>costs; 2=benefits<costs)

|  | Indigenous                  |  | Non-indigenous              |                          |
|--|-----------------------------|--|-----------------------------|--------------------------|
|  |                             |  | Normanton                   | Karumba                  |
| <b>Economic and employment impacts</b>               |                             |  |                             |                          |
| Jobs available in the Shire                          | 0.76                        |  | 1.52                        | 1.29                     |
| Tourists competing for local jobs                    | -0.50                       |  | -0.33                       | -0.27                    |
| <b>Business investment in the Shire (1)</b>          | <b>0.87<sup>a, b</sup></b>  |  | <b>0.63<sup>a</sup></b>     | <b>1.31<sup>b</sup></b>  |
| Government investment in the Shire                   | 0.50                        |  | 0.65                        | 0.40                     |
| Amount of money people spend in the Shire            | 0.53                        |  | 1.12                        | 0.97                     |
| <b>Prices of goods and services locally (1)</b>      | <b>-0.76<sup>a</sup></b>    |  | <b>-0.07<sup>b</sup></b>    | <b>-0.10<sup>b</sup></b> |
| Your standard of living                              | -0.13                       |  | 0.48                        | 0.24                     |
| Standard of living for people in the Shire generally | 0.31                        |  | 0.48                        | 0.65                     |
| <b>Mean Total economic impact (2)</b>                | <b>0.20</b>                 |  | <b>0.56</b>                 | <b>0.56</b>              |
| <b>Social and quality-of-life impacts</b>            |                             |  |                             |                          |
| Health services                                      | -0.50                       |  | -0.19                       | -0.54                    |
| Condition of roads                                   | -0.18                       |  | 0.07                        | 0.48                     |
| Schools & education                                  | 0.25                        |  | -0.23                       | -0.07                    |
| Facilities and/or services for the elderly           | 0.08                        |  | 0.68                        | 0.12                     |
| Facilities and/or services for the young             | -0.07                       |  | 0.15                        | 0.11                     |
| Parks and recreational facilities                    | 0.47                        |  | 0.74                        | 0.45                     |
| Community strength and 'spirit'                      | 0.06                        |  | 0.44                        | 0.43                     |
| Crime  | -0.36                       |  | 0.00                        | -0.14                    |
| Variety of things to do in/around town               | 0.19                        |  | 0.44                        | 0.55                     |
| Variety of food in shops & restaurants               | 0.38                        |  | 0.54                        | 0.79                     |
| Variety of retail options                            | 0.56                        |  | 0.74                        | 0.41                     |
| Encounters with tourists                             | 0.29                        |  | 0.69                        | 0.86                     |
| <b>Number of people at favourite spots (1)</b>       | <b>0.00<sup>a, b</sup></b>  |  | <b>0.20<sup>a</sup></b>     | <b>-0.62<sup>b</sup></b> |
| Amenity of towns                                     | 0.24                        |  | 0.65                        | 0.29                     |
| <b>Mean Total social impact (2)</b>                  | <b>0.10</b>                 |  | <b>0.35</b>                 | <b>0.22</b>              |
| <b>Environmental impacts</b>                         |                             |  |                             |                          |
| <b>Availability of fresh water (1)</b>               | <b>-0.60<sup>a, b</sup></b> |  | <b>-0.26<sup>a</sup></b>    | <b>-1.10<sup>b</sup></b> |
| Visible pollution (eg. roadsides)                    | -0.13                       |  | -0.58                       | -0.50                    |
| <b>Capacity and/or operations of refuse tip (1)</b>  | <b>-0.07<sup>a</sup></b>    |  | <b>-0.32<sup>a, b</sup></b> | <b>-0.79<sup>b</sup></b> |
| Sewage system  | 0.08                        |  | -0.21                       | -0.40                    |
| <b>Fish stocks in river (1)</b>                      | <b>-0.75<sup>a</sup></b>    |  | <b>-1.00<sup>a</sup></b>    | <b>-1.63<sup>b</sup></b> |
| Fish stocks off-shore                                | -0.71                       |  | -1.05                       | -1.48                    |
| Condition of wetlands and riverbanks                 | -0.50                       |  | -0.09                       | -0.38                    |
| <b>Mean Total environmental impact (2)</b>           | <b>-0.38</b>                |  | <b>-0.50</b>                | <b>-0.90</b>             |
| <b>Overall tourism assessment (3)</b>                | <b>1.24</b>                 |  | <b>1.12</b>                 | <b>1.28</b>              |

These analyses revealed that perceptions of tourist impact were largely congruent across the host community. For example, testing for possible gender differences yielded no result.

The analyses did, however, find some interesting differences, which are summarised in Table 4.

The analysis indicates that *where* people live in the region has a larger influence on perception of tourism impact than ethnicity. Residents of Karumba generally perceive higher economic benefits from tourism than Normanton residents, and specifically a significantly larger positive impact of tourism on business activity. At the same time, they are generally more concerned about the environmental impacts of tourism, and specifically indicate a much larger negative impact of tourists on fish stocks, drinking water availability and operations of the refuse tip. They are also more sensitive to having to share their favourite recreational areas with the visitors.

Indigenous respondents tend to perceive less impact than non-indigenous respondents, both less positive economic and social benefits, as well as less environmental detrimental impacts. However, there is only one statistically

significant difference to the non-indigenous sub-sample in relation to the prices of goods and services charged by local businesses. Indigenous respondents rate this significantly more negative. They also perceive there to be a slightly negative impact of tourism on respondents' individual standard of living, but the difference is not statistically significant. Some explanations may be offered.

1. Indigenous people are far less involved in tourism than the non-indigenous population and therefore miss out on the economic opportunities that tourism provides;
2. There is anecdotal evidence to suggest that the non-indigenous population does bulk shopping in large regional centres, specifically Cairns, and may therefore be less affected by prices charged for goods and services in Carpentaria Shire.
3. Indigenous people tend to be on lower incomes and may therefore be more price-sensitive.

Importantly, indigenous respondents perceived tourism to be small negative economic impact on their standard of living while acknowledging a positive impact for people in the Shire as a whole.

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## 3 VISITORS TO THE CARPENTARIA SHIRE

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### 3.1 Summary

During the 2002/03 financial year the research team interviewed 510 travel parties, or 1378 visitors to Normanton and Karumba. Those respondents were staying at commercial accommodation places. The number of visitor nights captured by the survey was almost 50,000.

On the basis of the socio-demographic characteristics of respondents, five key visitor segments were identified. These are:

- Retirees
- Couples
- Families
- Travel groups
- Singles

Key differences between visitor segments relate to their usual residence, duration of stay, activity pattern and reasons for visiting. A majority of respondents were retirees, who are part of the 'grey nomads' phenomenon. Retirees stay for an average of 10.5 weeks in the region. They typically come from southern states, stay in their caravans and are on low household incomes. Couples stay for average of 5 weeks. Other visitor segments originate predominantly in (northern) Queensland and stay for 1-2 week periods.

All visitor segments, with exception of singles, come to fish. And fishing is the most regularly undertaken activity, mostly by own boat, but also from the riverbank and beach, and to a lesser extent on charter fishing tours.

Retirees are on low income and are highly self-sufficient. They interact comparatively sparsely with local businesses, tend to cook their own meals and undertake few commercial tourist activities.

### 3.2 Methodology

During the 2002/03 financial year the research team interviewed 510 travel parties, or 1378 visitors to Normanton and Karumba. Those

respondents were staying at commercial accommodation places. The number of visitor nights captured by the survey was almost 50,000.

The survey data was collected using face-to-face interviews with overnight visitors to the Carpentaria Shire. Two steps were taken to maximise representativeness of the sample in relation to total visitor population:

1. Surveys were conducted during four one-week periods throughout the year so as to capture changes in tourist segments throughout the year:

- July 2002 – peak season (208 travel parties),
- September 2002 – spring shoulder season and school holidays (169 travel parties),
- February 2003 – off-season (25 travel parties), and
- April 2003 – autumn shoulder season and fishing competition (108 travel parties).

2. Interviews were conducted at accommodation places. All accommodation managers had granted the research team access to their premises and clients. This enabled stratification of the sample by bed capacity and accommodation types.

The visitor survey sampled 510 travel parties, representing 1378 visitors to the Shire.

This sample can be taken as being representative of those visitors who stay in commercial accommodation.

Due to the methodology, some visitor groups are either not at all or not adequately represented in the sample. Not represented are: Day visitors, visitors staying with family or friends, and people camping on properties or in the bush. Tour groups were under-represented mainly due to the short overnight stays. Some events, such as the fishing competition and bicycle bash, were included, others, such as the rodeo, were not.

**Table 5: Number of respondents, by visitor segment and by visitor type**

| Visitor segments       | Responses per segment | Visitor types                                       | Responses per type |
|------------------------|-----------------------|---|--------------------|
| Retirees               | 244                   | Retired couple                                      | 215                |
|                        |                       | Retired family group without or with older children | 7                  |
|                        |                       | Retired group of friends /relatives                 | 9                  |
|                        |                       | Retired single                                      | 13                 |
| Couples                | 93                    | Non-retired couple                                  | 93                 |
| Families               | 63                    | Family group with children < 16 years old           | 56                 |
|                        |                       | Retired family group with children < 16 years old   | 7                  |
| Travel groups          | 70                    | Family group without or with older children         | 11                 |
|                        |                       | Group of friends/relatives                          | 59                 |
| Singles                | 32                    | Non-retired single                                  | 32                 |
| Members of tour groups | 8                     | Tour group  | 8                  |
| <b>Total</b>           | <b>510</b>            |   | <b>510</b>         |

The survey aimed to establish place of residence and socio-demographic profile, duration of stay, visitor expectations and activities. It also gauged visitor preferences for a series of potential new activities and facilities, and willingness of visitors to financially contribute to the management of tourist resources and infrastructure.

### 3.3 Visitor segments

Stoeckl et al. (forthcoming) provided an aggregation of respondents into 11 visitor types on the basis of socio-demographic variables such as age, connection between members of travel party, and others.

The publication provides a detailed comparison of those visitor types. The analysis reveals overwhelming similarities between a number of visitor types, which provided grounds for further aggregation into five distinct visitor segments, plus an ‘other’ category. The visitor segments are:

- Retirees
- Couples
- Families
- Family and travel groups
- Singles.

Table 5 shows how visitor segments relate to visitor types.

This report refers to travel parties surveyed (n = 510) as “respondents”. Results are generally reported for visitor segments, and in a few instances by visitor type.

### 3.4 Visitor characteristics

Visitors to Karumba and Normanton are predominantly domestic tourists. Only 5% originated from overseas (Figure 4).

Retirees, including retired couples and singles, were the largest visitor group in the sample. This visitor segment is generally referred to as ‘grey nomads’. Redland (2003) provides a comprehensive analysis of grey nomads for north-east Queensland. The characteristics of

the grey nomads in Carpentaria Shire are generally similar, but differ in some important aspects, as will be explained further.

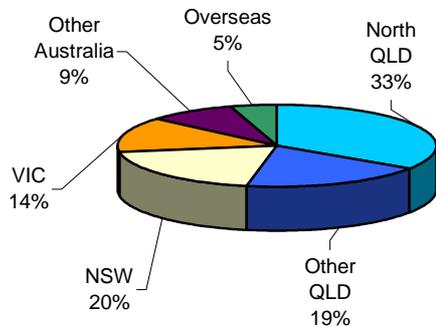


Figure 4: Origin of survey respondents

Figure 5 provides an overview of the place of residence of visitor segments. Couples, families and travel groups originate predominantly from within North Queensland. Retirees come predominantly from southern states, specifically NSW and Victoria, but also from southern Queensland. Singles have the largest international origin proportion.

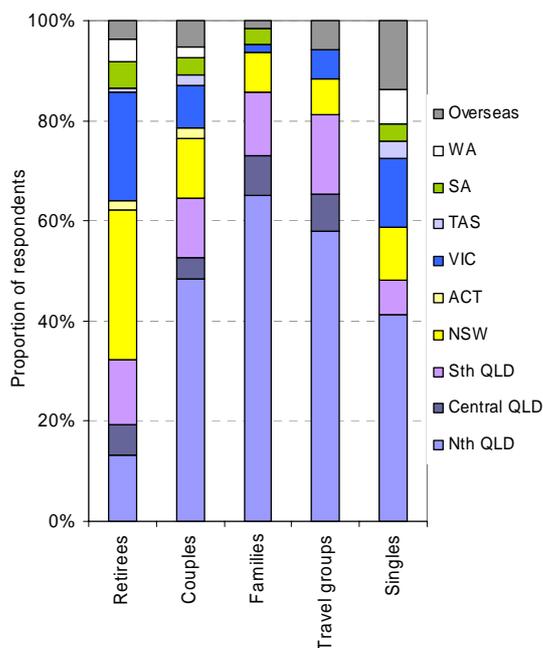


Figure 5: Origin of visitors, by segment

Figure 6 indicates seasonal variation in the visitor mix. Retirees dominated the July and April samples. Couples and singles were the strongest segments in February. Families were most notably represented in September, during school holidays.

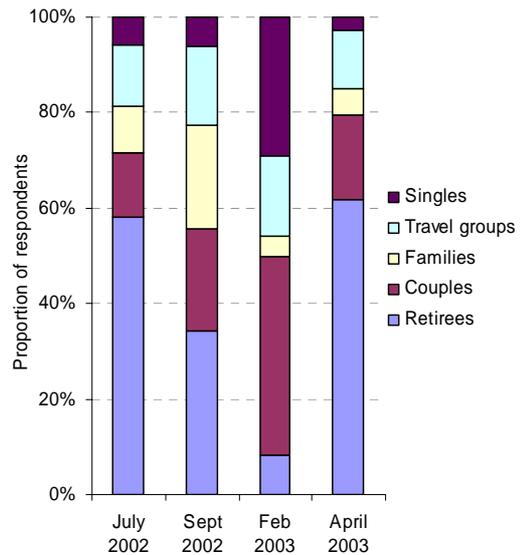


Figure 6: Segments by survey period

Most visitors were repeat visitors (Figure 7), with the exception of singles who were predominantly on their first visit. For retirees, more than 40% have visited at least four times before.

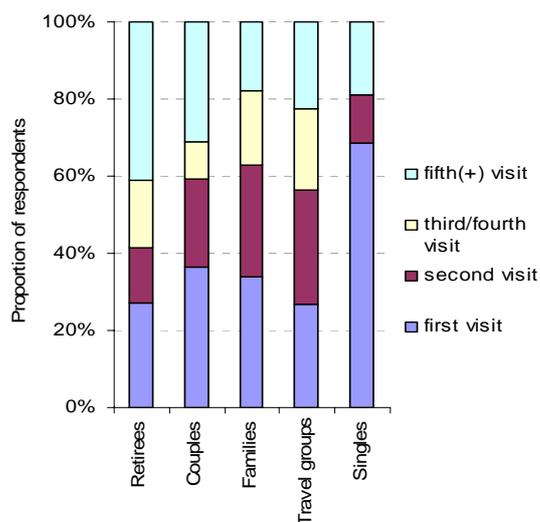


Figure 7: Repeat visitation, by visitor segment

Visitors to Carpentaria Shire stay a long time – and are away from home for even longer (Figure 8). Retirees and couples spend about half their travel period in the Shire, other segments have shorter absolute and relative stays. Length of stay for grey nomads is longer in Carpentaria Shire than for east coast destinations. Length of stay, by segment, is further detailed in Table 6.

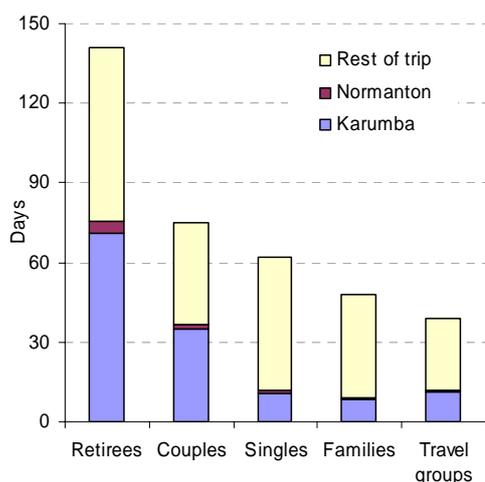


Figure 8: Mean length of trip and length of stay in Normanton and Karumba, by visitor segment

Visitors were asked about the main attractions that brought them into the region. Fishing and good weather ranked high as the most important drawcards, followed by others as presented in Figure 9.

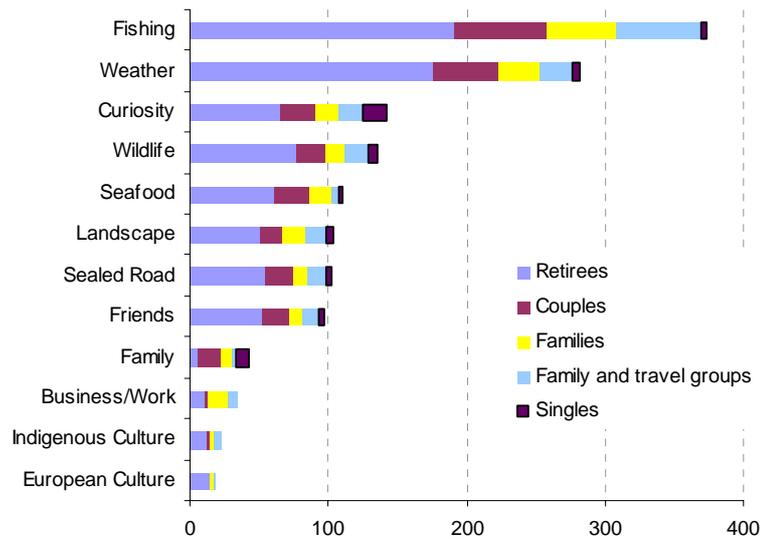


Plate 6: Beach fishing at Karumba Point

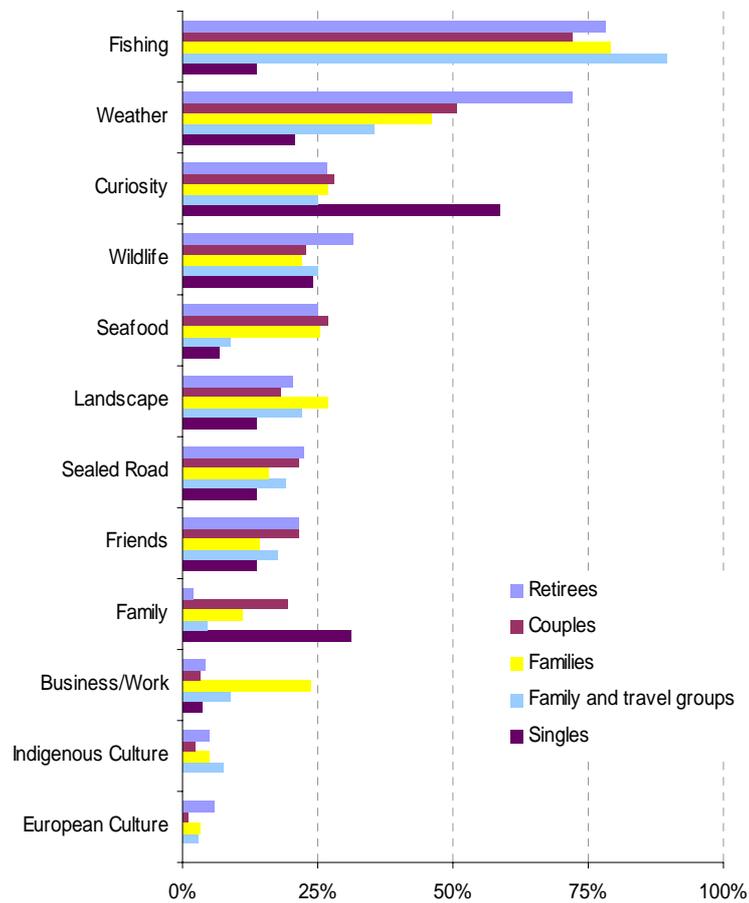
In terms of accommodation, caravans dominated in all segments (Figure 10). Singles, travel groups and families tended to stay in rooms and cabins more than couples or retirees.

Visitors to Normanton and Karumba have a relatively low income profile (Figure 11), with 48% of all respondents indicating their annual household income (before tax) was below \$35,000. In comparison, the national visitor statistics found that only 21% of interstate visitors to Queensland had a household income of below \$36,400 while 49% were above \$52,000.

Figure 12 shows respondents income distributions, by visitor segment. It identifies retirees staying in Carpentaria Shire as being on consistently low incomes. Most used to work in blue-collar jobs. This is in contrast to the east-coast grey nomads, who, according to Cridland (2003:89) predominantly used to be middle-income earners from the upper working class and middle class.



(a) Number of respondents nominating attraction as 'important' for their visit



(b) Proportion of respondents nominating attraction as 'important' for their visit

**Figure 9: Number (a) and proportion (b) of respondents, by segment, who nominate attractions as 'important' for their visit**

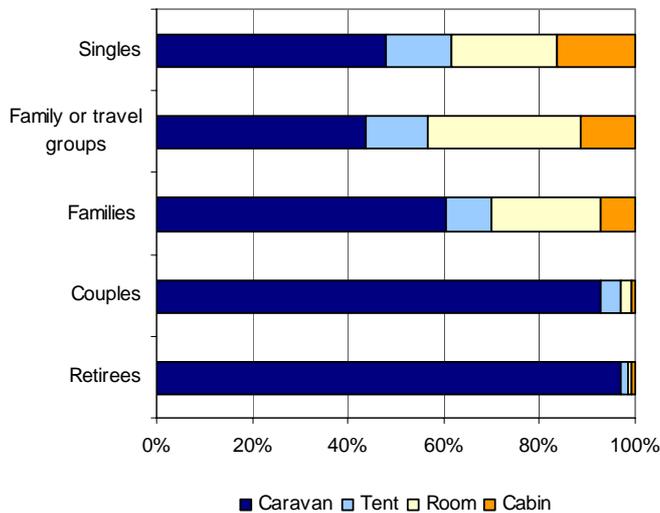


Figure 10: Type of accommodation, by visitor segment

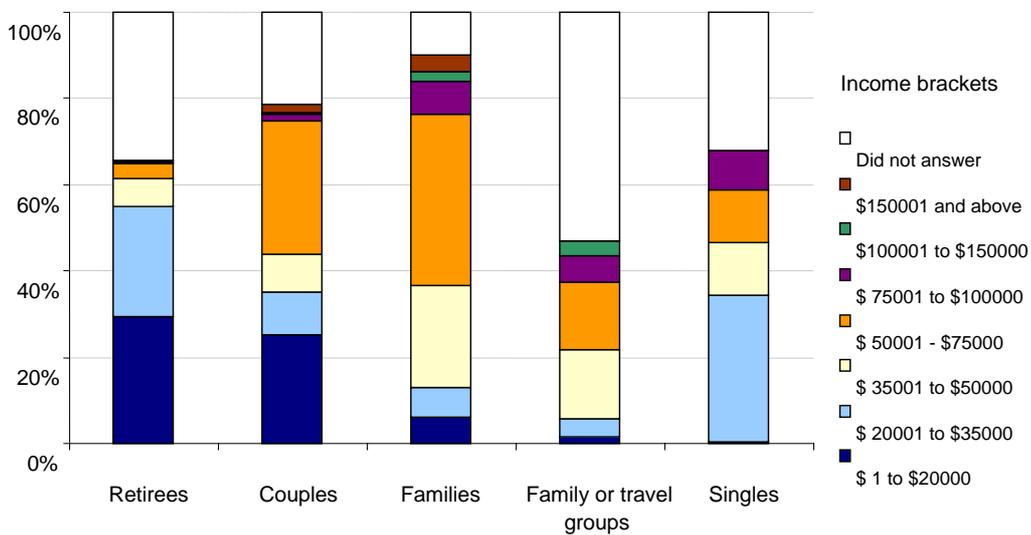
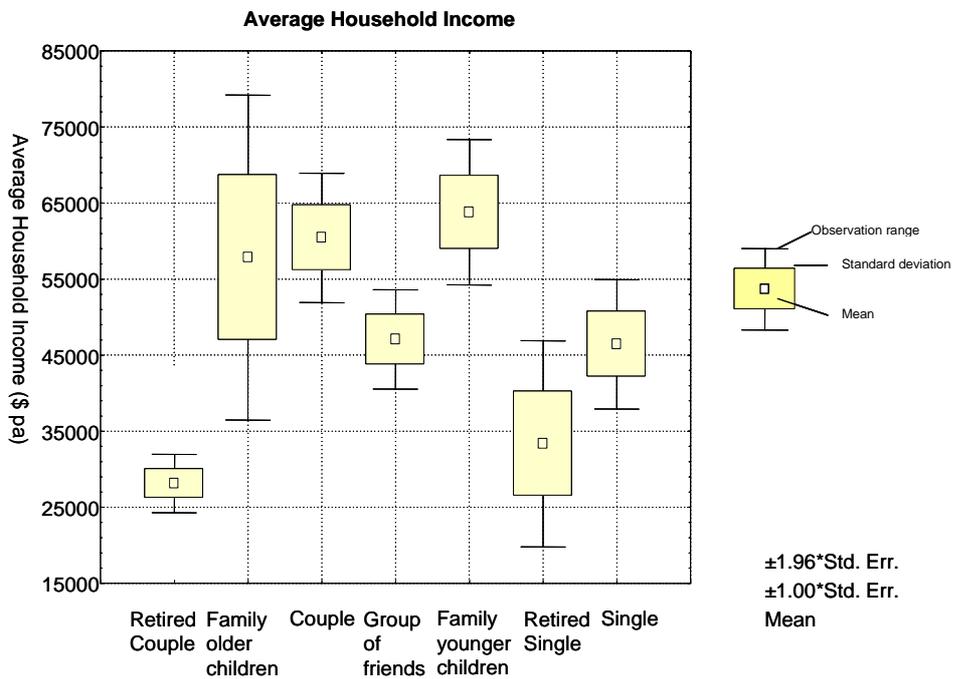


Figure 11: Household income before tax, by visitor segment



**Figure 12: Distribution of annual household income, by visitor type**  
(for respondents providing information)

**Table 6: Travel parties surveyed, by visitor segment, and duration of stay**

| Segment                | Number of respondents (travel parties) (a) | Average persons per travel party (b) | Number of visitors surveyed (c)=a*b | Average length of stay (days) (d) | Visitor days covered in survey (e)=c*d |
|------------------------|--|--------------------------------------|-------------------------------------|-----------------------------------|--|
| Retirees               | 244  | 2                                    | 488                                 | 73.4                              | 35,848                                 |
| Couples                | 93   | 2                                    | 186                                 | 36.7                              | 6,826                                  |
| Family or travel group | 70   | 4.7                                  | 329                                 | 12.0                              | 3,943                                  |
| Families               | 63   | 4.3                                  | 271                                 | 9.1                               | 2,478                                  |
| Singles                | 32   | 1                                    | 32                                  | 11.3                              | 362                                    |
| Members of tour groups | 8  | 9                                    | 72                                  | 1.1                               | 79                                     |
| <b>Total</b>           | <b>510</b>                                 |                                      | <b>1378</b>                         |                                   | <b>49,536</b>                          |

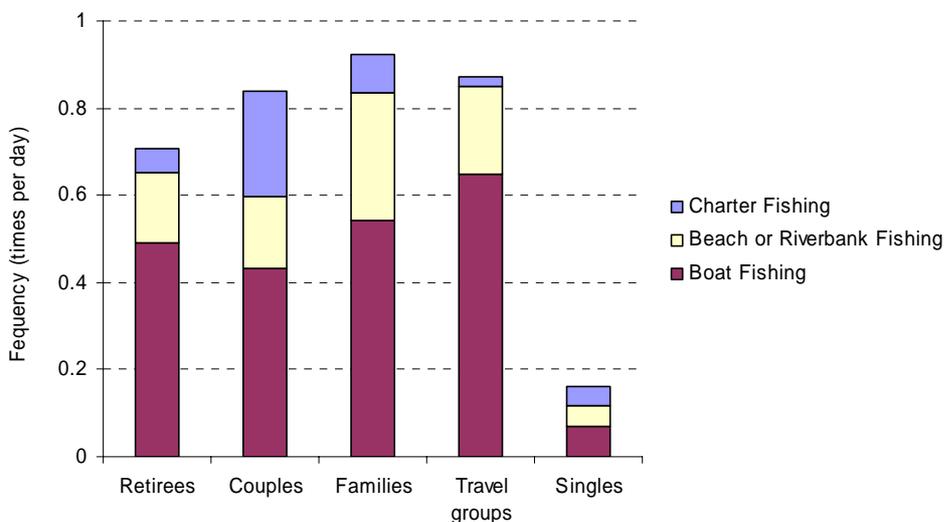


Figure 13: Mean daily frequency of fishing, by segment

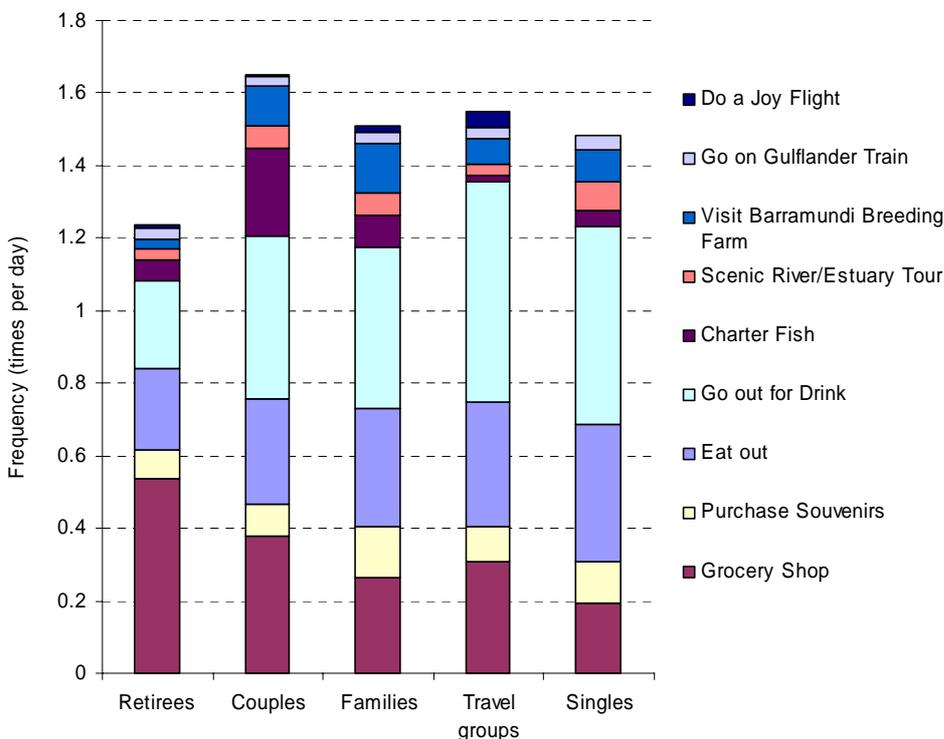


Figure 14: Mean daily frequency of activities involving monetary exchange, by segment

### 3.5 Visitor activities

Respondents were asked about the frequency of engagement in a suite of activities. The data are described and analysed for visitor types in the paper by Stoeckl et al. (forthcoming).

The range of activities on offer in Carpentaria Shire is limited and the predominant activity is fishing. All visitor segments except singles fish virtually daily (Figure 13).

Fishing is most commonly done from boats that tourists bring to the region and to a lesser extent from the beach or riverbank (mostly by families). Couples and families also engage quite regularly in charter fishing. Families and travel groups have the highest propensity to fish, although differences between tourist segments are only statistically significant when compared to singles.

Figure 14 shows how often visitors engage in activities that involve spending money. Retirees stand out as having fewer economic interactions than other visitor segments.

Retirees go grocery shopping more frequently than other segments, and conversely, eat out less frequently than other segments. Travel groups frequent hotels and eateries most often in comparison – about once a day – and about twice as often as retirees. Couples and families are most engaged in doing tours and other commercial tourist activities, which the destination has to offer. Retirees engage least in such activities.

Spending on groceries per shop was captured in the consumer survey (Figure 15). Families spend substantially more per grocery shop than do other visitor segments.



Figure 15: Spending on grocery shopping, by visitor segment



Plate 11: Conducting consumer surveys

(Roman Schweigert outside shop)



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## 4 ESTIMATED VISITOR CONTRIBUTION AND NEEDS

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### 4.1 Summary

This section integrates the information obtained during the course of the research project to estimate the Shire-wide outcomes from tourism. To that effect, it is critical to know how many tourists are visiting, how much they spend, how that expenditure flows through the local economy, how many people gain employment in tourism and how much fish the tourists catch.

The number of tourists staying in commercial accommodation in Normanton and Karumba during 2002/03 was approximately 14,000. The number of visitor nights was approximately 280,000.

Visitors to Normanton and Karumba stay for long periods of time, much longer than the average interstate visitor to Queensland, who stays for 3 days only. 280,000 visitor nights for Karumba and Normanton are thus equivalent to 93,000 'average' visitors.

It is important to note that this estimate does not include the following types of visitors:

1. visitors staying within the Shire but outside Normanton and Karumba,
2. visitors staying with family or friends,
3. visitors to special events, such as for the rodeo, which are not fishing competitions,
4. most commercial tours passing through town and possibly staying overnight, and
5. day visitors to the Shire.

Applying various assumptions, the number of total annual overnight visitors to Carpentaria Shire might be as high as 25,000.

Tourists equate to about 800–1000 additional residents, adding a further 25–30% demand for infrastructure and services on top of that generated by the resident population in the Shire. The vast majority of this additional demand is focused in Karumba and Normanton.

On the basis of visitor nights (for commercial accommodation), retirees are the largest tourist segment (37% of visitor nights). On the basis of

travel parties and visitors, families are the largest tourist segment (36% of total visitors).

Tourists inject in excess of \$11 million into the Shire economy, with total economic impact, through businesses sourcing labour and other inputs locally, worth up to \$14.1 million.

An estimated 180 persons are employed in tourism, directly or indirectly, in Normanton and Karumba. This is equivalent to 10% of the workforce and 16% of the working population in Carpentaria Shire.

Resource use by tourists through fishing is high and may be as high as 330 tonnes of fish, equivalent to mean commercial catch landed in Karumba.

### 4.2 Methodology

The estimates provided in this section are based on three principal data sources, the visitor survey, the business survey and data obtained from Queensland Department of Primary Industries and Fisheries on charter fish catch.

The business survey was conducted to gain a better understanding of the economic impact of tourism. This was necessary since the ABS data for tourism are based on only three data points in the Shire. Our survey targeted all 39 registered businesses in Normanton and Karumba, which were either directly or indirectly associated with tourism, including accommodation places, pubs, clubs, cafés and restaurants, tour businesses and retail outlets (Table 2).

To reduce respondent concern over the confidential nature of issues discussed, no information was sought on dollar values. Instead, business managers were asked about the number of staff employed, the proportion of total expenses attributable to particular inputs, and the proportion of inputs sourced locally, or elsewhere. For the purpose of the survey no distinction was made between resident-related and visitor-related turnover.

In total, 27 business managers participated in Normanton and Karumba, equalling a response rate of 68%. Response rates ranged from 53% for accommodation places to 90% for retail businesses.

### **4.3 Tourist numbers**

In order to estimate tourist impact, one must know the (approximate) number of tourists. These numbers are estimated by taking into consideration data on accommodation, room occupancy, visitor types and seasonality.

On the basis of all survey data, the number of tourists staying in commercial accommodation in Normanton and Karumba during 2002/03 was approximately 14,000. Those visitors stayed for a total of approximately 280,000 nights (Table 7).

The estimate of 14,000 total visitors is well below the locally cited number of 80,000 to 100,000 visitors and also well below the potential for 60,000 visitors derived from international and national visitor statistics for Tropical North Queensland. The estimate is, however, entirely plausible as it equates to an occupancy rate of just below 50% for the year for accommodation in Karumba and Normanton.

There were an estimated 1350 retirees visiting, which equates to 10% of visitors. Because they stay so long, retirees account for 37% (102,801) of total commercial visitor nights at the destination.

Families and travel groups are the largest visitor segments in terms of visitors to the region. They are also the most numerous travel parties, closely followed by singles. In terms of visitor nights, they account for 17% and 25.5%, respectively.

Singles were estimated to be the third largest segment in terms of travel parties, but because there is only one member per travel party and due to their comparatively short duration of stay, they account for only 4% of total visitor nights.

To estimate visitor numbers, two assumptions were made:

1. The temporal stratification of the visitor survey (Section 3.1), combined with the stratification across accommodation types, provides a true reflection of the composition of the visitor market throughout the year.
2. The monthly occupancy rates provided by the accommodation businesses accurately represent, in total, occupancy rates of various accommodation types across Normanton and Karumba. Multiplied by the total capacity for each accommodation type, room nights occupied can be estimated.

Given the limitations of the methodology in relation to capturing all visitors to the Shire (Section 3.2), it is impossible to precisely estimate total visitation.

The ABS census data (Table 1) suggest that only 75% of reported visitors to the Shire were in Normanton and Karumba. However, it is unknown how many of the reported visitors were staying in commercial accommodation as compared to with family or friends. Assuming that 90-95% of visitors stay in commercial accommodation, the number of overnight visitors to the Shire could be as high as 20,000.

Assuming further that another 1000 visitors free camp, an additional 2000 visitors come to events other than the fishing competitions and an additional 2000 tour guests stay overnight, then total annual overnight visitation could be as high as 25,000.

This still leaves day visitors, those tourists who briefly stop on their way through, unaccounted for.

We assert that most of the visitors who were not recorded in the survey would have comparatively short stays (typically one to two days for events, one night for tours), so that the survey would have captured the vast majority of visitor days, and is therefore able to provide a sound estimation of tourism impact.

#### 4.4 Resident equivalents

Thinking about the infrastructure and services that tourists require, translating visitors into ‘resident equivalents’ is a useful measure of additional demand. Essentially, 365 visitor days equate to one full-time resident.

Assuming a total of between 300,000–360,000 visitor nights for the Shire, tourists equate to about 800–1000 additional residents, equivalent to 25–30% of the resident population.

The vast majority of this additional demand is focused on Karumba and Normanton.

#### 4.5 Accommodation occupancy

A critical factor in estimating visitor numbers is accommodation capacity and occupancy.

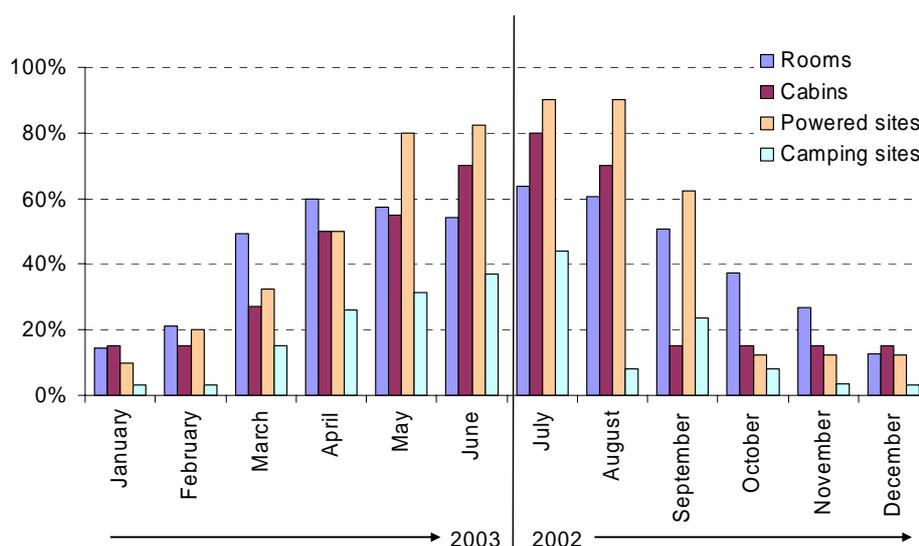
Mean occupancy rates, by accommodation type, for the year from July 2002 to June 2003, are presented in Figure 16.

The numbers represent combined occupancy for Normanton and Karumba, with Karumba occupancy tending to be higher than for Normanton. Specifically, powered sites occupancy during peak season in Karumba is usually 100%.

**Table 7: Estimated visitation to commercial accommodation in Normanton and Karumba during 2002/03**

(note: estimation does not include those visitors listed at the end of Section 3.1)

| Visitor Segment | Estimated number of visitor nights | Estimated number of visitors | Estimated number of travel parties |
|-----------------|------------------------------------|------------------------------|------------------------------------|
| Retirees        | 102,801                            | 1,349                        | 675                                |
| Couples         | 44,820                             | 1,202                        | 601                                |
| Families        | 46,098                             | 5,011                        | 1,165                              |
| Travel groups   | 70,865                             | 5,154                        | 1,158                              |
| Singles         | 10,890                             | 964                          | 964                                |
| Other           | 2,078                              | 281                          | 281                                |
| <b>Total</b>    | <b>277,552</b>                     | <b>13,961</b>                | <b>4,844</b>                       |



**Figure 16: Estimated mean occupancy rates, by accommodation type by month for year 2002/03**

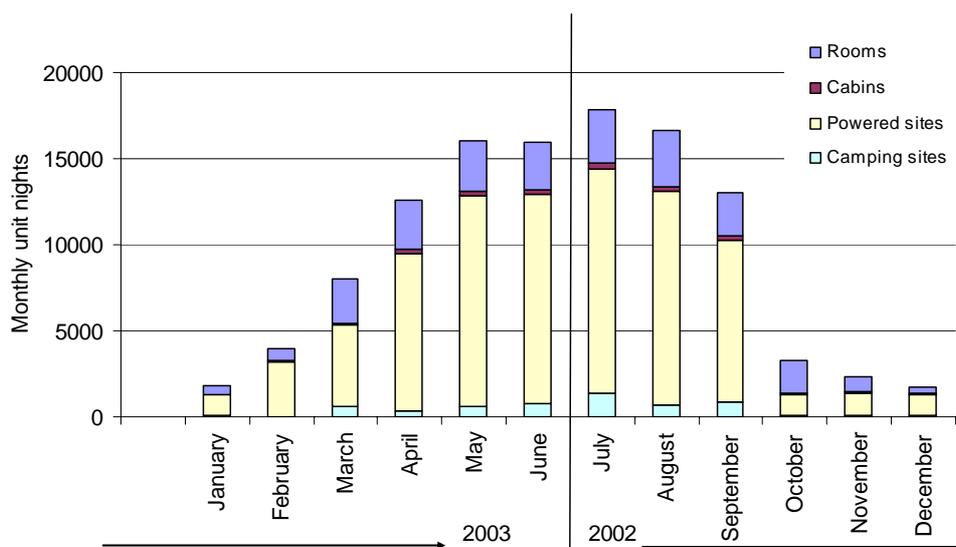


Figure 17: Estimated “unit” nights occupied, by month for year 2002/03

The graph reflects the high seasonality of tourism with peak occupancy recorded for June to August. ‘Rooms’ tend to have a longer peak season than other forms of accommodation.

Total unit nights for rooms, cabins, powered and camping sites were estimated (Figure 17). Figure 17 also shows seasonal variation in numbers of the units occupied, with peak season occurring in May to August.

#### 4.6 Economic contribution

The major benefit from tourism to the regional community is through visitors spending money in the region. Tourist expenditure is approximately \$11.3 million. The way in which this estimate was obtained is explained below.

Expenditure data were approximated using information from the visitor and the consumer surveys. More specifically, having sourced estimates of visitor spending from tourist businesses in the area, and knowing the frequency of economic transactions, duration of stay and mean size of travel party by segment, mean daily spending per visitor could be calculated for each visitor segment.

Table 9 summarises estimated mean daily spending by visitor segment and provides a comparison to the estimated mean daily spending for interstate overnight visitors to Queensland.

Three observations are significant.

1. Daily spending by visitors is substantially lower – by between 44 and 72 per cent – than the Queensland average.
2. The variation of daily spending is substantial between visitor segments. Singles spend an estimated \$61.63 per day, which is almost double the expenditure of retirees (\$30.30)
3. Visitor segments spend money on different items. Singles spend almost four times as much on accommodation as retirees.
4. Couples spend generally more money on tours and entertainment including golf, bowls and gambling than any other visitor segments.

Care needs to be taken specifically in the interpretation of the tour-expenses estimates. They may be overestimates based on over-

reporting of infrequently undertaken activities in the visitor survey.

While retirees spend less *per visitor day* than any other visitor segment, they spend more *per visit* because they tend to stay in the Shire for a long period of time – 10.5 weeks on average. On a per-visitor basis, retirees spend approximately six times as much as a visitor within the segment ‘Families’.

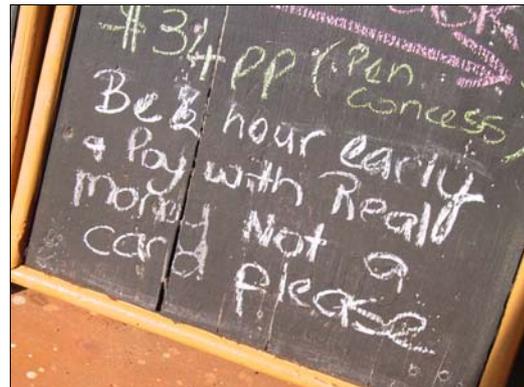
Based on estimated visitor nights (Table 6) and mean daily spending by visitor segment (Table 8), the aggregate expenditure of overnight visitors to Normanton and Karumba in commercial accommodation is approximately 11.3 million dollars (Table 9).

In comparison, agricultural production in the Shire, from livestock disposals, is valued at \$31.0 million (OESR, 2002; value for 1998-99).

A comparison of tourist expenditure is useful to gauge the relative magnitude of that spending. An estimation of tourist spending has been conducted for Charters Towers. Cegielski et al. (2001) estimated a total annual visitation of 70,000 and total annual expenditure of \$6.137 million. 84 per cent of visitors to Charters Towers are day trippers.

The visitor segments making the largest contribution to the Carpentaria Shire are the segments travel groups (due to their large number) and retirees (due to their long stay), with 3.1 million dollars each.

The estimate of tourism expenditure is based on the estimate of 14,000 visitors to commercial accommodation. It is impossible to quantitatively estimate the additional effect of visitors not captured in the survey. However, given that those additional visitors are likely on short stays and/or staying with visitors and friends or bush camping or on (prepaid) tours, their economic contribution can be expected to be low, without significant impact on the order of magnitude of the expenditure estimate. This potential underestimate is likely to be counter-balanced by previously raised issue that some expenditure items by visitors in commercial accommodation may be over-estimated.



**Plate 12: Business providing price and payment information to customers**

**Table 8: Estimated mean daily spending per visitor, by visitor segment and expenditure item**

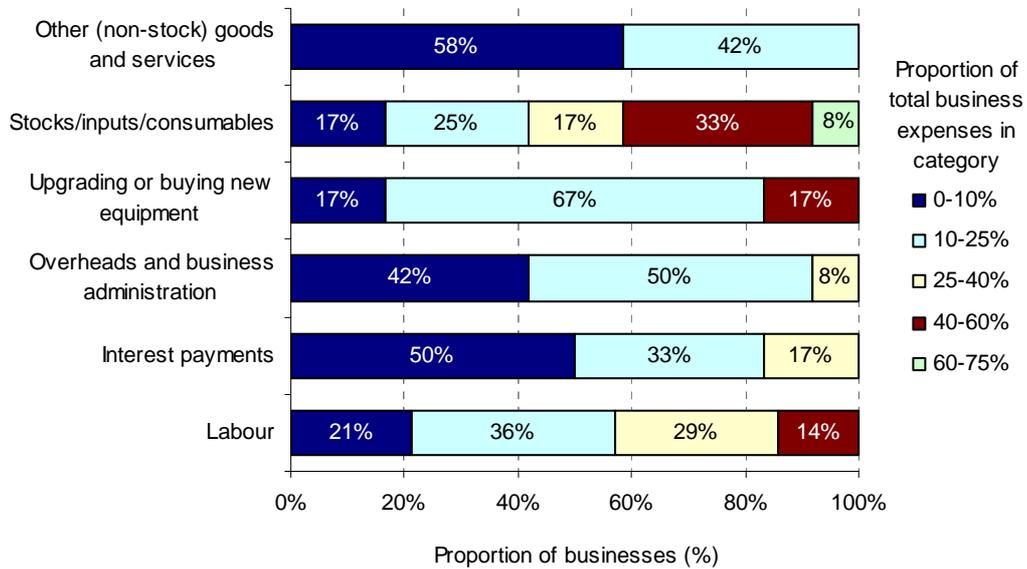
Note: <sup>(1)</sup> QLD mean value for overnight visitors: holiday/leisure: BTR estimates (BTR, 2002:27) are referenced per “visitor night”. Total average expenditure per visitor night \$136.48. Mean value for fuel does not differentiate between ‘travel between residence and destination’ and ‘at destination’

Other estimates obtained by multiplying estimated mean value of transactions for items by visitor segment by frequency of transactions obtained from visitor survey and adjusting for size of travel party and duration of stay if necessary. Spending per grocery shop obtained from customer survey conducted. Estimates for other mean amount of transaction calculated from tourist business data. Entertainment includes golf, bowls, betting, etc.

| Expenditure items                        | Retirees       | Couples        | Families       | Travel groups  | Singles        | QLD mean <sup>(1)</sup> |
|--|----------------|----------------|----------------|----------------|----------------|-------------------------|
| Accommodation                            | \$9.47         | \$11.62        | \$12.56        | \$12.83        | \$35.61        | \$34.54                 |
| Groceries for self-catering              | \$6.09         | \$4.37         | \$2.60         | \$3.01         | \$5.00         | \$9.55                  |
| Restaurant meals & take-away             | \$1.54         | \$5.11         | \$4.51         | \$5.81         | \$4.94         | \$20.09                 |
| Alcohol and drinks                       | \$0.84         | \$3.12         | \$2.37         | \$8.55         | \$3.82         | \$8.68                  |
| Fuel (petrol/diesel) purchased in region | \$4.43         | \$4.08         | \$4.78         | \$5.51         | \$2.63         | \$13.01                 |
| Organised tours and other entertainment  | \$6.66         | \$21.20        | \$12.91        | \$7.34         | \$7.94         | \$7.34                  |
| Shopping, gifts, souvenirs               | \$1.25         | \$1.31         | \$2.22         | \$1.50         | \$1.68         | \$15.90                 |
| <b>TOTAL</b>                             | <b>\$30.30</b> | <b>\$50.81</b> | <b>\$41.94</b> | <b>\$44.54</b> | <b>\$61.63</b> | <b>\$109.11</b>         |

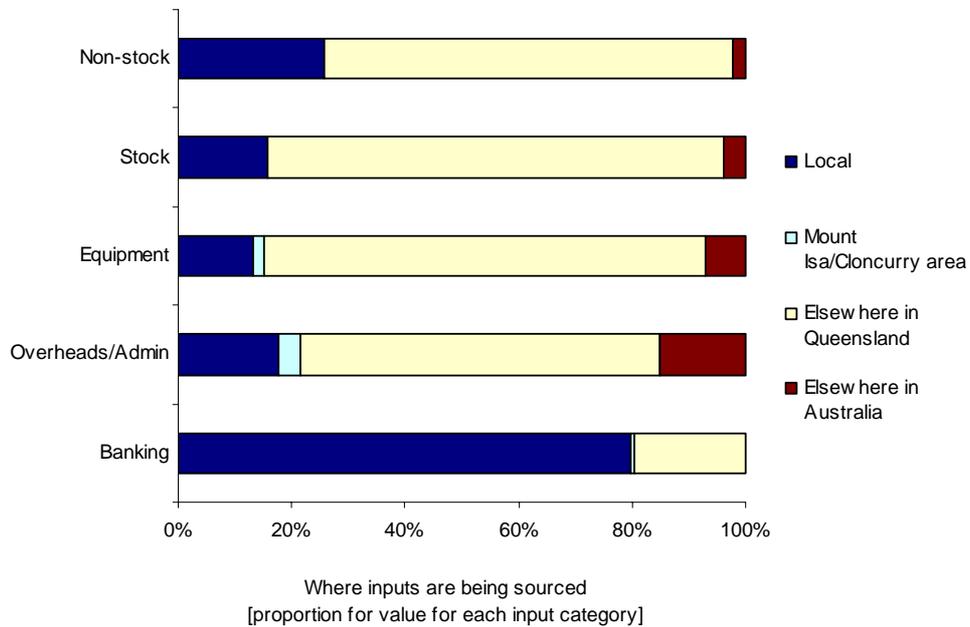
**Table 9: Estimated tourist expenditure, by segment and total**

| Visitor Segment | Mean daily expenditure per visitor (\$) | Average total expenditure per visitor (\$) | Average total expenditure per travel party (\$) | Estimated aggregate expenditure (\$) |
|-----------------|---|--|---|--------------------------------------|
| Retirees        | 30.30                                   | 2,308.86                                   | 4,617.72  | 3,114,428                            |
| Couples         | 50.81                                   | 1,895.21                                   | 3,790.42  | 2,277,485                            |
| Families        | 41.94                                   | 385.85                                     | 1,659.16  | 1,933,593                            |
| Travel groups   | 42.97                                   | 591.04                                     | 2,672.30  | 3,159,360                            |
| Singles         | 61.63                                   | 696.42                                     | 696.42  | 672,222                              |
| Other           |   |  |   | 116,098                              |
| <b>TOTAL</b>    |   |  |   | <b>11,273,186</b>                    |



**Figure 18: Distribution of business expenses, by category**

(note: business owners/managers nominated what proportion of total business expenses were attributable to what category; eg. 21 % of respondents indicated that their labour expenses were between 0-10% of total business expenses)



**Figure 19: Where businesses source inputs geographically, by category**

(respondents indicated what proportion of goods and services – on the basis of value – they sourced locally and elsewhere)

#### 4.7 Value adding in local economy

The economic impact of tourism is further increased by tourist businesses expending revenue within the region to purchase labour, services and other inputs. The magnitude to which this is happening is captured in the ‘output multiplier’. On the basis of the business survey data, the output multiplier is estimated to be in the range of 1 to 1.25 (Greiner et al, 2004). The output multiplier is low, as expected in a small local economy, due to businesses sourcing a large proportion of the inputs from outside the Shire.

The total economic impact of tourism for Normanton and Karumba is therefore estimated to be between \$11.3 million and \$14.1 million for the year 2002/03.

The following explores how and where businesses spend money.

Figure 18 shows how business expenses are distributed across various inputs. The majority of business expenses are associated with the purchase of stocks/ inputs/ consumables. For 41% of businesses this category accounts for more than 40% of total expenses.

The second most significant cost item is labour. The majority (65%) of businesses estimate labour costs to be between 10 and 40% of total expenses. New equipment is a significant item (40-60% of expenses) for 17% of respondents. The vast majority of businesses are reporting business administration, interest payments and non-stock goods and services to each make up less than 25% of total expenses.

The data were tested for statistically significant differences between different types of businesses, specifically businesses in the category ‘accommodation, cafes and restaurants’ and other types of businesses. However, no significant differences between industries were found. This outcome is not surprising given the high diversity of businesses within each industry, small number of respondents (businesses) overall and in each category – compounded by incomplete data –

and the fact that some businesses are highly vertically integrated (for example including accommodation, retail and tours).

All respondents stipulated that they preferred to buy goods and services locally where possible. However, with the exception of banking, the vast majority of goods and services are purchased outside the Shire and outside north-west Queensland (Figure 19).

Impediments to increasing local business connections include unavailability, costs of goods and reliability of delivery.

About 85% of respondent businesses indicated that their head office was in either Normanton or Karumba.

#### 4.8 Employment in tourism

The survey recorded the employment pattern of businesses. The responding businesses employed 121 people. Employees were predominantly non-family employees and on a full-time basis. Seven per cent of employees were indigenous (Figure 20).

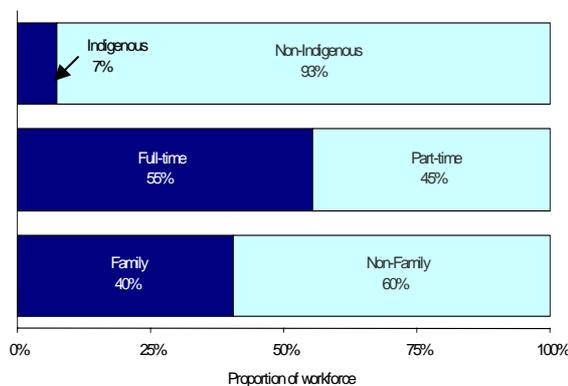


Figure 20: Characteristics of employees in respondent businesses

Assuming that the survey sample enables a linear extrapolation of employment to the total number of tourist-related businesses in Carpentaria Shire, there are approximately 180 persons employed. This estimate relates well to the employment information derived from the 2001 census (ABS 2003), which records a total of 175 persons employed in tourism-related

industries, including 76 in ‘accommodation, restaurants and cafés’, 93 in ‘retail trade’ and 6 in ‘cultural and recreational services’. This accounts for 15.9% of employment in the Shire.

As regards indigenous employment, the ABS estimates that there were 776 indigenous persons employed in Carpentaria Shire at the time of the 2001 Census. The business survey identified nine indigenous employees in the tourism industry. Again assuming that the survey sample enables a linear extrapolation of employment, this implies that tourism accounts for less than two per cent local indigenous employment (14 out of 776).

Employment in tourism is seasonal. The ABS IRDB data show employment varying in their sample of three accommodation businesses between 41 persons employed during the peak season (September quarter 2002) and 25 during off-season (December quarter 2001).

Respondents indicated that it is difficult to find employees who have the right skills and are reliable and trustworthy. Some employers are willing to “make do” with employment shortages rather than employing somebody who is not qualified for the position.

#### 4.9 Resource use

The host community’s perceives tourism as having a large negative impact on the environment, primarily on fish stocks but also in relation to freshwater availability and other aspects of environmental management (Figure 3).

Fishing is the key activity of tourists and the major drawcard for visitors to the region. This finding is consistent with survey results obtained by Kehoe (1999).

The QDPIF has been conducting surveys of commercial fisheries, and the department as well as the Fisheries Research and Development Corporation (FRDC) are in the process of conducting recreational fishing surveys (Hart, 2002a). However, data are at best sketchy. The same source reports QDPIF estimates for the

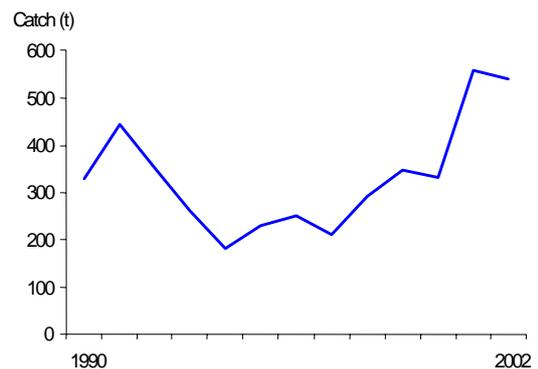
annual take of grunter bream of between 40-60 tonnes by recreational anglers adjacent to the Norman River mouth near Karumba.

Hart (2002b) reports on results of a two-week pilot survey of recreational fishing trips in Karumba. Preliminary estimates of total recreational catch in Karumba for August 2002 were between 6.4 and 12 tonnes. That survey recorded that the most common species kept were blue salmon, grunter bream and pikey (black) bream.

To see whether we could generate an independent estimate of tourist catch, the official fishing and catch statistics were obtained and analysed (QDPIF, 2003).

That data covers the past 13 years for commercial catch (Figure 21). The fishery is based in Karumba but fishes between Holroyd River and Queensland / Northern Territory border.

The commercial fishery comprised between 42 and 55 boats per year over the past decade. The recorded catch for 2002 of 540 tonnes was above the long-term average (333 tonnes), and worth an estimated \$2.8 million (\$5.16/kg fish). Effort was 3900 boat days.



**Figure 21: Commercial catch 1990 –2002**

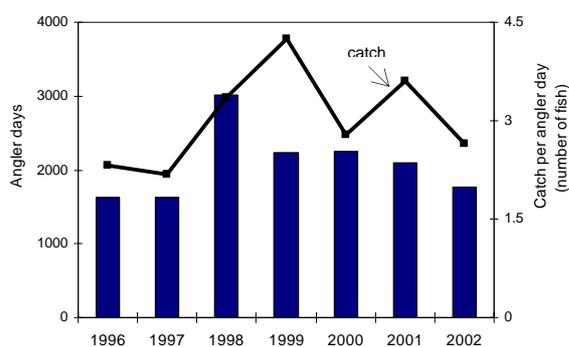
(Compiled from data provided by QDPIF, 2003)

The commercial fishery sources their product in a large area, stretching from the Holroyd River to the Queensland/Northern Territory border.

The Norman River is closed to commercial fishers. It is a key area for recreational fishing.

In terms of recreational fishing, the QDPIF data record a steady increase in the number of charter boats operating out of Karumba up to 14 in 2002. However, the relationship between charter boats and charter fishing effort is not linear.

The QDPIF recreational charter fishing data are available for the last seven years (Figure 22).



**Figure 22: Charter fishing in Carpentaria Shire: angler days and catch**

(Compiled from data by QDPIF, 2003)

Figure 22 shows that angler days on charter boats (columns) peaked in 1998 and subsequently declined to below 1800 days in 2002. There was a sharp increase in catch per effort (fish per angler-day) during the late 1990s, followed by a declining trend. The proportion of fish released has increased – specifically for Barramundi – along with the average size of fish harvested.

The upper end of that range represents the equivalent of mean commercial catch recorded over the period of the last 13 years.

The activities profiles derived from the visitor survey indicate that charter fishing accounts for only a small fraction of recreational fishing effort (Figure 13). People fishing from their own boats (and also from the beach) account for approximately 25 times that effort.

An estimate of recreational catch can be obtained using a combination of QDPIF and visitor survey data on the basis of the following assumptions:

1. The rate of catch per effort is related to fishing base. Fishing from own boat and beach fishing are less effective in terms of catch per effort than charter fishing.

Here, two scenarios were investigated:

| Scenario | Own boat | Beach fishing |
|----------|----------|---------------|
| (A)      | 1/2 *    | 1/4 *         |
| (B)      | 1/3 *    | 1/9 *         |

\* of charter fishing effectiveness

2. The rate of catch does not vary between different visitor segments.
3. Each member of a travel group has the same fishing effort and catch.

A third scenario (Scenario C) investigates the impact of differential effort and catch by visitor segments: it is assumed that all members of travel group fish, whereas for other segments some members do not fish all the time. This scenario is based on consistent anecdotal evidence to suggest that ‘true’ effort and release rates may vary considerably between visitor segments. Specifically travel groups are said to be fishing harder and more successfully than other segments.

4. The rate of release of fish caught is equal for all types of fishing and is equal to charter release recorded for 2002.

The results are summarised in Table 10.

Based on these assumptions, tourists harvest between 219 (scenario B) and 333 tonnes of fish (scenario A) per year. This would be consistent, in term of order of magnitude, with the QDPIF estimated annual catch for grunter, a key target species, of 60 tonnes. Hart (2002b)

On the basis of the high-end estimate, total annual catch from commercial operators and tourists combined could have been as much as 873 tonnes in 2002/03.

These estimates of tourist fish catch provided here reinforce concerns raised by Henry and Lyle (2003) about the potentially large impact of recreational fishing on a number of fish and aquatic invertebrate species, specifically as technological advances in fishing and the proliferation of information increase catch per effort.

Retirees have the largest share of tourist catch in Scenarios A and B, and travel groups in Scenario C.

Given the vague basis of the preceding estimates (and underlying assumptions), the numbers need to be interpreted with caution.

Given that fishing is the single most important drawcard for the destination, it is also interesting to calculate the economic returns to the community per unit of resource extraction. Table 11 shows tourist expenses by segment and calculates \$ spent in the region per kg of fish caught. The mean ‘value’ per kg of fish taken is estimated to be in the range from \$33 to \$50. This is more than six times the comparative value for commercially harvested fish. This comparison does not, however, imply

that commercial fishing is inferior. Given that the catchment areas of the fish caught and the distribution of the financial benefits through the community are vastly different, both types of fishing have equal justification as long as they are conducted within sustainable catch limits.

Estimates show significant variation visitor segments of value-for-catch, ranging between \$190/kg for singles and as low as \$27-30 for retirees and travel groups, depending on the scenario assumptions.

Among the current tourist market, only one segment –single travellers – indicated that fishing was not important to them. All other visitor segments come to the region for fishing and fish more or less daily. There is anecdotal evidence to suggest that people are catching less fish than they used to. There is no data to support this perception. However, given the high proportion of repeat visitors and the key focus on fishing, continued perceived poor fishing experiences constitute the key threat to tourism in the region, not just to tourism growth.

**Table 10: Estimated tourist catch for scenarios, by visitor segment**

| Visitor segments | Scenario A                      |                            |                    | Scenario B                |                         |                    | Scenario C              |                    |
|------------------|---------------------------------|----------------------------|--------------------|---------------------------|-------------------------|--------------------|-------------------------|--------------------|
|                  | Number of fish taken (C1, '000) | Tons of fish taken (C2, t) | Share of catch (%) | Number of fish taken (C1) | Tons of fish taken (C2) | Share of catch (%) | Tons of fish taken (C2) | Share of catch (%) |
| Retirees         | 55,732                          | 113                        | 34                 | 36,742                    | 74                      | 34                 | 75                      | 32                 |
| Couples          | 24,906                          | 50                         | 15                 | 17,189                    | 35                      | 15                 | 34                      | 14                 |
| Families         | 31,031                          | 63                         | 19                 | 20,178                    | 41                      | 19                 | 25                      | 11                 |
| Travel groups    | 50,288                          | 102                        | 31                 | 32,894                    | 66                      | 31                 | 96                      | 41                 |
| Singles          | 2,116                           | 4                          | 1                  | 1,749                     | 3                       | 1                  | 4                       | 2                  |
| <b>TOTAL</b>     | <b>164,074</b>                  | <b>333</b>                 | <b>100</b>         | <b>108,754</b>            | <b>219</b>              | <b>100</b>         | <b>234</b>              | <b>100</b>         |

Note: excludes visitor segment ‘other’;

Effort[segment] = recorded daily fishing frequency[fishing base, segment]\*rate of catch per effort[fishing base]\* mean visitor days[segment]

Scenario A: based on estimated boat catch of 1/2 and beach catch of 1/4 of charter catch

Scenario B: based on estimated boat catch of 1/3 and beach catch of 1/9 of charter catch

C1 = effort \* mean catch/effort [number of fish taken] in numbers estimated

C2 = effort \* mean catch/effort [weight of fish taken] in tons

**Table 11: Estimated value of recreational catch**

| Visitor Segment | Estimated regional expenditure<br>(\$'000) | Estimated regional expenditure per kg fish taken (\$/kg) |                |                |
|-----------------|--|--|----------------|----------------|
|                 |  | Scenario A   | Scenario B     | Scenario C     |
| Retirees        | 3,115                                      | 27.58  | 41.83          | 41.35          |
| Couples         | 2,277                                      | 45.12  | 65.37          | 69.00          |
| Families        | 1,933                                      | 30.74  | 47.28          | 76.71          |
| Travel groups   | 3,160                                      | 30.98  | 47.88          | 32.92          |
| Singles         | 672  | 156.54   | 189.32         | 168.00         |
| <b>Total</b>    | <b>11,041</b>                              | <b>\$33.20</b>   | <b>\$50.40</b> | <b>\$47.27</b> |

#### 4.10 Tourism net benefits

The resident population clearly identified a suite of positive impacts – predominantly economic and some social – contrasting with negative environmental impacts (Figure 3). Those surveyed showed overwhelming support for tourism.

The quantitative estimates provided by this research validate this assessment.

Overall, there is little doubt that tourism brings substantial financial benefit to the region. It is estimated that during 2002-03 approximately 14,000 overnight visitors (to commercial accommodation alone) visited the Shire, contributing approximately \$11.3 million to the regional economy. While these estimates are based on many simplifying, and unverifiable assumptions – they are realistic and certainly improve upon the prior state of knowledge.

Given the large financial impact it is not surprising to find that the resident population overwhelmingly supports tourism, primarily on the basis of the employment opportunities the industry generates. Tourist businesses (those industries most directly involved in tourism) employ approximately 180 persons or 16% of the working population.

However, the financial benefits of tourism come at a high price for the fish stocks in the region. Based on visitor survey data and data obtained from the QDPIF, this research estimates that recreational catch by tourists could possibly be as high as the long-term average commercial catch. Residents perceive tourism as having a large negative impact upon fish stocks in and around Karumba.

The resident survey also indicates that tourism has a negative impact upon the availability of fresh water, and generates congestion at some or the ‘favourite spots’ of Karumba’s permanent residents. The indigenous residents of Normanton also note the negative impact that tourism has upon the prices of local goods and services (i.e. making them more expensive).

Further, despite the substantial financial benefit attributable to regional tourism, the benefits (and costs) are not evenly distributed – either across the population centres or across ethnic groups. This is most evident when looking at employment – fewer than 7 per cent of those employed by tourist business are indigenous, even though indigenous persons comprise more than 60% of the Shire’s population.

The financial benefits attributable to tourism are also distributed unevenly across space. More than

94% of total (surveyed) visitor nights are spent in Karumba. Hence, to the extent that total economic impact is related to the place where visitors stay, it is likely that most of the economic impact of tourism occurs in Karumba.

These distributional effects were reflected in the resident survey, specifically: the generally less favourable rating on the economic impact of tourism impact by indigenous respondents; the significantly higher, positive economic rating on the impact of tourism (with respect to business investment) by the residents of Karumba, and the significantly more negative ratings on the social and environmental impacts of tourism (with respect to congestion, fish stocks and fresh water) from the residents of Karumba.



**Plate 13: Tourists enjoying a drink before sunset at the Point Hotel**



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## 5 TOURISM FUTURES

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### 5.1 Summary

Based on what we now know about tourists and their impacts, this section seeks to answer the research questions, which are outlined in the Introduction.

Tourism is dynamic. Destinations change and so do visitor numbers and types of visitors. Destinations have the opportunity to influence the direction and speed of this change. The data presented here provides valuable information to underpin planning, management and investment to support thinking about what kind of tourism the community in Carpentaria Shire wants for their region and how to work towards achieving that objective.

A combination of planning, management and policy, with cooperation from various stakeholders, is required. This specifically includes the Shire Council, tourist operators, the indigenous community, Gulf Savannah Development, Tourism Queensland and Queensland State Government departments.

Increasing benefits to the regional community from tourism will largely depend on the region diversifying its tourist product away from fishing as well as safeguarding fish stocks, thereby offering tourist anglers satisfying fishing experiences into the future. This is a necessary condition for ongoing tourism success and attention to fish management is urgent. Fishing is the major motivation of all current visitor segments, except for singles, for visiting the Shire. Repeated anecdotal evidence – though not as yet backed up by data – suggests that recreational catch has been declining and that there is visitor dissatisfaction.

Improving the variety and quality of facilities and services available to tourists broadens the appeal of a destination. The current visitor market in Carpentaria Shire are not very enthusiastic regarding most ideas for new tourist facilities and activities. However, some ideas appeal sufficiently to current visitors to suggest

that their implementation would be a successful proposition and generate additional employment and revenue for the region. At the same time, these investments could serve to broaden the tourist product and appeal of the region to non-fishing visitors, which in time will enable further business opportunities.

The resident population was concerned about perceived negative impacts on environmental aspects of the region, including the availability of fresh water and refuse generation. It is possible to mitigate this impact. Importantly, planning of services must be guided by total demand, not just demand by the resident population. Tourists add as many as 800–1000 “resident equivalents”, effectively increasing demand for services in the Shire by 25–30% over a calendar year.

It is equally important to provide incentives for tourists to minimise the amount of freshwater use and waste generated. This can happen through user charges or indirectly, through volume-base rate payments of the businesses where tourists use most resources and produce most waste.

It is also important for the destination to seriously consider generating revenue from tourists to support the development and management of infrastructure and services, which are better equipped to meet the demands of the total population, including residents and visitors.

Embedding the region in broader destination marketing and ‘theming’ provides a further avenue of attracting different types of tourists. Themed roads such as the Savannah Way are being marketed for the 4WD enthusiasts and ‘adventurers’ and help to attract more short-term visitors. The Savannah Way, following a route between Cairns and Broome, also connects savanna regions across northern Australia in a meaningful manner.

## **5.2 Changing the visitor mix**

Different visitor segments make different 'net' contributions to community benefits because they generate different financial and environmental impacts. This gives rise to the idea that substituting low-spending/high-fishing visitors with high-spending/little-fishing visitors would generate significantly more net benefits for the community from the same number of visitors. This consideration is specifically relevant during peak season, when accommodation capacity provides the limiting factor for visitation. However, the research results for visitor segments, shown in Section 3, indicates that the current visitor mix offers little opportunity for such substitution. While there is clear variation in visitor spending between segments, they all fish extensively, with the exception of singles. This would indicate that new visitor segments need to be attracted to the region, including people who are high-spending and have little or no interest in fishing.

It has become evident that *visitor numbers* is not a good reference point for this calculation given the excessive length of stay of key visitor segments and the great variation in length of stay for different visitor segments. It is essential to include number of *visitor days* in the assessment.

A change in the visitor mix that holds the number of visitor days constant could generate an increase in net benefits, but this would generally require an increase in the number of visitors.

To illustrate, note that retirees spend little money per visitor day. However, a retired couple spends, on average, more within the regional economy than six singles, and almost three times as much as the average family. Thus, if one were to simply reduce the number of retired visitors, replacing them with an equal number of 'singles' or 'families', then the region would experience an economic downturn. To ensure a yield-neutral change in the visitor mix, one would need to replace each retired couple (spending an average of \$4600 over 10.5 weeks)

with six singles (each spending a total of \$700 during an 11 day visit) or three families (comprising 12-13 individuals each spending almost \$385 per day on a nine-day visit). A yield-neutral change in the visitor mix therefore means that more visitors pass through the region. It is possible however, to achieve a higher yield with a reduction in aggregate visitor nights.

In other words, this analysis indicates that a change in the number of visitor nights from the current mix that is dominated by retirees to one with more singles, couples, travel groups or families could have positive financial but less certain resource impacts.

What is required for the region is to attract different visitors, who are not currently present – or present in small numbers and therefore subsumed in the fishing-focused visitor segments. Those visitors are ideally high-spending and none/less-fishing.

## **5.3 Changing the tourist product**

Carpentaria Shire offers visitors a very 'raw' tourist product. There is little to see or do except fishing. The current visitor segments are quite homogenous – with the exception of singles – in their motivation to visit the region and their activity pattern once they are in the region (Figure 13); it is focused on fishing. Tourist facilities and services have largely developed to service the tourists who fish.

There is comparatively little private or public infrastructure to support the non-extractive use of the region's rich biodiversity through activities such as bird watching or river tours.

Changing the appeal of the region and what people do while they are visiting is strongly influenced by the facilities and activities on offer. A diversification of the tourist product is the key to a diversification of the tourist market.

Generating additional facilities and activities is also an important avenue for the local community to generate greater economic benefit and employment from tourism.

Diversification requires public and private investment. Investment needs to be viable in the sense that new facilities and activities need to attract visitors/customers. It is therefore important to gauge the likely acceptance of an investment by the market.

In the scoping phase of the research, a series of ideas were proposed for new tourist facilities and activities. These ideas were put to the

respondents of the visitor survey to gauge the degree of likely acceptance.

Respondents were asked to indicate their interest in the idea on a scale from -2 (not interested, definitely would not do or visit) to +2 (very interested, would definitely do or visit). Figure 23 shows, by visitor segment, interest and likely support for potential new tourist activities and facilities in the Shire.

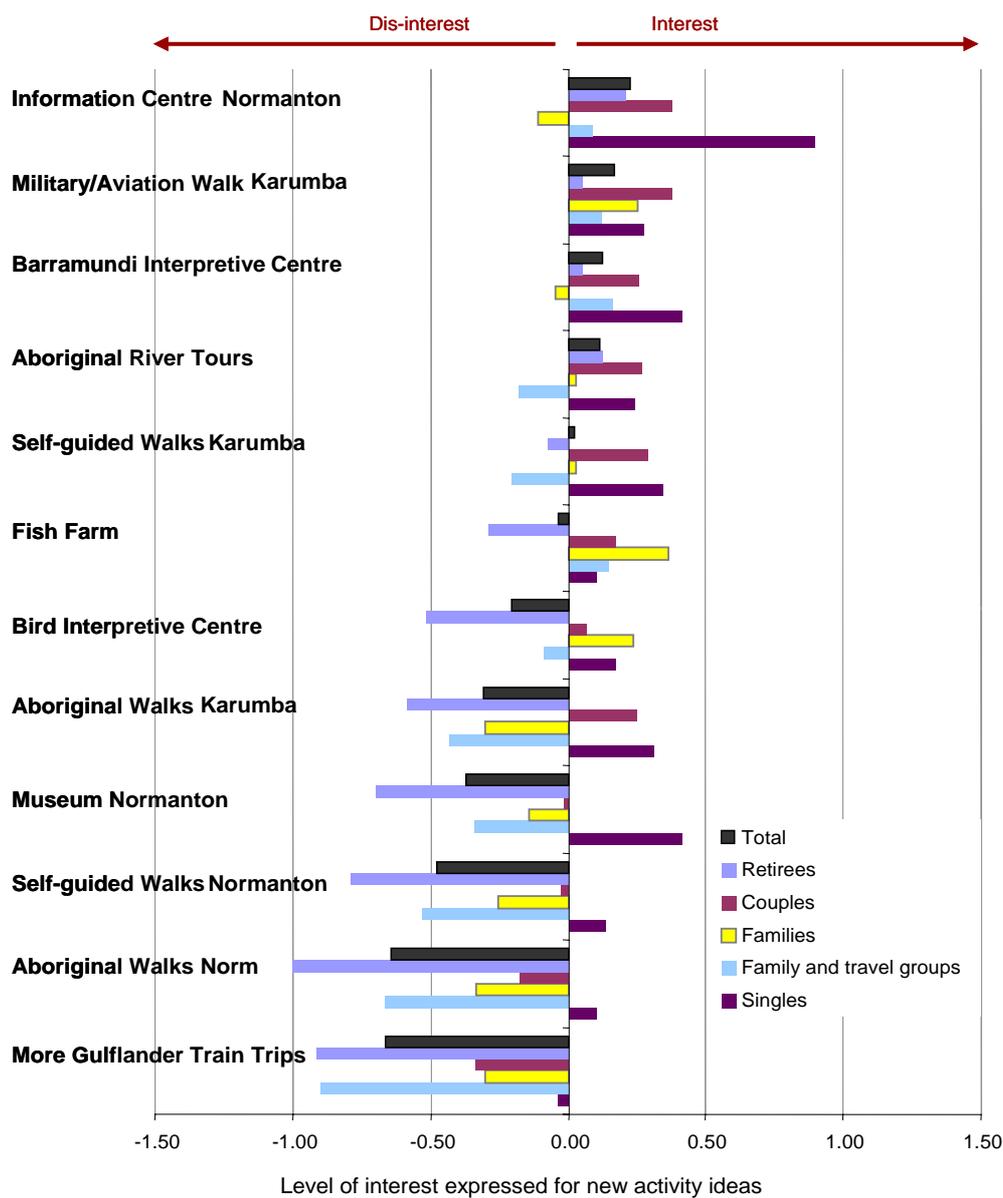


Figure 23: Interest and dis-interest expressed by respondents in prospective new tourist activities and facilities, by visitor segment

Overall, the current tourist market responds unenthusiastically to new ideas. There is a moderate level of acceptance by all segments for only a few potential new activities and facilities, specifically a visitor information centre in Normanton, a military/aviation walk in Karumba and a Barramundi Interpretive Centre.

The current visitor market seems quite happy with what the region has to offer. Key visitor segments, in particular retirees, are completely uninterested in new facilities and activities. This sends a signal of caution to private investors who are considering commercial tourism opportunities in Carpentaria Shire. It also suggests that public investment projects, such as a tourist information centre – which is already being implemented in Normanton – are low-risk ways of diversifying the tourist product and broadening the appeal of the Shire to non-fishing visitors.

On the other hand, the data clearly shows that some visitor segments, specifically couples and singles, have a much broader interest in a variety of facilities and activities. These segments may well provide additional niche opportunities for some business investors.

The findings also reiterate the importance of seeking change to the visitor mix: not only are retirees the visitor segment who stays longest and spends least per day, they are also least interested in innovation. If the region decided to attract non-retirees at the expense of retirees, thereby shortening average length of stay, it would have to seek to attract a much larger number of non-retiree visitors to maintain or improve current income from tourism.

#### **5.4 Generating revenue from tourists for infrastructure and services**

Tourists use infrastructure and consume resources during their stay at the destination. They use roads, consume water, generate waste,

use boat ramps and catch fish. Consumption is typically proportional to length of stay.

Most infrastructure and services are provided by local government and tourists do not contribute to the income of local government from rates. They contribute indirectly to local government revenue through the rates and levies that tourist operators, specifically accommodation places, pay. The question is to what degree this indirect revenue covers the true cost to the host community of providing infrastructure and services to tourists.

The visitor survey explored whether tourists would be, in principle, willing to make a contribution to service and infrastructure provision, and what payment vehicle they would prefer.

**The questionnaire asked whether respondents thought it ‘fair’ that visitors to the region be asked to make a financial contribution. On balance, there was support for the idea (**

Figure 24). The variance in responses between visitor segments shows a similar profile to that of income distribution of segments (Figure 12).

Figure 24 explores the differences between tourist segments further. Families had the strongest support for a contribution by visitors, with 35% totally supporting the idea and only 8% utterly rejecting the idea. In contrast, fewer than one in four retirees totally supported the idea while 33% utterly rejected the idea.

The questionnaire proceeded to explore responses as to the possible ways in which a financial contribution to the region could be made by tourists. Four payment vehicles were investigated, which are common: visitor pass, accommodation levy, activity pack and user charges. Table 12 summarises the key principles of the payment vehicles.

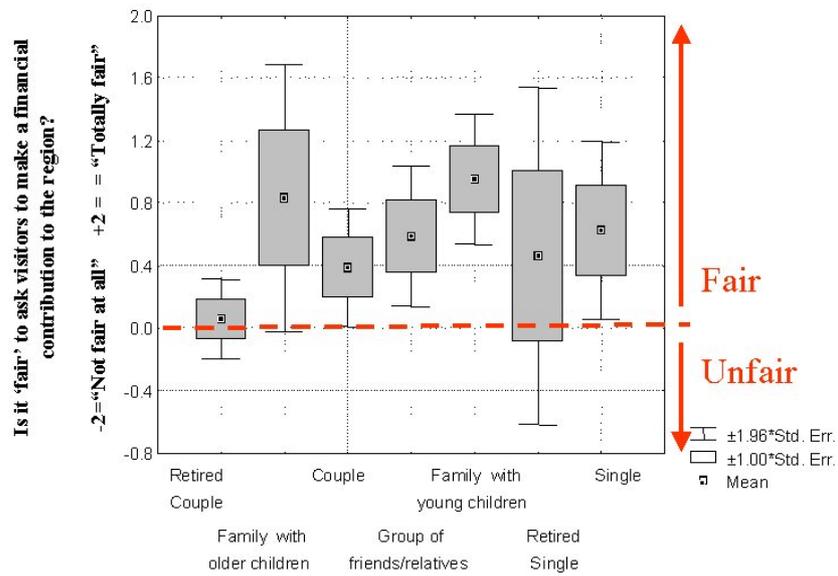


Figure 24: Distribution of tourist willingness to contribute financially, by visitor segment

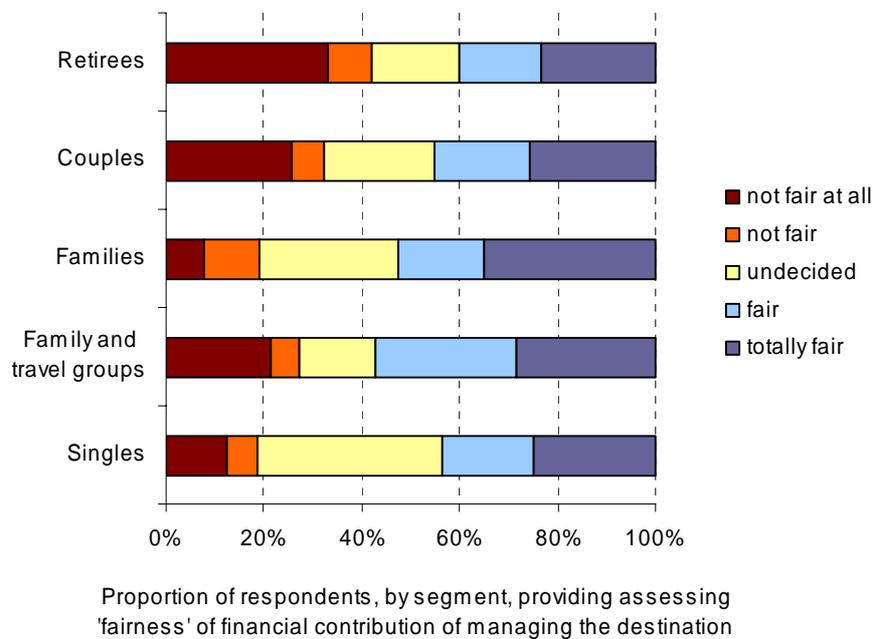
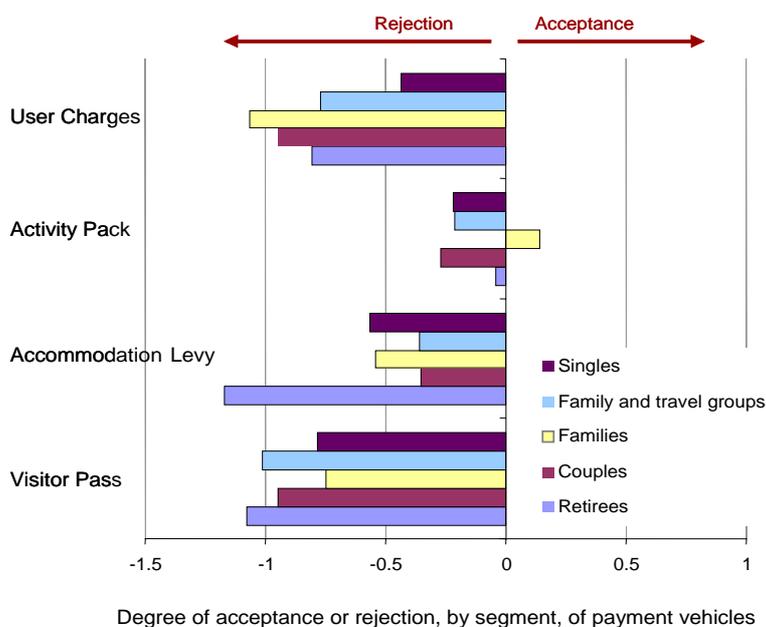


Figure 25: Willingness of visitors to financially contribute to services and facilities, by visitor segment

**Table 12: Summary description of potential payment vehicles**

|                        | Visitor pass  | Accommodation levy  | Activity Pack   | User Charge   |
|------------------------|---|---|---|---|
| Principle              | Annual "pass", displayed as sticker on car windscreen   | Small charge added to cost of accommodation per night   | Activities and entry to facilities is sold as "package" at discount price   | Tourists purchase services on a "user pays" basis   |
| Charge unit            | Vehicle per year  | Accommodation "unit" (eg. Room, camp site, etc) per night   | Package is cheaper than sum of activities purchased individually  | Per unit of use of individual service (eg. Coin operated boat wash facility)  |
| Collected by           | The Shire, purchased at visitor information centre  | Manager of accommodation place; passed on to Shire Council monthly  | Every participating business and tourist information centre;<br><br>Revenue distributed according to relative value of individual activity with a proportion of revenue directed to Shire Council | Operator / provider of facilities   |
| Incentive for tourists | Voluntary, "collectors' item"   | Compulsory  | Voluntary "Savings" made  | Pay for what you use  |
| Advantage              | Easy to implement and administer  | Easy to implement and administer<br><br>Secure and comprehensive stream of income<br><br>Charge is proportional to length of stay | Supports collaboration of tourist businesses  | Only people who use a resource are paying for use<br><br>May generate additional employment   |
| Disadvantage           | Not comprehensive, no mechanism to enforce purchase (in comparison to National Parks)<br><br>Favours long-stay visitors |   | Requires agreement between businesses and financial transfer provisions to be established<br><br>Long-stay visitors purchase one package at most  | Unsuitable for many kinds of resource use (eg fishing)<br><br>High cost of implementation and maintenance<br><br>People may seek to evade charges |



**Figure 26: Respondent attitude towards different payment vehicles, by visitor segment**

Figure 26 summarises respondent attitudes towards the different payment vehicles. It shows that all payment vehicles are rejected. The single acceptance of any visitor segment of any payment vehicle is of activity packages by families. Activity packs were the payment vehicle least rejected by all other visitor segments. Retirees are most sensitive to an accommodation levy being imposed. Due to their long duration of stay, this type of payment would affect retirees most.

**This result is in stark contrast to the response about a general concept of financial contribution by visitors (**

Figure 24). The description of payment mechanisms leads to the realisation that such a concept can be implemented and that real monetary transfers from tourists to the host community may actually be required in the future.

The in-principle support for the idea is a signal that with adequate communication effort, visitors may be accepting of the idea. In the event of a mechanism being implemented, it should aim at comprehensive coverage of visitors (non-voluntary) and minimal implementation and administration effort. It should also aim to raise enough net revenue to cover tourist-induced costs.

**5.5 Minimising negative environmental effects**

Residents are concerned about the impact of tourism on their use of resources, specifically access to freshwater. The Council of Australian Governments (COAG) has set user-pays principles in place for the use of water, which have not as yet been implemented by Carpentaria Shire Council. If (1) water use was metered, (2) charges applied on a per use basis and (3) the levy reflected the true value of water, then accommodation places (including caravan parks) would have to pay for the use of water by their customers. This would have two effects. Firstly, it would generate revenue for

the Shire to improve water provision. Secondly, business would seek to minimize water use by their customers and therefore resource savings would be achieved.

The most prominent negative impact of tourism is on fish stocks. From the estimation of catch – despite the large range of catch estimates – it is obvious that the recreational catch needs to be monitored and breaches of fishing regulations (such as size and bag limits) policed and punished. Current monitoring effort is sporadic and inadequately linked to management action.



**Plate 14: Car park at Karumba Point boat ramp during tourist season**



**Plate 15: Town boat ramp in Karumba during tourist season**

This research thus endorsed the conclusion drawn by Henry and Lyle (2003) on the basis of the National recreational and Indigenous Fishing Survey that impacts of recreational

fishing warrant more stringent assessment and management.

### **5.6 On-farm diversification**

Another way for the region, and specific sections of the community, to increase benefits from tourism is through on-farm tourism. There are some grazing properties in Carpentaria Shire that have on-farm tourism.

A survey was conducted of six properties to find out what experiences graziers had made with tourism. The survey was used to determine what opportunities existed for grazing properties to diversify into tourism and the impediments they faced in doing so. All properties surveyed were leasehold grazing properties.

On-farm tourist season is from April to September, and all respondents thought that there was scope to extend the season. The key restriction is reliability of access during the wet season.

All of the properties were seeking to attract nature based tourists and none was trying to attract the fishing market. Birdwatchers were their key clients.

Motivation for tourism is only partially financial. Tourism is not a main contributor to the property income but assisted with cashflow. The number of visitors to individual properties ranged from 200 to 500 per year with duration of stay between one and eight days. None of the properties provided extra activities.

Impediments to on-farm diversification into tourism included:

1. the provision of adequate water, sewage and electricity services;
2. being able to manage visitors within a restricted area on their property;
3. different leases and licenses, and being able to obtain information about what licenses are required;
4. liability insurance; and
5. finding reliable staff to operate the tourism part of the business.

To successfully diversify into tourism, property owners indicated that the grazing/tourism ventures should be run independently and managed by an appropriately skilled person. More up-front investment into tourism infrastructure would be required and it would need to be ensured that tourists would not interfere with the grazing enterprise.



**Plate 16: Camping facilities at Leichhart Lagoon**



**Plate 17: Dry season aspect of Leichhardt Lagoon**



**Plate 18: Wet season aspect of wetland outside Normanton**

### 5.7 Fostering indigenous involvement in tourism

Currently there is no direct involvement of local indigenous people in tourism with the exception of Delta Downs Station, which runs a small tourist camping facility and was part of the property survey. There are no indigenous owned or run businesses and the indigenous community is not supplying products such as art and craft to shops to sell.

There is a strong indirect connection, through the substantial indigenous employment by the Council, which services tourist facilities and provides services. Therefore, not surprisingly, indigenous people generally perceive less economic benefit to themselves from tourism than non-indigenous parts of the community.



**Plate 19: Norman River at Delta Downs Station**

The visitor survey found that the current visitor market does not consider Aboriginal culture as a motivation for visiting the region and is generally not receptive to ideas of Aboriginal guided walks. However, specifically singles and couples indicated a moderate interest in indigenous interpretive river tours. Thus the commercial viability of any indigenous commercial operation needs to be considered carefully. However, there might be a niche market and that opportunity may be growing over time if the visitor market diversifies.

Involvement of members of the indigenous community in the soon-to-be-opened tourist information centre and indigenous exhibits can provide a valuable avenue for focussing existing ideas and exploring further avenues for indigenous involvement in tourism. Such involvement will start to address the uneven distribution of benefits from tourism.

### 5.8 Tourism planning and management in a regional context

Carpentaria Shire is a member of Gulf Savannah Development (GSD), a non-government organisation to promote economic development across the Queensland Gulf. GSD has been instrumental in devising and implementing the “Savannah Way”, a newly launched 3700 km themed route linking Australia’s tropical savannas from Cairns to Broome. The Savannah Way is actively promoted by Tourism Queensland, the NT Tourist Commission and the WA Tourist Commission and is expected to bring more adventure travellers into the region.

There are broader planning and marketing activities underway, which the Shire can seek to link into and influence more actively. The Queensland State Government launched a North West Tourism strategy in 2003. Tourism Queensland is promoting Outback Queensland as a drive tourist destination, specifically through its themed road network such as the Mathilda Highway, which ends in Karumba.

The study area is on the boundary of both the Northern and Southern Gulf Natural Resource Management planning initiatives. Tourism has been identified in both regions as a major stakeholder with demands on resources and implications for natural resource management. In addition to the extraction of (fishing) resources, other areas of concern include the rubbish, human waste and the inadvertent spread of weeds. Improved collaboration of NRM agencies and processes with tourism stakeholders is required in addition to improved education of tourists about impacts and preferred behaviours.

In the past, there has been little cooperation between tourist operators in the region. Membership of and involvement in the tourist progress association has been low and fluctuating and the association has recently folded. This can be seen as a sign of businesses acting independently, with the result that the industry reacts to tourist needs in a single-business fashion rather than seeking to influence the tourism product and regional profile. However, over the past 12 months the GSD has

found significant interest by business owners in the proposed Savannah Way VIC Cluster/Network. This would indicate a strong desire to work more closely together and explore potential synergies, which can lead to improved benefits for everybody.

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## 6 LESSONS FOR REMOTE DESTINATIONS

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The research results presented in this report contain important messages that are relevant beyond the case study of Normanton/Karumba. The considerations provided here focus on three areas: the tourist product; foreseeable future trends which will impact on tourism demand and tourism benefits.

Remote destinations – and the people who make decisions about them – need to understand the basic principles governing tourism and tourism development so that they can plan appropriately and take anticipative action, thereby safeguarding the region as a great place to live for the regional community and as a worthwhile place to visit for tourists.

The considerations shared here will help regional and other decision makers to balance the needs and aspirations of tourists and host communities with national interests and the need to safeguard natural resources and ecosystems for future generations.

### 6.1 Resource use

Tropical savanna destinations, like destinations across Australia's outback regions, offer an essentially nature-based tourist product. In addition to the magnificent scenery, offering drive-through and bushwalking experience, the extensive coastline, rivers and waterholes offer fishing opportunities and wetlands and billabongs harbour extensive birdlife.

In the process of enjoying these resources, tourists also consume them. They take fish, generate rubbish and waste, cause congestion, and by their mere presence detract from the enjoyment of other visitors and local people.

Tourists also consume other types of resources in host regions, such as accommodation and catering, entertainment, infrastructure and services. They further consume intangible aspects of the tourist product such as the local culture and the feeling of place.

The type and extent of resource use differs between destinations depending on visitor numbers, visitor nights, visitor types and resource availability.

All the resources that constitute a destination's tourist product are shared by members of the host community, tourists and other users. It is therefore essential to understand the cumulative impact and extent of resource use/extraction. The use of resources can then be assessed in the context of the contribution tourists make to a destination.

This report provides two important steps towards an integrated analysis of tourism benefits and costs. Firstly, it provides an estimation and assessment of tourist spending (financial contribution) as well as fish catch (resource extraction). Secondly, it shows the extent to which tourists require access to basic infrastructure and resources by converting visitor days into 'resident equivalents'. This reveals the extent to which the true demand for infrastructure and services is underestimated if based only on resident population.

The experiences and challenges of most savanna and outback destinations are similar. As Wood (2003:16) summarises in relation to Coral Bay on the Western Australia Carnarvon-Ningaloo coast: "Many negative impacts of tourism [...] can be attributed to incremental growth and the absence of appropriate plans and management actions. The future of tourism in the region depends on its sustainability and the maintenance of the natural environment, the very attribute that attracts visitors to spend their discretionary dollars in [this region] rather than competing destinations in Australia and abroad."

### 6.2 Future trends

The tropical savannas are largely a domestic tourist destination. Increasingly, grey nomads

are dominating the visitor market right across the north, from Cape York to the Kimberley.

Given the demographic profile of the Australian population, the number of grey nomads is bound to increase significantly over the next decades as the baby boomer generation retires. The ABS estimates that the number of people older than 65 years will increase from 2.4 million (year 2001; 12.1% of population) to 2.94 million within a decade (an increase of 23%) and to 5.05 million by 2031. Many people retire before the age of 65. Consequently, many more grey nomads will travel to and through northern Australia's outback regions, in the pursuit of adventure, solitude and pristine environments.

More demand on outback roads will lead to increased maintenance costs and more roads will be sealed. Towns such as Burketown, which are currently 'protected' from the gravel-road adverse travellers, will become mainstream destinations. The fish stocks in adjacent rivers will be attracting the tourist anglers that are now becoming frustrated with declining catch in the waters accessible from Karumba.

Many visitors consider it their right not only to travel to remote regions, but also to camp and fish wherever they want to, and to do so free of charge. However, increasing visitation and resulting pressure on savanna ecosystems and communities requires a change of public attitude to the effect that it is a privilege to visit remote regions. This in turn means that with the right to visit comes an obligation to firstly minimise ones' impacts through careful resource use and secondly to pay for the services received. An attitude change to the effect that 'free-riding is un-cool' requires a concerted and continued education effort at the national, state and regional levels.

It is more difficult to foresee trends relating to international tourists to the region. International travel is subject to many uncertain factors such as exchange rates, price of aviation fuel, political conditions and security issues. However, some economic forecasters predict that tourism will become the largest export-earning sector in Australia in the near future.

Increasing international visitor numbers to savanna regions would exacerbate the urgency of rethink of tourism in remote regions.

### **6.3 Tourism benefits**

Tourism involves many players including tourists, businesses, tourism managers, host communities and society. All players need to derive benefits from tourism for tourism to be truly successful. However, the aspirations of these players are at least partially competing. Tourists seek to maximise 'consumer surplus', ie. get the best experience possible for the least cost, while businesses seek to maximise (short-term) profits and host communities are interested in long-term income and employment as well as net benefits.

Tourism success is predominantly measured in tourist numbers. This measure is useful when assessing tourism at a national scale since economic activity generated can be assumed to be linear to tourist numbers. Thus, from a national – or even state perspective – it is useful to pursue an increase in tourist numbers, both international as well as inter- and intra-state.

Equalling tourist numbers to tourist success is a dangerously floored concept for small host communities such as Normanton/Karumba and others right across the tropical savannas. Here, benefit is not necessarily related to tourist numbers but to yield and net benefit. Yield is about the financial bottom-line of tourism and net benefits assess yield in the context of social, cultural and environmental impacts. As demonstrated in this study, the question of yield is not only linked to the types of visitors and their daily spending, but also to duration of stay. Therefore 'visitor days' is proposed as a superior measure to 'visitor number'.

Tourists who spend more and extract/use fewer resources produce higher net benefit than those who spend little and use resources heavily.

To increase net benefits of host communities from tourism it is absolutely critical to have a fact-based understanding of tourism in the region, including tourist numbers, tourist

market, visitor profiles and activities. Perceptions and anecdotal evidence (eg. about assumed tourist numbers and market segments) can be misleading for planning and management. Specifically the quest for more tourists without consideration of yield and net benefit is a hazardous concept.

The visitor market at any specific location across the savannas may differ from other locations. While it is important to understand the visitor market it is equally important to identify what types of visitors are missing. For example, there are only very few international tourists visiting Normanton/Karumba. On the basis of such understanding the host community can develop a vision for tourism for the destination and start to take pro-active and strategic steps to maximise community net benefits.

When evaluating tourism benefits it is further important to consider the distribution of benefits and costs in the host community. For the Karumba/Normanton region it has been demonstrated that indigenous people, despite representing a majority of population, have only a marginal involvement in tourism and therefore receive few benefits from tourism. In addition, they are also the socio-economically weakest group and are affected most by local businesses increasing prices for goods to generate a tourist rent.

#### **6.4 Extent of influence**

Savanna regions are 'peripheral' destinations (Hohl and Tisdell 1995), as is the case for Carpentaria Shire. This brings specific challenges in terms of changing product, attracting different tourists to diversify the tourist market, adding secondary benefits from money re-spent locally and combating seasonality of visitation.

Nevertheless, if local government, local businesses and development, tourism and management agencies work together to create a consolidated tool of actions, offers and controls for tourists; use of this tool can go a long way to

ensuring that the host community derives comprehensive net benefits, indigenous participation is enabled, and the integrity of the region's natural resources is safeguarded for tourists, locals and others to enjoy into the future.



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