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Sub 35

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Inquiry into developing Queensland's rural and regional communities through grey nomad tourism

The Research Director,
Economic Development Committee
Parliament House
George Street
BRISBANE QLD 4000

Thank you very much for inviting me to make a submission to the above committee's inquiry.

I note that the guidelines indicate that there is no set form for a submission. I would therefore, like to take the opportunity to 'submit' the attached paper (published in 2006 in the Journal: Tourism Management) for consideration by the committee, in addition to the comments below. I make this submission as an individual.

I note that the inquiry asks for comment on several issues, the first of which is

> 1. What economic contribution do grey nomads make to rural and regional Queensland?

and, I provide the following comments (supported by the journal article) as an 'answer'.

- If one only counts the total dollars spent by nomads, the 'answer' is (probably), 'substantial'.

- BUT ... if one considers BOTH the dollars spent AND the value of a region's resources that are 'used up' by these tourists, then the answer is "not necessarily substantial". Indeed the answer may even be "negative": at least for some residents. The owners of caravan parks, no doubt, benefit. But some people suffer (e.g. local residents who are not associated with the tourism industry who see their fish-stocks depleted, their favourite swimming holes congested, or who must ration their own water use so there is plenty for the nomads).

I therefore encourage the committee to also consider OTHER forms of tourism, for at least *some* rural and regional communities: the lower volume, higher spend type of tourist, may, in some cases, have a more positive economic impact across a broader range of individuals, than the grey nomads.

Those points aside, if there is a 'global' decision to go ahead and encourage greater numbers of grey nomads to visit rural and regional parts of QLD, then I urge the committee to try to find ways of ensuring that those who benefit most from this venture, are also those who contribute most to the provision of costly infrastructure to support the tourists (be that infrastructure 'physical' – such as road upkeep, dams, and water reticulation schemes; or 'soft' – such as the provision of staff to help monitor fish-takes, rubbish disposal, and off-road access to protected areas). Further, many nomads stay for extended periods, but do not pay local rates, so it may also be worthwhile considering ways in which to entice these long-stay visitors into also making a financial contribution to the regions which are, essentially their 'home' for many months each year.

I hope these comments are useful.

Sincerely Yours,

Natalie Stoeckl.

ELSEVIER

The community impacts of different types of visitors: an empirical investigation of tourism in North-west Queensland

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Abstract

This paper uses data from a survey of visitors to the Carpentaria Shire in Queensland, Australia to investigate some of the economic and environmental (predominantly fishing) impacts of different visitor segments. The results show that different types of visitor generate different economic and environmental impacts and that the current visitor mix contributes most (financially) to caravan parks and local stores while drawing heavily upon local fishing stocks. The paper argues that in the short to medium term it is paramount for the continued success of tourism to manage the recreational fisheries. In the medium to long term, a more diverse range of visitor types could generate larger regional economic benefits, a broader distribution of benefits, and less reliance on just one of the region's otherwise plentiful natural resources.
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Keywords: Visitor impacts; Economic impacts; Environmental impacts; Regional tourism; Grey nomads

1. Introduction

Tourism is one of the fastest growing sectors of the Australian economy. In Queensland, for example, takings from accommodation grew almost 25% in the 5 years prior to September 2002; the story is no different in the Carpentaria Shire, located in the tropical savannas of Australia (ABS, 2002a).

Tourism tends to complement, rather than crowd out, existing industries, thereby adding to and broadening the revenue base of local businesses and communities (Collins, 1996). Further, the total economic benefit of tourism is generally greater than direct tourism expenditures because these expenditures have flow-on and indirect effects. At the national scale, the indirect contribution from tourist consumption to the Australian

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economy is substantial. Salma (2002) estimates that indirect gross value added for the year ending June 2001 was close to $26.8 million and therefore slightly larger than the direct gross value of $26.3 million. The (Australian) Bureau of Tourism Research (1999), estimates that the total employment generated by tourism is double that of direct employment.

It is not, therefore, surprising to find that Tourism is often looked upon as a regional 'saviour'—to quote from the Tourism Green paper (the Commonwealth Department of Industry, Tourism and Resources 2003, p. 6):

A healthy tourism sector contributes to the economic and social well-being of all Australians.

Tourism provides significant business and employment opportunities in regional and rural Australia, particularly for small to medium sized business.

It also provides a vehicle for Australians to interact with the natural and cultural environment.

Yet this does not mean that tourism generates unambiguous benefits to all members of small regional communities. Several important qualifications need to be made.

First, large national or state-wide tourism multipliers do not translate into large regional multipliers. Small regional communities must import many goods and services from other areas—so that a larger proportion of tourism expenditure leaks out of small towns than out of large, more self-sufficient, regions. Empirical studies typically find that multipliers are smaller in small economies/regions than they are in larger economies (Driml, 1987; Baaijens, Nijkamp, & Van Montfort, 1998; Johnson, 2001).

Second, important, negative, feedbacks may occur if tourism competes for scarce resources (Dwyer, Forsyth, & Spur, 2004). These effects occur when, for example, increases in the demand for scarce goods or services raises their prices, thereby choking off previously met demand. The gross increase in regional income that is generated by the tourism expenditure, may therefore be larger than the net increase (gross minus any negative feedbacks).

Third, not all visitors have the same net financial impact on a local community. That different types of tourists have different tastes and motivations and reasons for travel is well documented in the literature (Pearce, 2001; Brown, 2003; Galloway, 2002; Jensen & Korneliussen, 2002; Lee, Lee, & Wicks, 2004). But different visitor groups also have different spending patterns (Caserta & Russo, 2002), engage in different activities, use different facilities (Galloway, 2002), show different degrees of sustainable behaviour and express different levels of willingness to pay for access to congested areas (Dimara & Skuras, 1998). Since different regions tend to attract different types of visitors,[3] one expects different regions to accrue different benefits from tourism (in aggregate and distributional terms).

The most important point to be made here, is that the value of resources consumed by tourists *may—in some circumstances*—be of greater value to local communities than the extra income that they generate. It depends upon how many resources are withdrawn, and how much income is generated. Further, the costs and benefits of tourism are not evenly distributed throughout communities. Even if the net benefits of tourism across a small community are positive, the net benefits accruing to individuals within that community could be positive, zero, or even negative.

In Karumba, a small township in the Carpentaria Shire, the resident population is faced with water restrictions during the dry season to ensure that drinking-quality water is freely available to tourists— tourists who spend much of their time fishing. Anecdotal evidence suggests that fish stocks are in decline and congestion in some areas may be lowering the recreational use values for local residents (if congestion is viewed negatively—see Brown & Mendelsohn, 1984). More than 60% of the estimated resident population of the Shire are Indigenous (ABS, 2002b), yet Indigenous persons make up less than 7% of the employees of businesses that are associated with tourism in the Shire. Many local residents report that tourism is, on the whole, generating net benefits but some do not agree (Greiner, Stoeckl, & Schweigert, 2004).

The research described here is part of an on-going project—funded by the Tropical Savannas Co-operative Research Centre and the Commonwealth Scientific and Industrial Research Organisation and initiated at the request of the Carpentaria Shire. The project seeks to consider ways in which to manage tourism in Carpentaria Shire so as to maximise community benefits of tourism—while minimising any adverse distributional effects.

This paper reports on part of that research, focusing specifically on the characteristics and activities of visitors to the region. The hypothesis underlying the research is that different types of visitors have a different net impact upon the local community, primarily because they behave differently—they contribute different resources to it, and withdraw different resources from it. This hypothesis is tested using data from a visitor survey. Specifically, survey questions are framed, and data are analysed in a manner that allows one to ask:

> What are the different impacts of different visitor segments in the Shire of Carpentaria? and
> How can information about the different impacts of different visitor segments help us to plan and manage tourism in a way that maximizes the net benefits from tourism, while minimising adverse distributional effects for this host community?

The research reported here thus differs from other research primarily because it focuses on the different impact that different visitor segments have upon the local community. Much research has been done on the economic, social, cultural and environmental impact that tourism has upon local communities (Ko & Stewart, 2002; Yoon, Gursoy, & Chen, 2001). Similarly, much research has been done on the different behaviour, motivations, and spending patterns of different visitor segments (Galloway, 2002, Lee et al., 2004; Jensen & Korneliussen, 2002—to name but three of many). But to the best of the authors' knowledge, there is little published research on the socio-economic impact that

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[3]Sorensen and Epps (2003) report that the elderly and adventurous dominate the tourism market in Central West Queensland; Prideaux (2002) reports that heritage visitors to peripheral areas are largely middle aged, middle classed and well educated; Ryan and Mo (2001) find that Chinese visitors to New Zealand are typically well-travelled with above average income and educational attainment.

different types of visitors have upon the local community.

As well as providing useful information to those living in the Shire of Carpentaria, this paper, therefore has the potential to interest several other groups of researchers: those interested in remote-area tourism; those interested in the 'grey nomads' (an Australian term coined for retirees who travel around the country for months at a time); and those interested in methodological approaches to considering the net impact of different types of tourists on local communities.

The paper is organised into 6 sections. Section 2 provides background information on the Carpentaria Shire. Section 3 describes the methodology, and provides a general, descriptive overview of visitors to the region and Section 4 compares visitor segments by identifying statistically significant differences in a range of tourist descriptors, including: socio-economic variables; participation in different activities; revealed interest in a range of different development options; and willingness to pay for the use of various regional resources. Section 5 discusses some of these similarities and differences, while Section 6 offers some concluding remarks as to how differences between tourist segments can be exploited for better long-term tourist management.
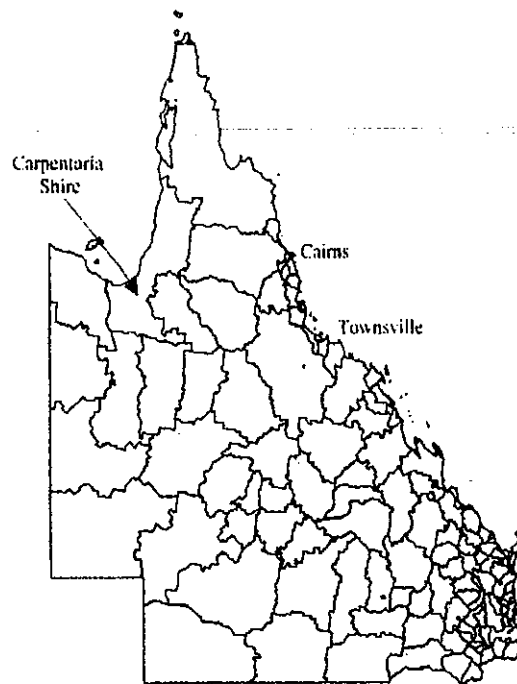

Fig. 1. Location of the Carpentaria Shire in Queensland, Australia (map generated using *Healthwiz*: Prometheus Information, 2002).

2. Background

The Carpentaria Shire is located in North-west Queensland, Australia (Fig. 1) and covers an area of approximately 69 thousand square kilometres. It has a resident population of less than 4000 persons, concentrated mainly in two townships: Normanton (population 1197) and Karumba (population 597).[4]

The region is very remote from major cities—it is almost 2300 km by road from the state capital, Brisbane, and approximately 10 h drive from the major regional centres in North Queensland, Cairns and Townsville. Although there are airstrips at Karumba and Normanton for light aircraft, the nearest domestic and international terminal is more than 700 km away (Cairns). As noted on a web-site that promotes Karumba:

> The Gulf Savannah is an interesting region to visit all year, however during the monsoon season, transportation methods must be carefully considered, as some parts of the Gulf Savannah region suffer from a lack of road infrastructure (Tourism Queensland, 2004).

Europeans first settled in Normanton in the 1800s. It served as the main port for the Gulf of Carpentaria and was used extensively to transport gold that was mined in the Croydon area. Nowadays, it is the administrative centre of the local government area. The railway line between Normanton and Croydon has been maintained and is home to the "Gulflander" train—a popular tourist ride.

Karumba adjoins the Gulf of Carpentaria. In the early part of the 20th century it served as a refuelling airport for planes operating between Australia and Asia. In the 1970s is was a key port for the more than 300 prawn trawlers working in the Gulf of Carpentaria. As fishing stocks went into decline, so too did the township. Today, it harbours a modest fishing fleet and serves as a shipping port for live cattle and zinc (from the Century Zinc mine some 400 km South). In the early 1990s a road into Carpentaria Shire was sealed, which has made Karumba the only location on the Gulf of Carpentaria accessible by bitumen road. This opened the area to mainstream tourism.

Today, there is anecdotal talk of there being up to 95,000 visitors per year to the region, although Tourism Queensland's data (2002) suggests that the number may be between 50,000 and 60,000 per annum.[5] Compared to the number of tourists to major tourist centres such as Cairns (the main tourism destination in TNQ), these

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[4]Australian Bureau of Statistics (2002c).

[5]Fewer than 1% of the 777,000 Tropical North Queensland's international visitors and close to 4% of Tropical North Queensland's 1.3 million domestic visitors travel to Carpentaria Shire (Tourism Queensland, 2002).

Table 1
The Australian Bureau of Statistics Census: persons and visitors counted in Carpentaria (S) in the August, 2001 census

Major centre within collection district	Total persons counted	Visitors from Australia	Visitors from overseas	Proportion of total persons counted who were visiting from outside the shire (%)	Proportion of total visitors originating from overseas (%)
Jacks Pocket/Inkerman	85	52	3	65	5
Burke and Wills Roadhouse	148	90	0	61	0
Karumba	1349	803	17	61	2
Delta Downs/Glencoe	180	85	6	51	7
Augustus Downs	101	20	3	23	13
Normanton	1452	268	16	20	6
fMitchell River Community	648	66	0	10	0
Kowanyama	894	45	0	5	0
Total for Carpentaria (S)	4857	1429	45	29	1

numbers seem small. Yet the local impact of tourism is high, primarily because visitor numbers are so large relative to the population base. In some parts of the Shire more than 60% of those counted on census night (during the peak tourist season) were visitors from elsewhere in Australia; there were few international visitors (Table 1).

Some rural shires deliberately set out to target tourism as traditional agricultural and fishing industries go into decline (Sorensen & Epps, 2003; Maclellan, 1999). The management focus in these situations is often, therefore, one of attempting to develop and/or market attractions that are significant enough to overcome the tyranny of distance, enticing tourists to travel from the core to the periphery (Prideaux, 2002). This is not so in the Shire of Carpentaria. Here, there has been a rapid and unplanned increase in visitor numbers since the 1970s (when there were almost no visitors to the area save those travelling in and out for work). Consequently, the problem facing those in the Shire of Carpentaria is not so much one of how to start a new industry, but of how best to manage an existing one, and how best to manage an evolution of the current state of affairs into one that continues to generate community benefits—subject, of course, to the normal set of constraints facing peripheral tourism regions (such problems of accessibility and distance from markets, a dependence on natural resources, pronounced seasonality of demand, limited infrastructure, etc.—see Pearce, 2001).

As noted earlier, the hypothesis underlying our research is that different types of visitors have a different net impact upon the local community, primarily because they behave differently—they contribute different resources to it, and withdraw different resources from it. If this hypothesis is true, and if it is also true that the number and type of visitors to a particular destination

changes over time—as predicted by Butler's (1980) life-cycle model—then it follows that:

(a) the community benefits of tourism will change dynamically, and interactively with changes in the visitor mix;
(b) optimal management regimes should change dynamically, and interactively in response to changes in the visitor mix; and
(c) planning and management may be able to influence the long run impact of regional tourism by targeting visitor segments deemed to have the most desirable (or least undesirable) impact upon the local community.

This paper therefore sets out to identify different behaviours of different visitor segments, using those to identify the impact, key management issues, and potential attractors of different visitor groups.

There is some precedence for such an approach—as noted in Dinan and Sargeant (2000), there is considerable scope to use principles from the Social Marketing literature to achieve better management outcomes in the tourism industry. They argue that if it is possible to identify different visitor segments that exhibit different types of behaviour and therefore have different impacts upon local communities and if one can also identify different motivations/drivers of those different segments, then it may be possible to manipulate the visitor mix thereby raising the net community benefits of the regional tourism industry (e.g. encouraging those deemed to have a positive impact upon the community whilst discouraging others).

3. Methodology

As noted above, information about the behaviour, motivations and attitudes of different types of visitors

may help those interested in trying to manage the existing tourism industry in the Shire of Carpentaria, whilst planning for the future. That requires detailed data relevant to the current situation—the primary problem being that there is little, existing, data about the Shire's tourism industry.

More specifically, socio-economic data is mostly limited to that which is supplied by the ABS census and business surveys—and the latter provides an incomplete picture. For example, in the case of accommodation places, the ABS (2003) lists data for 3 businesses only for the whole of Carpentaria Shire, with a capacity of 86 rooms. This compares to the inventory in Normanton and Karumba alone, compiled by this research team, of 15 accommodation places with a capacity of 133 rooms/units, 474 (powered) caravan sites and 127 camp sites. Similarly, there are no sound estimates of tourist numbers; those that are available (like those reported above) are generally too aggregated to be informative at the local scale.

The BTR, for example, includes the Carpentaria Shire in its 'OUTBACK' Tourism Region—a region that covers more than 50% of Queensland (Fig. 2).
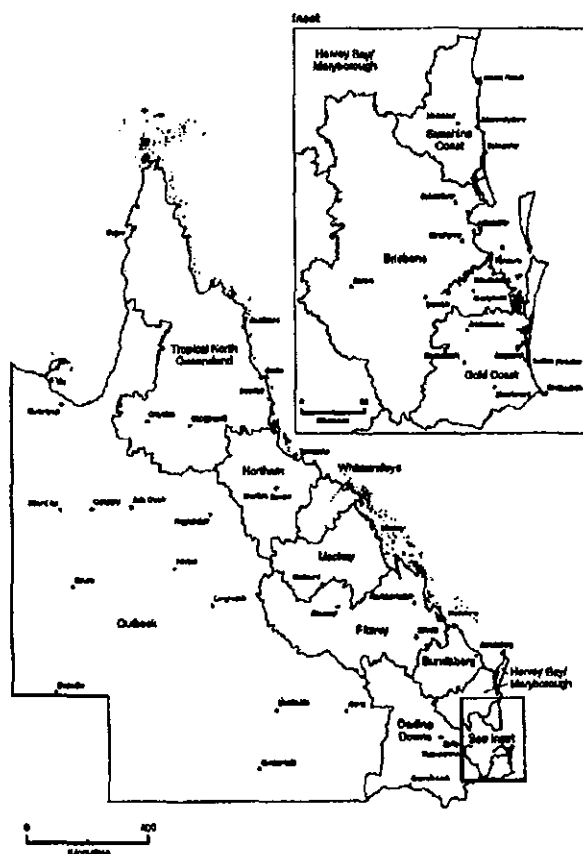

Fig. 2. The Bureau of Tourism's 2001 Tourism Regions (BTR, 2001).

In contrast, Tourism Queensland includes the Carpentaria Shire with the Tropical North Queensland region, which includes both Cairns and Port Douglas. This region attracts many international visitors and many relatively young domestic visitors—most of whom stay for between 3 and 10 days (although those from the ACT and Tasmania tend to stay for longer, between 16 and 19 days on average).[6] This contrasts markedly with the profile of visitors to the Shire of Carpentaria—one which is dominated by grey nomads (see Section 4).

Consequently, to develop an understanding of tourism in Carpentaria Shire, the research team needed to generate data through survey activity—it could have been misleading to draw inferences from data sets that were dominated by visitors to other regions that are thousands of kilometres away, and that have (perhaps vastly) different characteristics from those who regularly visit the region of interest.

As noted in the introduction, the hypothesis underlying the research described here is that different visitor segments have different impacts on aspects of the host region's economy, environment and community. To test that hypothesis, one needs data on the way in which different visitor segment interact with the host community. Also, noted earlier, is that the reason for investigating differences across visitor segments, is to see if such differences can be exploited so as to provide those within the Shire of Carpentaria with insights as to ways to maximise the community benefits to tourism.

To meet these aims, the research team therefore needed to collect information about the different visitor groups—the question being how best to segment the visitors. As noted by Brown (2003), "the dimensions used to segment a market...depend on the research objectives sought". Our primary objective was to see if one could exploit differences across visitor segments; encouraging groups deemed to generate the largest community benefits (relative to other groups). Instead of using statistical techniques like cluster analysis to segment the market (e.g. Galloway, 2002; Lee et al., 2004), it was, therefore, important to start with easily recognisable visitor groups (as per Jensen & Korneliussen (2002) who segment their visitors by country of origin). Visitor groups were therefore chosen in consultation with local residents (Families with young children, Families with older children, Couples and Singles). These groups were further differentiated by retirement status—allowing researchers to focus on the most visible segment: retirees.

Having identified clearly visible visitor segments, it was necessary to collect information about their activities and expenditures whilst in the region (so as to assess the impact of different segments), their origin, their motivation for coming to the region, and their

attitudes to future development and management (enabling one to focus marketing campaigns at those segments deemed to have a desirable community impact). A questionnaire was therefore developed, visitors were interviewed, and the data so obtained were analysed. Further details are given in the following methodological sub-sections.

3.1. The questionnaire

The survey established 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.[7]

More specifically, several questions that were aimed at finding out about the socio-economic background of those visiting the shire (age, usual residence, occupation, and household income) were included.

Also included, were questions about the activities that different visitors engaged in. The primary reason for doing this, was to allow us to gauge the impact that different visitor groups have upon the local community—as noted earlier, the costs and benefits of tourism depend upon the way in which tourists interact with the community and their environment. Specifically, only when tourists spend money in local businesses does the regional economy benefit. But tourists also use local resources, e.g. roads, water, fish. The NET benefit derived by a host community from any individual tourist, will therefore depend—at least in part—upon how much he or she spends in local businesses compared to how many local resources he or she uses.

The economic literature has several well-established means of estimating the impact of tourism (using, for example, input–output analysis or computable general equilibrium models, in conjunction with survey data on visitor expenditures to estimate the economic impact of tourism, and/or using cost–benefit analysis to estimate the broader impact). Yet all of these well-established techniques are costly to develop—particularly in data poor environments. Consequently, this survey sought to measure the impact of visitors, indirectly, by asking respondents to indicate the number of times (per day, per week or per visit) that they engaged in a range of different activities (the activities were identified in conversations with local residents and representatives from the local tourism industry).

The survey also elicited comment from visitors regarding the importance of a range of different factors that attracted them to the region (here-after referred to as items). This information is of utmost importance, if

one wishes to exploit difference in visitor segments. Here again, members of the research team worked with local residents and operators in the tourism industry to develop a list of regional attractions. These were listed on the questionnaire, and visitors were asked to identify those attractions that were important to them when deciding whether to come to the region. They were then asked to re-consider the list, nominating the most important item.

Also important, is visitor reaction to future development—particularly if those within the shire wish to identify the types of development options viewed most favourably by visitor groups that generate the highest net community benefits. Here again, researchers worked with local residents and tourism operators to develop a list of proposals and ideas for future development. These included a council-run museum and tourist information centre, additional free-of-charge walks, and additional commercial activities. To gauge visitor attitudes to these proposals, respondents were asked to indicate their likely support for such activities and facilities on a five-point scale.

Finally, the willingness of visitors to make a financial contribution to the region (in compensation for resources used) was tested in an additional set of survey questions. Specifically, the questions asked visitors to indicate, on a five-point scale, (a) whether they thought that it was fair to ask tourists for a financial contribution towards the management/maintenance of the region; and (b) how acceptable and/or unacceptable different vehicular payment mechanisms were. Here again, such information is important to those wishing to develop management strategies that target particular visitor groups.

3.2. The survey: sampling and data collection

The questionnaire was administered using face-to-face interviews with visitors to the Carpentaria Shire.

Two steps were taken to ensure that the sample adequately represented the visitor population. First, surveys were conducted during four 1-week periods throughout the year (July 2002—peak season, September 2002—spring shoulder season, February 2003—off-season and April 2003—autumn shoulder season). Table 2 shows the number of each type of visitor groups interviewed during each period. Second, interviews were conducted at accommodation places, which allowed for stratification by bed capacity and accommodation types. Day visitors were not interviewed—very few travel to the area and it would have been extremely costly to meet and interview a sub-sample that was large enough to allow us to draw inferences about their behaviour.

In total, 510 travel parties were surveyed, representing more than 1400 visitors to the Shire and approximately 2.5% of the entire visitor population (if the 'official'

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[7]A copy of the survey is available upon request—from Romy Greiner, at CSIRO.

Table 2
The number of visitor groups interviewed during each sampling period

Number of visitor groups interviewed	Survey period				Total
	1	2	3	4	
Retired couple	110	47	2	56	215
Couple	28	36	10	19	93
Group of friends/relatives	26	25	3	14	68
Family group with children <16 years old	20	36	1	6	63
Single	12	10	7	3	32
Family group without children or with older children	4	9	1	4	18
Retired single	4	4		4	12
Tour group	3	2	1	2	8
Other	1				1
Total	208	169	25	108	510

Table 3
Travel parties surveyed by visitor segment and combined duration of stay

Visitor segment	Number of groups interviewed	Average size of group	Average length of stay (days)	Share of market calculated as	
				The proportion of groups interviewed (%)	The proportion of (surveyed) visitor days (%)
Retired couple	215	2	76	42	67
Couple	91	2	37	18	14
Group of friends/relatives	68	4.7	14	13	9
Family group with children <16 years old	65	4.3	9	13	5
Single	32	1	11	6	1
Family group without children or with older children	18	3.5	14	4	2
Retired single	12	1	70	2	2
Tour group	8	1	7	2	0
Other	1	1	3	0	0
Total	510	2.7	44.7	100	100

estimates of up to 60,000 visitors per annum are correct).

As shown in Table 3, the regional tourism market is dominated by retirees. Not only do they constitute the largest visitor segment (in terms of numbers), but they also stay for longer (on average) than all other visitor segments. In terms of surveyed visitor days, retirees account for 67% of the market. Non-retired couples were also prominent in terms of the number surveyed and average length of stay. Families with young children and groups of friends/relatives were relatively well represented among those surveyed; other visitor segments were present, but in comparatively small numbers (comprising less than 2% of the market).

4. The results

Those interested in managing and/or targeting specific visitor segments need detailed information about different types of visitors. This section of the paper provides such information, analysing the socio-economic characteristics, the activities, the attractors and the attitudes of different visitor segments.

The information is summarised in Tables 4–6—which provide mean values of several descriptors for each visitor segment with a sub-sample of 10 or more. When compiling the information, a post hoc comparison of means was conducted for each descriptor—the aim being to highlight similarities and differences between visitor segments. In the following discussion, the term 'significantly different' indicates that the difference between mean values for the relevant visitor segments was statistically significant at the 5% level (using the Tukey HSD test for unequal sample sizes). The term 'similar' indicates that any difference between the means was not significant. In Tables 4–6 this is shown by assigning 'similar' means, 'similar' superscripts; means that do not share the same superscript are statistically different at the 5% level.

Table 4
Visitor segments: socio-demographic variables and visitation characteristics

	Retired couple	Family without children or with children >16 years old	Couple	Group of friends and/ or relatives	Family with children <16 years old	Retired single	Single
Number of persons in travel party	2.00^a	3.50^b	2.00^a	4.68^c	4.33^c	1.00^b	1.00^b
Number of adults	2.00^b	2.50^b	2.00^b	4.21^a	2.24^b	1.00^c	0.88^c
Number of children	0.00^o	1.00^b	0.00^c	0.47^b	2.08^a	0.00^c	0.13^c
Average age of travel party (years)	62.95^a	38.29^b	45.95^b	41.63^b	27.57^c	63.85^a	29.90^c
Average household income ($ pa)	28,108^a	57,833^{ab}	60,427^b	47,059^b	63,772^b	33,333^{ab}	46,429^{ab}
Proportion of travel parties originating from within QLD	0.30^a	0.89^c	0.65^{bc}	0.74^{bc}	0.86^c	0.38^{abc}	0.44^{ab}
Proportion of travel parties originating from elsewhere in Australia	0.66^a	0.11^b	0.30^b	0.18^b	0.13^b	0.62^{ab}	0.44^{ab}
Proportion of travel parties originating from overseas	0.04^a	0.00^a	0.05^a	0.09^a	0.02^a	0.00^a	0.13^a
Days spent in Karumba	73.50^b	10.41^a	34.95^a	13.58^a	11.79^a	71.54^{ab}	10.71^a
Days spent in Normanton	4.69^a	3.88^a	1.94^a	0.52^a	0.50^a	0.40^a	1.00^a
Days spent in Region	76.17^a	13.50^b	36.70^b	13.82^b	12.25^b	69.50^{ab}	11.31^b
Length of trip away from home (days)	145.31^b	35.78^a	74.76^{ab}	46.38^{ab}	47.75^a	136.54^{ab}	62.07^{ab}
Proportion of trip spent in the region	0.56^a	0.60^a	0.68^a	0.61^a	0.66^a	0.50^a	0.50^a
Proportion of travel parties who would return to the region	0.90^a	0.94^a	0.93^a	0.85^a	0.97^a	1.00^a	0.96^a
Proportion of travel parties who would recommend Normanton	0.74^a	0.69^a	0.76^a	0.83^a	0.83^a	0.67^a	0.72^a
Proportion of travel parties who would recommend Karumba	0.98^{ab}	0.94^{ab}	0.99^{ab}	0.91^a	1.00^b	1.00^{ab}	0.96^{ab}
Overall satisfaction with visit (1 = extremely dissatisfied; 5 = extremely satisfied)	4.45^{ab}	4.33^{ab}	4.39^{ab}	4.26^{ab}	4.57^b	4.46^{ab}	3.88^a

Mean response were compared across visitor groups for each variable reported in the left-hand column (using the Tukey HSD test for unequal sample sizes). Means that are statistically similar at the 5% level share similar superscripts; means that do not share the same superscript are statistically different at the 5% level.

4.1. Socio-economic profile of visitors

Table 4 gives a summary and comparison of the mean values of socio-demographic and other descriptive variables for visitor segments.

In terms of members of a travel party, 'groups of friends and relatives' tended to be the largest travel parties—with an average of 4.2 adults and less than 0.5 children.

As expected, the average age of the retired segments was significantly higher than the average age of other groups. The average age of non-retired couples was more than 40 and the distribution was relatively narrow (from about 38 to 45); apparently, few young couples travel to the region. The non-retired 'singles' were generally between 25 and 35 years of age.

Approximately half of the travel parties interviewed originated from Queensland, two-thirds of those from North Queensland. Most of the other travel parties originated from the southern states of Australia, predominantly Victoria and New South Wales—the vast majority being retirees. Only 3% of visitors were from overseas.

Almost 90% of families and more than 60% of 'groups' and 'couples' originated from within Queensland. Most retirees came from elsewhere in Australia. Singles were the most diverse group in terms of origin, with 44% coming from within Queensland, 44% from elsewhere in Australia and 12% from overseas.

It is not uncommon for researchers to find that the socio-economic status (income, educational level and tendency to be employed in white-collar jobs) of visitors to National Parks is higher than that of the general population (Knapman & Stoeckl, 1995). The opposite seems to be true in the Shire of Carpentaria, which appears to be something of a 'Mecca' for low-income earners in 'blue-collar' occupations.

At just AUD 28,000, the average annual household income of the largest visitor segment (retired couples) is substantially below that of the Australian population (AUD 39,000[8]). This is in contrast with studies of international senior travellers—a market sometimes dominated by those on relatively high incomes (e.g.

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[8]Calculated as the mid-point of the median household income range reported in the ABS (2001).

Table 5
Visitor segments: activity profile

	Retired couple	Family without children or with children >16 years old	Couple	Group of friends and/ or relatives	Family with children <16 years old	Retired single	Single
Fishing							
Fishing on charter boat (times per day)	0.02[a]	0.01[a]	0.05[a]	0.02[a]	0.03[a]	0.02[a]	0.06[a]
Fishing in own boat (times per day)	0.48[bc]	0.49[abc]	0.43[b]	0.68[c]	0.54[bc]	0.64[bc]	0.07[a]
Fishing from beach or river-bank (times per day)	0.16[ab]	0.40[b]	0.17[ab]	0.16[ab]	0.29[b]	0.09[a]	0.05[a]
Total fishing	0.66[a]	0.91[a]	0.65[a]	0.85[a]	0.86[a]	0.70[ab]	0.17[b]
Activities (other than fishing) that involve the exchange of money							
Stay in caravan park (proportion of groups)	0.93[a]	0.28[e]	0.68[b]	0.29[e]	0.44[cde]	0.85[abc]	0.34[de]
Grocery shop (times per day)	0.54[a]	0.44[ab]	0.38[b]	0.30[b]	0.27[b]	0.53[ab]	0.19[b]
Go out for a drink (times per day)	0.24[a]	0.34[ab]	0.45[b]	0.60[b]	0.44[b]	0.21[ab]	0.55[b]
Eat out (times per day)	0.22[a]	0.27[a]	0.29[a]	0.32[a]	0.33[a]	0.32[a]	0.38[a]
Purchase souvenirs (times per day)	0.08[a]	0.09[a]	0.09[a]	0.09[a]	0.14[a]	0.06[a]	0.11[a]
Visit barramundi farm (times per day)	0.03[a]	0.05[abc]	0.11[bc]	0.06[ab]	0.14[c]	0.03[abc]	0.09[abc]
Go on scenic river tour (times per day)	0.03[a]	0.02[a]	0.06[a]	0.03[a]	0.06[a]	0.03[a]	0.08[a]
Go on 'Gulf-lander' (times per day)	0.03[a]	0.06[a]	0.03[a]	0.02[a]	0.03[a]	0.03[a]	0.04[a]
Go on joy-flight (times per day)	0.01[a]	0.05[a]	0.00[a]	0.03[a]	0.02[a]	0.01[a]	0.00[a]
'Free' activities							
Cook own meal (times per day)	0.86[a]	0.76[ab]	0.71[ab]	0.70[ab]	0.66[b]	0.74[abc]	0.33[c]
Go on walk (times per day)	0.64[a]	0.63[a]	0.53[a]	0.42[a]	0.63[a]	0.59[a]	0.52[a]
Watch birds (times per day)	0.29[a]	0.30[a]	0.30[a]	0.18[a]	0.29[a]	0.17[a]	0.26[a]
Engage in family activities (times per day)	0.04[a]	0.65[b]	0.06[a]	0.11[a]	0.71[b]	0.00[a]	0.06[a]

Mean response were compared across visitor groups for each variable reported in the left-hand column (using the Tukey HSD test for unequal sample sizes). Means that are statistically similar at the 5% level share similar superscripts; means that do not share the same superscript are statistically different at the 5% level.

Table 6
Characteristics of visitor segments: mean response to questions regarding the importance of different regional 'drawcards'

	Retired couple	Family without children or with children >16 years old	Couple	Group of friends and/ or relatives	Family with children <16 years old	Retired single	Single
Business	0.03[a]	0.00[a]	0.33[b]	0.09[a]	0.19[ab]	0.00[ab]	0.50[b]
Family	0.06[a]	0.33[ab]	0.05[a]	0.07[a]	0.35[b]	0.00[ab]	0.06[a]
Fishing	1.28[a]	1.22[a]	1.18[a]	1.57[a]	1.29[a]	1.62[a]	0.22[b]
Seafood	0.19[a]	0.33[a]	0.20[a]	0.19[a]	0.27[a]	0.38[a]	0.13[a]
Sealed road	0.27[a]	0.06[a]	0.29[a]	0.13[a]	0.27[a]	0.38[a]	0.06[a]
Wildlife	0.22[a]	0.28[a]	0.23[a]	0.12[a]	0.14[a]	0.31[a]	0.13[a]
Landscape	0.22[a]	0.39[a]	0.23[a]	0.15[a]	0.17[a]	0.23[a]	0.16[a]
European culture	0.05[a]	0.11[a]	0.01[a]	0.03[a]	0.03[a]	0.15[a]	0.00[a]
Aboriginal culture	0.05[a]	0.06[a]	0.02[a]	0.07[a]	0.05[a]	0.08[a]	0.00[a]
Weather	0.99[a]	0.39[ab]	0.56[b]	0.32[b]	0.52[b]	1.00[a]	0.22[b]
'Looking'	0.45[ab]	0.61[ab]	0.41[a]	0.29[a]	0.38[a]	0.31[ab]	0.97[b]
Friends	0.40[a]	0.39[a]	0.28[a]	0.21[a]	0.30[a]	0.31[a]	0.31[a]
Bike event	0.00[a]	0.11[ab]	0.04[ab]	0.12[b]	0.00[ab]	0.00[ab]	0.00[ab]
Craft	0.03[a]	0.00[a]	0.06[a]	0.00[a]	0.00[a]	0.00[a]	0.00[a]

Mean response were compared across visitor groups for each variable reported in the left-hand column (using the Tukey HSD test for unequal sample sizes). Means that are statistically similar at the 5% level share similar superscripts; means that do not share the same superscript are statistically different at the 5% level.

Huang & Tsai, 2003). Notably, the variance in household income for retired couples is also particularly low. As illustrated in Fig. 3 (which shows box-plots of the household income for key visitor segments), not only are the retired couples generally poorer than other visitor groups, but they are uniformly poorer—the spread of
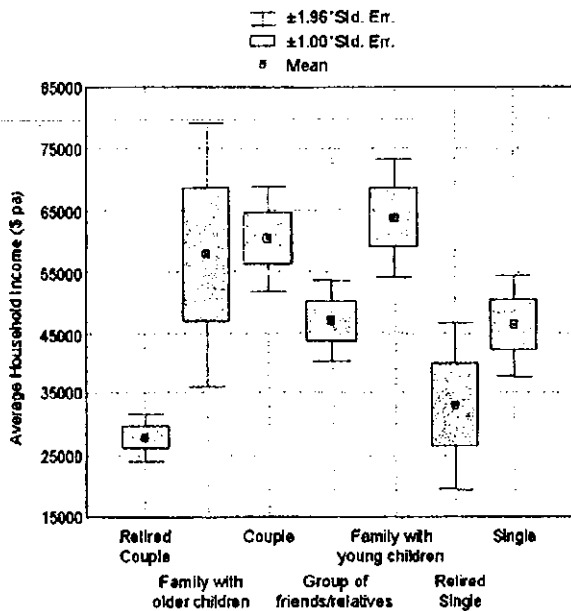
Fig. 3. Household income of visitors to the Shire of Carpentaria—box plots by visitor segment.

income for retirees is considerably smaller than for other visitor groups.

Although the household income of non-retired visitor segments tends to be higher than the Australian average, the non-retired visitors are less likely to be 'white-collar' workers than their Australian counterparts. As illustrated in Fig. 4, with the exception of families, the proportion of 'professionals, associate professionals' and 'managers/administrators' is much lower than the Australian average of approximately 39%.[9] Similarly, more than 40% of non-family respondents identified themselves as 'labourers'—compared to the 29% of workers throughout Australia (ABS, 2001) who were employed as either 'tradespersons and related workers', 'intermediate transport and production workers' or 'labourers and related workers'.

4.2. Activity profile of visitors to the Carpentaria Shire

Information about the number of times visitors engaged in various activities was converted to a daily rate (calculated on the length of stay) and averages were calculated for each visitor segment—Table 5.

The single most popular activity across all visitor segments—except singles—was fishing. On average, non-single visitors were more apt to go beach fishing, charter fishing and/or own-boat fishing than any other

nominated activity. Families, and groups went fishing more frequently than other visitor segments, with families doing most beach/riverbank fishing, although differences were only statistically significant when compared to singles.

Visitors to the region tend to be self-sufficient—bringing their own food and cooking themselves, rather than eating in local restaurants. Retirees were less likely to eat out than other groups, instead purchasing groceries at the local store and cooking their own meals. Retirees were also less likely to go out for a drink than most other visitor segments—those most inclined to do so were the groups.

4.3. Regional draw-cards and visitor attitudes to potential new 'attractions'

Table 6 shows the mean responses to questions regarding the importance of different *items* as an attractant to the region (responses were scored by assigning: '2' to *items* that were nominated as the most important attraction; '1' to *items* that had some bearing on the visitors decision to come to the region; and '0' to *items* that were not mentioned). Fig. 5 shows the percentage of respondents within each visitor segment that nominated each *item* as 'important'.

Since the most popular regional activity was fishing for all segments except the singles, it was not surprising to find that fishing was the single most important draw-card for all visitor segments except the singles. Fewer than 15% of singles nominated fishing as important—for that group 'looking' (i.e. the attraction of coming to the region out of curiosity, to simply see what was there) featured more prominently than any other draw-card. For retirees, the weather was almost as important as fishing.

Responses to questions about the level of support for potential/new activities to the region were coded from −2 (for 'would definitely not do/not visit') through to +2 (for 'would most definitely do/visit'), and values were compared across segments. Mean responses for each activity/attraction are shown in Fig. 6.[10]

Overall, most support was shown for the idea of an information centre. There was also some support for a range of other activities such as a Military/Aviation Walk, a Bird Interpretative Centre, a Museum, self-guided walks around Karumba, and a Barramundi Interpretive Centre.

Important differences exist in support for individual options between visitor segments (Fig. 7). Retirees were generally uninterested in most proposed activities—retired singles in particular showed a lack of interest in many activities. Non-retired couples, singles and

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[9]Calculated as the total number of persons working as professionals, associate professionals and Mangers/Administrators divided by the total number of persons responding to the question about occupation on the 2001 census (ABS, 2001).

[10]Reproduced from Greiner, Stoeckl, and Mayocchi (2003) Greiner et al. (2003).
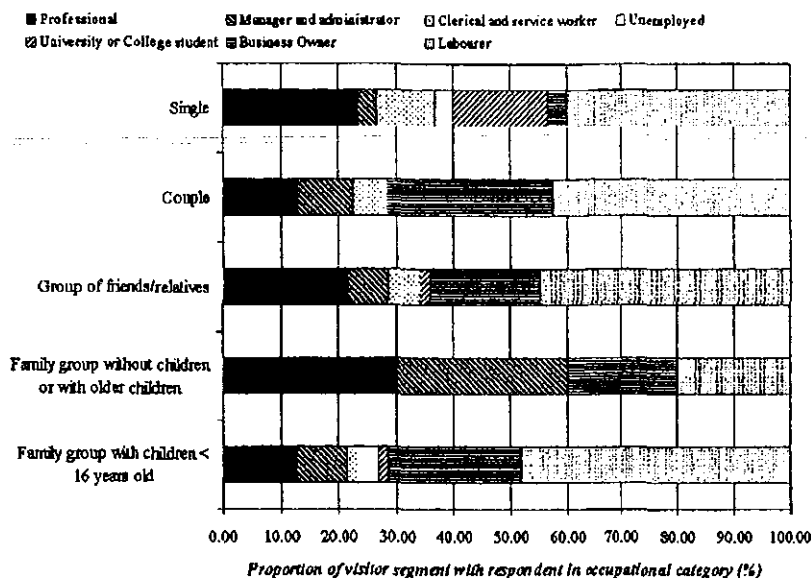
Fig. 4. Occupation of main income earner of non-retired travelling parties to the Carpentaria Shire—by visitor segment.

families with young children were generally more interested in potential Aboriginal guided walks and river tours.

4.4. Willingness to make a contribution to the region: the attitude of different visitor segments

As noted earlier, the questionnaire asked visitors to indicate, on a five-point scale, (a) whether they thought that it was fair to ask tourists for a financial contribution towards the management/maintenance of the region; and (b) how acceptable and/or unacceptable different vehicular payment mechanisms were. The five-point scale was coded from −2 (for 'totally unfair' or 'totally unacceptable') through to +2 (for 'totally fair' or 'totally acceptable'), and responses were compared across segments.

Responses to the question are shown a box-plot (Fig. 8) that allows one to view both the average responses across visitor groups, and the spread of responses within the groups. Most visitors noted that it was either fair, or totally fair to ask for a financial contribution to resources and infrastructure maintenance and management. There were no significant differences across visitor groups in the expressed attitude—although the mean responses were lower for retired couples than for families. With the exception of retired couples and singles, very few respondents claimed that it was totally unfair to ask visitors for a contribution to the region. This pattern of responses may reflect a link between willingness and ability to pay—the average household income of families ($57,833 per annum with an average size of 3.5 persons) is almost double that of retired couples ($28 108 per annum for 2 persons).

Respondents—across all segments—rejected almost all of the payment vehicles offered, which included charges for individual services (such as washing boats), an accommodation levy and visitor pass (Fig. 9). Only the idea of an 'activity package' found a small degree of acceptance, specifically by retirees and families with younger children. Retirees expressed very strong objection to the idea of an accommodation levy. Families with young children expressed their strongest objection to the idea of charging for individual services; families with older children found the visitor pass most objectionable.

5. Discussion

The data presented in Section 4 lend convincing support to the hypothesis that different types of visitors have different economic, environmental and social impacts in the Shire of Carpentaria. This information can be used to great advantage when developing long-term strategies for tourism development, promotion and management. This is because the information allows one to assess the impact of the different types of visitors, make predictions about the effect of changes to the existing visitor mix, and develop strategies to attract visitors that are deemed 'desirable'.

Retirees, for example tend to stay in caravan parks, fish frequently, shop frequently, but rarely go out for meals or drinks. In contrast, 'groups' are more likely to stay in self-contained units, fish frequently, shop infrequently, but go out for meals and drinks relatively often. Singles show similar expenditure patterns to 'groups' but are much less interested in fishing.

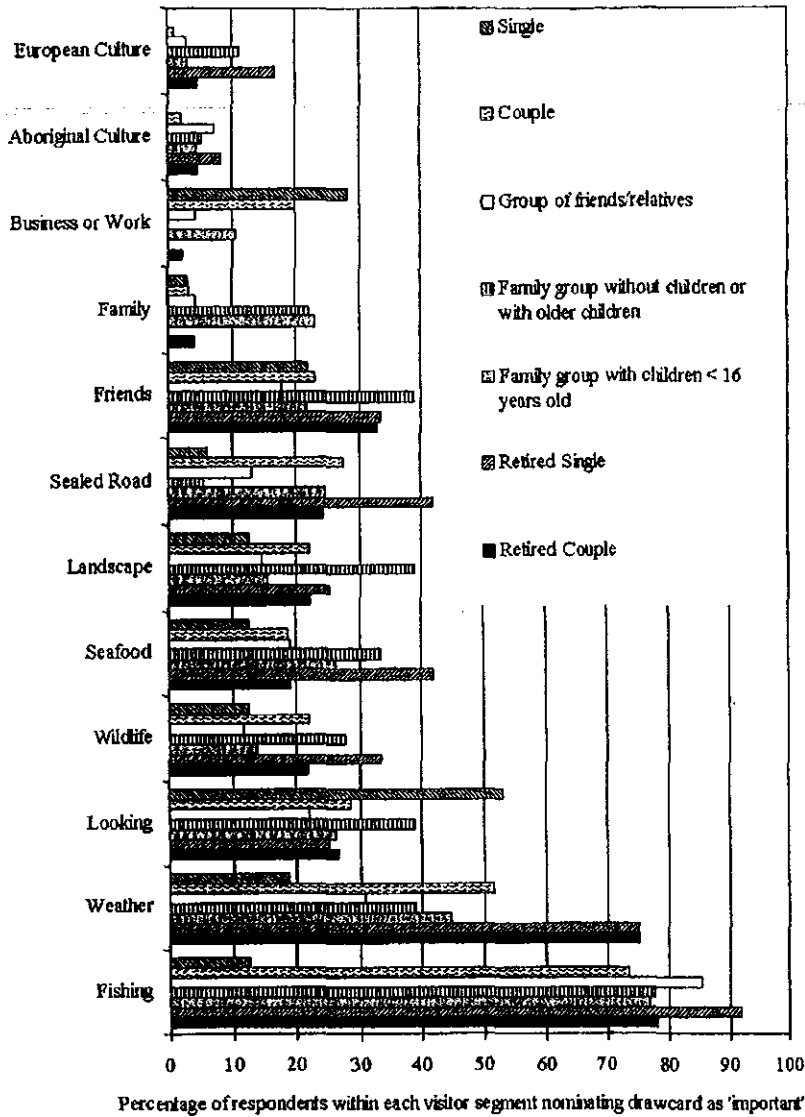Percentage of respondents within each visitor segment nominating drawcard as 'important'

Fig. 5. Proportion respondents—by visitor segment—nominating regional draw-cards as 'important'.
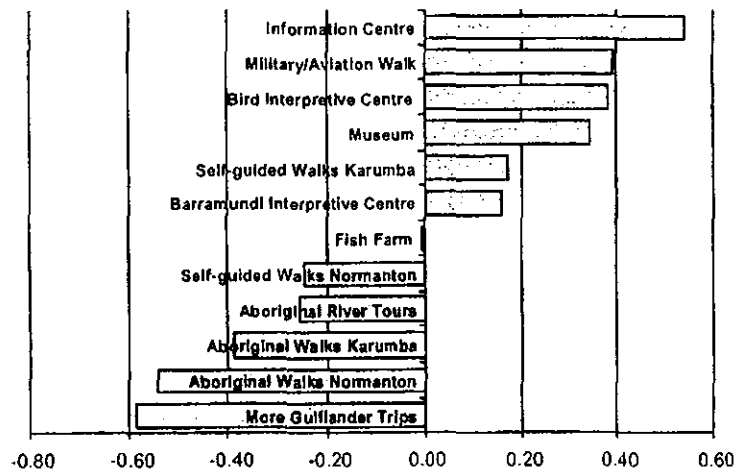

Fig. 6. Interest expressed by respondents in prospective new activities and facilities.
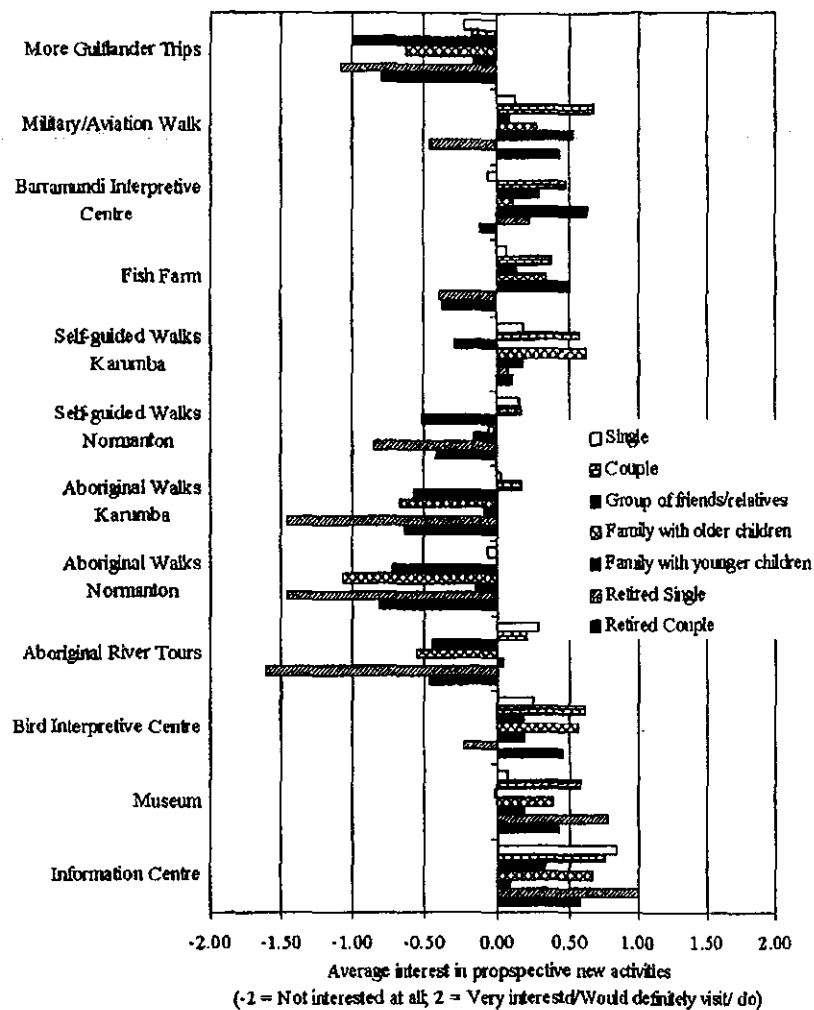
Fig. 7. Interest expressed by respondents in prospective new activities and facilities—by visitor segment.
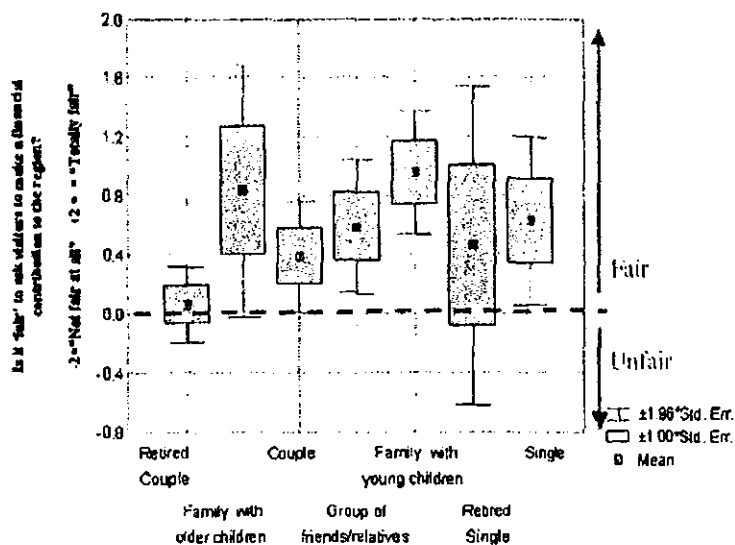

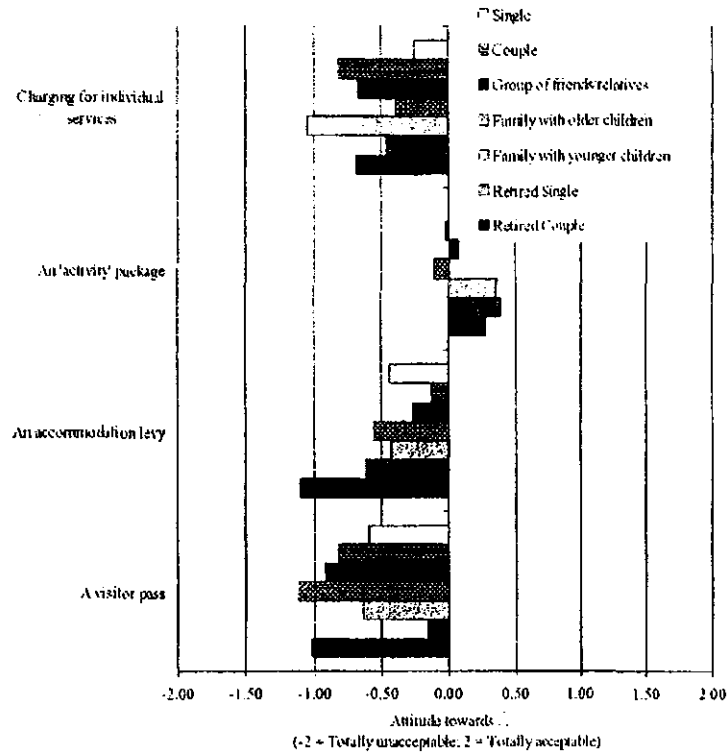Fig. 8. Willingness of visitor segments to contribute financially to resources and infrastructure maintenance in destination region.

Fig. 9. Attitude towards different payment vehicles.

Because different visitor segments behave differently, changes to the visitor mix will have an impact upon the local community. For example, if the current visitor mix were to change to one that is dominated by 'singles' (without a decline in aggregate visitor nights), then there might be an aggregate increase in visitor expenditure and less pressure on fish stocks. But there would not be unanimous support for such a change; there would be winners (possibly the restaurants, bars, and tour operators), and losers (possibly the caravan parks and grocery stores). A change in favour of more 'groups' or 'families' could have a similar impact on the revenues of grocery stores and bars, a lesser (negative) impact on the revenue of caravan parks, but may place even greater strain on fishing resources.

If the local community could agree on a 'desirable' visitor mix, they could use some of this information to develop strategies for increasing the attractiveness of the destination to the target group(s). Those interested in increasing the number of visiting families, for example, would tailor marketing campaigns for families in Queensland—particularly in northern Queensland. They could also look at ways of diversifying the range of 'activities' available to families while paying urgent attention to measures for managing fishing stocks. Here, the preferred vehicle for raising additional funding from visitors would be through an activity package—if only

because that was the least offensive payment vehicle for that visitor segment.

When targeting the singles market—where the most important draw-card seemed to be curiosity (a desire to 'have a look')—one could try to increase the diversity of locally available activities and consider broad-scale marketing campaigns that capitalise on the natural attributes and curiosity value of the region (along similar lines to the Northern Territory's campaign slogan: You'll never never know, if you never never go).

Those interested in increasing—or maintaining—the current mix of visitors could develop marketing campaigns for pensioners in the southern parts of Australia. Such campaigns would focus on the fishing and the weather. This would be accompanied by urgent measures to safeguard fish stocks and other measures to improve amenities for tourists travelling with caravans. Additional funding for such measures could be generated by selling 'activity packages', which is the least offensive way for retirees to make a contribution to the region.

6. Concluding remarks

This paper presents and tests data from a survey of visitors to Carpentaria Shire, a remote region of

Queensland. The data paint the region as a destination for 'grey nomads'—an Australian term coined for retirees who travel around Australia for months at a time.

Carpentaria Shire council is asking questions about the benefits that the community derives from tourism and there are tourism planning processes in place for the larger North-west Queensland region. The analysis presented here, clearly shows that the benefits and costs of tourism that accrue to a host community, are determined by the visitor mix. In the Shire of Carpentaria, residents who are associated with caravan parks could be incurring a net benefit, but those who rely on fishing and/or on uncongested tracts of wilderness for their livelihood or enjoyment may be incurring a net cost (particularly those who are not gaining financial benefit from the local tourism industry).

Reflecting back to the earlier quotations from the Tourism Green Paper, it is evident that a healthy tourism sector contributes to the economic and social well-being of some—but not necessarily all—Australians. It is also clear that *the interaction* of visitors *with the natural and cultural environment* need not be positive—in many cases, the 'interaction' is exploitative, as when, for example, tourists spend much of their time fishing. The tourists are using the regions natural resources, but it is a consumptive use.

Although tourism is an important industry in the Shire of Carpentaria, it will only remain so if visitors continue to be attracted to the region. Further research into the extent of and reasons for repeat visitation (both actual and potential) could add useful information.

In the short to medium term it is paramount to manage the recreational (and commercial) fisheries—to ensure that the amount extracted by the recreational fishers is sustainable. The more remote a region is, the greater/larger a tourist attraction must be to attract large numbers of visitors (Prideaux, 2002). If the recreational fishery were to collapse, it is difficult to imagine what other attraction could—in the short term—entice up to 60,000 visitors per annum to travel up to 1200 km 'off the beaten track'.

In the longer term a more diverse mix of visitor types could generate larger regional economic benefits, a broader distribution of benefits, and less reliance on just one of the region's otherwise plentiful natural resources. As emphasised by Dinan and Sargeant (2000), one need not simply target segments whose current behaviour is 'desirable'—one could also target visitor segments that are likely to be susceptible to marketing messages that encourage them to adopt 'desirable' behaviour.

This poses a significant challenge for the local community—namely to identify a 'desirable' visitor mix, and to develop plans and strategies that attract, and service, that market. This is much easier said then

done, primarily because that which is 'desirable' to some communities (and/or individuals) may be 'undesirable' to others. The task is complicated by the fact that a 'desirable' visitor mix may include tourists that do not, currently visit the Shire, and about which there is little known. One may, therefore, need to investigate the potential community impacts and potential draw-cards of other tourist types to fully inform the process.

Despite its attraction as a generator of opportunities for remote communities, those charged with overseeing regional tourism require a systematic understanding of key issues, supported by a wealth of data so as ensure that this important industry is managed in way that maximizes its community benefits. The data shown here are extremely useful for informing that process and the methodology used in this research is both robust and transferable. Additional insights and guidance could result from a more detailed understanding of social, economic and environmental impacts of tourists—a task, which, at the time of writing—CSIRO was committed to pursuing.[11]

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[11]Whilst the data presented here allows one to indirectly estimate economic impact from the activity pattern of visitors, more information on the expenditure patterns of different visitor groups and on the financial links between local businesses would help one assess the economic impact in more detail. It is important to consider the relationship between the host community and tourists in more detail. CSIRO has already developed, piloted and begun running full surveys that are designed to elicit such information.

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