Quality reef tourism: building a web of strategic knowledge

G Moscardo, P Pearce, B Woods, L Murphy and G Ross
Cooperative Research Centre for the Ecologically Sustainable Development of the Great Barrier Reef and Department of Tourism, James Cook University of North Queensland, Townsville Qld 4811

According to the 25 Year Strategic Plan for the Great Barrier Reef World Heritage Area 'tourism is the major and most rapidly growing economic activity' (Great Barrier Reef Marine Park Authority 1994, p. 2). In accordance with this statement it should be apparent that the successful management of tourism will play a critical role in achieving the goals of the 25 year vision. The Plan recognises the importance of understanding the impact of tourism as part of the maintenance of a healthy environment, and tourism is seen as a major activity which must be considered as a part of sustainable multiple use. The visions of integrated management and cautious knowledge-based decision making also include explicit recognition of the need to develop management plans for tourism and the necessity to base these plans on information about the nature and extent of tourism to the Great Barrier Reef (GBR) region and the characteristics and experiences of tourists. What is not explicitly recognised is the importance of tourism in the other two parts of the vision, the maintenance and enhancement of values and an informed, involved, committed community. Tourism has the potential to make a major contribution by encouraging individuals to understand the values, attributes and sustainable use of the reef. There are also important links to be made between tourism and Aboriginal and Torres Strait Island communities. Overall, the challenge is to both recognise the potential that exists and to develop it. This challenge requires reliable, valid and relevant data on tourism.

This paper will examine the status of knowledge on the nature of tourism to the Great Barrier Reef World Heritage Area (GBRWHA) and its adjacent regions. This examination will consist of four major parts. The first section will provide an overview of concepts and models from tourism literature and practice which are relevant to the management of tourism in the GBRWHA. The rationale for this section is to establish a framework for the kinds of tourism research necessary to support management of the GBRWHA. This framework can then be used to identify gaps in the current state of knowledge about tourism and the GBRWHA. The second and major section of the paper will present a summary of the tourism data currently available which are relevant to the management of the GBRWHA. There are several levels or types of data which will be reviewed and summarised. The paper will describe both the patterns which can be identified from these data sets and the limits or gaps in the knowledge provided by the data sets. While there are some major gaps in these data sets, there are some important patterns which can be identified and directly linked to management. In particular, multivariate analyses of various data sets have identified several clusters or types of visitors to the regions adjacent to the GBRWHA who exhibit very different characteristics and behaviours and who have very different attitudes towards the GBR.

The third part of the paper will consist of an overview of the market survey and interpretation evaluation projects which are part of the Cooperative Research Centre for the Ecologically Sustainable Development of the Great Barrier Reef (CRC Reef Research Centre). These projects have been specifically designed to address some of the major gaps in the knowledge of reef tourism. The conclusion of the paper will outline some issues that need to be considered in any discussion of the status of reef tourism knowledge.

Research needs for strategic tourism planning

Currently in the field of tourism two concepts are seen as essential for the successful management of tourism. They are the principles of ecologically sustainable development and strategic planning. These two interrelated concepts are focused on the quality of both the tourism experience and the setting for tourism, and are critical to the successful management of tourism in world heritage areas. In establishing a framework for research needs to support the management of tourism and the GBRWHA it is important to review the major components of these two concepts.

It is appropriate to begin with the principles of ecologically sustainable development as these provide the broad framework within which strategic tourism planning operates. In Australia we have had the benefit of a federal government sponsored process of examining what ecologically sustainable development means for tourism. The ESD Working Group concerned with tourism (1991) suggested that an ecologically sustainable tourism industry would be one which:

1. considers carefully the quality of experiences offered;
2. does not diminish the range of educational, recreational and environmental activities available to present or future generations;
3. protects biological diversity and maintains ecological processes and systems;
4. ensures the cultural integrity and social cohesion of communities;
5. is based upon activities or designs which reflect the character of a region;
6. allows the guest to gain an understanding of the region visited and encourages visitors to be concerned about, and protective of, the host community and environment; and
7. is integrated into local, regional and national plans.

To achieve such a tourism industry as described above requires regional strategic planning. What then are the core elements of strategic planning in tourism? Figure 1 summarises these core elements or stages. The stages of most direct relevance to the present discussion are those of research, synthesis and evaluation. These are the elements most often missing from the process of planning and management of heritage resources. Many authors have suggested that there has been too much emphasis, often as the result of political pressure, on development or implementation rather than research and evaluation (Dowling 1993; McArthur and Hall 1993; Gunn 1994). 'The long-standing reliance on "gut feeling" is being overdone and cannot be seen as reliable in the dynamic world of the visitor' (McArthur and Hall 1993, p. 267). Indeed in the area of heritage resource management it has been proposed 'that the visitor experience should be placed at the centre of any heritage management process' and that traditional management which has focused on the physical resource is 'deficient because it generally takes inadequate account of the human element in heritage management and especially the significance of visitors' (Hall and McArthur 1993, p. 13).

Table 1 provides a summary of the tourism features to be examined in the research stage of the strategic planning process. This summary is subdivided into categories which reflect the major components of the tourism system. Five important points need to made about this summary of tourism features. Firstly tourism must be seen as a dynamic system in which various components interact (Gunn 1994). There is a relationship, for example, between information available and the type of tourists who are attracted to a region. Secondly, tourists should not be seen as a single homogeneous group. What is necessary is to develop a market segmentation approach to understanding tourism in any region. It is possible to adapt the business definitions of market segmentation to a management context. Such an adaptation would result in the following description of this approach.

The underlying premise for a segmentation approach in understanding tourism is that the facilities, access and experience offered or supported by management for one type or segment of tourist may not be appropriate for tourists from another segment. Although the conference delegate and the scuba diving enthusiast can be both classified as tourists, their needs and impacts differ in many ways (adapted from Heath and Wall 1993: 92).

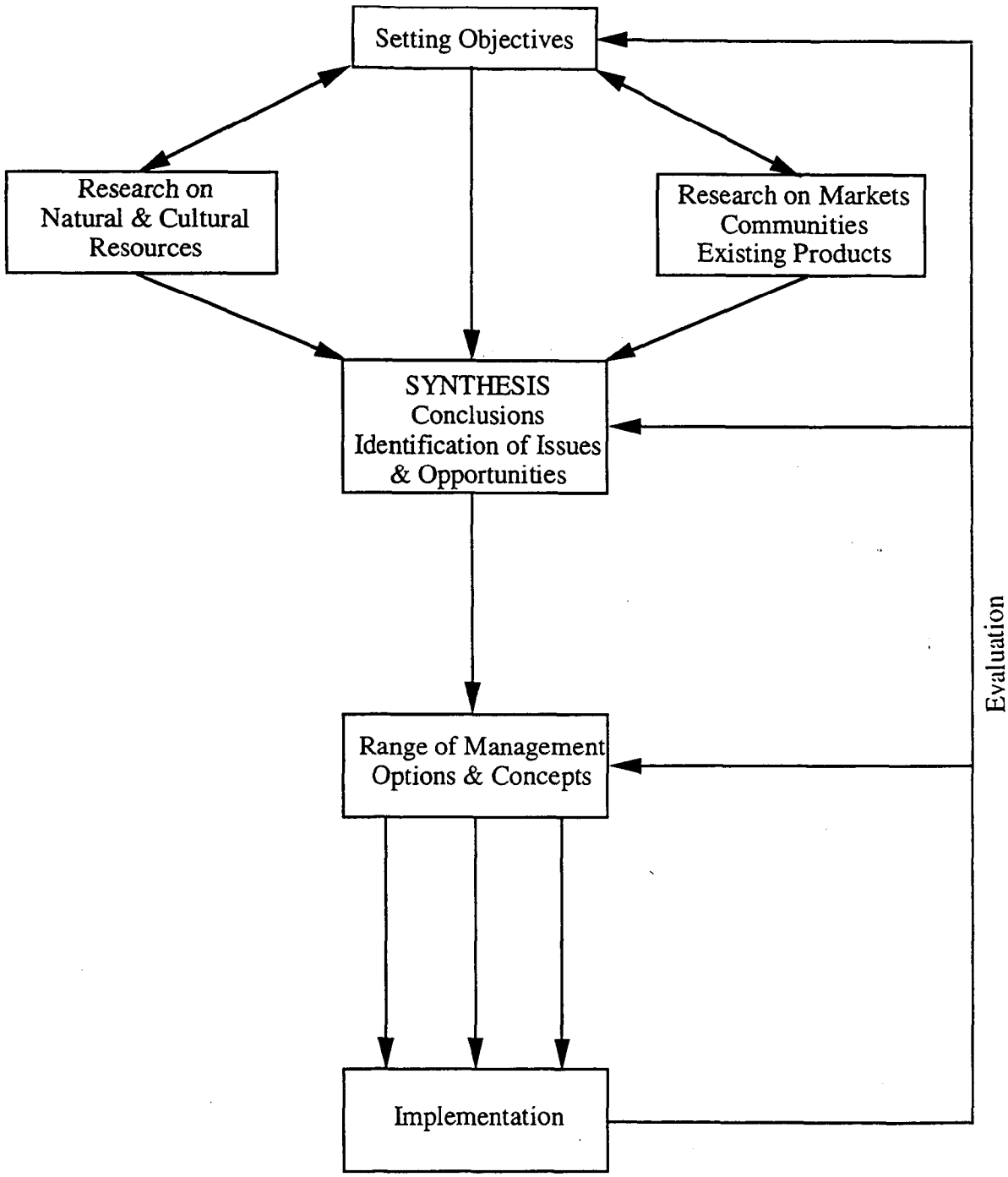

Figure 1. Core elements of strategic tourism planning (Derived from Gunn 1994; Dowling 1991)

The second category includes changes to transport capacity, the increasing use of computer systems for reservation and promotion, and the use of technology to create tourist experiences. Changes to transport technology are likely to have the most visible impacts on tourism. Currently growth in tourism is limited by capacity at major international airports and a number of changes in aircraft technology are likely to substantially alter this situation in the early years of the 21st century. These changes include:

1. the use of satellite navigation which will allow for much greater use of airports and shorter more direct flight paths.
2. increases in the capacity of aircraft. All major aircraft manufacturers are developing planes with the ability to carry between 850 and 1000 passengers. These are expected to operational by the year 2003.
3. decreases in flight times. Boeing, for example, is developing new aircraft with the capacity to cut flight times between Australia and the Americas by half.

In summary, it is likely that within the next decade that Australia will no longer be a long haul expensive destination for international travellers.

There are several other technological developments of relevance to the GBRWHA. In 1989 the use of small submarines taking 10-20 tourists into marine environments was predicted. Such tour opportunities are now available and are a feature of many reef day trip tours in the Caribbean. The use of virtual reality has also become widespread and is being used increasingly in tourism to provide virtual experiences of a range of environments and activities including such things as snow skiing and horse riding. These developments have the potential to both increase pressure on the GBRWHA through the provision of more ways to access the reef environment, and to decrease pressure by developing alternative tourist experiences.
Information in the preceding section was derived from WTO (1990 and 1993), Ballantyne (1995) and Shafer and Moeller (1989).

Another major change in global tourism is the growth of cruising. In 1990 11 million people were listed as cruise passengers making this the 11th largest travel concentration in the world. Growth in cruising in the last 15 years has been in excess of 10% per annum and this growth is supported by major increases in capacity. In 1990 14 vessels with a capacity of in excess of 1000 passengers were being built. Three of these vessels will carry more than 4000 passengers and crew and use large catamarans as transport vessels to carry passengers to islands and reefs. Cruising is currently dominated by North American passengers cruising in the Caribbean (accounting for nearly half of all cruising). As with all other aspects of tourism this emphasis is shifting towards increased cruising opportunities in the Asia Pacific region. If, as predicted, there are increased opportunities for shorter, cheaper air travel to the Asia Pacific then cruising will be able to grow dramatically in this area.
Information in the preceding section was taken from WTO (1990, 1991), the Cruise Shipping Report (1990) and CLIA (1994).

Explanatory factors

In attempting to understand the patterns of international tourism outlined in the previous section the WTO has identified a number of social, demographic and economic factors which are related to tourist behaviour. Table 2 lists these factors. The first two sets of factors are those related to capacity to travel. In general, rising living standards and the spread of democracy have resulted in greater opportunities for travel especially from developing countries in Asia. Changes in the structure of the family with increasing participation of women in the workplace and decreasing birthrates have allowed for more flexibility in organising travel times and thus the increase in shorter breaks. These factors combine to make travel a more commonplace activity resulting in greater experience and the pressure for more intensive, specialist and independent travel.

Table 2. Factors influencing growth and patterns of international tourism

1.	**Socio-Economic Factors**
	- increasing standards of living accompanied by,
	- increasing discretionary disposable income,
	- increasing paid leave, and
	- earlier retirement.
2.	**Political Factors**
	- relaxation of immigration restrictions,
	- spread of democracy.
3.	**Demographic Factors**
	- aging global population, lower birth rates,
	- increase in working women and dual income families,
	- trends towards later marriage,
	- increasing standards of education.

Implications for the management of tourism in the Great Barrier Reef World Heritage Area

This overview of global tourist trends can be seen as having five major implications for the management of tourism in the GBRWHA.

1. Managers can expect increasing numbers of both international and domestic tourists to come to the region. This growth in tourism is likely to continue at least at the same rate as in previous years. If the predicted changes to transport technology eventuate it is likely that numbers of international tourists to the region could expand very quickly. The pressure to provide access and facilities so that tourists can visit the GBR will increase.

2. Managers can expect that international tourists coming to the GBRWHA are increasingly likely to be from Asia. Tourists from these countries are rapidly increasing in travel experience and thus are increasingly likely to be independent travellers and to visit more often for shorter periods. Managers will have to think carefully about their current images of international travellers; the reality is changing rapidly.

3. For all tourists increasing travel experience and education will result in demands for more active experiences and greater quality in services. Expectations for quality interpretation will rise.

4. Managers can expect pressure to introduce submarines to provide greater reef access.

5. Large scale cruising could become a major activity in the GBRWHA. Again, predicted changes to transport technology could make Cairns a cheaper and more accessible destination and provide the necessary tourist markets to support the use of large cruise vessels moving through the GBRWHA.

International visitors to Australia

The major source of information about international visitors to Australia is the International Visitor Survey (IVS) conducted for the Bureau of Tourism Research (BTR). The IVS has been conducted since 1991 and each year involves personal interviews conducted with

slightly greater focus in this respect as it indicates that the FNQ region is the most visited region and the area likely to have the fastest growth rate.

2. The trend towards increasing numbers of visitors from a range of Asian countries is also highlighted in the IVS although Japan still dominates the GBRWHA region. A major point to be made here is that managers must recognise that there are major cultural differences between Asian visitors and decisions and management actions will have to become more aware of these cross cultural differences if they are to be effective.

3. The other major implication from the IVS analyses is that there is variation within the GBRWHA. The pattern of international tourism in the FNQ region is not typical of that for other regions adjacent to the GBRWHA. This pattern is qualitatively different. That is, it is not simply that there are fewer international visitors in the other regions, but that there are different types of international visitors.

4. In an attempt to get more value from the IVS for the GBRWHA regions researchers from the CRC Reef Research Centre Project 2.2.1 on Market Segmentation of Reef Visitors have negotiated with the various state and federal tourist bodies to include a question in the IVS which will identify international visitors who have been to the GBR during their stay. This question was included in the 1994 survey and those data have recently been released for analysis. These analyses will be able to provide both a more detailed profile of international tourists who visit the GBR and a comparison with those who do not. This more reef specific information should have more direct implications for the management of tourism in the GBRWHA.

Domestic tourism within Australia

The BTR is also responsible for monitoring domestic tourism within Australia and to achieve this conduct a household survey with Australians aged 14 years and older. Each year this Domestic Tourism Monitor (DTM) survey is conducted with 65 000 respondents. Although this is a large sample the actual number of respondents who have travelled to any particular region in the previous year is often very small and so again much of the information collected is not reliable at a regional level. This survey includes information on the destination and length of overnight trips, as well as accommodation and transport used and demographic details of the respondent. The DTM uses the same regional boundaries as described for the IVS and provides similar information on domestic tourists. The DTM operates on a financial year and the most recently analysed data are for the 1993-1994 financial year. Further, the DTM provides information on both trips and visits. A trip is defined as a journey involving a stay of one or more nights but less than three months away from home, while a visit refers to every place during that trip where the tourist spent a night. Each night at a particular destination counts as one visit. The more accurate indicator then of tourist numbers is trips and all analyses in the following section will be of trips.

Summary of data

As with the IVS the DTM has a prime role in providing information on numbers of visitors to the regions of interest. Table 5 contains the number of trips made to the GBRWHA regions in 1989-90 and 1993-94. Unlike international travel, domestic travel has not continuously grown to the GBR regions, with the exception of FNQ. The actual figures, however, are still substantial showing that overall more than two million trips were taken to the regions adjacent to the GBRWHA. Table 6 contains the profile for each region's domestic visitation in terms of where tourists come from. Intrastate tourism dominates the profile in all four regions. The majority of domestic visitors come from within Queensland. The next largest source of