

**INTEGRATED PLANNING AND  
MANAGEMENT OF TOURISM AND RELATED  
ACTIVITIES IN NATURAL AREAS  
- A REVIEW OF TOOLS AND APPROACHES**

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**2003**

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# **1 INTRODUCTION**

## **1.1 Programme Overview**

The objectives of this four year FIRST funded research programme are to evaluate existing approaches to planning and managing visitor related developments in natural areas, define an integrated approach for application in multi-stakeholder management contexts, to pilot, evaluate and refine that approach for specific cases, and to develop an approach for integrating ecological, economic, social and cultural (including Maori) factors in the planning and management of natural areas for tourism and other uses.

The programme will provide direction for integration of the above components of sustainability, as well as the recognition of a finite capacity for some activities at some sites; the sometimes competing requirements of tourism and recreation activities, and cultural and amenity values, for all sectors of society; and the need to monitor progress towards sustainability.

Four broad end-user groups will participate in this research - the tourism industry, government agencies, professional associations, and iwi (as part of the industry, host communities, and resource managers). Their participation occurs through the establishment of a wide-ranging Reference Group, the inclusion of a range of research team clients from the tourism sector as active participants in the project, close interface with professional practitioners, and the full-time involvement of a Maori researcher studying for a PhD.

The specific tasks for the first year were to:

- identify, review and evaluate approaches, methodologies and tools developed in overseas contexts to integrate ecological, economic, social and cultural factors in outdoor recreation, tourism planning and other related areas of natural resource management and evaluate existing approaches relevant to the New Zealand context;
- interview 50 participants in planning and management in multi-stakeholder contexts involving natural areas to determine the efficacy of existing approaches (listed in Appendix A); and
- synthesise this information.

## **1.2 Reviews**

The first task undertaken was a review of existing approaches or models (referred to as approaches in the rest of this report). The format for this review is shown in Appendix B. Six different areas ('Category of Review') were identified as being relevant to planning and management of visitor related developments in natural areas, and within each of these a series

of methodologies or tools were categorised. The areas that were reviewed are outlined in Table 1.

**Table 1.1: Approaches Reviewed**

| <b>Review categories</b>  | <b>Approaches</b>  |
|---|--|
| <b>Valuation/<br/>risk assessment</b>   | Non-market valuation   |
|   | Contingent valuation   |
|   | Hedonic pricing  |
|   | Travel cost method   |
|   | Cost benefit analysis  |
|   | Regional economic analysis (including input-output tables and multipliers)               |
| <b>Landscape/visual/<br/>ecological</b>   | Limits of Acceptable Change (LAC)  |
|   | Biophysical carrying capacity  |
|   | Environmental standards, control and certification                                       |
|   | Recreational Opportunity Spectrum (ROS) and Visitor Asset Management (VAM) system        |
| <b>Participatory<br/>approaches -<br/>including co-<br/>management and<br/>indigenous<br/>involvement</b> | Consolidated review including Alternative Dispute Resolution (ADR), transactive planning |
|   | Charrettes   |
| <b>Leisure and<br/>recreation<br/>management</b>  | Specialisation theory  |
|   | Crowding management (social carrying capacity)   |
|   | Conflict management and resolution   |
|   | Resource Management Act framework  |
|   | Conservation Act framework   |
|   | NZ regional/district tourism strategies  |
| <b>Planning/statutory<br/>approaches</b>  | New Zealand Resource Management Act framework  |
|   | New Zealand Conservation Act framework   |
|   | Concessions systems  |
|   | NZ regional/district tourism strategies  |
|   | World Trading Organisation (WTO) planning approach                                       |
|   | Environmental regional planning  |
|   | Management of cumulative impacts   |
|   | Resort planning  |
|   | Zoning   |
| <b>Integrated<br/>approaches</b>  | Integrated monitoring of impacts and thresholds  |
|   | Eco-tourism approach   |
|   | Reverse sensitivities  |
|   | Webbing-and-chaining approaches  |
|   | Social Impact Assessment (SIA)   |

Some of the 'approaches' can be designated as methodologies or tools, some are frameworks (for example the Resource Management Act), and others can be referred to as issues that arise in the context of integrated planning. Those approaches that are recognised as tools are described in Chapter 8.

### 1.3 Interviews

Interviews were conducted with 50 key people (listed in Appendix A), many of whom were identified during the review stage of the research. They were selected on the basis of their knowledge and experience of various aspects of tourism and related activities linked to natural areas. In addition, they were chosen to reflect a range of geographical areas and organisation types, including local and central government, Non-Government Organisations (NGOs), the private sector and community organisations and tourism and related sectors. They were also selected according to their level of involvement in related activities. The interviews were conducted on a semi-structured basis, using a set of selected 'keywords' to guide the interview content and analysis (these are listed in Appendix C). Some of the interviews were conducted with small groups rather than individuals. All members of the team participated in the interview process, and a number of the interviews were conducted by more than one interviewer.

The interview notes were typed and collated according to the keywords and entered into the *askSam* text based database system. For each keyword, a full report containing all the information relating to that keyword was generated. The information was analysed and summarised and a summary report prepared.

As part of the interviews, the research team collected information about potentially useful approaches to management of natural areas that the interviewees used or were familiar with. The team also collected information about natural areas that warranted further attention, either because the level and/or type of tourism and related activities were perceived as problematic or because some potentially useful management approaches were being implemented.

The examples of natural areas that potentially warranted further investigation informed the development of a list of possible case studies for the next stage of the research programme. The full list of possible case study areas, and the reasons for their inclusion, is presented in Appendix D. Case study areas will be selected from this list for the second stage of the research. The selection of case studies will be guided by a set of criteria that will focus on the nature of current interventions and management approaches as much as the types of tourism related activities and the character of the natural areas themselves.

The approaches identified by interviewees are described in detail in Chapter 8 and will inform the on-going development and refinement of integrated approaches to the management of natural areas. In some cases the approaches adopted in particular areas underpinned the inclusion of that

area on the 'potential case study' list. Therefore, these approaches will be reviewed and evaluated as part of particular case studies. Part of the case study stage of the research will explore the use of the different approaches that have been identified during the review process and interviews. The case studies will allow the research team to examine in more depth how and where these approaches have been applied in New Zealand, and their possible application elsewhere.

Interviews with key informants will continue throughout the research programme. Some were identified in the first phase of the research but could not be interviewed, at that time. Others will be identified as the research progresses and people may be interviewed more than once. Future interviews are likely to be more specifically focused, for instance on particular aspects of approaches that require further investigation.

#### **1.4 The structure of this report**

This report contains an analysis and synthesis of the review material and the information gathered from the interviews. While there is some overlap between the areas of analysis, we have broadly focused on the following broad themes:

- setting limits for tourism development;
- the legislative planning context;
- identifying impacts; and
- opportunities for public participation, particularly Maori participation.

Chapter 2 discusses the carrying capacity of natural areas, while Chapter 3 analyses issues relating to Maori participation and collaboration. Chapter 4 examines approaches to integrated planning that could address tourism related activities in and around natural areas, Chapter 5 looks at current approaches to the assessment and monitoring of tourism related impacts in natural areas and Chapter 6 reviews participation approaches and barriers to participation in planning for tourism. The capacity to implement an integrated approach is examined in Chapter 7. In Chapter 8, two tables describe, in summary form, (i) the full range of tools discussed in the relevant literature and (ii) the approaches identified by interviewees as having been used or being considered for use in New Zealand. Chapter 9 provides some preliminary conclusions.

Examples from reviews and interviews summarised in this synthesis concentrate on localities included in the list of possible case later case studies (Appendix D). Details in this review are brief but fuller information will be given in the synthesis of these case studies.

## 2 RECOGNISING AND SETTING LIMITS TO TOURISM DEVELOPMENT

### 2.1 Limits to Tourism Development in Natural Areas

A key theme arising from both the literature and interviews is a recognition that there must be limits set for future tourism development. These limits appear to be especially important in and around natural areas, where there are carrying capacity constraints that are social and cultural as well as ecological and physical in character. People involved in planning and future management cited a number of areas in New Zealand where they considered that carrying capacity has been exceeded and management needed to be focussed on establishing limits. However, they tended to share the view that, although there are a number of techniques available, setting limits is difficult.

The Abel Tasman National Park is one of the most frequently cited examples of a natural area in New Zealand that faces severe problems hosting current visitor levels, let alone projected visitor increases. It was generally agreed that the social carrying capacity has been exceeded in many places, especially around the Abel Tasman Track and its coastal environs, and that extending the physical carrying capacity has changed the character of the natural environment. There are other examples of areas where physical carrying capacity is under pressure, including some where limits have been placed on visitor activity in natural areas. Kapiti Island, for instance, has been closely managed, including a cap on the number of visitors that are allowed on the island per day. Given the weather conditions (which frequently preclude boats landing on the island) this cap is often not reached. Cumulative impacts have not yet been identified as an issue there, although proposals for further development have raised concerns<sup>1</sup>.

At Pupu Springs, questions have arisen in relation to ways to protect this unique water body in the Tasman District Plan. In addition to issues relating to the Springs' recreational and tourism carrying capacity there are important cultural issues to address. Mechanisms currently in place for managing the area range from a water conservation order to the present voluntary limits agreed amongst diving groups.

Bosselman *et al.* (1999) examine the benefits and costs of tourism and issues around the management of tourism growth. The authors urge a careful examination of the impacts of tourism, and the value of developing mitigation and management strategies, particularly from a community perspective. The strategic management of tourism from the point of view of the destination or host

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<sup>1</sup> The Tasman District Council has now granted a resource consent for overnight stays at a Lodge on privately owned land on the island. [This decision is currently under an appeal process.]

community is a way of ensuring tourism brings as many benefits and as few risks as possible (p.2). While every host community is unique there are often underlying patterns of change and problems associated with tourism growth that are commonly experienced. In addition, communities often adopt similar ways to tackle these problems.

## **2.2 Carrying Capacity of Natural Areas**

Crowding, or the perception of too many people in a place, affects host communities and visitors by significantly diminishing their enjoyment of resources such as beaches, parks, tracks, picnic places or historic sites (Devlin and Booth, 1998; Goodwin, 1995; Warner, *et al.* 1997). Devlin and Booth (1998) point out that, along with conflicts resulting from differing perceptions of the appropriate use of tourism or recreational facilities, crowding is one of the greatest effects that recreationists have on each other. Crowding has significant implications for their enjoyment and satisfaction.

Bosselman *et al.* (1999, pp 111-2) discuss carrying capacity analysis as one of the quantity management strategies available to manage tourism. They trace the concept back to the field of wildlife management and then its application to outdoor recreation management from the 1960s. Taylor *et al.* (1995, p.50) note that the concept began to be applied to human environmental relationships as early as the 1920s. Essentially, applied to tourism development and growth, carrying capacity analysis is concerned about the ability of a particular "setting to sustain tourism growth within the environmental and physical constraints of the site" (Bosselman, *et al.* 1999, p.111).

Environmental sociologists such as Catton (1983) have taken the analysis of carrying capacity further to incorporate a social dimension (Taylor, *et al.* 1995, p.50). Their particular interest was initially in the physical limits to social life. Bryan (1983) and other writers introduced the notion of social carrying capacity to indicate not just the physical limitations of the environment but also the limitations for people set in terms of their satisfaction with, and use of, the environment. Bryan and Taylor (1987) note also that physical-biological carrying capacity and social carrying capacity are separate but related matters. The limits of one may exceed the limits of the other and *vice versa*.

Social carrying capacity links to the concept of visitor satisfaction. The concept of visitor satisfaction is usually based on analysis of the perceptions visitors have of their experience. This analysis is usually undertaken by means of visitor surveys and other evaluation techniques. Specific attention is given to perceptions and experiences of crowding. There has been extensive research undertaken on this topic in New Zealand, especially in relation to Department of

Conservation (DOC) tracks (Cessford and Dingwall, 1999) and sea kayaking, and by the Cawthron Institute, in relation to trout fishing.

There was wide agreement amongst people interviewed for this research that, in order to establish carrying capacity and social carrying capacity in particular, much more information is needed. DOC needs information about visitor expectations, satisfaction and motivation, with these related to visitor activities rather than visitor types (see further discussion in Chapter 5). Visitors tend to engage in a wide range of activities and, therefore, cannot be usefully categorised by type.

Information about carrying capacity needs to be accessible (i.e. presented and marketed appropriately) to DOC and other key stakeholders on the one hand and made available to others including communities, on the other. Communities may wish to be more involved in establishing acceptable limits to tourism related activities.

DOC managers see a more proactive approach to concessions as one way to prevent either overuse of the natural resource, or overcrowding from a social perspective. This proactive assessment of sites and natural areas would enable DOC to set out guidelines (or prescriptions) of the types of activities and level of activity that could occur and still maintain the principles that underscore their zoning. They would need to manage activity in a way that would still enable rather than restrict entrepreneurship by the industry.

### **2.3 Recreational Specialisation**

Recreational specialisation is another key concept that can be used in conjunction with the analysis of carrying capacity to limit development. The term recreational specialisation was first introduced by Hobson Bryan in his seminal article in 1977 and further discussed in 1979. The essence of this theory is that “outdoor recreation participants can be placed on a continuum from general interest and low involvement to specialised interest and high involvement. Each level of specialisation carries distinctive behaviours and orientations”. A further related concept is provided in the idea of leisure careers (Bryan, 2000), with recreationalists moving through levels of increasing specialisation as their leisure career develops.

Devlin and Booth (1998) identify two reasons for caution against simplistic assumptions of an inverse relationship between user density and user satisfaction. Firstly, recreationists develop coping behaviour in the form of displacement and rationalisation. As visitor use increases, recreationists less tolerant of higher visitor numbers move away to new areas and are replaced with visitors who are more tolerant. As a result, analysis of visitor satisfaction at a specific place or

time is not necessarily a reliable measurement of users' perceptions of crowding. Rationalisation describes the process recreationists go through as they weigh up the effort and resources spent on the desired experience against the enjoyment of the experience itself. Secondly, different social-cultural characteristics among visitors will result in different perceptions of the degree of crowding, and perceptions of other effects such as littering.

The practical application of specialisation theory to management requires the collection of detailed information about the behaviour and attitudes of recreationists, whose needs are satisfied through a range of environmental settings. The information informs the application of appropriate natural resource management techniques. Substitution of resources or trade-offs between user groups is one valuable technique for avoiding or managing user conflicts (Taylor, *et al.* 1995, p.52).

## **2.4 Limits of Acceptable Change<sup>2</sup>**

Management of natural areas through concepts of carrying capacity and specialisation can also include specific and defined limits or thresholds. These thresholds to development can reflect bio-physical and/or social and cultural limits and, in tourism development, are often discussed in terms of the 'limits of acceptable change' (LAC). LAC is an extension to the concept of carrying capacity as applied to outdoor recreation use and management. The formal LAC framework initially focused on the amount of use that an area can carry or absorb, based on its biophysical carrying capacity. There has been some shift in this concept more towards the idea of the acceptable or desired conditions of an area. Conditions can be defined in both a bio-physical sense and also a social sense. The LAC framework spells out nine sequential steps to determine the limits of change. An important and final step is monitoring to assess the effectiveness of management (Bosselman, *et al.* 1999, p.112).

## **2.5 Recreation Opportunities Spectrum (ROS)**

The Recreation Opportunities Spectrum (ROS) is a procedure for long-term planning of recreational use against the natural resource base available (Lichtkoppler and Clonts, 1990; Daniels and Krannich, 1990). The principle of ROS is that there is a diversity of resources and therefore recreational opportunities on public lands that can meet and satisfy a wide range of demands from recreational users. This concept clearly builds on the parallel concepts of recreational specialisation and resource substitution and is usually applied in conjunction with the analysis of limits to acceptable change. The approach usually applies a number of criteria incorporating biological, physical, social, and management parameters to classify resources and recreational opportunities. A variety of recreational opportunities spectrum management systems

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<sup>2</sup> See also Table 8.1 (E.7)

appear to have evolved including those applied in New Zealand. DOC uses ROS for planning visitor and visitor asset management (DOC, 1996).

## **2.6 An Integrated, Host Community Approach to Setting Limits**

Host communities are increasingly concerned about the effects of tourism development and the need to limit development. Tourism growth is perceived as desirable or acceptable only if it does not affect current life styles. Queenstown is often identified by communities as their litmus test for 'over development', in the sense that people expressed a desire that tourism development in their community did not reach the perceived level of over-development in Queenstown.

Bosselman *et al.* (1999) consider a number of tools that host communities can use to plan for and manage tourism in an integrated, community-based way. These include planning approaches and rule making (categorised as planning tools and summarised in Chapter 5); outdoor recreation management, including strategies for managing quality and quantity; and various economic instruments. These management strategies come under three broad headings:

- Quality control strategies based around approaches to protecting and enhancing the quality of the resource base for tourism activity, including land use zoning, and performance standards. The RMA can be seen as a broad tool for promoting sustainable management of resources.
- Quantity management strategies, or controls on visitor growth and activity, including legal restrictions, permitting systems, economic instruments and so on. Some of the tools identified during interviews fall into this category. It could be argued that these tools are also about managing the quality of the visitor and host experience in the long run.
- Location enhancement strategies, which can aim to either disperse or concentrate tourism activity, as well as establish processes such as conservation planning.

In an integrated approach, host communities and tourism operators would also use information on customer satisfaction to provide knowledge about the gaps between delivery of an experience or service and visitor satisfaction. This information can be used to guide strategies such as the dispersal of visitors, by visitor type and resource type.

The provision of interpretation is an important part of an integrated approach to controlling visitor numbers and activities, at the same time as it satisfies visitors' desire for interactive experiences. A more integrated approach to interpretation can form the basis of visitor management, for instance informing visitors about high-use and high-capacity sites or, alternatively, about low use and low-capacity sites, such as wilderness areas and to convey information about the ecological or cultural sensitivity of a site. Inadequate interpretation, for instance through poorly placed

information boards or poorly designed pamphlets, can both contribute to overcrowding (e.g. by leading many people to one place) and diminish visitor experiences.

Visitor centres can also play an important role in managing visitor numbers both at site level and locally and regionally, through more coordinated information sharing and provision and other visitor management activities. For instance, good information sources would be available for interpretation development. However, in New Zealand coordination between VIN, DOC and other visitor centres is currently insufficient to adequately carry out this role.

Management partnerships can be another important aspect of an integrated community approach to setting limits. Resource managers are increasingly interested in establishing partnerships with specific stakeholders with respect to outdoor recreation management to encourage shared goals and the involvement of a wider range of people, particularly in the management of national parks and reserves. A variety of partnerships are currently operating in New Zealand: for example partnerships to establish stewardship, and for funding, accountability, conservation activities and research. Of particular interest to New Zealand are partnerships that involve Maori in park and other natural area management and recognise the importance of customary and traditional knowledge, customary uses, and customary land ownership. An example of this is Ngai Tahu involvement in management of topuni areas (this designation recognises the high cultural values of particular areas).

## **2.7 Eco-Tourism as a Framework for Setting Tourism Limits**

Commonly used definitions of eco-tourism imply a specific approach to tourism planning, especially tourism in natural areas. The definition used by the Australian Department of Industry, Tourism and Resources is typical: eco-tourism is “nature-based tourism that involves education and interpretation of the natural environment and is managed to be sustainable”. Such a definition implies a specific aim to integrate environmental and cultural aspects in a sustainable way and provide appropriate returns to local communities. Thus eco-tourism is seen to be integrative by nature and, therefore, the ‘way to go’ for tourism in natural areas in New Zealand.

However, eco-tourism is not a planning approach *per se* but, instead, an approach to tourism and product development, usually at the individual level. Thus, it is not an approach that is easily applied on a national or regional basis (except in a few very remote areas like the sub-Antarctic islands. This raises two questions: is it necessary or desirable to develop a formal methodology for eco-tourism planning in New Zealand and, secondly, is it necessary or desirable for more national or regional activity to manage, develop or co-ordinate eco-tourism in New Zealand?

The undesirable aspects of eco-tourism may undermine the sustainable management of natural areas. For instance, there is potential for unacceptable impacts in some remote or fragile areas or on wildlife whose habitat or behaviour can be affected by visitor behaviour or presence, through visitation when normally there is none. Wilderness qualities are potentially undermined by people deliberately seeking more remote wilderness experiences. Off-track and other wilderness-based eco-tourism puts infrastructure demands on regions, for instance from access roads and sewage facilities at road-ends. Ironically, given visitor expectations of authentic wilderness experience, some protective mechanisms such as hardening of tracks are less available.

### **3 MAORI PARTICIPATION AND COLLABORATION IN TOURISM DEVELOPMENT**

#### **3.1 Tourism Management Approaches and Maori Ethics, Values and Practices**

The current Government's support for tourism in New Zealand reflects its confidence in the industry's capacity to contribute to national and regional economies, particularly through international visitor spending. A related benefit is seen to be the potential of the tourism industry to contribute to Maori economic and social development. However, tourism growth also poses threats to Maori, particularly when tourism planning and management approaches reinforce rather than challenge power differentials and undermine or undervalue cultural values. The mounting demands by various recreational groups for access to Maori multiple-owned lands, lands and waterways under Maori tribal trust board control, and places of high cultural value seem ominous to many Maori. The use of the Kura Tawhiti (Castle Rock) area by rock climbers and other groups is a case in point. Tangata whenua are concerned about how conflicts between Maori values and recreational and tourism values are to be managed. In a political context where Government support for tourism development is high, as in the current situation, there is the real potential for tourism and recreation values to be given higher priority than cultural values in any management decisions.

At a broader level, the theory and practice of tourism planning and management has tended to reflect Eurocentric world-views and values rather than those of other cultures, particularly indigenous cultures. However, the industry and international bodies such as the World Tourism Organisation are beginning to recognise the need to incorporate the cultural values and practices of indigenous people in tourism planning and management and reflect these in destination branding and product development. For New Zealand, these trends signal the need for local and central government agencies, the tourism industry and other stakeholders to take more explicit cognisance of cultural values, especially Maori values, in the management of natural areas for tourism and related activities.

Tangata whenua felt that DOC, local government and others responsible for sustainable management of natural areas have yet to adopt management systems that adequately represent cultural values alongside ecological values. It is still often the case that Maori and other cultural values are subsumed under, or replaced by, ecological values when issues such as limits and carrying capacity are considered. Adoption of more culturally sensitive management systems would require a substantial shift in their ethical base re matters such as cultural values, cultural

impacts, collaboration and co-management, delegated management or transfer of management responsibility.

The current disregard for Maori and other cultural values and the lack of collaborative approaches to management generally reflect the wider decision-making context. Decisions across a range of economic and political spheres tend to maintain the status quo and protect privileged groups (also discussed in Chapter 6 on participation). As tourism activity is indivisible from other economic and political structures and processes, it is not surprising that Maori are marginalised in key tourism related decision-making (Mowforth and Munt, 1998; Reed, 1997). Research can also act to reinforce the less influential role of Maori in tourism. For instance, recent research identifies communally owned Maori land management structures as barriers to development. Recommendations to cut the number of trustees on multiple-owned land and to allow them to act as beneficial owners to streamline development have the potential to further disadvantage Maori – by alienating other shareholders and privatising the land.

A range of stakeholders (including but not limited to Maori) expressed concerns about the way that Maori culture is used in current tourism, both as part of destination branding and marketing and in strategic planning and product development. One concern is about the co-modification of Maori culture for the purposes of tourism. With Government and industry promotion of and confidence in 'cultural tourism',<sup>3</sup> the risk that Maori cultural products are subsumed within this broad product area is real. In industry and Government rhetoric, Eurocentric values and notions of what constitute culture prevails, with a hierarchy that values westernised art forms such as opera, ballet, painting, sculpture and the colonial built heritage over others. This often results in greater support given to these cultural and heritage forms compared with Maori cultural heritage and art forms. At the same time, there is increased pressure on Maori to provide cultural and physical tourism contexts, which potentially further alienate their natural, cultural and artistic resources. For instance, some see Te Toi Iho, the authenticity marker for Maori cultural and artistic products, as a way to shift Maori cultural authentication and validation from Maori to a government agency.

A number of tourism activities and the impacts of those activities further marginalise and alienate Maori. These include tourism providers who operate without the appropriate consents and/or licenses or without due consideration of cultural values. Impacts include desecration of cultural sites and environmental damage. One serious case identified involved an operator continuing to take visitors to a site where a human skull had rolled out of a burial cave full of bones. Tangata

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<sup>3</sup> Strategy 2010 (Tourism Strategy Group, 2001) defines cultural tourism as "those cultural dimensions that enable more depth of interaction with, and understanding of, our people, place and cultural identity".

whenua had not been informed of the find. The continued use of the site showed the operator's lack of respect for the place and for the values of the local people.

### **3.2 Maori Involvement in Participation Processes**

Despite increased opportunities for community and stakeholder participation in tourism planning and management over the past 20 years, opportunities for Maori participation lag behind that of Pakeha. New opportunities for public participation emerged as part of a broader trend of increasing citizen participation in economic and political decision-making, mainly in western countries (Sancar, 1994). This increased public participation was motivated by broad social principles of human rights and self-determination (Bramwell and Lane, 2000; Tosun, 2000) as well as community responses to economic crises and rural downturn. During the same period, Maori also became more politicised as they sought means to achieve greater economic, social and cultural self-determination.

The greater opportunity for communities and others to have their say through various participation processes has not necessarily lead to greater community control over how resources, including natural areas, are managed. Instead, these processes have tended to reflect and reinforce the predominant values, beliefs, rituals and institutional procedures, to the benefit of certain persons and groups and at the expense of others. Through these processes, Maori have remained marginalised, and power differentials between Maori and others have not been challenged or altered.

Power inequity within Maori groups is also an issue, with tensions arising as different factions vie to control and manipulate tourism development. These groups can include highly organised whanau groups that have captured the political control of a hapu/iwi body, or a small group of individuals in elite positions on hapu/iwi bodies. These power differentials are difficult to overcome through collaboration/participation processes alone, despite much tourism literature to the contrary (Reed, 1997), especially when these processes are embedded within a foreign cultural context which tends to reproduce power inequalities anyway. These processes can mask power relations within Maori as much as they can mask those between Maori and other groups.

Currently, there are few if any approaches where Maori can enter into the participatory or consultative dialogue in their own way - so that their cultural values, ethics and practices can remain substantively intact. Instead, the processes (and the structures that underpin them) reinforce the current position of Maori and isolate them from their own kaupapa or way of doing things. For example, Maori are more or less forced to use the trust board model to engage in consultation, when the individualised voting system for election of trust board members reflects

western social and political values rather than those of the iwi voters. Also, agencies often assume that trust board members speak for their people without checking that out.

Maori stakeholders' lack of information and understanding of the tourism development process further undermines their ability to participate and influence development and management outcomes. Their lack of information is not helped when government agencies do not openly share information with all stakeholders – it seems that the level of political or economical influence of stakeholders sometimes shapes the amount and type of information they are given access to.

Local government often lacks sufficient appreciation for Maori values and practices and the complexity of the cultural context when they are considering tourism related matters in Environment Impact Assessment (EIA) reports and other components of planning and management. If they also lack the resources to interpret these values and practices, for instance through contracting in expertise or conducting appropriate consultation and/or research, the matters that need addressing are often put into the "too hard basket", with decisions delayed. Or decision-makers revert to their own European values and theories as a framework for interpreting other perspectives. As a consequence, meaningful and durable solutions to tourism related development usually remain illusive and the Maori cultural protocols adopted usually end up serving decorative functions rather than address the imbalance of power.

### **3.3 Managing Conflict**

Conflict is an inherent and legitimate part of any integrated approach to tourism development. Often an apparent lack of conflict is evidence of the suppression of views rather than indication of a consensus of views. However, conflict tends to work to the advantage of large tourism operators and government if it is inadequately managed. Sometimes the tools used as part of an integrated approach to planning and management can exacerbate conflict. For instance, poorly implemented participatory and consultative processes can set various community groups against each other as they scramble to secure resources and potential benefits (Chambers, 1997). Competition can be intensified when benefits are not clearly defined (Pretty and Scoones, 1997).

Treaty claim processes are a basis for potential conflicts both within and between Maori organisations and between Maori and the wider government and tourism sectors. In the Waipoua Forest area, a proposed five-day walk development has been delayed because of concerns relating to Treaty claims as well as concern about impacts. These concerns stem from previous developments perceived as poor, given loss of control by tangata whenua and cultural impacts. Cape Reinga is another area where Treaty claims have complicated resolution of development issues.

### 3.4 A Way Forward

Participation processes could be made more **culturally appropriate** through:

- Allowing sufficient time and resources in participation processes, for instance in visioning exercises, to accommodate cultural values and enable participants to work through issues and conflicts. These may vary from rohi (area) to rohi and between different whanau, hapu and iwi.
- Developing shared language (or terms) so that Maori can express their own ambitions in their own way. That language could be built upon ethics, values and practices that are cross-cultural and shared by the wider community. Shared language would also help built trust and shared values.
- Ensuring that all participants have access to and share knowledge, including where the costs and benefits of suggested tourism/land development options are likely to fall. An effective information flow between key stakeholders is an essential part of an integrated planning and management approach. Information sharing is needed between government agencies and iwi, within iwi (at hapu and whanau levels), and between iwi and individual commercial operations. This would enable whanau/hapu/iwi and other stakeholders to identify with whom to form alliances to gain the most benefit. The process would also be more transparent.

Developing a shared knowledge and language would also be an effective means of mitigating conflict between groups of differing ethnic, social, regional, political, economic or geographic settings. The essence of shared language and knowledge is the discovery of equivalent values, ethics, and practices between Maori and non-Maori. Those values might include cross-cultural principles such as respect, guardianship/stewardship and compassion. The value for Maori would be in finding a way to express their own aspirations within a form as close to their own as possible, thereby opening the way for real participation and collaboration within a value system inclusive of their own.

**Partnerships** between Maori and key agencies and other stakeholders are an important part of a more integrated approach to the sustainable management of natural areas. Ecotourism is being seen by people in the industry as a driver for co-management. The well-established nature conservation partnership arrangements that DOC has with environmental groups like Forest and Bird provide good examples of how formal and informal partnerships can work. The approaches that DOC takes to avoid disenfranchising such traditional supporters could inform strategies to build and maintain new partnerships with hapu and iwi.

Amongst possible care study areas, Kura Tawhiti, Kapiti Island and Mount Bruce were suggested as showing potential for collaborative management. Kura Tawhiti, like other places in the Waimakariri Basin, has significant cultural values that have been damaged through current DOC dominated management. Beyond providing limited information on cultural values, DOC has constrained recreational activities despite their impacts and the opportunity to limit rock-climbing activities to a number of rocks. Kapiti Island, culturally important to Rangitane and other iwi, has the potential for joint management between DOC, the current private tourism operator and tangata whenua. A partnership for the management of Mount Bruce was been formalised through a memorandum of understanding between DOC and tangata whenua.

While partnerships and co-management offer considerable potential, they will not always be the best way forward. There are cases where tangata whenua are better placed (and mandated) to carry out planning and management of natural areas, particularly when these areas are of particular significance to them. In these cases, rights can be established through Treaty processes. Treaty settlements also mean that some iwi have funds for establishing tourism-based projects.

Ways are needed to address Maori cultural issues as an intrinsic part of economic development strategies. Northland's economic development agency, which has a separate unit that focuses on Maori development, provides a possible model for ensuring cultural issues are appropriately included in decision-making. This unit also has a formal working relationship with Tai Tokerau Maori Tourism Association, which has been existence for several years. However, the Association has always struggled financially as it has no Government funding, instead relying on various forms of partnerships as a strategy. Also, Maori tourism businesses in the area have had chequered histories.

## **4 THE PLANNING FRAMEWORK**

### **4.1 Approaches to Planning**

Planning approaches for integrated management of tourism in natural areas include both systems or process based and statutory approaches. Given the jurisdiction-specific nature of statutory approaches, the international component of our review of planning approaches mainly canvassed systems based approaches such as the Environmentally Based Tourism Planning Model for regional level environmental planning and examples of resort planning. In New Zealand the statutory planning approaches embodied within legislation, such as the Resource Management Act (RMA), the Reserves Act and the Conservation Act, have been considered along with resort planning and more process based planning examples. Details of several planning approaches are presented in Chapter 8.

The purposes of planning approaches differ, both between and within statutory and process approaches. For instance, the statutory planning objectives embodied within the RMA (sustainable management of natural and physical resources) are different from those of the Reserves Act or Conservation Act. Some approaches aim to provide a basis for development to occur in a sustainable way (e.g. the basis of District Plans prepared under the RMA), while others are based on management for conservation of natural values beyond the interests of development (e.g. Conservation Management Strategies under the Conservation Act) or present tools for management, rather than establishing overall management approaches in themselves (e.g. zoning).

An integrated approach to planning, adopting both statutory processes and less formal planning approaches, should enable sustainable development in natural areas. The approach should enable an appropriate balance of commercial and non-commercial visitor and recreational activities and the development of amenities and structures that are, together, consistent with and protect the natural and other values associated with the natural area.

### **4.2 The Resource Management Act**

People commonly, but wrongly, attribute the Resource Management Act (RMA) as the main statutory or legal framework for tourism planning in New Zealand. The Act seeks the sustainable management of natural and physical resources and this purpose is given effect statutory through Regional Policy Statements and District and Regional Plans. It is clear that many in the industry perceive the RMA as a “big hassle” or hurdle to overcome rather than as a positive instrument, despite the Act making no mention of tourism in its content. DOC and local authority management

plans, for reserves and national parks and regional parks and reserves respectively, are of more direct relevance to tourism in natural areas. These plans can play a fundamental role in managing tourism development in these areas, including the activity of tourism and its attendant land based development and infrastructure.

The RMA comes into greater play where tourism development is proposed at the interface of private and public land, such as a national park. Development at Marahau, on the fringes of the Abel Tasman National Park, provides one example. There are potentially significant effects from tourism and related activities in publicly-owned areas with high natural values where development is focused in one place and where access to the area is relatively easy. Buffers are a useful approach or technique to manage these effects. Puponga Farm Park buffers Farewell Spit from the surrounding rural and increasing residential/holiday and tourism activities of Puponga and its surrounds. The buffer concept also provides opportunities for managing the natural values of the farm park land (in that example archaeological, vegetation, landforms, habitat), and provides some public access to a working farm (which itself is becoming a tourism attraction). Management plans, prepared and administered by DOC are used to manage development and activities within the farm park<sup>4</sup>.

The tourism industry's involvement in the RMA is still seen as very rudimentary. One indication is the low input by the industry into development of the first generation of regional and district plans under the RMA. However, the 10-year review cycle of these plans means that many are coming up for review. Thus, there are new opportunities for the tourism industry to influence the RMA statutory process so that district and regional plans better reflect tourism interests. Another indication is the industry's lack of knowledge about environmental planning. Respondents provided several examples of poorly composed development proposals, and their attendant applications for consent, with respect to planning policy, rules and effects assessment. Nevertheless, there are some exceptions, with astute businesses proactively incorporating environmental management in their business activities and development proposals, through engaging specialist environmental planning skills at the outset.

### **4.3 Conservation Act and DOC Concessions**

The principal statute for conservation management in New Zealand is the Conservation Act 1987. The Act promotes the conservation of NZ natural and historic resources and provides for management of the public conservation estate by the Department of Conservation (DOC).

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<sup>4</sup> The Puponga Farm Park Management Plan is currently under review.

Conservation is defined in the Act as ‘the preservation and protection of natural and historic resources for the purpose of maintaining their intrinsic values, providing for their appreciation and recreational enjoyment by the public, and safeguarding the options of future generations’. This definition does provide for tourism management but only “to the extent that the use of any natural or historic resource for recreation or tourism is not inconsistent with its conservation”. The Act also sets up a clear distinction between tourism and recreation (with the implication that recreation is non-commercial while tourism is commercial), in that one of DOC’s function is “to foster the use of the natural and historic resources for recreation, and to allow their use for tourism” (section 6e). Although phrased in different language, preservation of natural values also underlies the principal purposes of the earlier Reserves and National Parks Act (1977 and 1980 respectively). These two Acts provide for public access and enjoyment but do not mention tourism specifically.

In the Conservation Act the fundamental planning mechanism is the preparation of Conservation Management Strategies (CMS) for each DOC region (Conservancy). CMSs provide a description of conservation resources and values in that conservancy and set out objectives and policies for all major public conservation areas and management issues in the conservancy. CMSs are guided by overarching General Policy which was prepared for the National Parks Act in 1983 and is currently being prepared for the Conservation Act and other conservation legislation.

DOC uses a concession system to allocate commercial activity in public conservation areas (e.g. guided walks, ski areas, marine mammal viewing). A concession is a permit to undertake a commercial activity in a particular place and over a specified period of time. The system is operated by DOC staff; in most cases applications are handled at the Conservancy level but with central oversight.

The DOC concessions process is analogous to the RMA consent process but without the same level of public consultation. To assess applications fully, DOC requires methods to identify resource capacities, assess the sustainable level of activity and monitor effects. While tools such as ROS and LAC are available to assess resource capacities, there is still a lack of tools for, and attention given to, assessment of the cumulative impacts of activity on the resource and the defining of sustainable levels of activity. One suggested approach to manage cumulative impacts is for DOC to allocate the total resource in one call for concession tenders (e.g. heli-viewing or marine mammal visits). In addition, while monitoring is usually written into concessions, it is seldom enforced.

One of the major problems of the concessions process is DOC's inability to manage total activity in natural areas that also support commercial concession activities. DOC capacity to achieve conservation outcomes is, therefore, limited despite concession conditions that may set visitor numbers and activities. Often, total visitor numbers in DOC-administered natural areas greatly exceed the number permitted by concessions. In part this problem stems back to the distinction in the Act between (non-commercial) recreation and (commercial) tourism activities. The former is to be "fostered" while the latter is only to be "allowed". DOC therefore has a much weaker mandate to regulate non-commercial visitor activity and impacts.

Concessions are a relatively blunt instrument in terms of managing effects. Because the concessions system is characterised by incremental decision rather than strategic management of areas, planning outcomes are similar to those of the effects based planning under the RMA. The current system is usually reactive, with DOC staff responding to single applications.

The tourism industry argues that the EIA process, as part of DOC's concession application process, is applied unevenly across the country. Further, it is generally not as comprehensive as EIA (AEE) under the RMA. While decisions on new concessions take environmental impacts into account, the EIA component of concession applications is not as public friendly as under the RMA, although applications are referred to the Conservation Board, Iwi and Runanga concerned. While the system can require public hearings if necessary, these are not commonly used. Overall there are no appeal rights. The concessions process is currently under review.

Development of The Remarkables ski area near Queenstown provides an example of weaknesses in the concession process. DOC placed a large number of conditions and rigid constraints on individual buildings in the area. As a result, the developers were unable to work with a full plan from the beginning, with buildings planned accordingly. Instead, development occurred on an *ad hoc* basis as it transpired that many of the conditions were unworkable. In a preferred process, DOC could have worked with the developers from the beginning to minimise effects on the environment, recognising that it is now a modified one. The experience of developing the Rainbow ski field shows that more collaborative approaches are workable. The developer and DOC developed a constructive working relationship during the process of establishing the field.

#### **4.4 Zoning**

Land use zoning, with attendant rules about what activities are permitted or controlled in some way, provide another approach or technique for managing the effects of tourism development on natural areas. Under the RMA various zoning arrangements are embedded in District Plans and are administered under the RMA provisions by local authorities. The Tourism Services Zone,

which is in the Tasman Resource Management Plan<sup>5</sup> (TRMP), is one example and is used at St Arnaud (Nelson Lakes) and Marahau in an attempt to address some effects of tourism development on the existing community, water supply, sewerage treatment, landscape values, traffic, access and so on.

Zoning is less commonly used in Conservation Act processes but is not precluded by them. The National Parks Act provides for amenities areas and wilderness zones in national parks, while the ROS approach can potentially lead to zoning approaches in other conservation areas.

#### **4.5 Interface between local government and DOC**

The respective roles of local authorities (that administer the RMA through their Regional or District Plans) and DOC, in coastal and other interface areas between private land and public conservation land, and with respect to freshwater, presents issues for achieving integrated management. Current jurisdictional issues, associated with control and access to the foreshore by boats at Abel Tasman National Park, create significant management issues for the Park's carrying capacity. In particular, the more recent recreational use of kayaks in the area has created significant additional use of the coastal area and the water access possibilities have made it difficult to manage. The freshwater statutory management issue is evident at Waikoropupu Springs where DOC manages the land around the Springs as a reserve and the water itself statutorily requires a management role by the Tasman District Council.

DOC's statutory advocacy role for conservation advocacy often sees it as a participant in RMA processes, a role which can hinder good interagency relationships for integrated management.

#### **4.6 Strategic Planning and Management**

There has been a renaissance in strategic level planning in New Zealand. The RMA, with its effects based approach, has been found wanting in terms of outcomes for the physical environment and its inability to address interrelated issues given the jurisdictional and philosophical parameters it embodies. The effects based approach to resource management and the case-by-case incremental consideration of proposals for new activities and developments has resulted in some poor outcomes on the ground. Many decision makers and planners have been attracted back to a more strategic approach to deal with planning issues, not so much because of the failing of the RMA to "plan" but because of the expectation that it would.

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<sup>5</sup> TRMP is a combined District and Regional Plan as TDC has both the District and Regional level RMA functions.

Through a strategic approach to tourism planning, interested parties are typically engaged in addressing issues which cross-spatial jurisdictions (e.g. regionally) and functions. They will look to build strategic directions that have a 'vision' and a range of actions for implementation. Often Charrettes, working groups and other techniques are utilised to gain participation from the parties. The implementation of the actions will frequently include the addition or change of provisions with District or Regional Plans prepared under the RMA, but these will be used as a tool rather than a driver.

There are a number of ways that planning issues can be addressed at the regional level in a strategic way. The Hauraki Gulf Forum (under special legislation) provides a statutory basis for cross-agency consideration of issues, including tourism and recreation, at a wider catchment level. Auckland's Regional Growth Forum also provides a non-statutory basis for consideration the future demand for regional parks. Issues addressed through this forum include the purchase of land to meet the demand for future regional parks and the management of environmental effects on regional parks in South Auckland. Regional level plans also provide a basis for addressing tourism management issues. For instance, in Southland rules are contained in Environment Southland's coastal plan to determine the management of aircraft and cruise ship activity in the southern fiords.

At a district level, strategic planning has also been embraced by local authorities as they deal with growth issues. For example, the Tasman District Council initiated the Marahau Strategic Planning Study (1999) to provide an opportunity for the community, stakeholders and Council to develop strategic directions that would address the future of the village given the tourism development pressures. This resulted in a vision, strategic directions and a plan change to establish a special tourism zone.

Strategic planning presents some risks. For instance, there is the risk of loss of strategic direction and emphasis in the transfer of strategic direction to the District Plan. The process of initiating plan changes allows submissions and Council decision making to influence the outcomes – this can lead to some disappointment from strategic process participants. There is also the related issue of the degree of specificity as to outcomes that plans can dictate – if an activity is permitted by a plan change there is no provision for management under the plan. Again, given the statutory process, if an application is required under a plan (because the activity is controlled, discretionary, or non-complying) then there is no surety to the outcome, given opportunities for submissions to influence decision making outcomes. Several respondents cited a Whakatu resort proposal at Marahau as a case where community expectations established through the strategic plan process and the

resultant zone changes were not fulfilled by the resource consent given to the development<sup>6</sup>. The people of Marahau have become concerned about the inadequate planning that has taken place for tourism in their community and the nearby Abel Tasman National Park, including the new resort. The community feels deceived by the developer and let down by the Council.

Assistance will be given to communities to plan for tourism and development through the community plans provision in recent Local Government Act amendments. Encouraging host communities to plan at the strategic level has the potential to smooth processes at the project level, given greater agreement by communities about the direction particular projects are taking them, and better management of cumulative effects. [A process initiated at Waikoropupu Springs<sup>7</sup> near Takaka has the hallmarks of an effective community driven plan. Although its implementation mechanisms are still unresolved<sup>8</sup>, the process has begun to address the conflicts between community expectations as to tourism development opportunities, cultural issues by tangata whenua regarding the waahi tapu nature of the water, and recreation issues around access to the water for diving]. Some empowerment of local authorities to address the local issues in tailored ways will be of assistance to recognise the place based and variable nature of many tourism pressures.

The need for resources (financial, intellectual, political, time) to manage and address issues is a significant issue for tourism development and activities in natural areas. There are many examples where basic information such as numbers and types of visitors, is needed to inform planning, for instance for infrastructure provision and related growth related amenities in places like Kaikoura, Punakaiki and Fox Glacier. Communities with a low rating base and limited resources have the most difficulty providing infrastructure such as sewerage disposal, or road maintenance in rural areas. In some areas of New Zealand, local authorities with some of the smallest rating bases have some of the largest share and spread of tourism related issues (e.g. Tasman District with parts of four National Parks and a large district and coastline to manage).

The strategic approach to planning potentially presents significantly more opportunities for effective tourism planning. This approach can recognise and provide for the variation of scale and type of tourism development issues and their cross jurisdictional nature. There is growing recognition of the need for strategic approaches in government and some facilitation of this through changes to Local Government Act. The implementation of strategic directions will need appropriate statutory plan provisions administered by local authorities (Regional, District, Reserve

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<sup>6</sup> The consent granted to Wakatu Inc is currently the subject of an appeal to the Environment Court.

<sup>7</sup> Refer to Lucas (1999).

<sup>8</sup> The aim is to get a combined management plan by TDC and DOC – they are preparing separate ones.

Management), and DOC (Conservation Management Strategy, Management Plans). However, these should be used as tools rather than drivers.

#### **4.7 The Legal Status of Place**

The legal status of place, including land and water, has important implications for land management for tourism and related activities. For example, management problems can occur with private walkways where land ownership is transferred on part of a walkway and no legal rights have been established to ensure longer-term access. Similar problems arise with public walkways on private land.

There are also legal constraints to creating natural areas with a status conducive to tourism development or managing areas for tourism. Marine reserves are a case point. Under the proposed Marine Reserves Bill, protection of biodiversity is the goal. The argument can be made for a marine reserve to be established for the purpose of marine protection, even though it effectively removes a fishery from commercial or recreational fishers' available sites. Although there are recreational benefits from marine reserves this cannot be a reason for creating them. The same can be said for educative/advocacy benefits of reserves. The benefits from having reserves near urban areas include accessibility and the potential support of users for other reserves being established. However, these benefits cannot be taken into account in the selection of possible future reserve sites.

### **5 ASSESSMENT AND MONITORING OF TOURISM IMPACTS**

#### **5.1 The Need for Integrated Impact Assessment**

The natural environment of a destination area is one of the core products sold by the tourism industry (Goodwin, 1995).

Sun and sand, forests and mountains, flora and fauna, rivers and lakes all constitute a major part of the product marketed by the visitor industry. Many holiday-makers seek untouched natural environments. However, in the process of experiencing them and spreading the word, they contribute to their destruction (Goodwin, 1995: 129).

Tourism developments are often located in close proximity to, or even within, conservation reserves and other relatively undisturbed natural environments. Depending on the scale of use, these areas can suffer significant biophysical degradation as a result of visitor activity (Buckley

and Warnken, 1998; Warnken and Buckley, 2000). Likewise, social and cultural attributes of destination communities that are valued by the visitors can be under threat from the presence of large numbers of visitors with differing cultural backgrounds, values and behaviours (Brunt and Courtney, 1999). Thus, tourism has the potential to degrade its own natural and social resource base, a phenomenon that has been described as the potentially paradoxical character of tourism. The more authentic and rich in culture, or the more undisturbed or ecologically rich the environment of the destination, the more attractive it becomes to visitors. With the popularity of an area come problems of environmental degradation, which in turn diminish the quality of the experience (Buckley and Warnken, 1998; Goodwin, 1995; Hillery *et al.*, 2001). This paradox was recognised in a 1980 report by the Organisation for Economic Cooperation and Development that warned that “tourism destroys tourism” (cited in Goodwin, 1995: 129). Consequently, the concept of tourism carrying capacity has arisen (Hillery *et al.*, 2001).

Warner *et al.* (1997) point out that in many places the environmentally damaging effects of tourism have only been recognised recently. However, there is growing awareness and research on the impacts of tourism (Hillery *et al.*, 2001; Williams and Lawson, 2001).

Environmental impact assessment (EIA) and social impact assessment (SIA) are strategies aimed at identifying the effects of projects, plans or policies, and at providing for the mitigation of negative impacts and the enhancement of positive effects. The trend towards specialisation within the field of impact assessment has, however, inhibited the integration of these methodologies and the findings derived from them. This separation has resulted in diminished efficiency and effectiveness in practice, a problem recognised when the development of integrated impact assessment was first proposed (Rossini and Porter, 1983). Since then, there has been continued debate on the merits of, and difficulties with, the integration of assessments of the various types of effects.

Taking a broad approach to the definition of environment, the environmental effects of tourism and tourism development (as with most development) can be categorised as biophysical, social and economic (Devlin and Booth, 1998; Parliamentary Commissioner for the Environment, 1997). However, impacts of these types are intricately linked with each other, and thus should be assessed in an integrated way. Impacts include those at the sites of visitor accommodation as well as sites of interest and recreational activities. Given the complexity and wide-reaching nature of the effects of tourism on the biophysical and social environment, it is obvious that the planning and management of tourism development needs to involve careful assessment and management of impacts and the mitigation of negative impacts and maximisation of benefits (Brunt and Courtney, 1999). As Devlin and Booth (1998) emphasise, impact studies need to take an interdisciplinary

approach to assure that all potential biophysical and social impacts are examined and their linkages are uncovered.

In reality, the environment is comprised of intricately and inseparably interlinked social and biophysical systems. When the biophysical environment is affected by a development, the result may be the degradation of these biophysical components of the environment. This degradation, however, will almost always have implications for humans. Thus, almost all biophysical effects ultimately have social consequences and must be explained in that context (Bryan, 1999; Craig, 1990; Slootweg, Vanclay and Schooten, 2001; Taylor, Bryan and Goodrich, 1995). In fact, it is precisely the social consequences of biophysical degradation that ultimately provide impetus for us to care about the environmental impacts of human activities (which is not to say that the biophysical environment does not have standing in itself).

## **5.2 Social Impact Assessment**

The social impacts of tourism have been widely studied over the past two decades. Communities with substantial tourism development invariably undergo changes in the structure of society. Demographic changes, for example, include the in-migration of younger people attracted by employment opportunities and the presence of visitors (Sharpley, 1994; Williams and Lawson, 2001). Changes in the demographic profile of host communities have been widely discussed (e.g., English, Marcouiller and Cordell, 2000). Some of these changes and their resulting impacts might be regarded as positive, others as negative (Brunt and Courtney, 1999).

Positive effects of tourism development include improvements in income, employment opportunities, local infrastructure and services. Tourism may boost, or in some cases, revitalise local economies, as it provides a stimulus for local industries and agricultural production, hotels and restaurants, transport, guides, souvenirs and handcrafts. Such improvements of the economic potential within a community usually have spin-off effects on the provision of social services, healthcare and education. In addition, public facilities and infrastructures such as roads and sewage systems may be maintained to a higher standard and recreational and leisure facilities that could otherwise not be supported are made available to local residents. These improvements result in improvements in the quality of life for local residents. Tourism may also provide an incentive for the restoration and preservation of historic and religious buildings and the revival of local customs and culture (Brunt and Courtney, 1999; Goodwin, 1995; Sharpley, 1994; Warner, *et al.* 1997).

However, tourism development can also result in significant negative social and cultural effects, which put a severe burden on host communities and can result in the failure of the development

itself, when visitor satisfaction deteriorates (Goodwin, 1995). Obvious negative social effects can include increases in the cost of living; problems of overcrowding, traffic congestions, noise and pollution; decreased safety or perceptions thereof; the communication of diseases; increased drug use; and clashes of cultures and values held by visitors and the host community (Devlin and Booth, 1998; Goodwin, 1995; Warner, *et al.*, 1997). Problems may also arise from the conversion of the local economy, especially of service providers and retail, from those oriented toward the local communities as the main market to those catering mainly for tourism demands, such as for souvenirs (Sharpley, 1994). In its extreme, this change can lead to dependence of local economies on tourism at the expense of economic diversification.

Like the deterioration of the biophysical environment, the degradation of the social and cultural environment can have significant impacts on the sustainability of tourism development. It has long been acknowledged in social impact assessment that relevant social impacts are not limited to changes such as jobs created. They extend to human values, attitudes and cultural change, particularly in tourism development. Resentment against visitors and the tourism industry within a host community can include unwelcome behaviour, the commoditisation of culture and religion, the economic gap between locals and visitors, and inflated prices (Brunt and Courtney, 1999; Sharpley, 1994). Negative local sentiment, in its extreme, might hamper tourism developments or even result in its abandonment. Thus, if tourism development is to be successful and sustainable, the social impacts should be taken into account (Warren and Taylor, 2001). If the reasons why residents support or oppose developments are known, the most suitable projects can be selected and planned for (Ap, 1992; Lankford, 1994; Brunt and Courtney, 1999; Williams and Lawson, 2001).

### **5.3 Biophysical Impact Assessment**

Typical impacts on the biophysical environment resulting from tourism and outdoor recreation include potentially significant impact on terrestrial flora or fauna, ground- and surface-water hydrology and chemistry, soils and geology (Devlin and Booth, 1998; Warnken and Buckley, 1998, Warnken and Buckley, 2000)

Parameters on biota which can be measured to assess baseline conditions and impacts include richness and diversity, abundance and biomass, for particular species and the overall ecosystem; rarity, conservation status, population size and community structure of the species present; and the occurrence of introduced species (Warnken and Buckley, 1998). Impacts can include reduction in species diversity, changes to population levels, displacement, rearrangement of the structure of biological communities, reduced productivity, changes in animals' behaviour and effects on breeding. These impacts can result from either direct interference with animals or plants, or

indirect alterations to the habitat (Devlin and Booth, 1998). No uniform relationship between the scale of recreational use and wildlife population measures is evident. Devlin and Booth (1998) point out that responses of wildlife to the presence and activities of recreationists vary by species, and sometimes by individual animals. Thus, species may decline or increase with increases in visitor numbers.

Impacts on soils and geology include those resulting from the removal of plant cover, ground compaction, soil erosion and gullyng, and the resulting increase in the presence of barren and eroded surfaces (Devlin and Booth, 1998; Hillery *et al.*, 2001). Shrub and tree damage, littering and vandalism, and the formation of informal tourist-made tracks are sometimes the most visible signs of environmental degradation caused by visitors (Goodwin, 1995; Hillery *et al.*, 2001). These effects are concentrated around recreation facilities such as tracks, huts and other facilities (Devlin and Booth, 1998).

Fragile ecosystems, which may already be under pressure from the local population, may be put under increasing stress. Further, as visitors penetrate increasingly remote areas, these impacts spread to previously undisturbed environments. In addition, hotels, roads, restaurants and car parks change the visual appearance of the environment (Goodwin, 1995). These effects include construction activity (Warner, Akis and Peristianis, 1997). Some developments bring along more project-specific impacts. For example, typical biophysical effects related to golf courses include nutrient enrichment and pesticide contamination in surface runoff or groundwater leachates (Warnken and Buckley, 2000).

Indirect (or higher-order) impacts result from increased resource demands. Visitors may consume more water as well as energy for amenities such as lifts and air-conditioning. Developments such as accommodation and campgrounds put additional stress on local sewage disposal and water treatment systems, and may result in increased pollution with pesticide, herbicides and cleaning materials. Still wider impacts include those of travel, including noise and chemical emissions from vehicles and aircraft (Goodwin, 1995).

Effects on the natural environment, however, are not necessarily always negative. In some cases, tourism provides an important incentive for the protection of natural areas, as it represents a non-consumptive use alternative of natural resources (Warner, Akis and Peristianis, 1997).

## **5.4 Assessment of Cumulative Impacts**

One of the problems associated with tourism in natural areas is that a single identifiable limit to development, with obvious consequences, is not always identifiable. Instead, the impacts of tourism tend to cumulate relatively slowly as visitor numbers increase, and consequent changes may be subtle. For instance, tourism activity might continue unabated, but in fact the character of that tourism activity and associated visitor types might have changed, or host community attitudes have hardened.

It is specifically important to examine the cumulative effects of tourism development in a local area. While most individual tourism projects are of medium scale, involving predictable engineering activities and waste streams, they are often clustered. This potentially results in much more significant cumulative effects than each individual project creates (Buckley and Warnken, 1998; Warnken and Buckley, 2000; Warnken and Buckley, 1995). These cumulative effects can lead to problems when individual projects are approved by the planning authorities without the requirement for impact assessment and, thus, without regard for the potential for cumulative effects. For instance, the urban sprawl and cumulative environmental effects associated with tourism development in Queensland, Australia, largely resulted from a failure of past legislation to require EIA for medium-scale projects (Warnken and Buckley, 1995).

The results of interviews for this project indicated that the tourism industry in New Zealand needs to 'bite the bullet' and find ways of addressing cumulative effects, along with an understanding of carrying capacity and ways to limit tourism development. One way for the industry, host communities and regulatory agencies to identify cumulative effects is to introduce more rigorous monitoring, including social monitoring, underpinned by research to generate baseline data.

In New Zealand much criticism is levelled at the concessions system as a management tool, because of its poor performance in dealing adequately with cumulative effects. DOC needs to look at cumulative effects as part of the concessions process, where relevant in conjunction with the resource consent process. It is difficult to do this assessment adequately without more monitoring of existing concessions and consents (it is agreed that monitoring is inadequate). DOC is now working on monitoring and measuring effects of concession activities to help managers determine levels of acceptability.

There is an issue here that concessions are granted either without adequate predictive assessment of impacts, or because assessments are not trusted as a decision making tool. So adverse effects are not recognised until they have been demonstrated and the resource becomes degraded - in comparison to a more precautionary approach.

For example, respondents considered that cumulative effects associated with Abel Tasman National Park could have been avoided if DOC had approached the allocation of concessions more proactively. However, there are still problems because the tools that may inform the zoning and setting of activity types and levels are imperfect. Management staff believe that tools such as LAC, carrying capacity, and ROS lack demonstrated success. If the available tools were perceived to be more reliable, managers would have greater confidence in being more prescriptive about allowable activity and therefore preventing cumulative impacts.

Particular problems arise with severe cumulative impacts in tourism buffer zones and gateways adjacent to the DOC estate, indicating a need for more integrated planning between territorial authorities and DOC. Marihau is one example of this, with Punakaiki, Ohakune and Franz Josef also noted as examples. An integrated approach should enable better planning and management of amenities in these areas that meet visitor demand, consistent with the high ecological values of the adjacent protected areas, as well as being profitable for operators.

Another area is Godley Head, which is considered to have a high physical capacity - in other words, capacity has not yet been reached from a physical perspective. A more positive example is 4WD use of some beaches and river beds in Canterbury which has required inter-agency co-ordination and public consultation to manage the resulting impacts such as beach erosion and destruction of breeding habitat. Working parties have helped to involve the community in identifying the problem and finding solutions.

Cumulative effects of climbing and other recreational activities are especially evident at Kura Tawhiti where the hardware that climbers leave in the rocks is gradually degrading the lime stone and lichens, and the graffiti of visitors is degrading the cultural values of the place including damaging the rock art. The modern graffiti sits alongside and, in one case, over the rock art of tangata whenua ancestors. While DOC and users of the area may not have recognised the impacts to date, the cumulative damage is now clearly evident and further cumulative impacts need to be avoided.

## **5.5 Monitoring of Impacts**

Monitoring is important in setting and maintaining standards as well as understanding environmental and social impacts. Some managers regard monitoring as academic, like research. It is therefore overlooked as a management tool and the results of monitoring are not properly aggregated, analysed or disseminated to managers and stakeholders. Yet monitoring the effects

of activities that have been allowed by management plans, concessions and resource consents should help managers determine levels of acceptable use from both a bio-physical and social perspective.

Respondents contended that DOC does not undertake adequate monitoring of concessions. After many attempts, DOC still does not have a reliable and robust track counting device. The Department often does not know numbers of visitors undertaking activities or using areas, nor do they know the dollar value (of the concession). While concession holders are required to report numbers to DOC, there are insufficient resources to do the necessary analysis of the returns. They are not setting appropriate visitor number limitations, nor addressing the scale of use.

Systematic monitoring is not happening due both to lack of capacity, and lack of tools. Because of this, DOC tends to do one-off studies, despite the need for ongoing monitoring of the conditions set for each concession. DOC also needs to look at cumulative effects from a number of concessions. An integrated approach is regarded as the only way DOC will get the necessary information to allow them to limit numbers. While one-off projects are undertaken there are too few staff to act unless the red flag goes up (i.e. there is a significant adverse effect). An example is research on marine-mammals. Another is a one-off survey of aircraft at Mt Cook/Aoraki which helped DOC to get information on visitor numbers and enabled them to limit numbers there.

Managers need a simple tool kit for monitoring impacts. A number of recent innovations were noted during interviews. One productive approach may be to look more at tourism indicators, for instance, tourist-related transport indicators on rural roads or main highways. Both pressure and state indicators have potential. It is also important to look at aggregate impacts on the environment, such as tourism energy use. Some human health indicators could be relevant for tourism, such as bathing water quality or shell-fish gathering standards commonly used in other contexts. Photos along the trail have been used to record changes to a beech forest area and thus measure the physical impacts of activities like horse trekking. There are now several relatively simple methodologies for monitoring different kinds of biodiversity. There are questionnaire designs for looking at visitor experience and satisfaction that can be repeated over time. In addition, the move to triple-bottom-line reporting by businesses may lead to some useful integrated indicators.

## **6 COMMUNITY PARTICIPATION IN TOURISM PLANNING AND MANAGEMENT**

### **6.1 Approaches to Participation**

There is an underlying philosophy that more democratic approaches to natural resource management will encourage active citizen participation in both planning and management. Public participation has become a basic precept in the EIA/SIA literature as well. However, while participation has become increasingly necessary in many contexts it is also more complex, as the management of natural resources for the purposes of tourism and recreation has also become more complicated.

There are two common participatory processes for involving local communities and other stakeholders in the decision-making processes. They comprise include interactive participation, and participation by consultation or functional participation.

- Through interactive participation people are involved in joint analysis, development of action plans, and strengthening of local institutions. Groups take control of local decisions and determine how available resources are used. For instance, the planning and management of participation processes could be handed on to tangata whenua rather than managed by DOC or other statutory bodies.
- In participation by consultation, or functional participation, people are consulted or answer questions. External agents define the problems and information gathering processes. Often, external agencies see such consultation as a means to achieve project goals. Shared-decision making is included, but tends to be after major decisions have already been made. Such participatory processes can lead to short sighted planning outputs and lack of uptake by key stakeholders.

To some degree, these different types represent a continuum of how power is shared. At one end, interactive participation represents an 'ideal' whereby power and decision making is shared between stakeholders. At the other, consultation or functional participation is generally more 'top down', with statutory bodies controlling the general terms of the planning process and the process itself (Mowforth and Munt, 1998:241).

Most participation approaches associated with tourism planning tend to focus on stakeholder participation, rather than 'popular' participation – that is, the participation of all individuals within a certain area or community.

The underlying rationale for participation shapes and influences the types of stakeholders involved, the participation processes employed, and the outcomes. Some reasons for establishing participation processes in tourism planning include:

- to increase or improve the capacity of the tourism industry;
- for pragmatic planning – to provide a sound plan for the future, which is sustainable and appropriate for stakeholders;
- to obtain host community support;
- to uphold democratic/social principles – human rights and self-determination;
- as a means of neutralising or balancing power between weak and strong stakeholders;
- for participation and control over the local economy.

## **6.2 Barriers to Effective Participation**

The most commonly cited barriers to participation relate to socio-economic characteristics of potential participants, their cultural background, operational barriers and wider political and other structural barriers.

- Socio-economic barriers can prevent individuals and communities from low-income socio-economic groups from participating. Often, their time and energy is spent surviving on a day to day basis (Tosun, 2000: 615-616), with little opportunity and energy left for other activities. There is growing concern that the communities in general, as well as particular stakeholders like hapu and iwi are finding it increasingly difficult to participate in consultation processes given the time and expertise needed to respond to the multitude of processes which are generated by a range of different decision making bodies.
- Cultural differences are another significant barrier to participation, especially where they have grown out of an historical context of colonisation (see Chapter 3). A participation process determined by one dominant cultural group is unlikely to be on equal terms with ethnic minorities who have been subjected to colonisation.
- Operational limitations to community and stakeholder participation include lack of quality information (for residents and for planners) and lack of co-ordination within and between stakeholders.
- Structural limitations include political dynamics and legislation. The literature on participation in tourism tends to assume that a properly conducted participatory process will neutralise or balance power between weak and strong stakeholders (Reed, 1997: 567). However, certain stakeholders can exercise their power through these processes to ensure that their own interests are met, or to secure or consolidate positions of power (Reed, 1997; Jamal and Getz, 2000).

- The increasingly common legislative requirement for consultation puts increasing pressure on under-resourced communities and stakeholders who want to participate.

Unless properly managed, participatory approaches can reinforce the uneven power relationships between different stakeholders associated with particular tourism development proposals (Tosun, 2000: 617). Power can be established or reinforced through decisions that more often than not reflect the values and priorities of the (more powerful) stakeholder/s. These decisions relate to:

- who initiates the participatory process
- who determines its form and evolution
- who determines the issues and priorities to be addressed
- who determines which stakeholders are involved
- which stakeholder knowledge and priorities are privileged.

The history of the relationship between planners and communities can also have a strong influence on the extent to which stakeholders participate (Yuskel, Bramwell, and Yukel, 1999:358). Councils and others such as DOC may or may not have developed adequate relationships with different stakeholders, and will vary in the extent to which they are prepared to devolve power. Those relationships may determine the extent to which stakeholders trust decision-makers, have a sense that they are able to influence decisions about tourism planning, and are prepared to participate in decision-making processes (Yuskel, Bramwell, and Yukel, 1999).

Given the complexity of the issues often involved in tourism planning, and the wide range of stakeholders, conflict is nearly always present within participatory processes and therefore needs careful management (Reed, 2000). Conflict is not necessarily destructive, and can be a vital part of constructive decision making between different stakeholders. It can also be a process of education about differing points of view and positions (Jamal and Getz, 2000:71). Managing conflict requires very skilled facilitators and robust conflict resolution processes to ensure ongoing participation and positive outcomes.

Other issues and conundrums relating to participation arise for the following reasons:

- Tourism planning processes are predominantly *issues* oriented. They are able to operate most effectively when issues are local and can be approached at an early stage in the planning process, before commitments are made and conflict arises.
- Effective participation may require a long time line, and should be flexible and responsive to stakeholder needs (Tosun, 2000:630).

- Stakeholders need timely, quality information (about eco systems, land use, visitor profiles, legal issues, zoning etc.) to make effective decisions.
- Interests of stakeholders will be dynamic, fluid, and can change throughout the consultation/participation process (Jamal and Getz, 2000).
- The ground rules which underpin a negotiation/consensus building process may need to change during the different phases of the process in order to empower or introduce different stakeholders (Jamal and Getz, 2000: 172).
- Management of stakeholder expectations is a critical issue. Participation does not always guarantee 'ideal' or anticipated outcomes from a stakeholder perspective, especially if the participation processes employed are consultative or functional.
- 'Ownership' of natural areas by local ('grassroots') stakeholders can be problematic. After being provided the opportunity to manage a natural area, a key stakeholder may return overall management to a statutory body, as it may not have the resources or legal mandate to manage the area adequately. A new partnership may then be realigned between stakeholders.

### **6.3 Different Methods of Participation**

There is no ideal approach to participation that can be applied across all planning and management contexts. Instead, a participatory process should be tailored to each unique context and the goals behind its use (Yuskel, Bramwell, and Yukel, 1999:351). Also, participatory tourism planning usually requires more than a single instance of information gathering or decision making.

Different contextual elements relating to tourism development that need to be taken into account include:

- the environmental context;
- the cultural context;
- the economic context;
- the stage of tourism development;
- the scale of tourism development;
- the size of the host community population(s);
- the types and levels of stakeholders;
- the resources available for consultation/participation (e.g. time, money);
- participant/stakeholder knowledge of tourism issues (a lack of knowledge about issues may require an educational component in the participatory process); and
- different levels of management and planning issues (regional or site specific).

An important point to consider is that stakeholders may wish to be consulted in a particular way. For example, interactive participation may not be necessary or desired by some stakeholders, and functional or consultative participation could be perceived as adequate. The starting point for a participatory planning process may therefore be consulting with stakeholders to determine the level they wish to be involved, and the processes they see as most appropriate for that level of involvement.

**Interactive planning processes**, which involve communities and stakeholders in joint analysis, development of action plans and strengthening of local institutions, can be used to generate two different kinds of plans.

- One kind of plan involves developing an *overall vision*, and the underlying principles which inform day to day decision making. This type of plan requires an emphasis on the processes of decision making, and managing differences/conflict. Planning processes of this type involve collaborative approaches - shared decision making and interest based negotiation. Shared decision making and interest-based negotiation have recently been used in large scale, multi sectorial planning situations (i.e. where tourism, environmental, economic, social, agricultural, and local government interests are involved). However, the same processes could be used in a smaller scale environment, using Charrettes (see Chapter 8) and/or focus groups. Aspects of alternative dispute resolution processes are woven through both of these approaches.

Despite the rhetoric of shared power, these processes are still prone to capture by more powerful stakeholders who use the planning process to consolidate their own positions. So conflict management and dispute resolution are necessary to ensure that the outcome represents the interests of most stakeholders in an adequate fashion. In one case study, final decisions were conferred back to the statutory body, as no agreement was reached between stakeholders. Participation in these processes is also very time consuming and stakeholders need to have significant capacity to process large amounts of information. Many may not have the time or skills to do so. Also, unless the plan is consolidated through a set of institutionalised procedures and responsibilities, it may not be operationalised. Changes in the external environment (such as a downturn in the economy) may also lead to the collapse of collaborative agreements, and stakeholders retreating to earlier positions.

- Another type of plan emphasises the *management of operational concerns*, whereby a plan of action is produced in line with the overall vision and principles. Time lines, tasks, outcomes, outputs, and risks are identified, and responsibilities are then assigned. This creates a means by which stakeholders are held accountable, and progress is monitored. It is possible that an

iterative process will be generated between the creation of the 'visioning' plan and the 'operational' plan, as issues will be raised in one plan that will affect the other. In addition, creating a separate visioning plan and an operational plan may not be appropriate.

**Consultation, or functional participation**, usually involves information being collected by decision making bodies from communities and stakeholders to inform a decision making or planning process which is already established - through stakeholder interviews, postal surveys, focus groups, open-houses (drop-in places) and Charrettes (see Chapter 8). Participants may be involved in decision making to a limited degree. These participatory processes tend to focus on developing tourism facilities and products rather than looking at the wider range of issues required for the integrated planning and management of tourism in natural areas.

Participatory planning approaches are practised in a variety of ways. Whilst interactive participatory processes may be 'ideal' methods to use, in reality consultative and functional participatory processes appear to be more commonly employed. This is because interactive processes can be very complex, dealing with a wide range of issues, and therefore time consuming and expensive to undertake. Groups managing the process may not necessarily have the capacity to deal with such complexity and stakeholders can become deadlocked and unable to reach an agreement.

#### **6.4 Applications of Community-based Planning**

Interactive processes of community-based planning have been used in New Zealand, usually by smaller, rural communities who are taking the initiative to develop their local economy. Generally, these community based approaches need to work within the auspices of the RMA and the Conservation Act. They have the advantages of building community consensus around a basic strategy and particular projects but, as noted, they require considerable community resources, particularly time, effort and leadership, to make progress. The benefits of community-based tourism planning are illustrated in the following examples:

- The Humpridge Track planning process resulted in the development of a viable tourism product. The process involved various stages of development from the late 1980s, including a feasibility study, an application for a concession (1997), a marketing plan, naming of the track, the concession application, public consultation and the resource consent process. Arrow International guided the final stages and the process would not have worked so well without them.

- Community planning is useful to help resolve local conflicts. An example is Okarito, where there is conflict between the community vision and proposals for commercial development. Another example is commercial development of a 30-dinghy hire business in Ohingaroa Bay (Mahau Sound, off Pelorus Sound). Residents viewed this activity as the thin edge of the wedge for commercialisation of a quiet backwater bay.
- The Arrowtown community planning initiative is valued by participants because they emerged with a common vision. The planning process was based on a Charrette with a steering group formed to follow through with an action plan (with designated responsibilities). The steering group had endorsement from the Council.
- The Marahau planning exercise led to community recognition of the need for a more balanced tourism product mix. Residents acknowledged the need for more accommodation but considered it had to be of an appropriate scale. What was eventually proposed was far more than people envisaged. With the proposed resort the ratepayers and residents association split into two parts, one to oppose the project and the other to pursue local community projects such as new signs and a wetland development.
- There are a number of examples of local areas pursuing community-driven approaches to economic and environmental development planning. These include:
  - The Catlins, with the involvement of the Clutha District Council Economic Development Board or Clutha Economic Development Board.
  - Environment Canterbury (ECAN), which has recently published a Pegasus Bay Draft Coastal Vehicle Access Strategy, responding to strong city concerns (Woodend, Waikuku, Leithfield, etc). This may result in restricted 4WD access to some coastal areas in Pegasus Bay.
  - The Ashley River, where more of an advocacy approach has been taken. ECAN is working with recreation groups to develop set vehicle routes. A recreational strategy is also being developed for the Waimakariri River and this will address 4WD access issues.

Overall, there are many opportunities for the tourism industry, including management agencies, to work more closely with host communities but so far these attempts have been *ad hoc*, inconsistent and lack follow through. The establishment of an information clearing house for community-level approaches to tourism planning, coupled with a process to feed information back into communities, could overcome such *ad hoc* participation in tourism planning and management.

## 7 NEW ZEALAND CAPACITY TO IMPLEMENT INTEGRATED PLANNING AND MANAGEMENT

### 7.1 Conservation Management

The capacity for New Zealand to manage tourism development for natural areas using more integrated approaches will depend on the capacity of the relevant organisations, including central and local government, iwi and the private and not-for-profit sectors. Capacity encapsulates skills, time, money and other resources. A common point made during interviews is that funding for conservation management is still a major constraint, even though the Government has allocated considerable funding over the next ten years for biodiversity protection and visitor facilities. A key issue around the allocation of DOC funding is the proportions going to 'front-country' recreational areas, which can be viewed as *de facto* funding for tourism, and conservation management purposes in 'back-country'. There is also tension between conservation funding for biodiversity and for visitor infrastructure.

Interviews suggested there is a lack of co-ordinated planning between DOC and other agencies. In addition, there is seen to be a limited management capacity in DOC. Current approaches to planning are often *ad hoc* and locally based. For example, within DOC, area managers need assistance in setting strategies for their visitor centres. Elements of the strategy to consider range from the location of centres and the level of integration with VIN centres, to the sorts of products they sell. Managers need consistent principles to work to overcome a lack of consistency between conservancies.

Monitoring is another capacity constraint. The lack of monitoring undertaken by DOC and territorial authorities can be attributed to a lack of capacity as well as the lack of available techniques to carry out monitoring. There are insufficient resources for monitoring effects and for building baseline data. Inadequate indicators for ecological, cultural, social and economic factors limit the applications of approaches such as VIM and LAC. Furthermore, regional councils appear to have little capacity and desire for tourism related work, even though the regional level scale appears to be appropriate to integrated tourism management in New Zealand. Recent amendments to the Local Government Act give regional councils potentially more discretion to become involved in tourism management, especially in addressing infrastructure issues and management of some impacts.

Barriers to ROS being applied in DOC include concerns about the capacity requirements, including the cost of building up the appropriate database and the extent to which appropriate data is

available or can be easily collected. As a result, DOC often challenges people from a position of regulation rather than a position of knowledge.

There are problems with the knowledge base available to inform interpretation and questions arise about the environmental, cultural and social impacts of tourism products that lack adequate interpretation. In addition, these products potentially fail to satisfy visitors who increasingly seek more information about the places they visit. Problems associated with the knowledge base are compounded by a lack of skills and trained staff throughout the system. While there is a need for qualified people to undertake both interpretation and advocacy, there is a lack of quality training schemes in place. DOC's capacity to adapt and adopt overseas (and NZ specific) approaches to visitor management and land management has been constrained by this lack of skills and training opportunities.

The capacity for planning and management of natural areas for tourism is also affected by a lack of accommodation in key areas that makes it difficult to attract and retain staff. This lack of accommodation can be attributed to inadequate planning, for instance in places like Franz Josef Glacier, Fox Glacier and Punakaiki, a dearth of private land for building staff accommodation at some centres in and around protected areas and, in other places, problems around infrastructure requirements such as sewerage and water systems.

DOC processes require it to develop strategies to deal with each component of its visitor amenities network, including visitor centres, camp sites, short walks and concessions. One of DOC's major current strategic responses to issues around visitor management is a review of General Policy under the conservation legislation. This task is expected to take between one and two years and will feed into the CMS review process. The General Policy review will include national parks managed under the National Parks Act and will attempt to provide policy for integrated conservation management of natural, cultural and historical heritage, as well as visitor experiences. It is seen, in part, as a natural extension of the visitor asset management process that DOC has embarked on between the Cave Creek tragedy (1997) and now.

The Visitor Asset Management (VAM) process, a key response to Cave Creek, has allowed DOC to create an inventory and evaluate its visitor amenities. Now attention is needed around managing them to meet visitor expectations. Some of the issues that have arisen out of the VAMs process are:

- The need to reposition some of the networks to better meet visitor expectations.
- The need for more funding or rationalisation of the visitor amenities. It is estimated that DOC would need three times its current budget to maintain the current network.

- The need for a visioning process. This requires some understanding of the history of the current network, current patterns of use, comparison between patterns of network (supply) and use (demand). This may lead to the abandonment of some facilities and redevelopment of others.
- The need to find a balance between visitor and host community interests. For this reason, the management of natural areas cannot be just recreation and tourism based. Local communities may value places/amenities for different reasons, including cultural and heritage values.

DOC and/or tangata whenua need to develop a strategy for the protection of the cultural and ecological values that outline the outcomes sought from conservation activities. Any management plan, whether developed by DOC and/or tangata whenua, needs to be informed by this strategy.

## **7.2 Capacity to Develop Local, District, Regional and National Strategies**

Tourism New Zealand (TNZ) promotes New Zealand as a visitor destination to selected overseas markets. Marketing campaigns aim to attract increasing numbers of international visitors, including the newly identified and preferred 'interactive traveller'. While strategies that aim to limit numbers or disperse visitors throughout the country have fallen outside of TNZ's perceived role, there is growing emphasis on limiting numbers, particularly through a focus on attracting higher yield visitors. There is less attention given to the dispersal of visitors, which is essential to the sustainable management of natural areas and the provision of visitor facilities. A regional strategic approach to visitor dispersal is required, but this is hampered by the barriers of parochialism.

The New Zealand Tourism Strategy 2010 (Tourism Strategy Group, 2001) puts the onus on TNZ to consult with the industry, with an open-mind approach. The next stage in the strategy implementation is for the industry and TNZ to work in partnership. The tourism strategy gives plenty of attention to conservation and tourism growth but provides little steer on how to address the tension between the two. Indeed, it hardly acknowledges the tension. Any reference to cultural/Maori tourism in the tourism strategy is in passing.

Overall, there is a need for better structures and collectives for product development and marketing. There are plenty of individuals all thinking that they are the best, rather than thinking and working co-operatively to promote an area in the most strategic way. So Regional Tourism Organisations (RTOs) are another area where capacity must be built. Staff do not necessarily accept the need for sustainability, and are often committed to growth models. RTOs are not linked well into an integrated approach to tourism management. Neither is there a clear link to the potential marketing role of DOC.

At the business level, new tourism ventures need assistance to work through feasibility analysis, funding, resource consents, and concessions. They tend to be focussed on their particular activities rather than a broader strategic vision.

Another broad principle for tourism planners is to be responsive to communities, and take their interests into account. Communities do not like surprises and need to know that benefits and costs are appropriately spread and that problems can be rectified. Neither community groups, nor trusts necessarily have the expertise to be involved strategically. Their initiatives therefore require the involvement of specialists. Community groups also need a 'champion'; a leader who can work over an extended period of time. Funding for community initiatives is another key issue.

There is a need for capacity building at the community level. The development of community-level plans is an important approach, the Charrette process providing a useful technique for developing community planning. Community trusts can have difficulty with the planning process so their approach tends to be *ad hoc*. They can get muddled about priorities and critical paths.

While communities need to become more strategic, there is no easy process for translating the national tourism strategy to the needs at a local level. The role of local government in developing strategic plans for particular areas is unclear. RTOs are mainly into marketing their regions with very little input into national planning and strategy building, yet the Strategy 2010 gives more responsibility to RTOs for planning and management.

New approaches will require local capacity. For example in the Waitomo District, the community plan was to spread the visitors more widely around the District, beyond the Waitomo Caves. But the project was not successfully implemented. Key Council staff changed and the project lost momentum. Despite wide community ownership the project was dependant on the Council, which had no mechanism to carry it through. In comparison, development of the Humpridge Track over ten years involved a strong local leader all the way through, with the Southland District Council, Conservation Board and Southland Community Trust, plus various government schemes, all playing a part.

Stakeholders at all levels have to address key questions, such as whether tourism at the top end of the market lifts the overall environmental performance of the sector. What are the social and environmental impacts of tourism at various points of the market continuum? Is ecotourism the best global market niche for nature-based tourism in New Zealand? Ultimately it is unclear that

ecotourism as it stands today is better for the environment than other types of tourism. Neither is it known whether visitor experiences in the back country are as special as often assumed.

Tourism has to be embraced by central, regional, and local government policy makers. They need to recognise the strong contribution tourism makes to the economy. However, strategic analysis and meta-planning approaches during plan formation requires training of planners.

The positioning of New Zealand tourism in the marketplace requires controlled alignment with national and regional strategies. Then managing the visitor experience is closely tied to its marketing. These strategies can be linked to the capacity of an area. Visitor numbers, flows and the seasonal spread of visitors can be deliberately planned to minimise impacts of overcrowding through a coordinated approach by the RTO, businesses, DOC and local government. There is much potential for regions to help deliver local and national strategies by integrating economic and environmental management.

The Northland Tourism Strategy has been very successful because the regional tourism organisation has been very focussed. Northland local authorities are supportive of tourism and aware of tourism issues and opportunities. Northland Tourism Strategy was unique in 1996, and gave rise to Destination Northland. It has been very helpful in concentrating on products and will be revisited in 2002. However, some issues, such as development of the Kerikeri Basin, Cape Reinga, and Waipoua Forest are beyond local control and require central government involvement.

### **7.3 Certification**

Certification is a key tool that is also about positioning New Zealand tourism in the international market place. This is a key strategic direction for the tourism industry in New Zealand. Industry standards are an international movement driven by a number of international NGOs through numerous mini conferences around the world. The New Zealand Tourism Industry Association (NZTIA) launched a draft industry standard in 2002. Qualmark, Green Globe and Toi Iho are all elements of the tourism industry quality assurance framework.

Systems of certification need to be outcome-based. The proposed certification system has been developed from international and Australian approaches in particular. There are of course questions with the applicability of international systems to New Zealand, and their ability to cope with local, indigenous issues.

Interviews identified a lack of appropriate systems of certification and the training to support them. There is also a key issue around the role of Qualmark. One view expressed during interviews was that the tourism industry should be allowed to drive the training process (the implication being that academia is not part of the tourism industry). Government has recently committed more than \$2 million over three years for the development of Qualmark. There is a lack of funding and operational support for the Adventure Tourism Council, which has the key role for supporting and monitoring the adventure tourism sector. The process of getting commitment to standards and qualifications approved, and then getting them developed and approved, is very protracted.

In the case of eco or nature-based tourism, qualified people should undertake both interpretation and advocacy. Respondents identified that skiing 'seems to have got its act together', and rafting is improving.

#### **7.4 Integration at the Agency Level**

Taylor and Dale (2001) identify institutional capacity as an important constraint to integrating SIA and EIA in decision-making. The authors argue that the institutionalisation of SIA brings requirements for 'power sharing' (p. 278). The reluctance of agencies to relinquish power has resulted in a technocratic approach to environmental assessment, limiting environmental management to rational, non-participatory approaches that ignore multiple human values pertaining to landscape and resources.

As a result, social scientists with systems views of human-ecosystem interactions are rare within institutions and the assessment of social and biophysical effects tend to be compartmentalised, with social effects usually not adequately addressed (Taylor and Dale, 2001). In addition, as Rickson *et al.* (1990) point out, the majority of professionals have been trained in tertiary institutions organised in disciplinary departments. Professional associations also are typically based on disciplines. Thus, planning approaches promoting interdisciplinary integration meet with resistance as professionals are not adequately prepared for such approaches, and many professionals are so narrowly specialised that they cannot collaborate with each other. This phenomenon is termed "disciplinary inertia" (Rickson *et al.*, 1990).

There are instances where key agencies fail to work together in tourism planning and management. Each agency or stakeholder group tends to externalise problems and do not take the initiative to ensure that responsibility for resolving or addressing issues are shared. Unclear jurisdiction and jurisdiction boundaries do not help. These are often found at the water's edge, for instance at Abel Tasman and Milford and Doubtful Sounds.

Meta-planning could include inter-agency planning. An example is the Auckland Regional Park and DOC conservation areas in the region, with common elements and place specific or organisation specific policies. There are potential synergies between the goals and objectives of the two organisations. Conflicts between local and regional interests are a further problem. Various approaches provide a basis for looking at a problem or management issue as discussed in Chapter 8. But the problem at the ground level is that practitioners get attracted to prescriptive approaches that seem able or relatively easy to be implemented.

## **7.5 Risk Management**

There are strategic risks to the tourism resource of natural areas, and to the industry itself, from a lack of integration of programmes leading to fragmentation of effort. There are also risks arising from the lack of ability of agencies responsible for management of natural areas to set priorities properly. Thus, resources are not properly allocated.

There are also operational and strategic risks to operators from the lack of staff, the lack of proper training for staff, and lack of availability of appropriate qualifications, as well as staff burnout and a mismatch of expectations and experience. In the medium term, the adventure tourism industry is at risk of a major accident affecting a large segment.

Physical risks arise from the location of some major attractions (Milford, Mt Cook, Franz Josef) in areas of significant natural hazard including earthquake, landslip, avalanche and tsunami. In addition, the industry is vulnerable to international events such as September 11 and the Bali bombing (a reminder of the fragility of the industry).

There are issues of access and privatisation of the property resource arising from the current land tenure review in the South Island High Country, examples including access for fishing guides and helicopter access. The conflict is fundamentally about private property rights, with many views about appropriate public access to mountain lands. The tenure review can, in some instances, lead to improved access. However, some landowners are fighting to control access and commercial rights, and are now charging for access.

All tourism businesses face a range of economic risks or constraints. There have to be viable businesses with suitable returns on capital but many remain as lifestyle businesses. The industry also faces the costs and risks of getting international visitors to and from New Zealand. Another

business risk comes from problems of seasonality. All these risks and constraints hold operators back from giving attention to environmental concerns and responsibilities.

Appropriate risk management procedures could prioritise risks for planning purposes, and help to identify options.

## **7.6 Research and Information**

Research and knowledge help to reduce risk. An inadequate tourism research and information base at present means there is insufficient basic data, including information on visitors and visitor services. There is a disconnection between science, decision making, and management.

A useful step would be a stock-take of all visitor related research. What has been done, how does it contribute to the bigger picture, what are the knowledge gaps, what needs to happen next? In order to manage tourism in an integrated approach, disparate knowledge should be built into a broader picture.

Several New Zealand governmental agencies have published materials on research into the assessment and management of environmental and social impacts from tourism and visitation of natural and historic conservation resources. A Conservation Advisory Science Note (Cessford and Dingwall, 1999) reports on a DOC workshop on the research and information needs about the impact of visitors on natural and historic resources. It discusses typical impacts and management issues and identifies needs for further research. The authors emphasise the need for interdisciplinary research and consultative techniques in the assessment of effects. Other similar materials include Parliamentary Commissioner for the Environment (1997), Cessford (1999a), Cessford (1999b), Cessford (1997), Cessford and Dingwall (1999) and Lawson *et al.* (1996).

## 8. APPROACHES, METHODOLOGIES AND TOOLS

This chapter provides a summary of the planning and management approaches, methodologies and tools relevant to tourism and related activities, that have informed the rest of the report. They were identified through a review of literature relating to areas such as tourism management, visitor management, public participation, leisure and recreation theory and management and planning and through key interviews. While some of these approaches have been applied in New Zealand, most of the experience described in the literature is internationally based.

**Table 8.1** summarises each of the tools identified in the literature review and interviews with key people as having relevance to decision-making related to integrated tourism. It also provides an evaluation of where and how they can be applied. They are grouped on the following basis:

- Economic approaches<sup>9</sup>
- Participatory approaches
- Leisure and recreation theory and management
- Legal and planning approaches
- Integrated management.

**Table 8.2**, based on interviews with key informants, presents information about the application of various approaches and tools in New Zealand. Thus, because it is based on the experience of a selection of potential users, this list of tools and approaches is not as extensive as the more internationally focused applications that inform Table 8.1. Table 8.2 contains descriptions of where and how tools and approaches have been used and their perceived utility. The table also includes information about the potential level of applicability for each tool or approach – that is whether it can be applied regionally, locally (including small towns, parks, sites, and similar) or for particular activities. The tools and approaches listed are cross-referenced to link to the description of the tool in Table 8.1. They are categorised according to their primary use, whether to:

- gather data/information (non-market valuation tools, participatory approaches)
- analyse information (SIA, EIA)
- present information (including mapping, ROS, zoning)
- make decisions (decision making tools)
- manage the resource (management tools)
- monitor the resource.

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<sup>9</sup> Appendix E provides some commentary on the usefulness of various economic instruments.

**Table 8.1: Tools and approaches used internationally**

| <b>Economic tools<sup>10</sup></b> |   |
|------------------------------------|---|
| E.1                                | <p><b>Non-market valuation</b></p> <p>Non-market valuation is the name given to a group of economic approaches that are used to value goods and services that are not traded in competitive markets. The purpose of many or most non-market valuations is to obtain data suitable for input into cost-benefit analyses, which are used to compare the values from alternative ‘uses’ of a resource. While in most cases non-market valuation is concerned with ‘use’ values, there are also ‘non-use’ values such as existence value, option value and quasi-option value<sup>11</sup>.</p> <p>The major economic approaches to measuring the value of environmental goods developed over the last 70+ years all use indirect or inferential pricing methods. Economic non-market valuation approaches are based on estimates of consumer preferences, using either expressed preferences or the preferences stated by individuals when directly asked to value an environmental or health good within a hypothetical market setting, or revealed preferences.</p> <p>The method of expressed preferences involves questioning individuals directly using questionnaires to construct the hypothetical market and to provide the basis for eliciting individuals’ willingness to pay. The information obtained is an individual estimate and requires aggregation in order to obtain societal estimates.</p> <p>The method of revealed preferences uses available statistics of behaviour (‘revealed’ through actual choices made by individuals in the marketplace) to infer underlying preferences. The method of implied preferences looks at societal institutions as a means of reflecting current values, while the method of natural standards uses geological time rather than historical time as a determinant of acceptable risk.</p> <p>The key techniques for expressed preferences are contingent valuation and contingent ranking/conjoint analysis.</p> <p>The key techniques for revealed preferences include random utility/discrete choice models; averting behaviour; hedonic pricing; and the travel cost method.</p> <p>The key non-market tools that have been used in tourism research (in New Zealand) are contingent valuation and travel cost method (see also hedonic pricing and option value – contingent ranking is another approach that has not been addressed). Choice modelling is a new tool that is being developed and applied in Australia.</p> <p>Multipliers derived from input-output analysis are also used to estimate the secondary effects of tourism activities and developments. These can be used to predict the flow-on effects of these activities on employment and economic activity.</p> <p>The relevant tools and key references (see Bibliography) are –</p> <ul style="list-style-type: none"> <li>▪ Contingent valuation (Carson <i>et al.</i>, 1994; Fahy and Kerr, 1991; Kerr, 1986; Mitchell <i>et al.</i> 1989)</li> <li>▪ Travel cost method (Kerr, 1985; Kerr <i>et al.</i> 1986)</li> <li>▪ Hedonic pricing (Bateman, 1995)</li> <li>▪ Choice modelling (Bennett <i>et al.</i>, 2001)</li> <li>▪ Cost-benefit analysis (Mishan, 1971; Pearce, 1971; Bateman, 1995)</li> <li>▪ Input-output analysis and Economic multipliers (Butcher, 1985; Clough 1993; Duncan <i>et al.</i>, 1992; Gough and Ball, 1995; Hubbard and Brown, 1981)</li> </ul> |

<sup>10</sup> Economic tools have been discussed in more detail than the other tools because they have not been covered separately in the text.

<sup>11</sup> Economists sometimes refer to these non-use or passive use values as ‘intrinsic’, however, many biologists and ethical philosophers would argue that ‘real’ intrinsic value is not based on any measure of human preference.

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|     | <p>In New Zealand non-market valuation (using contingent valuation and travel cost method) has been used to value</p> <ul style="list-style-type: none"> <li>▪ Public lands (National Parks and DOC managed areas)</li> <li>▪ Recreational areas</li> <li>▪ Specific ecosystems</li> <li>▪ Forests</li> <li>▪ Rivers</li> <li>▪ Roothing.</li> </ul>   |
| E.2 | <p><b>Cost-benefit analysis</b></p> <p>Cost benefit analysis is a decision making tool used to compare options such as different activities or alternative uses of a resource.</p> <p>The process of cost-benefit analysis consists of estimating all the costs and all the benefits associated with the project and activity using a common metric, usually over the time frame of the project. Different parameters are then calculated including benefit/cost ratios, net benefit, and net present value. In most cases a discount rate is used to bring benefits and costs incurred/received in later years to a present day value. Where a common metric cannot be used (i.e. some benefits and costs cannot be given an imputed value), then those benefits and costs that cannot be measured are treated separately.</p> <p>Cost benefit analysis (CBA) is generally looked at from the national perspective (use of 'social') – individual cost-benefit analyses are called financial cost benefit analysis (i.e. social replaced by individual).</p> <p>Cost benefit analyses are divided into –</p> <ul style="list-style-type: none"> <li>▪ Economic cost-benefit analyses</li> <li>▪ Social cost-benefit analyses.</li> </ul> <p>Economic cost benefit analyses are traditional CBA, whereas social CBA incorporates trade efficiency and distributional issues of time (consumption and investment) and income.</p> <p>The aim of cost benefit analysis (CBA) is to compare the costs (disadvantages) and benefits (advantages) of a proposal, either as a means of comparing different options (projects), or as a means of deciding whether it makes economic sense to proceed (comparison against the status quo). This type of comparison is readily performed when all costs and benefits can be quantified in dollars, but this is usually not the case when viewing a project from a societal perspective. Because costs and benefits typically occur over different time frames, a 'discounting' routine is used to express all values at the same 'point in time', usually the starting point of the activity.</p> <p>Social cost benefit analyses also commonly include consideration of intangible costs and benefits (using non-market valuation techniques).</p> <p>It is particularly difficult to get the perspective right when undertaking CBA for tourism projects because of the equity issues - typically visitors and tourism operators' gain and we (New Zealanders) pay. Transit found this when they did a lot of cost-benefit work on sealing tourist visitor roads – hard to draw lines on beneficiaries, and generally the benefits don't come to New Zealand. In terms of tourism in general we have environmental degradation as a <b>cost</b> to New Zealand and a <b>benefit</b> to overseas tourism operators.</p> <p>However, cost-benefit analysis is good for eliminating projects using the simple rule that if there is no net benefit, then the project should not proceed. If there is a net benefit then the situation becomes more complex and the distribution of the costs and benefits must be addressed. Regional aspects may also need to be considered. For example, consider the proposed Hollyford Road where benefits would accrue to the West Coast and Milford and the costs would fall on Queenstown. In these circumstances CBA should concentrate on new benefits.</p> <p>Identified problems (in New Zealand practice) include:</p> <ul style="list-style-type: none"> <li>▪ Small sample sizes and simplified data collection jeopardising the quality of the results</li> <li>▪ No reporting of confidence intervals</li> </ul> |

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|     | <ul style="list-style-type: none"> <li>▪ Invalid comparisons (between small and large areas etc)</li> <li>▪ Inadequate sensitivity analysis</li> <li>▪ Poor response rates</li> <li>▪ Naïve statistical analyses</li> <li>▪ 'Formula' approaches with little understanding of the theoretical foundations.</li> </ul> <p>What is required is:</p> <ul style="list-style-type: none"> <li>▪ More careful clarification of the objectives of the 'project', leading to better alignment of objectives of the 'client' and abilities of the 'model' or technique</li> <li>▪ Better application (general flaw is lack of best practice application), and more realistic discussion of assumptions</li> <li>▪ Exploration of new approaches.</li> </ul>   |
| E.3 | <p><b>Regional analysis</b></p> <p>The tools used in regional economics include the development of input-output tables and multipliers. Cost-benefit analysis is also used in regional analysis. One of the classical difficulties encountered in regional economics is that of defining the region, because of the unavoidable leakage or over-boundary effects that will not be able to be fully accounted for.</p> <p>Economic activity has direct and indirect effects (sometimes also called primary and secondary effects). Demand for any one product has repercussions beyond that industry as it draws in inputs from other sectors. For example, if a visitor spends \$25 on a meal then that revenue will become income for those who supply the restaurant with inputs. This may include staff, food suppliers, landlords and so on. These businesses or individuals will in turn spend a proportion of their income on inputs from other businesses. When assessing economic impacts these flow-on or multiplier effects need to be incorporated.</p> <p>There are a number of different tools available to regional analysts for assessing these indirect effects. The most common of these are input-output analysis, multiplier analysis and mathematical programming. These tools require considerable quantities of high quality data that may be difficult and expensive to obtain.</p> <p>Input-output analysis is “the study and empirical measurement of the structural inter-relationships between production sectors within an economy” – at a national or regional economy level. The analysis looks at the product of each industry (a) as a commodity demanded for final consumption and (b) as a factor in the production of itself and other goods. The process consists of constructing an input-output table where the rows describe how one industry's total product is divided among various production processes and final consumption, and the columns denotes the combination of productive resources used within an industry. Input–output tables can be constructed for whole economies or for segments within economies. They are useful in planning the production levels in various industries necessary to meet given consumption goals and in analysing the effects throughout the economy of changes in certain components. They have been most widely used in planned economies and in developing countries. Deriving an I-O table requires large amounts of (survey) data, and because of the complexity in calculating them there is often a significant lag time. As they represent a 'snapshot' in time, significant changes may not be picked up.</p> <p>Regional I-O tables can either be calculated using survey data or by adjusting national I-O tables.</p> <p>Multipliers are calculated from I-O tables. Three types of multipliers can be calculated: output, income and employment multipliers. Output multipliers account for changes in output resulting from a unit increase in final demand. Income multipliers are concerned with the increased input from households required to fulfil an increase in input. Employment multipliers are derived by calculating the employment coefficient for each industry. These represent the number of people directly employed per dollar of output. These coefficients are used to calculate employment multipliers in the same way as income multipliers.</p> <p>One of the main limitations in deriving regional multipliers is the need to calculate regional input-output tables which require large amounts of survey data. In recent years, however, approximations using non-survey approaches and involving modification of national input-output tables have been developed. This has proved one way of getting good comparative information whilst minimising the amount of direct data collection required. Regional input-output tables suffer from all the limitations of national input-output tables as well as the fact the inter-regional trade</p> |

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|     | <p>coefficients may be even more unstable than inter-industry coefficients. However, their advantages, in terms of their ability to explain differences, outweigh the disadvantages and they provide the most commonly used tool for regional analysis. Hubbard and Brown (1981) described the first New Zealand application of this technique using the GRIT methodology (Generation of Regional Input-Output Tables). This was further developed and applied by Butcher (1985)<sup>12</sup>. Other studies have used this base to derive multipliers for specific purposes.</p> <p>Another issue is that regional economies where tourism exists are not simply scaled down versions of the national economy, and this means that some industries are under-represented and some over-represented. In addition 'tourism' does not appear as a discrete sector in the I-O table data and a lot of assumptions need to be made to get regional multipliers. This means that the calculated multipliers may not be very reliable.</p> <p>There are two further points to remember about using multipliers:</p> <p>Firstly, multipliers are concerned with changes at the margin (rather than average increase/decrease) – this is important, since other techniques such as travel cost method, don't look at the margin. On the other hand, in our case we are dealing with the <b>current</b> impacts not changes. If we looking the effects of taking away conservation land or increasing conservation land this point about marginal changes is relevant but not in the case where we are estimating the benefits of current circumstances.</p> <p>Secondly, multipliers calculated from input-output tables are concerned with <i>backward</i> linkages. Backward linkages only assess the impacts on demand for inputs, not outputs. In other words, the effect of further processing is not included. For example, amongst the backward linkages for dairy factories would be the milk produced by dairy farmers. But it would not include benefits to wholesalers or retailers who sell dairy products as these are forward linkages. Typically, multipliers for primary producers, such as farmers, are low because they have very few backward linkages. Butcher (1985) describes a process for calculating <i>forward</i> linkages where these are required.</p> <p>Multipliers have been used in the tourism sector in New Zealand – see Kerr <i>et al.</i> (1986) (Mt Cook), Kerr <i>et al.</i> (1990) (Fiordland), Lim (1989), Gough and Ball (1995) (West Coast).</p> <p>The NZTIA newsletter recently (March, April 2002) reported on an Economic Impact Report for Mt Ruapehu that stated that "the economic multiplier for ski visitors is 0.42 - for every \$1 spent on the mountain another 42 cents is spent in the community. The multiplier for Tourism overall is 1.75 (i.e. for every dollar spent directly on Tourism, \$1.75 is spent in the community)". We assume that the ski multiplier is in fact 1.42 (not 0.42) - this is an example of an 'output' multiplier.</p> <p>Multipliers are often used to predict employment expected to result from capital investment in a project – often employment predictions are given without much caveat or indication of how they have been derived, and as noted previously there is very little follow up to see how close the 'actual' is to the predicted.</p> <p>While multipliers are useful, there have not been enough studies in New Zealand comparing predicted numbers and actual numbers to demonstrate their reliability as a predictive tool. What is known is that in most cases actual employment is less than predicted. These differences can usually be explained in economic terms because of 'leakage', substitution and other effects. Therefore, while they are useful, they are only an indication.</p> |
| E.4 | <p><b><i>Economic Instruments (grouped)</i></b></p> <p>Economic instruments are tools that are used to control the numbers of individuals (or groups) that are considered to be 'consumers' (in this instance of tourism goods), by modifying the costs that they face for their activities.</p> <p>Effectively economic instruments are devices used to modify the market price of a commodity.</p> <p>Types of mechanisms are:</p> <ul style="list-style-type: none"> <li>▪ User charges, taxes and other pricing mechanisms</li> <li>▪ Contingent user costs</li> </ul>   |

<sup>12</sup> Geoff Butcher regularly updates the regional multipliers, which are made available on contract.

- Tradable permits and entitlements
- Subsidies
- Regulation
- Other policy instruments (including queuing, rationing, fixed quotas).

Technically the term “economic instrument” is only used in relation to the first three.

### ***Prices and user charges***

The purpose of prices and user charges is to raise revenue to ensure viability of service supply, and signal to users the full costs their use imposes. This also has the effect of rationing use since prices and user charges impact on users in proportion to the use they make of the resource. By bringing the collection of funds closer to the point at which services are provided, prices also indicate where revenues will be needed to meet future demand increases.

Economists would say that if the price is too low then use occurs such that the value to the user is less than the full costs on the resource and leads to overuse, but having the resource over-priced and under-used is also inefficient, even if it results in suppliers being highly profitable. Use becomes excessive at the point where an additional user creates an unacceptably adverse impact, either on the natural condition of the resource or on the experience of other users. Prices and charges do give an incentive to reduce use and allow users who value the resource the most to use it the most. With tourism that impacts on the natural environment it is very difficult to determine what the price should be, and prices are sometimes used to ‘ration’ scarce resources.

Visitors to the public estate base their use decisions on the private costs of use, including the expenditures of time, effort and money required to reach the area, but the full social costs of their use include a range of "externality effects" which are not felt directly by the users who create them. These include:

- Effects on the physical condition of the natural environment, such as trampling of natural vegetation
- Use-related wear and tear on the physical fabric of facilities
- Effects on the experience of other users, most notably manifested in congestion of facilities like car parks or accommodation, but also in the less tangible devaluation of wilderness by encroachments by non-traditional activities
- Sundry effects on the supplying agency, such as the cost of mounting searches and rescues when visitor groups go astray.

Any of these pricing techniques may be supplemented by other measures such as fixed itinerary permits (c.f. Great Walk hut booking systems) and restrictions on free-riding activities. However, some of these other measures lack flexibility and restrict use unnecessarily. For example, Milford Track "freedom walkers" are tied to fixed itineraries: users book in advance to walk on a specific set of days. There is no provision for them to extend their time on the track to take advantage of the weather, even if there is spare capacity at the huts.

Alternative rationing devices to pricing include restricting use by such non-monetary means as bans and use quotas, allocation by queue, by lottery or by imposing physical hurdles for users to overcome. They are less efficient than a well-designed pricing structure since they may all result in use being denied to those whose willingness-to-pay is highest.

### ***Taxes***

Taxes can be regarded as economic instruments when they act like a price supplement for goods and services, "correcting" prices for effects not handled by the market (e.g. pollution) by making individuals' tax payments bear some relation to the level of effect they create. A similar instrument in tourism is a levy on users, such as one applied recently to boat services at Milford Sound to fund an upgrade of common wharf and coach park facilities.

Other forms of specific tax used or proposed for tourism funding include bed-night taxes (as in some European countries) or levies on activity-related equipment sales (e.g. camping gear). These are not strictly economic instruments, but are similar.

Taxing arrivals in New Zealand and diverting revenues to projects on conservation lands is not an economic instrument, since it would have no effect on visitors' use of specific facilities or areas. Although relatively easy to administer it would not be efficient, since it would result in those arrivals that do not visit conservation lands (e.g. business travellers) subsidising those who do. Neither would it provide any guide to where the funds collected should be spent, whereas revenues from user charge or site-specific taxes gauge directly the strength of demand for different facilities and locations.

Note that income tax paid by visitor operators is not an economic instrument, and can have an undesired effect because it doesn't give any price signals and provides incentive for operators to minimise their tax liability.

### ***Contingent user costs***

Contingent costs include penalties and compliance fees, returnable deposits, bonds, and fines. They can be useful for modifying behaviour and are applicable to both concession operations and individual members of the public. However, the penalty needs to be sufficiently high to act as a deterrent as at times large organisations may deliberately infringe their permits knowing that the penalty (fine) is comparatively low. It is also important that there is a good monitoring and detection system in place.

Raising the fine but lowering detection activity can have the same effect as raising detection activity holding the fine constant, but the latter is likely to entail considerably more administration costs for the enforcement agency. However, setting a fine so high that most people could not pay it can reduce its effectiveness, and it may be deemed inequitable.

### ***Tradable permits and property rights***

Tradable permits give access to a resource that can be exchanged between resource users. The most common example in New Zealand is the fisheries quota system. The system creates a property right and requires the establishment of a market. Economists are interested in ways of separating these types of entitlements from freehold interests.

Concession licences are a form of property right since they confer entitlements to, and associated constraints on, use of resources. 'Right of foot' access to national parks for members of the public is also a form of property right. Such entitlements are not synonymous with any single legal instrument nor do they imply privatisation.

Property rights mould expectations of how resources can be used, what income can be derived from them, and hence how valuable or worthwhile is any investment in them. Most of the advantages claimed for freehold private ownership are also available from lesser tenures, such as leasehold and licenses, provided the rights are adequately defined. The critical features of property rights for efficiency purposes are therefore:

- Clarity of rights and obligations conferred
- Sufficiency of duration to allow return on investments
- Transferability, which refers to the ease with which right holders can quit the business, die ability to realise the value of any improvements on its sale and hence the incentive to maintain or enhance the entitlement
- Exclusivity, which refers to the right holder's ability to exclude others from exercising the particular right, rather than implying sole occupancy to conservation lands. For instance, the exclusivity of rights to use a building (e.g. a hut, or bird hide) depends on there being keys to the door, not on the presence or absence of other buildings nearby.

With respect to concessions over conservation land, it is important not to confuse exercising exclusivity over facilities and services provided with sole use rights over the resource itself. The ability to exclude non-payers from specific facilities is a fundamental requirement of commercial operations, and where this is not possible - as in the case of very dispersed use - either facilities are provided as public goods or they are not provided at all.

### ***Subsidies***

Subsidies give recipients financial incentive to change behaviour, but unless they are carefully applied (and constantly monitored), they can be inefficient. They are not particularly relevant in this context.

|     | <b>Participatory approaches</b>  |
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| E.5 | <p><b><i>Interactive participation</i></b></p> <p>Interactive participation planning processes involve stakeholders in joint analysis, development of action plans, and strengthening of local institutions. Groups take control of local decisions and determine how available resources are used.</p> <p>Interactive planning processes can be used to generate two different kinds of plans: those associated with developing an overall vision, and the underlying principles which informs day to day decision making; and those associated with the management of operational concerns, whereby a plan of action is produced in line with the overall vision and principles.</p> <p>Particular tools used in the development of overall vision include Shared Decision Making (SDM) and Interest Based Negotiation (IBN) these have recently been used in large scale, multi sectorial planning situations (i.e. where tourism, environmental, economic, social, agricultural, and local government interests are involved). However, the same processes could be used in a smaller scale environment, using Charrettes and/or focus groups.</p> <p>Aspects of Alternative Dispute Resolution processes are woven through both of these approaches.</p> <p>Some issues associated with SDM and IBN include:</p> <ul style="list-style-type: none"> <li>▪ Despite the rhetoric of shared power, these processes are prone to be captured by more powerful stakeholders who use the planning process to consolidate their own positions. Effective conflict management and dispute resolution is necessary to ensure that the outcome represents the interests of most stakeholders in an adequate fashion.</li> <li>▪ Stakeholders are required to have significant capacity to process large amounts of information. Many may not have the time or skills to do so. Participation in SDM and IBN is also very time consuming.</li> <li>▪ Unless the plan is consolidated through a set of institutionalised procedures and responsibilities, the plan may not be operationalised. Changes in the external environment (such as a downturn in the economy) may also lead to the collapse of collaborative agreements, and stakeholders retreating to earlier positions.</li> </ul> <p>Processes that concentrate on the management of operational concerns are directed toward developing a plan of action is produced in line with the overall vision and principles. Timelines, tasks, outcomes, outputs, and risks are identified, and responsibilities are then assigned. This creates a means by which stakeholders are held accountable, and progress is monitored. Participatory planning processes which could be used to generate this kind of plan include:</p> <ul style="list-style-type: none"> <li>▪ Concept Pyramid Process</li> <li>▪ Objective Oriented Project Planning (log frames and planning matrix)</li> <li>▪ Evolutionary Tourism Partnership.</li> </ul> <p>It is possible that a circular process will be generated between the creation of the 'visioning' plan, and the 'operational' plan, as issues will be raised in one plan that will affect the other. In addition, creating a separate visioning plan and an operational plan may not be appropriate.</p> |
| E.6 | <p><b><i>Charrettes</i></b></p> <p>A Charrette is an intensive planning session usually held at the community level. A small group of participants spend a series of meetings, often over the course of several days, to discuss a particular problem or set of problems and develop strategies or plans in response. Participants usually try to achieve a level of consensus or agreement about the actions required.</p> <p>The method provides an opportunity for accelerated processes of problem analysis, strategising and putting together an action plan. The method allows in-depth discussion and the development of relationships amongst participants. It appears to have been used successfully in a marae context (Waitomo).</p> <p>Importantly, the technique, which has unstated similarities to aspects of soft-systems methodologies and other facilitated works happening, requires skilled facilitators.</p> <p>Many community planning exercises are superficial or highly legalistic or based on formal submissions processes. Also, there tends to be a predominance of technical involvement, with</p>  |

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|   | <p>local people standing aside in favour of technical views compared to local knowledge. The use of Charrettes, which attempts to be more inclusive of all views, has been pioneered in New Zealand by Lucas Associates as an approach to planning local areas such as town centres. Places where the technique has been used include Waitomo, Arrowtown, Reefton and areas of Christchurch. More lately it appears to have been used as well by Boffa Miskell in Fort Takapuna, Takapuna Head, as a “one day collaborative workshop” or visioning exercise. “The result was a clear vision statement... along with a number of principles and a series of actions plans to achieve the vision”. However, community members still felt left out of the process.</p> <p>RMA processes do not appear to be meeting the needs of host communities, with proposed developments far outside the dimensions of change envisaged through community processes such as community visioning or even expectations of the approved district plan (e.g. Marahau). From the tourism perspective, integrated planning for localities or small host communities can potentially be based around in-depth discussion and detailed analysis of issues.</p>   |
| <b>Leisure and recreation theory and management</b> |  |
| E.7   | <p><b>Limits of Acceptable Change (LAC)</b></p> <p>Limits of acceptable change (LAC) (Stankey <i>et al.</i> 1985; McCool <i>et al.</i> 1997) are an extension to the concept of ‘carrying capacity’ applied to outdoor recreation use and management. This framework initially focuses on the amount of use that an area can carry. There has been some shift in this concept more towards the idea of the acceptable or desired conditions of an area. Here it seems these conditions can be defined in both a bio-physical sense and also a social sense.</p> <p>The LAC planning approach has four components:</p> <ul style="list-style-type: none"> <li>▪ the specification of acceptable and achievable resource and social conditions, defined by a series of measurable parameters</li> <li>▪ an analysis of the relationship between existing conditions and those judged acceptable</li> <li>▪ identification of management actions necessary to achieve these conditions and</li> <li>▪ a program of monitoring and evaluation of management effectiveness.</li> </ul> <p>The four components are then expanded into nine distinct steps. For some protected area management agencies, these steps closely follow existing planning processes, while for others the LAC system may represent a significant departure. What is important is that planners understand the rationale for each step and its sequence in the overall process. By clearly understanding the rationale, the steps (list below) can be modified as needed.</p> <ol style="list-style-type: none"> <li>1. Identify area special values, issues, and concerns</li> <li>2. Identify and describe recreation opportunity classes or zones</li> <li>3. Select indicators of resource and social conditions</li> <li>4. Inventory existing resource and social conditions</li> <li>5. Specify standards for resource and social conditions in each opportunity class</li> <li>6. Identify alternative opportunity class allocations</li> <li>7. Identify management actions for each alternative</li> <li>8. Evaluation and selection of a preferred alternative</li> <li>9. Implement actions and monitor conditions</li> </ol> <p>The LAC approach was developed for wilderness recreation planning in the United States, and since its first use (in the Bob Marshall Wilderness area in Montana) it has formed the basis for nearly all protected area management planning in the United States Forest Service. It has spawned a number of variations. While the technique has not been used explicitly in New Zealand, there is evidence that it has provided input to the conceptual foundation to the DOC Visitor Asset Management Program (VAMP).</p> |
| E.8   | <p><b>Recreational Opportunity Spectrum (ROS)</b></p> <p>The recreation opportunities spectrum (ROS) is usually applied in conjunction with the limits of acceptable change (LAC) theory. It is a procedure for gathering and classifying information for the purposes of long-term planning of recreational use against the natural resource base available and according to types of visitors and visitor experiences and needs. The principle of ROS is that</p>  |

there is a diversity of resources and therefore recreational opportunities on public lands that can meet and satisfy a wide range of demands from recreation. This concept therefore clearly builds on the parallel concepts of recreational specialisation and resource substitution. The approach usually applies a number of criteria incorporating biological, physical, social, and management parameters to classify resources and recreational opportunities. A variety of recreational opportunities spectrum management systems appear to have evolved including those applied in New Zealand. DOC uses ROS widely as a tool for identifying visitor management needs and approaches.

ROS is a mapping technique which provides an inventory of the supply of outdoor recreation opportunities, and where they can be found. Opportunities are categorised into a continuum which can be defined in terms of the experiences that the visitor should gain in the particular area. This continuum includes urban, urban fringe, rural, back-county, remote, and wilderness opportunities. Factors which are used to determine each ROS opportunity include type of activity (e.g. fishing or tramping), type of setting (physical, social and managerial), or type of experience (e.g. escape, meet new people, or risk taking).

Once an area is categorised as a particular recreational type, the type is used as a benchmark to determine management decisions. For example, certain characteristics within an area which is not appropriate for a wilderness recreational experience are removed. Responsibility for and control of the supply is visible when assessed against land tenure. The ROS can indicate levels of actual use or be used as a reference against which use can be measured, and it allows managers to consider different scenarios proposed, and to assess recreation alongside species distribution or protected areas.

Mapping of the different ROS in an area is achieved by overlaying the physical, social and managerial characteristics of the setting. This is usually done by laying transparencies of each over a topographical map, or by computer (GIS). Local knowledge can be added to these overlays to verify results.

In New Zealand ROS was used by DOC in the early 90s, and now that DOC's emphasis is shifting away from Asset Management, it is being revisited. DOC is currently looking at mapping areas that will include front and back country, carrying capacity, wilderness areas, areas of cultural significance, geographical features, and amenities.

A whole range of different types of data could be collected to transform ROS into a more effective planning tool, including:

- Significant sites of economic production
- Potential areas of conflict between conservation/production
- A more thorough inventory of existing infrastructure, who uses it, and when it is used
- Individual vs. collective ownership
- Waahi tapu
- Host communities
  - How area is used for economic/production purposes
  - Recreational use of the area by host communities
  - Areas of special significance to host communities
- Areas of heavy concentration of current use by visitors (visitor carrying capacity)
- Cross sectorial/regional/institutional issues – who is responsible for what in each area? This would also assist different groups in being aware of whom they need to approach concerning different issues
- Legislative/regulatory obligations – identify overlaps, 'holes' where nobody is responsible for something
- Identification of areas which requires expenditure, and issues surrounding who should carry the costs
- Identification of areas which will require monitoring for accumulated impact from incremental change
- Areas of conflict between different groups
- Densities of concessions
- Cultural differences

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|                                 | <p>The ROS process is very dependant on who determines the recreation opportunities and in its present form is simply an information gathering tool. While it provides information to the decision process, it is not a decision process. There can be a tendency for the mapping process to become the end rather than the means. While ROS assists in identifying areas of conflict, it does not necessarily provide any means through which conflict can be resolved.</p>   |
| E.9                             | <p><b>Visitor Impact Management (VIM)</b></p> <p>Visitor impact management (VIM) focuses on impact assessment and management and therefore links very much to the standard processes of EIA and SIA. The focus is on "measurement" of impacts. A number of management strategies could of course be applied. Some mentioned include management of overcrowding, controls on accommodation, incremental growth strategies, various environmental controls, traffic management and targeted visitor marketing (Bosselman 1999).</p> <p>VIM can be viewed as a variation of the LAC approach. There are several reported variations and links to the Canadian Visitor Activities Management Programme (VAMP) and the DOC Visitor Asset Management Programme.</p>  |
| <b>Legal and planning tools</b> |  |
| E.10                            | <p><b>Tourism strategies</b></p> <p>A review of tourism strategies published in New Zealand from the mid 1990s onwards indicates that there appears to be no 'standard' approach used by the authors of the strategies. This is perhaps appropriate, given the geographic, social and economic differences between regions.</p> <p>These differences include:</p> <ul style="list-style-type: none"> <li>▪ the size of the region (e.g. Stewart Island compared to Southern Lakes District);</li> <li>▪ the current level of development and significance of the tourism industry (e.g. Stewart Island compared to Southern Lakes District);</li> <li>▪ the nature of tourism areas and products (e.g. Southern Lakes District compared to Coromandel or Bay of Islands);</li> <li>▪ Information base available;</li> <li>▪ the current status of infrastructure; and</li> <li>▪ the number and range of stakeholders.</li> </ul> <p>In general, very little information is provided about how the plans were developed, or the literature used to develop the plan. Despite these differences and shortcomings, such plans do hold some common elements, both in the methods by which the plans were developed, and in the attention paid to particular contextual elements. These are listed below. It must be noted that the emphasis of these plans tends to focus on economic development of a region through the development of the tourism industry. In addition, none of these plans address all the contextual elements identified as significant by the working group for this project.</p> <p>The following describes both the methods used to determine the strategy, and the overall process.</p> <ol style="list-style-type: none"> <li>1. <u>Establish a Steering/Management Group</u><br/>Usually some kind of group which consists of representatives from a range of 'high level' key players, usually from RTOs, businesses from the tourism industry, tangata whenua, territorial authorities, and DOC. This steering group advises the planners by identifying and discussing issues to be investigated. It also reviews draft plans on an ongoing basis, and authorises the final plan etc. Probably used for networking as well.</li> <li>2. <u>Consultation – initial scoping</u><br/>Typical approaches might be telephone interviews, public meetings (individuals with particular interests or responsibilities, community members, community organisations, tourism providers), and focus groups.</li> </ol> <p>The purpose of the scoping is to determine community aspirations, fears, what kind of tourism and which kinds of visitors were preferred in the area etc. In many instances, these may be integrated into an overall framework of high level objectives, to be used as a bench mark against which the plan is tested against, and decisions made. They may also used to identify key issues in terms of infrastructure, funding etc.</p> |

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|      | <p>3. <u>Consider Contextual Issues by Reviewing Secondary Data</u><br/>Contextual issues include geography, climate, history, and infrastructure. Other contextual material required would include information about local communities, visitors (trends, characteristics, market segmentation etc), tourism products, accommodation, the importance of tourism to the economy, and current marketing positioning and strategies.</p> <p>4. <u>Consider Contextual Issues by Conducting Research</u></p> <ul style="list-style-type: none"> <li>▪ Information about visitors: characteristics, market segmentation. Questionnaires, interviews, use of photos</li> <li>▪ Importance of tourism to the economy - multiplier effects, mail out questionnaires for business</li> <li>▪ Information about local communities – telephone interviews, key informant interviews, participant observation</li> <li>▪ Information about Maori – key informant interviews, focus groups, surveys.</li> <li>▪ Information about local government – surveys, interviews.</li> </ul> <p>5. <u>Contextual Issues - general</u></p> <ul style="list-style-type: none"> <li>▪ Identify partnerships/relationships that need to be developed in tourism industry and between different players such as territorial authorities etc.</li> <li>▪ Identify potential tourism products</li> <li>▪ Discuss professionalism and service standards, and need for training</li> <li>▪ Undertake SWOT analysis.</li> </ul> <p>6. <u>Outline Implementation and Recommendations</u><br/>This part of the strategy differs in specificity according to the issue. Recommendations most commonly focus on issues such as:</p> <ul style="list-style-type: none"> <li>▪ Coordination of tourism industry – partnerships and relationships to be developed</li> <li>▪ Professionalism and Service Standards</li> <li>▪ Product Development (especially NZTB)</li> <li>▪ Infrastructure (Airports, roads, signage, accommodation, sewage and waste, visitor and information services</li> <li>▪ Marketing, or ‘positioning’ (International and Domestic).</li> </ul> <p>Recommendations are often coupled with specific prioritised ‘action plan steps’.</p> <p>At the end of the process a Draft Plan is released and reviewed. This plan is made available for review to community members, tourism operators, and other parties. This can take the form of public meetings. Responses can also be in the form of written submissions. The Plan is then modified if necessary, finalised, and authorised and released by Steering Group. In most of the plans, it is noted that there is no statutory obligation etc enforcing the plan. The responsibility for carrying out different aspects of the plan is placed on key players in the tourism industry.</p> |
| E.11 | <p><b><i>Environmental regional planning</i></b></p> <p>The aims of environmental regional planning as applied to tourism are:</p> <ul style="list-style-type: none"> <li>▪ to advance environmentally compatible sustainable tourism through the identification of ‘significant features’, ‘critical areas’ and ‘compatible activities’, and</li> <li>▪ to promote tourism development associated recreational activities that are compatible with the environment</li> </ul> <p>The Environmentally Based Tourism Planning Model trialled in Western Australia between 1989 and 1992 (Dowling 1992b; 1993a,b) has five key stages:</p> <ol style="list-style-type: none"> <li>1. <u>Statement of objectives</u> – situational analysis, carried out through literature review, discussions with government, regulators, and local managers, and discussions with residents and visitors. It also includes a brief review of study area and regional issues – then review of specific areas of outstanding environmental significance, natural areas considered compatible with tourism activities, specific areas for intensive tourism etc.</li> </ol>   |

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|      | <ol style="list-style-type: none"> <li>2. <u>Survey and assessment</u> - identification and description of the significant environmental attributes and tourism resources in the region in terms of structure and function–use scale of significance - develop a map of significant environmental attributes and significant tourism resources.</li> <li>3. <u>Evaluation</u> – an overlay of the tourism map over the environmental attribute map to find spatial relationships e.g. areas that are solely environmentally significant, solely tourism significant, and ‘critical areas’ where the two areas coincide.</li> <li>4. <u>Synthesis</u> – matching of the significant features, critical areas and compatible activities with various zones defined in goal formulation phase. A map is produced which indicates allocation of regional environment units to each various zoning class.</li> <li>5. <u>Proposals</u> – preparation of a plan for consideration as part of the overall regional planning framework.</li> </ol> <p>The objectives for this approach are not arbitrarily fixed, however, planning zones are defined and designed to protect conservation values while fostering tourism development and activities.</p> <p>Features of the approach are:</p> <ul style="list-style-type: none"> <li>▪ <u>Spatial</u> – the approach incorporates land use zonings, and spatial relationships between environmentally significant areas and tourism areas. It should cover most natural areas</li> <li>▪ <u>Conservation</u> – environmental protection and conservation of environmental values underpin the EBT approach in any regional application because of intrinsic values and also because natural and social environment form the basis for any sustainable development including tourism development of region</li> <li>▪ <u>Host Community</u> – maintaining and improving lifestyle of local residents and protecting a region’s natural and cultural attributes is fundamental to any form of development</li> <li>▪ <u>Community Involvement</u> – local community should be involved because local communities should benefit from ecotourism occurring in their locality – benefits in the form of financial, employment, increased provision of services and facilities and better planning, management and operation of ecotourism. People should be involved in the development of ecotourism, protection of lifestyles and interaction with visitors.</li> </ul> |
| E.12 | <p><b>Resort planning</b></p> <p>Report planning is the purposeful planning of a specific area as a specific visitor destination, i.e. provision of transportation, accommodation, all services required for visitors and employees, and visitor activities. Now it is usually undertaken privately in developed countries, but was previously seen as a useful state activity to stimulate tourism, and this is still the case in some less developed countries. Report planning is often seen as an opportunity to avoid or mitigate adverse effects in advance, through planning and design, as well as an opportunity to plan a tourism development (from scratch) in consultation with a host community and anticipate or counter opposition to that development.</p> <p>Resort planning always incorporates an important design component – design of buildings, precincts, transport facilities, etc. Resorts are often planned in multiple stages.</p> <p>The tool is used worldwide, in many contexts. In most cases it involves a natural setting, except for resort based around a casino or a large theme – but even these may be in a natural or semi-natural setting.</p> <p>It is especially used in mountain and coastal areas, but not necessarily related to nature-based tourism because the beach may be simply an attractive feature and the resort itself and its facilities may be the main attraction. In many countries it is the dominant tourism form in mountain settings because it is focussed around skiing which is capital-intensive and has to take place at a specific site.</p> <p>Historically it is the oldest form of ‘modern’ tourism planning, for example consider old resort settlements in European and North American alps, and some Mediterranean beach resorts. Sometimes the resort may grow into significant town in its own right, e.g. Aspen. These are often ‘gateway’ towns which are seen as very attractive for people to live in permanently undertake other activities.</p>   |

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|      | <p>Typically resort planning is a very capital-intensive form of development. Nowadays this investment is usually private but may still involve public funding for a joint planning development. If the activity is based around an existing settlement then public realm of streets and open spaces may be retained by local authority. Also local authority involvement in infrastructure – some deals involve resort developers to pay costs of services which are of benefit to existing host community.</p> <p>The adverse social and environmental impacts from chain or mass resort development are well-documented and probably represent the stereotype of bad (undesirable) tourism with no benefits for host community. Resort planning often is not seen to have a vision to drive it, except profit. However, it provides opportunities for public-private cooperation in planning. In addition, resorts do not need to be huge or high-impact – in effect many New Zealand luxury lodges are small resorts. Resorts are high-yielding, and in some circumstances seen to be very desirable for New Zealand tourism. Problems have arisen in areas such as Marahau, Queenstown, and Bay of Islands, etc. which suggest that NZ planners have to be very mindful of dangers of resort development on the fringes of notable natural areas.</p> <p>Controlled resort development offers huge potential for planned development that has high economic yield but avoids negative biophysical and social impacts. At best they could be models of 'green' tourism development. Large resorts are much more difficult to get right than small ones, but they also concentrate visitor effects.</p> |
| E.13 | <p><b>Concessions systems</b></p> <p>Concessions systems can be thought of as allocation models for commercial activity in public conservation areas. A concession is a permit to undertake an activity in a particular place and over a specified time frame. DOC uses a concession system as the basis of allocation for commercial use of public conservation areas under its administration. The DOC concessions process is analogous to RMA consent process, although generally public consultation processes are generally not required. Assessment is by DOC staff. In most cases concessions are handled at the Conservancy level, with some central oversight through Standard Operating Procedures, etc. Decisions are made on a case by case basis.</p> <p>In order to assess applications, a method for identifying resource capacities (such as ROS, LAC etc) is still required. One of the issues is that defining a sustainable level of activity in particular areas is difficult and not often done. Thus, cumulative impacts from a number of activities with concessions occur.</p> <p>The current system is almost always reactive – responding to a single application. Defining sustainable levels of activity from cumulative impacts is difficult so there have been many calls for DOC to allocate the total resource in one call for concession tenders, e.g. heli viewing or marine mammal visits in one area. DOC is currently looking more closely at a more strategic way to allocate concessions (e.g. by pre-defining sustainable levels of activities).</p>   |
| E.14 | <p><b>Zoning</b></p> <p>Zoning as a tool relates to the establishment of zones within plans of different types (Newsome <i>et al.</i> 2002). Zoning is used particularly for land use planning, although it can be used to delineate a zone of influence or of special character. The precept of zoning is that it allows for incompatible uses to be separated from one another, or for compatible uses to be grouped together.</p> <p>In New Zealand zones are established in District Plans, where the basic steps for standard plan preparation are:</p> <ul style="list-style-type: none"> <li>▪ Identify issues</li> <li>▪ Establish objectives/goals and policies for implementation</li> <li>▪ Identify methods of implementation</li> <li>▪ Apply zoning, rules, guidelines etc on basis of zoning.</li> </ul> <p>The regional approach to planning is less zoning or spatially based, and more likely to concentrate on managing resources (air, water, soil, coast marine area) on a scientific basis, linked to allocation and quality.</p> <p>For managing effects of tourism in natural areas this can include:</p> <ul style="list-style-type: none"> <li>▪ <b>Interfaces:</b> Zoning of areas at natural area interfaces or at pockets within a natural area (say</li> </ul>   |

camp sites or enclave of private land (e.g. Awaroa) for management of potential adverse effects and to manage quality of gateway.

- **Structure:** At a high level zoning (e.g. Marahau) can be used to establish some (non-statutory) structure definition to the arrangement of land uses to limit adverse effects on one another, to provide for efficiencies in service provision by minimising 'spread' of development, and to establish no go areas where there are natural values that needed to be protected (e.g. coast line and interface with Abel Tasman NP). This can be undertaken with community participation to gain local knowledge and establish understanding, and community buy in before proceeding to a statutory based zoning regulation.
- **Provisions to attach:** Using the Marahau example this high level structure plan was used to develop a set of zone provisions within the Tasman Resource Management Plan to manage the implementation of the structure, TDC applied a 'tourism services zone' to this area which also applies to other locations. The zone requires a specialist set of rules and guidelines to be met and any more than minor levels of activity require resource consents to be sought to provide for scrutiny of proposal.
- **Boundaries:** Zoning large areas of natural character to recognise values and the boundaries to their extent. Large areas of natural values can be zoned for conservation purposes or for the values that are important and it recognises the point at which those boundaries cease.
- **Overlays:** Zoning layers to represent particular values – this allows for example a ridgelines and hilltops zone layer to be laid over a cultural heritage layer to be laid over a forest type zone to see correlations (say sensitive archaeological sites on ridgelines) there are and produce constraints maps for example. These zoning overlays will often be combined with other information (e.g. streams, roads, tracks) on maps.

Zoning is a flexible approach, can be adapted to any scale to further a broad range of goals. It provides a spatial basis to recognise the location specific nature of values and potential effects on them. Often zoning is combined with performance standards and can attach incentives to encourage particular land use outcomes. Zones in National Parks are common e.g. USA (Bosselman *et al.* 2000) NZ (Tongariro NP – amenity zone). The use of ROS in a recreational setting often results in a recreation zoning plan as part of a management plan.

On the negative side, zoning defines boundaries and those boundaries might be difficult to draw with any certainty. The boundaries can't reflect the gradual variation in values and tend to be relatively broad in their application. There can be cross boundary issues that are not possible to contain (for example a stream running through several zoning and the effects on its water quality from different land use allowed for by the different zones).

Zoning tends to separate out activities from one another when in fact there are some benefits to their coexistence (e.g. large residential zones with no shops where everyone has to drive to the shops in their separate zone). For natural areas the caution would be that in zoning areas as "sensitive" or having particular natural values for example might lose some of the mix of values which make it attractive (e.g. Totaranui's cultural heritage values could be lost by requiring that exotic vegetation, i.e. the poplar trees, should not be maintained).

Zoning is a relatively clumsy tool that might work well on large areas, but lacks the ability to plan with definition, like a master plan can. For sensitive areas at an interface with a natural area, or within a natural area a master plan give some certainty to land uses. Zoning does give some flexibility to land uses within certain rule limit which means it can accommodate changes in development over time.

In statutory application the RMA there is an inbuilt monitoring requirement for local authorities – they are required to monitoring the effects of activities on the environment and consent process will frequently see monitoring conditions applied. The issue is with enforcing and resourcing monitoring.

Zoning plus standards amounts to a growth limitation (carrying capacity a technique for establishing standards for zoning). This approach needs continual monitoring and may also need to be linked to marketing.

**Integrated management approaches**

E.15 *Integrated monitoring, including indicators*

Tourism management requires monitoring to provide information on:

- links between tourism (visitor) activities and the natural and cultural environment and
- Impacts of tourism (visitors) on the environment.

There are several types of monitoring recognised, differing in purpose and frequency (e.g. one-off survey compared with surveillance and systematic monitoring, Ward and Beanland, 1994).

Most monitoring is site-specific, which enables a focus on key areas (hot spots). This is the approach recommended by WTO and is compatible with the approach used by DOC to manage impacts and assets at key sites. However, indicators can be either site-specific, or issue or activity specific.

Baseline monitoring information is usually numbers, types and behaviours of visitors, but beyond this there are endless possible types of monitoring parameters. A few key examples used in NZ:

Ecological:            Damage to tracks (soil compaction), plants, etc.

Erosion

Damage to wildlife: breeding success

Behavioural

Water quality

Air pollution

Social:                Number of people heard or seen

Visitor satisfaction

Economic:            Employment levels and characteristics

### **Environmental Indicators**

To be meaningful and provide consistent information monitoring information needs to be gathered in the form of environmental indicators, defined in the MfE Environmental Reporting Programme as: "environmental indicators which are monitored regularly to show trends or sudden changes in an environmental condition."

Characteristics of key environmental indicators for tourism (adapted from Ward and Beanland 1994, p21-2 and Newsome *et al.* 2002 based on Stankey *et al.* 1985) are the following:

- Indicators should be capable of being measured in a cost-effective ways at acceptable levels of accuracy
- The condition of the indicator should reflect some relationship to the amount and type of use occurring, in a scientifically defensible way
- Indicators should be capable of identifying real changes in environmental conditions (quantity and quality, in space and time) and if possible the causes of these changes
- Social indicators should be related to user concerns
- The condition of the indicator must be responsive to management control, and in time for management action to prevent irreversible change
- Indicators should be understandable to the general public and decision-makers.

Indicators with these characteristics are fundamental to the use of several of the integrated management approaches used currently, notably LAC.

The WTO initiated a process of tourism indicator development in the 1990s to help tourism managers identify which information was key to their decisions, and would help them to reduce the risks to their enterprise and to the communities and environments they used. The indicators were to encompass:

- Environmental factors and sensitivities
- Measure of human actions which stress the environment
- Measures of results of human impact
- Measures of the human and biological consequences of these impacts.

They developed a set of 11 core indicators, as well as a further series of site-specific indicators for tourism destinations in different environmental zones. These are intended to provide essential

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|      | <p>information that responds to the key risks that tourism managers must manage. The WTO approach has been to:</p> <ul style="list-style-type: none"> <li>▪ Identify a small core set of indicators which is likely to be useful in almost any situation</li> <li>▪ To supplement these with additional indicators known to be useful in particular ecosystems of types of destinations, and</li> <li>▪ To additionally require a scanning process for risks not covered by the above indicator sets, which produces further indicators critical to the management of particular sites and destinations.</li> </ul> <p>Focussing on impacts to communities and environments is the first step to integrated monitoring. DOC's monitoring focuses on the biophysical environment (as well as visitor satisfaction, see below). But these two monitoring strands don't appear to be linked.</p> <p><i>Visitor satisfaction surveys</i> are a specific form of monitoring. DOC has a standardised visitor satisfaction survey that enables the general condition or levels of satisfaction (indicative monitor) to be monitored on an ongoing basis, mainly at visitor centres. The monitor provides a tool for collection of data about visitors' levels of satisfaction with their experiences across the range of visitor facilities and services provided by DOC.</p> <p>Much monitoring is based on the assumption that visitor satisfaction will drop off before biophysical limits are reached, thus visitor satisfaction surveys can substitute for integrated monitoring. This ignores the phenomenon of visitor replacement whereby dissatisfied visitors are replaced by visitors with a higher tolerance to crowding and satisfaction levels remain the same even if impacts are increasing. Therefore proven indicators of ecological carrying capacity are required even when social indicators are in place.</p> <p>Integrated monitoring is a key aspect of a more holistic approach to planning and management of tourism destinations. It fosters a more integrated approach. However, although it's an essential tool for integrated planning, it's not a substitute. Monitoring approach and the choice of indicators must be related to the purpose of management – therefore it's unlikely you will get or need integrated monitoring if your management objective is narrow – e.g. just avoiding ecological impacts.</p> |
| E.16 | <p><b>Webbing and chaining</b></p> <p>'Webbing and chaining' is a tool used within integrated EIA/SIA as a scoping device.</p> <p>Scoping, which should be completed before any detailed impact assessment is done, includes initial social profiling, identification of stakeholders and interested and affected parties, initial consultation with these people, and the preliminary identification of impacts. Scoping allows the assessment team to:</p> <ul style="list-style-type: none"> <li>▪ identify important issues relating to a proposed action</li> <li>▪ determine the timing, depth and extent of the analysis needed, and plan the detail of the analysis</li> <li>▪ link biophysical impacts to their social outcomes</li> <li>▪ add the results of initial consultation to the collation and interpretation of available secondary data</li> <li>▪ identify data gaps and needs and plan the collection of new data.</li> </ul> <p>Here webbing and chaining is a very useful tool for focussing the analysis onto all types of environmental impacts (social, biophysical, etc.) to ensure all important impacts and issues are taken into account regardless of their type. The method is used for the analysis of projects, plans or policies that have potential for either social or bio-physical impacts. It can be used by individuals with different disciplinary backgrounds.</p> <p>The process links bio-physical and social impacts in a "web" of cause and effect relationships. This process is much more analytical than a matrix of project variables and impacted population variables sometimes used by assessment teams. The matrix is useful for ticking off, or even ranking, the intersecting boxes to identify impacts or issues. The webbing and chaining method does into the relationships between impacts in more depth, using a "brain-storming" process with all members of the interdisciplinary team in attendance.</p>   |

A chart or series of charts are produced by the assessment team (and, where appropriate in co-operation with proponents and members of the affected public). The various potential impacts of a development are represented in boxes. The relationships between impacts are made explicit by arrows running between the boxes, pointing either in the direction of the 'flow' (chains) of impacts - from first to second to third order impacts, etc, or to webs of impacts - where one impact links to another, setting off a new chain. All types of impacts (i.e., social, biophysical etc.) are taken into consideration. Depending on the complexity of the case, many impacts will be likely to result in a variety of higher-order impacts. On the other hand, several arrows can point to the same box, indicating that this impact can be the caused through a variety of pathways. Here the existence of cumulative impacts should be noted.

'Webbing-and-chaining' exercises are often carried out initially by the members of the interdisciplinary team. At this time, it is a useful device for individual team members to observe and acknowledge the issues that are of interest or importance to other team members. However, it can also be used further in the assessment process in groups that include technical experts in the team as well as representatives of stakeholder groups. The use of participatory approaches to the initial scoping of effects and impacts can effectively direct technical experts towards those issues which are seen as priorities from various community perspectives. Baines *et al.* (2000) argue that the ability to link environmental effects to social consequences is one argument for the need to recognise the importance of local knowledge in IA.

In summary, webbing and chaining is a very useful tool in focussing the analysis of all types of environmental effects (social, biophysical, etc.) on the relevant issues, and ensuring that all important issues are taken into account regardless of their type.

**Table 8.2: Approaches and tools used in New Zealand**

| <b>Type of tool and level of application</b> | <b>Approach</b>                    | <b>Applicable level</b>    | <b>Examples of places used in tourism context</b>                         | <b>Interviewees' comments</b>  | <b>Cross reference</b> |
|--|------------------------------------|----------------------------|---|--|------------------------|
| Data gathering                               | Consultation/<br>Visitor surveys   | Region, local,<br>activity | Various   | Useful but need to be careful not to raise expectations.   | E1                     |
| Data gathering                               | Charrettes                         | Local                      | Waitomo, Christchurch,<br>Arrowtown, Palmerston<br>North                  | Problems with implementation if key Council staff change. Needs an independent steering group with a mandate from decision makers and the community.   | E5                     |
| Data gathering                               | Non-market valuation               | Local, activity            | Mt Cook, Arthurs Pass,<br>Haast Road, Kawerau<br>Gorge                    | Too many studies are done 'on the cheap' – insufficient attention paid to the quality of the application. Sometimes studies don't meet the objectives of the funders. Travel cost methods are becoming standardised. Contingent valuation is expensive and risky, and viewed as being simple but in fact very difficult. | E1                     |
| Analysis                                     | EIA                                | Region, local,<br>activity | Humpridge Track,<br>Remarkables, Treble<br>Cone, Rainbow, Lake<br>Pearson | Can be important in terms of getting a concession.   |                        |
| Analysis                                     | SIA                                | Region, local,<br>activity |   | Also important for some concessions.   |                        |
| Presentation                                 | Visitor experience<br>monitoring   | Region, local              | Mt Cook   | Approach being developed for DOC, to be repeated at regular intervals.   |                        |
| Presentation                                 | ROS                                | Region, local              | Widely used by DOC in<br>NZ   | Good scope for use in New Zealand. Has ability to map recreational areas at various levels and to create zones of use. Useful for making trade-offs. Status with DOC uncertain - concern about cost and confusion about what it can do.  | E8                     |
| Presentation                                 | Benefits Based<br>Management (BBM) | Region, local              | (US Forest Service)   | DOC funded project looking at developing a New Zealand approach – looks at the human dimension.  |                        |
| Presentation                                 | VAMS/VAMP                          |                            | DOC   | Focus of DOC Visitor activities since Cave Creek.  |                        |
| Presentation                                 | LAC                                |                            |   | Derived from outdoor recreation – may not necessarily be appropriate.  | E7                     |

|                             |                                 |                         |  |   |     |
|-----------------------------|---------------------------------|-------------------------|--|---|-----|
| Decision making             | Cost benefit analysis           | Region, local, activity | Hollyford road   | Difficult to get the perspective right – if done on a regional basis then one region's gain may be another's loss. Distributional aspects are difficult.  | E2  |
| Decision making/ Management | Project management              | Activity                | Humpridge Track  | Operational and strategic tool providing the integration for development.   |     |
| Analysis/Management         | Strategic plans                 | Region, local           | Kaikoura, West Coast, Northland                                      | Can operate at different scales, good (under-used) at regional scale. Can be highly participatory but stakeholders become frustrated when plans are not implemented.  |     |
| Management                  | Zoning                          | Activity                | Tasman (Reg. Mgnt Plan)<br>Tongariro Nat. Pk                         | (See also LAC and ROS as a means of creating zones)<br>Attractive to DOC.   | E14 |
| Management                  | Buffer zones management         | Local                   | Puponga Farm Park  |   |     |
| Management                  | Voluntary agreements            | Local                   | Pupu Springs, Canterbury<br>4WD access                               | Flexible – can be used for many management issues. Implementation difficult, need high degree of buy-in. Require continued monitoring of impacts.   |     |
| Management                  | Ad hoc/ coping strategies       | Activity                | Milford, Abel Tasman, Franz Josef                                    | Individual operators time visits and activities to minimise crowding.   |     |
| Management                  | Rationing (restricting numbers) | Activity                | Great Walks  | Not used to any great extent in New Zealand except Milford Track and places like Kapiti.  | E.4 |
| Management                  | Bulk concessions                | Region, Local           |  | Saves duplication of effort.  |     |
| Management                  | Legislative approaches          | Region                  | Hauraki Gulf, proposed for Milford,                                  | Aim to achieve integrated approach.   |     |
| Management                  | Co-management                   | Local, site             | Mt Bruce, Kura Tawhiti, Kapiti Island                                |   |     |
| Management                  | Concessions                     | Activity                | Used by DOC throughout country, also by Auckland & Wgtn Reg Rouncils | Concerns that tender prices may not be viable and may lead to compromising of experiences and safety. Decisions made on case by case basis – concerns over cumulative effects. Does not manage non-commercial recreation. | E12 |
| Management                  | Covenants                       | Local                   | Penguin Place  | Issue about how privately owned (covenanted) areas can be economically self-sustaining.   | E12 |

|            |                  |                         |  |   |     |
|------------|------------------|-------------------------|--|---|-----|
| Management | Tolls/Pricing    | Activity, local         | Ski Roads (indirectly)   | Good way of protecting resources. Concept of Golden Eagle type pass would ensure that NZers are not adversely affected.<br>Need earmarked ways of raising money for tourism development and infrastructure maintenance. | E.4 |
| Management | Dispersal models | Region, local, activity | Humpridge & Kepler Tracks (Canadian National Parks, Point Pelee) | Removal of DOC facilities could have serious negative impact on public perceptions.   |     |

## 9. CONCLUSIONS

This report presents the results of Year 1 of this project. Reviews of different approaches and tools used in the planning and management of tourism recreation and related activities were prepared. Forty-eight people were interviewed and the interview data has been compiled and analysed.

Further interviews will be conducted with selected key stakeholders and interested parties during the second year of the programme. Some of the people who will be interviewed in this second round were identified for the first round of interviews, but were unavailable at the required time. Others will be selected for targeted interviews as particular issues are identified. In addition, interviews will play a part in the analysis of the selected case studies.

Some preliminary findings discussed in more detail in the previous sections include that:

- there is growing recognition in New Zealand of the need for limits for different types of tourism impacts;
- social carrying capacity is as much if not more of a limiting factor than biophysical carrying capacity;
- small communities are struggling to provide the necessary infrastructure for tourism development leading to a need for a national approach and perspective ;
- eco-tourism often incorporates ecological and cultural values in tourism products;
- there is very little evidence of monitoring of cumulative effects and what there is, is associated with one-off specific aspects;
- there is a lack of cohesion between different planning processes that intersect with tourism planning and legislation is inconsistent;
- public involvement in planning for tourism activities requires commitment and empowerment;
- in some areas sole management by tangata whenua may be more appropriate than co-management arrangements;
- the concessions process needs a better regional and national focus that enables more strategic approaches than the current case by case process;
- inter-agency planning could provide economies of scale;
- there is a need for better structures and collectives for product marketing, as well as better targeting of niche markets; and
- training of staff and qualifications is becoming a significant issue for sustainable tourism development.

In terms of the current use of available tools and approaches it can be concluded that there are a number of tools that could usefully be used more extensively in New Zealand. These include:

- LAC and ROS;
- Economic rationing tools;
- Community visioning approaches, and participatory approaches to implementing these visions;
- Impact assessment tools; and
- Management of tourism resources by tangata whenua, either alone or in some sort of partnership with appropriate agencies/organisations.

The examples shown in Table 8.2 in Chapter 8 have been derived from both the interviews and from the experience of the researchers. They include broad geographical localities, particular activities such as tracks, and local areas including towns and parks. These examples will be used as the basis for selecting of case studies for the second year of the programme. Case studies will be selected to represent a range of tools/approaches adopted to address perceived management problems.

From this analysis, it can be seen that while there is considerable knowledge about the range of approaches or tools that can be applied to management of tourism with respect to natural environments, the application of these tools has been very fragmented. There is little evidence of the use of an integrated approach linking the various tools. One reason for this would appear to be that the legislation that relates to tourism development lacks a co-ordinated framework. This may not necessarily be the fault of the legislation, but more the fault of the application of the legislation.

The next steps in the research programme include selecting case studies for the second year of the study, and preparing a project plan to undertake and analyse them. It is anticipated that the case studies will be selected dynamically. That is, as additional aspects are identified as having relevance to the development of an integrated approach they will be included in the case studies.

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## APPENDIX A - LIST OF INTERVIEWEES

|   |  |
|---|--|
| Eugene Sage<br>Non-government organisation, lobby group<br>Royal Forest and Bird Protection Society<br>24 May 2002  | Graeme Ayres, DOC Technical Manager,<br>Southern Region<br>DOC<br>9 April 2002   |
| Kay Booth, lecturer, Lincoln University<br>Lecturer, researcher, (consultant)<br>Lincoln University<br>30 January 2002  | Paul McGahan<br>Tourism Consultant<br>10 April 2002  |
| Geoff Kerr<br>Lecturer, researcher, consultant<br>Lincoln University<br>30 January 2002   | Christine Angus,<br>Researcher/Consultant<br>8 May 2002  |
| Geoff Gabites<br>Owner/operator, previously Adventure<br>Tourism Council<br>28 March 2002   | John Cooper<br>Tourism Consultant<br>14 May 2002   |
| Des Hay<br>Host community member<br>Marahau Residents and Ratepayers and<br>Marahau Environmental Trust<br>15 April 2002  | Bev Abbott<br>Tourism New Zealand<br>22 April 2002   |
| Participants at Flock Hill workshop - inc.<br>Keith Johnston, Phil Hart, Malcolm Anderson<br>tourism operators, regulators, researchers,<br>industry reps<br>16-17 April 2002 | John Barrett<br>Tourism operator Kapiti Island<br>17 April 2002  |
| Malcolm Anderson<br>Tourism Industry Association TIA<br>16 April 2002   | John Bos, Poma Palmer, Mike Edginton,<br>Peter Taylor, Andy Kliskey<br>DOC and University of Canterbury<br>18 April 2002 |
| Richard Suggate, North Canterbury area<br>manager, DOC<br>3 April 2002  | Joseph Hullen<br>Interpreter, field worker<br>DOC<br>17 April 2002   |
|   | Keith Johnston<br>DOC<br>20 May 2002   |

Neil Olsen, Jane Aitken  
Consent management/ recreational planning  
Auckland Regional Council  
18 December 2001

Nigel Parrott  
DOC - Policy  
15 April 2002

Raewyn Hutchings, Visitor Services Manager  
DOC  
18 April 2002

Sean Murray, Tourism Operator  
Tourism Holdings Ltd  
9 May 2002

Doug Leighton and Ewen Henderson  
Urban designer and planner, Boffa Miskell  
Ltd, Auckland.  
26 November 2001

Francis Sullivan and Peter Ross  
Environment Canterbury (ECAN)  
18 April 2002

Don Getz, Professor, Tourism Management,  
University of Calgary, Canada  
19 November 2001

Tim Cossar, CEO  
Totally Wellington  
23 April 2002

Kaye Thorn, Lecturer  
Dept Management and International  
Business, Massey University.  
26 November 2001

Keith Dewar  
Dept Management and International  
Business, Massey University.  
26 November 2001

Kiri Goulter  
Tourism Northland  
26 November 2001

Peter Winder  
CEO, Local Government New Zealand  
30 April 2002

Ray Salter  
Ministry of Tourism, Wellington  
9 April 2002

John Moriarty  
CEO, Tourism Industry Association New  
Zealand  
16 April 2002

Di Lucas  
Landscape consultant  
Lucas Associates  
10 May 2002

Chris Ryan, Chief Executive Officer  
Ruapehu Tasman District Council  
17 June 2002

Dennis Bush-King,  
Environment and Planning Manager, Tasman  
District Council  
10 May 2002

Greg Carlyon and Harry Keys  
Planner and Advisory Scientist, Turangi-  
Taupo Conservancy, DOC  
17 June 2002

Paul Green  
Conservator, Turangi-Taupo Conservancy,  
DOC  
17 June 2002

## **APPENDIX B - FORMAT FOR REVIEW**

Category of review

Reference name (approach)

Description of the approach including its intended application

How and where it is used (the context)

Contextual issues to consider

- Spatial and/or economic considerations
- Accommodation of urban/rural differences
- Accommodation of coastal/inland/high country differences
- Accommodation of conservation/production differences in focus
- Accommodation of public/private ownership
- Accommodation of individual/collective ownership (e.g. Maori land)
- Adequacy of attention to contextual issues

What works/doesn't work (using documented evidence and comments of key people)

Improvements that could be made to the approach (given its intended use or for the NZ and tourism context)

Identification of key people and organisations

Bibliography

Overall evaluation including recommendation on further investigation

## **APPENDIX C - KEYWORDS**

**Name**[name and current position]

**Role**[e.g. DOC , tourism operator, regulator, govt level, researcher etc]

**Organisation**[organization the interviewee is from]

**Date**[date of interview]

**Place**[place of interview]

**Interviewer**[name of person conducting the interview]

**Contact**[full contact details including name, address, email, phone number]

**Activity**[specific activities that the person is involved with or manages]

**Area**[area and location that the person is primarily involved with e.g. coastal, inland, mountain, urban etc – specifying location e.g. Abel Tasman, Tongariro if relevant]

**Conflict**[noted areas of conflict]

**Capacity**[ the capacity to manage tourism development including integrated approaches, constraints including skills, and training needs]

**Limits**[limits to tourism including carrying capacity, sustainability and resource thresholds, host community opposition and visitor satisfaction]

**Ecological**[ecological values and ecological impacts, including (coastal) erosion]

**Social**[social values and social impacts, including things like noise and traffic]

**Economic**[economic values and economic impacts]

**Legal**[issues relating to the statutory or legal framework for tourism]

**Maori**[aspects particular to Maori including co-management]

**Cultural**[cultural values and cultural impacts]

**Examples**[examples and case studies]

**General**[stuff that needs capturing but does not necessarily fit anywhere else]

**Planning**[people's experience with the planning process]

**Participation**[public involvement in planning, participatory approaches, working parties]

**Information**[availability and quality of information for planning, 'wish list']

**Models**[models or approaches for planning/managing natural areas tourism]

**Monitor**[monitoring of impacts – includes social monitoring, visitor monitoring]

**Cumulative**[cumulative effects]

**Risks**[areas that are seen as risks to tourism, and ways of managing those risks]

**Strategies**[local, district/regional/national strategic approaches]

**Future**[future issues, personal view of the future, expectations, comments on the general direction of tourism development, including the NZ tourism strategy]

**Follow up**[suggested leads to follow up, including literature refs]

## APPENDIX D – POSSIBLE CASE STUDIES FOR YEAR 2 GIVEN APPLICATION OF TOOLS AND APPROACHES

| Location            | Issues   | Approaches  | Comments  |
|---------------------|--|---|---|
| Abel Tasman/Marahau | <p>Unclear jurisdiction and jurisdiction boundaries, with resulting agency tensions</p> <p>Imbalance between District Plan and resource consent for proposed resort</p> <p>Heavy increase in use - high visitor numbers</p> <p>Conflict between users such as sea kayaks and motorised boats</p> <p>Host community impacts and resistance - cumulative impacts</p> <p>Imbalance between marketing and planning/impact mgmt</p> | <p>RMA strategic planning</p> <p>RMA resource consent process and EIA/SIA</p> <p>Community based planning</p> <p>Recently changed jurisdiction giving DOC some management mandate over water</p> <p>National Park Mgmt Plan</p> | Likely PCE investigation  |
| Aoraki/Mt Cook      | <p>Helicopter noise, intrusion and management: social impacts differ between use groups</p> <p>Cultural values</p> <p>Infrastructure and hazard planning</p> <p>Questions around visitor satisfaction</p>  | <p>Non market valuation</p> <p>Aircraft surveys</p> <p>User satisfaction surveys</p> <p>National Park Management Plan</p> <p>Co-management</p> <p>NB Almost all areas have Conservation Mgmt Plan</p>                           | Reasonably well-researched  |
| Arrowtown           | <p>Heritage protection</p> <p>Visual resource protection issues</p>  | <p>Community strategic planning exercise (Charrette)</p>  |   |
| Auckland Region     | <p>Coordinated planning needed for regional parks</p> <p>Very large visitor numbers, but absorbed into large base?</p>   | <p>Meta planning</p> <p>Forums and other community participation approaches are being used by the ARC to develop community visions</p> <p>Use of ROS and GIS</p>  | Would need to narrow down focus to discrete focus, e.g. regional park mgmt for tourism? |
| Bay of Islands      |  |   |   |

|                      |   |   |   |
|----------------------|---|---|---|
| Cape Reinga          | Issues around establishing co-management - little co-ordination between iwi<br>Treaty claims  |   |   |
| Catlins              | Increasing eco-tourism activity<br>Issues of growth from low base<br>Infrastructure issues<br>Planning at early stage of development    | Tourism planning by District Councils as part of economic development plans with CEG funding for Clutha<br>Proactive small businesses | Contact Julene McCorkindale, Clutha Economic Development Board O3 418 1350                        |
| Coromandel Peninsula | Lifestyle vs commercial development<br>Proximity to Auckland - impact of faster access<br>Infrastructure issues                         | Participatory tourism strategy addressing growth issues<br>District Planning  |   |
| Doubtful Sound       | Unclear jurisdictions for management of coast and water   | Tourism strategy under the Southern Lakes Strategy<br>Pricing mechanisms (as per Sthrn Lakes)   |   |
| Farewell Spit        | Inferred threshold capacity due to impacts on wildlife nesting areas and coastal erosion  | Concessions restricted to two<br>Single agency jurisdiction   | Thresholds mainly biophysical   |
| Fox Glacier          | Inadequate infrastructure<br>Aircraft noise<br>Overcrowding<br>Growth and strip development   | Visitor surveys   | Two sets of issues<br>-around glaciers<br>-around villages<br>Within TRREC Westland case study    |
| Franz Joseph         | Needs better planning and management of facilities - water and sewerage, flood control<br>Aircraft noise<br>Lack of staff accommodation | Visitor surveys<br>Risk assessment and risk management<br>Voluntary restrictions on numbers on glacier in guided groups               | Some comments were under "glaciers" and Fox and Franz could potentially be one case study - agree |
| Godley Head          | High use area with good physical carrying capacity  | Walking track appears to have high capacity   |   |

|                             |   |  |  |
|-----------------------------|---|--|--|
| Hanmer                      | Physical and social carrying capacity of the thermal pools<br>Perceived natural area but not indigenous<br>Ownership and tenure of natural area   | Entrance fees<br>Income used to fund community facilities such as health services and public toilets   | Support from Hurunui Tourism   |
| Hauraki Gulf inc Long Bay   | Marine reserve proposals e.g. Great Barrier, Long Bay<br>Closeness to urban areas and high use<br>Resources like sea mammals not as yet exploited   | Special legislation<br>Regional forum<br>Areas with reserve status but in a mixed management regime<br>Application of VOS<br>Charrette at Tamaqua reserve  | Many stakeholders, many values   |
| Humpridge track (Tuatapere) | New track provides alternative "great walk"<br>On-going maintenance problems<br>Lack of infrastructure<br>Promotion by >1 agency?   | Community based development<br>Community Trust - central government funding partnership<br>Use of project management company<br>Price rationing by hut prices<br>Booking system through Tuatapere office | Tuatapere was a Resource Communities case study  |
| Kaikoura                    | Tourism based on marine mammals<br>Small rating base supporting infrastructure<br>High growth   | Single concession confirmed<br>Maori based development<br>Regional strategy  | Major TRREC case study<br>Baseline information from Lincoln study<br>Also eco-tourism case study |
| Kaipara                     | Close to Auckland and has many tourism attractions and values but low use and promotion<br>Relatively high Maori population<br>Increasing tourism development<br>Low present tourism usage but high multi-users |  |  |
| Kaitorete Spit              | 4WD access to beach and spit  | Management plan ???  |  |

|                              |   |  |                                |
|------------------------------|---|--|--------------------------------|
| Kapiti Island                | <p>Island sanctuary and wildlife rehabilitation</p> <p>Culturally important to different stakeholder groups</p> <p>Proposed accommodation - resistance from Forest and Bird and others who seen threats to sanctuary achievements</p> <p>Some Maori are pro-development</p> <p>Tension between groups opposed to development and Maori operator</p> <p>Relationship between Maori and DOC</p> | <p>tight controls (through concession) in place on access (numbers) and movement by DOC</p> <p>Joint management with iwi</p>                               | Possible Ph D site             |
| Karori Wildlife Sanctuary    | <p>Development of urban natural tourism based on a community conservation initiative</p> <p>Potential for over-exploitation</p>   | <p>Detailed Mgmt Plan</p> <p>Community based planning</p> <p>Long-term goal setting</p> <p>Private implementation but high agency interest and support</p> |                                |
| Kura Tawhiti                 | <p>Conflicts between recreationalists and tangata whenua</p> <p>Management of sacred site</p> <p>Degrading of rock by climbing equipment</p> <p>Disposal of sewage waste</p>  | <p>Co-management (iwi, DOC, recreational groups, tourism operators)</p> <p>Interpretation methods</p>  | Ecotourism workshop case study |
| Lake Pearson                 | <p>Access to wildlife sanctuary</p> <p>Vehicles and motorised craft disrupting breeding populations</p> <p>Cumulative impacts on bird populations</p>   | Voluntary power boat controls  |                                |
| Loch Katrine (Upper Hurunui) | Vehicle access to lake and huts   | <p>Consultation/dialogue with bach owners and recreationalists</p> <p>Removal of huts by negotiated settlement</p>   | Interest from Hurunui Tourism  |

|  |  |   |   |
|--|--|---|---|
| Manukau Harbour                        | Potential pressure from Auckland residents and visitors<br>Newly acquired hist/cultural heritage resource – (how) to develop as tourism asset?               | Iwi, two city councils and Regional Council, DOC and community all stakeholders in management                       | Interest by ARC?  |
| Milford Sound                          | Physical and social carrying capacity<br>Noise from aircraft and aircraft management   | Joint infrastructure development plan, includes TLA, DOC and private sector<br>Concessions<br>Non-market evaluation |   |
| Mount Bruce                            | Intensive viewing of wildlife<br>Wildlife rehabilitation<br>Infrastructure<br>Relative distance from markets   | Highly controlled wildlife interaction<br>Iwi-DOC co management   |   |
| Northland                              | Economic development is seen to be closely linked to tourism development   | Regional economic development agency<br>Plus a separate Maori tourism and economic development agency               | Case study for ecotourism and heritage tourism. Also Resource Communities case study of Paihia and Auckland University Maori tourism study. |
| Okarito                                | Management of visitor numbers and few operators<br>Increasing numbers of kayakers and growth in numbers as a less-crowded place!!!                           | Council planning exercise<br>DOC planning   | Within TRREC case study<br>Raised by Tourism Research Council   |
| Pegasus Bay (North Canterbury) beaches | 4WD access, recreation user conflicts, damage to bird breeding areas   | Pegasus Bay Draft Coastal Vehicle Access Strategy   | See also Saltwater lagoon (below)   |
| Punakaiki                              | Lack of infrastructure and sewerage in particular<br>Visual amenity of facilities<br>High growth<br>Proposals for increased infrastructure and accommodation | Community planning process<br>High-intensity track<br>Private and public planning, but not coordinated?             | Within TRRES Westland case study  |

|   |   |   |                             |
|---|---|---|-----------------------------|
| Pupu Springs                            | Physical impact on fragile spring ecosystem<br>Cultural issues for management of sacred site  | Co-management<br>Voluntary rules restricting diver access<br>Interpretation   |                             |
| Queenstown                              | Lack of planning<br>Politicised context – many changes of strategic direction<br>Cumulative effects<br>Landscape management                         | Cumulative effects management<br>Strategic planning                           | PCE case study              |
| Rainbow ski field                       | Ski field in major ecological area  | Example of a planned development<br>DOC concession process                    |                             |
| Rakiura National Park (Stewart Is/Oban) | New national park status<br>Social impacts and carrying capacity<br>Thresholds and infrastructure<br>Host community response                        | Social impact assessment<br>Tourism strategy                                  | Interest by DOC and PCE     |
| Saltwater lagoon (Ashley)               |   | Coastcare group established by ECAN   |                             |
| Somes Island                            |   | Agency-public-council coordination  | Consider also Quail Island? |
| South Coast (Wellington)                | Questions around role of marine reserves close to urban areas<br>Issues for commercial and recreational fishing<br>Landscape and subdivision issues | Agency-public-council coordination<br>Urban planning and landscape techniques |                             |
| Southern Fiords                         | Physical impact of cruise boats<br>Water quality and biosecurity  | Use of Coastal Plan to implement controls<br>Levy on cruise ships             |                             |

|                              |   |   |                                   |
|------------------------------|---|---|-----------------------------------|
| Takaparawha                  | Urban<br>Political and culturally charged<br>Strong Maori presence<br>Potentially high usage<br>High informal usage<br>Development urgently sought<br>Conflict increasing                                 | Consultation process in early stages<br>Maori have several voices and views |                                   |
| Taupo (Lake and lake fringe) | Lakeside development and geothermal, water quality issues and recreation - steady development<br>Domestic tourism oriented<br>Limited public access to lake   | Catchment Mgmt Plan   |                                   |
| Tarawera Lakes               | Treaty claims<br>Subdivision pressures  | Regional and non-statutory plans  | Consider as part of Rotorua Lakes |
| Te Urewera National Park     | Strong Maori presence<br>Increasing demand to open access<br>Multi-usage – conflict<br>Increasing number of unlicensed tourism operations in area<br>Maori have difficulty with own representative bodies | Maori want say in development<br>Maori tourism bodies uniting               |                                   |
| Tongariro National Park      | Most heavily used North Island National Park<br>Skiing and high use in World Heritage Area<br>Cultural values<br>Hazard mgmt<br>High use  | National Park Mgmt Plan revision<br>Limits of facilities development        |                                   |
| Tongariro Crossing           | Aircraft operations and noise<br>Social and physical effects of high use<br>Inability to control access   | New management plan<br>Track counters<br>Physical hardening                 |                                   |

|                                 |  |  |                |
|---------------------------------|--|--|----------------|
| Twin Coast Highways (Northland) |  | Intra-regional planning  |                |
| Waitakere City                  | Balance between subdivision/<br>protection                                     | Enterprise Waitakere, community<br>visioning exercise<br>Regional Park role  |                |
| Waitomo Caves                   | Physical and social carrying capacity<br>of the cave system<br>Cultural issues | Community visioning process -<br>Charrette run by Di Lucas<br>Plan to disperse visitors more in the<br>district<br>Iwi involvement and hui | PCE case study |
| Wanaka                          | Growth pressure on lake and also<br>landscape issues                           | Charrette and strategic planning   |                |

## **APPENDIX E – COMMENTARY ON THE USEFULNESS OF ECONOMIC INSTRUMENTS**

### **Current status of use of economic instruments and principles for application**

DOC sub-lets some of its facilities to private managers or contractors in areas such as campgrounds. In other areas DOC visitor centres are operated on a joint basis with other organisations. Given reasonable expectation of a return on investment, private operations can find it advantageous to provide "common carrier" facilities, such as roads or wharfs, which could later be opened to wider public access.

Many of the instruments described are used in various forms relating to uses of conservation lands, for example, concession fees, hut tickets, and other user charges. However, in many cases there is no evidence that they are being used to best advantage. Economists would argue that if users vary in their willingness to pay and price sensitivity (e.g. overseas and domestic visitors), it is neither efficient nor equitable to subsidise every user with low uniform charges, which result in overcrowded facilities and a less satisfying experience for all. In principle, well-designed non-uniform charges coupled with differentiated service levels could collect more revenue while retaining opportunities for more price sensitive users to continue to have access. While this is theoretically correct, other barriers exist that are not taken into account when applying a strict economic framework.

Clough (1993) concludes that, economic principles on conservation lands indicate:

- Improving the economic efficiency of visitor services on conservation lands is not simply a case of expanding the opportunities for private profitability. Rather it requires maximising long-term net benefits by choosing from various possible combinations of activities and uses, after comparison of both financial and non-financial costs and benefits. This is consistent with continued public ownership and management of the landscape resource, with a mixture of public and private facilities and operations.
- The prime function of nature conservation on public lands implies constraints on permitted activities, whose compatibility depends primarily on their impacts on environment and other uses, rather than on the characteristics of those undertaking them. A public hut can be equivalent in impact to a commercial lodge of similar size and use level; a footprint from a commercially guided walker is equivalent to that from an independent walker.
- Avoidance of environmental impacts implies limitation of development on conservation lands, and confers something of scarcity and value on those that take place. Commercial operators can expect to pay a resource royalty or fee according to the privilege they enjoy through such limitations on oilier uses.

- Where a commercial operator provides goods and services of benefit to a wider public than its clients as part of its conditions of operation, it can expect to receive some recognition and reduction in the fees it pays. A similar principle applies to non-commercial users - clubs that volunteer their members' time for track maintenance, ski patrols or search and rescue can expect some discount over those that do not.
- Elements of these economic approaches are already apparent in visitor services on conservation lands. It is likely that further refinement of approaches, in particular with regard to differentiation of prices and services and peak-period variations, could increase the capacity of conservation lands to receive visitors and enhance the satisfaction (and reputation) derived from those lands, while still maintaining their natural characteristics and addressing equity concerns.

### **Practical examples of applications of economic instruments (Clough)**

In principle, any private operation on conservation lands should improve the efficiency of use of those lands provided:

- it is viable as a private concern over its lifetime and makes provision for removal of structures and restoration of natural landscape on winding up;
- the benefits of proceeding with it exceed the costs of so doing, in net present value terms over the lifetime of the operation. "Benefits" covers total use of both the commercial and any co-existing non-commercial uses. "Costs" covers both private costs of operation and opportunity costs of impacts on environment or existing users.

In other words, the efficiency effects of private operations on the public estate depend not just on their financial viability, but on their effects on the total "outputs" (including displacement of other uses) flowing from the estate and on the total impacts borne by it.

Any business can increase its profits if it supplies an exclusive service, but with respect to concessions over conservation land, it is important not to confuse exercising exclusivity over facilities and services provided with monopoly over the resource itself. The ability to exclude non-payers from specific facilities is a fundamental requirement of commercial operations, but where this is not possible - as in the case of very dispersed use – either facilities are provided as quasi-public goods or they are not provided at all.

The variety of settings on conservation lands suggests different degrees of excludability to the services and facilities on them. The greater the exclusivity the larger the likely economic rent earned off the resource, which the manager can expect to share in by collecting a royalty.

### ***Exclusive facilities***

In principle, provided private facilities meet the constraints of conservation management (i.e. do not irreversibly detract from the natural condition of the resource), there need be no objection on efficiency grounds to locating such facilities within the public estate; or in allowing sole, exclusive operation of such facilities (e.g. lodges, ski tows etc). Conservation constraints are likely to restrict the numbers of such facilities and confer a rent on the occupiers, which the resource manager should expect to share by collecting a royalty. A royalty net of costs incurred (or "rent tax") is most likely to reveal the true economic rent created by exclusion. Given sufficient contenders for the location, auctioning such occupancy rights should reveal even more of the bidders' own expectation of what it is worth to them (through a "bonus bid"), but this will not always be feasible.

### ***Exclusive occupation of an area***

This may further enhance the size of economic rent, and hence the financial return to both the concession operator and the resource manager who collects the royalty. However, if the resource is particularly unique, it may also create the possibility of monopolistic pricing and reduction in service quality, which could detract from efficiency. Such exclusive occupation of parts of the public estate can be offered for a finite term, sufficient to offer reasonable expectation of a normal return on the operator's investment. Beyond that period, if other operators can offer competitive services within conservation constraints, there is no efficiency case for preventing them.

Controlling other activities in order to favour one service is only warranted on efficiency grounds if these activities impose real costs on the operation (e.g. vandalism). Some ski fields may warrant seasonal exclusion of other uses if these interfere with the ski tow operations - but this should be subjected to a benefit-cost test to establish how big are the displacement effects on other activities.

Another situation which may warrant such controls is where other users can "free-ride" on the services provided by the initial operator: for instance, use of a wharf or road where it is not feasible to collect payment from all users. An example would be the control of camping around serviced huts on the main visitor tracks: the efficiency case would suggest such bans be instituted **around** the huts **rather than along** the entire length of the track.

Such expectation of exclusivity would need to be written into the concession agreement. It would be reflected in both the operator's bid rent and in royalties paid over the duration of the exclusivity arrangement. Such agreements could be used to install facilities whose capital costs are beyond

the capacity of DOC to provide: for instance, road access into parks which, at the end of the exclusion arrangement, revert to public use.

### ***Exclusive hut and track systems***

Where proposals arise for new hut and track systems which meet all conservation constraints and involve little or no displacement of existing uses, their development as exclusive, private routes is not necessarily the most efficient if extra use could be accommodated at no additional cost (e.g. day walkers only). However, such private networks could be efficiency improving relative to the current situation, since the range and scope of visitor services would increase. In this situation, a limited period exclusion to enable the private establishment of the new network, with reversion of the track (but maybe not the excludable huts) to wider use at the end of the period could raise the long-term output of the resource. The resource manager would collect a share of resource rent from the operator through royalties.

The efficiency implication of private operation of **existing huts and tracks** is different, since the structure and reputation of these tracks have already been established and can be regarded as sunk costs of no relevance to pricing. Exclusivity would earn large rents for the operator and resource manager, but would also create large displacements of current users. In this situation, efficiency effects are least ambiguous if private operators offer part of a range of service offerings, probably with exclusive facilities distinct from public facilities.

The key to private profitability in this instance is in creating a distinctive, value added service to the basic land resource, which requires differentiation of private products from publicly provided ones. Exclusivity of service offering is critical only for the recovery of establishment costs and a wider range of operators may be considered at later stages of development. There may also be situations in which private concessionaires can offer more effective provision of facilities of the sort currently provided by DOC, given sufficient visitor concentration to make charge collection feasible.

### ***Exclusive access to depletable stocks***

The idea of exclusive access to depletable stocks has long been applied to "extractive" recreation such as fishing and hunting, where the more participants there are, the less stock is left for those who come after. Similar considerations apply to a range of "congestible" services or facilities in tourism, including occupation of hut bunks, camp sites, car parks, chair lifts, vehicle tours across single-track roads with few passing places, and jet-boat slots on rivers, given limits to frequency caused by safety requirements.

In all of these cases, users should expect to be faced with the scarcity cost caused by their contribution to congestion. All of these in principle can be subjected to peak load pricing to improve efficiency, both by spreading use into off-peak periods and by providing funds for future capacity expansion. There is also scope for non-uniform pricing to increase the collection of charges from users.

### ***Monopoly in visitor facilities***

The unequivocal case for monopoly in supply is "common carrier" facilities with high installation costs, such as roads or track networks, jetties or airstrips, where there would be wasteful costs incurred in duplicating the system. But given some co-ordination, services on such networks need not be from a single operator and multiple suppliers, as long as they do not impinge on each others' operations, are likely to provide a wider range of services at lower costs to their customers.

Road and track networks, although sometimes subject to congestion, share many of the characteristics of public goods in the difficulty of observing and charging for use directly. Once constructed, the marginal cost of use may be relatively low (although there may be significant non-use-related costs, such as repairing damage caused by natural events), and attempting to collect charges may over-charge users and unnecessarily deter use.