INTEGRATED MANAGEMENT:
FROM CONCEPT TO PRACTICE

Integrated Management:
from Concept to Practice

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Abstract

New Zealand's key environmental management statutes are notable for requiring the integrated management of resources. This thesis explores the extent to which integrated management is actually occurring between two different agencies operating under the *Resource Management Act 1991* and the *Conservation Act 1987*. The level of integration between Tasman District Council and the Department of Conservation is analysed with reference to a case study of management issues along the coast of Abel Tasman National Park. The primary issue here is that increased human activity along the Park coast has attendant social and environmental impacts; these should be addressed in an integrated manner by both agencies.

The concept of integrated environmental management is defined and explained by means of a literature review. Following this, the potential for integrated management in the New Zealand context is assessed by reviewing the requirements of legislation and relevant commentary. Subsequent to developing this theoretical framework, research investigations centre on the Abel Tasman case study. First, interviews are conducted with those who prepared the *Proposed Tasman Regional Policy Statement* and *Proposed Tasman Resource Management Plan*; and the *Nelson-Marlborough Conservation Management Strategy* and *Abel Tasman National Park Draft Management Plan*, amongst other practitioners. Second, these plans are coded; and the findings of both research methods are then analysed.

It is shown that the degree to which integrated management can be achieved is dependent on institutional factors. New Zealand's environmental management regime contains both opportunities and barriers to the implementation of integrated management, and this is reflected in the case study. The extent to which integration is achieved between Tasman District Council and the Department of Conservation is limited, due to inadequate funding, staffing and statutory deadlines. Statutory and informal processes followed by the two agencies in preparing plans lacked the comprehensive interaction and effective co-ordination that are the key operational ingredients to integrated management. The lack of capacity within agencies is attributed to a lack of political commitment to the processes of integration. The

intentions embodied in the legislation are being compromised by pressure on agencies and staff to be cost-effective. Nevertheless, significant improvements to the regime were noted by practitioners.

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Chapter 1: Introduction

The last three decades have seen an increasing awareness of the adverse nature of human impacts on the natural environment. There has been a corresponding increase in the understanding of ecosystems and the interrelatedness of all natural and human systems. Global environmental problems such as climate change are evidence of a raft of complex connections between a diverse range of human activities and the environment. Similarly, regional and local issues such as increased erosion and flooding are attributed to a variety of causes, none of which can be viewed in isolation. These and other environmental issues are being addressed by communities at all levels through the process of environmental management. However, it has become apparent that traditional management frameworks have generally failed to take account of the complexities and interconnections manifest in the environment. Further, these frameworks have not given adequate recognition to the diversity of human uses, perspectives and values involved in environmental management.

Responses to these perceived deficiencies have included calls for management of the environment to be more comprehensive, co-ordinated and integrated. New Zealand's *Resource Management Act 1991* (RMA) is a framework for environmental management that has been called all these things. Indeed, integrated management is a key tool by which the purpose of the RMA—the sustainable management of natural and physical resources—is to be achieved. A range of consistent, integrated resource management plans are required from agencies responsible for implementing the RMA. As a framework for integration, the RMA has attracted a great deal of praise and interest from overseas. According to May (1997), the approach is more comprehensive and integrated than found in any other country. However, there is potentially a huge gap between the opportunities provided by the RMA and the practical realities of environmental planning and management in New Zealand. Moreover, there is more than one piece of legislation governing the management of resources in this country.

New Zealand's national parks and conservation estate are managed under the *Conservation Act 1987*. The 1990 amendment to this Act requires that plans be produced for the integrated

management of New Zealand's natural and historic resources. The RMA and Conservation Act have different purposes, and relate to different resources, but both have the potentially unifying requirement for integrated management. Further, both acts specify that planning is to be the tool for achieving the integrated management of resources. Therefore, different management agencies charged with implementing the legislation have the responsibility to prepare plans that address environmental issues in an integrated manner. Planning for integrated management requires interaction and co-ordination among agencies to identify and deal with issues that may cross institutional boundaries. One locality where the issues demand inter-agency co-ordination and integrated management is the coastline of Abel Tasman National Park.

The Park coastline has high scenic, historic and ecological values, and attracts large numbers of people because of its recreational qualities. There are two agencies responsible for the management of different components of this coastline: the Department of Conservation (DOC); and Tasman District Council (TDC). DOC manages the land area of the Park, while TDC manages the coastal marine area adjoining the Park. The two agencies must deal with a number of management issues as the Park coastline becomes increasingly crowded with walkers and boaters. TDC and DOC have produced separate plans to manage these coastal resources in accordance with their individual mandates under the RMA and Conservation Act. The different plans meet at the land-sea interface, a place of dynamic interaction between natural and human elements. Co-ordination between the two agencies is essential to address issues of mutual concern and achieve integrated management across this management boundary.

Thesis aim

The aim of this thesis is to determine whether co-ordinated, integrated management is occurring between different agencies operating under the *Resource Management Act 1991* and the *Conservation Act 1987*. One of the primary objectives of recent resource management reforms in New Zealand was to make environmental management more comprehensive and integrated. Therefore, it is of interest to examine the extent to which integration is now occurring in practice. The aim relates specifically to a case study of management issues along

the coastline of Abel Tasman National Park, the resolution of which rely to a large extent on effective co-ordination and integration between TDC and DOC.

Thesis objectives

In order to achieve the overall aim of this thesis, four objectives have been developed to: (1) explore the notion of integrated environmental management in different contexts and summarise what it actually means; (2) investigate the specific requirements for integrated management in the New Zealand context under the RMA and Conservation Act, highlighting the opportunities and limitations for integration; (3) identify and analyse processes of interaction and co-ordination that are used by TDC and DOC in order to achieve integrated management; and (4) assess the extent to which co-ordinated and integrated management is actually occurring in relation to the case study. If integration is not being achieved, why not? And how might the integration effort be improved?

Methodology

Objective one is attained by conducting a literature review. Objective two is achieved by reviewing commentary of the environmental management regime in New Zealand, and by assessing the relevant mandates. Objectives three and four relate specifically to the case study of management issues present along the Abel Tasman National Park coast. These latter objectives are achieved by undertaking two different phases of research: (1) interviews; and (2) plan analysis.

A number of interviews are conducted with key people involved with the implementation of the RMA and Conservation Act. A national level perspective on inter-agency co-ordination and integrated management is gained by interviewing senior policy analysts from the Ministry for the Environment and Department of Conservation head offices. Regional and local level perspectives on the planning and management issues surrounding the case study are gained by interviewing planning practitioners. First, interviews take place with the TDC planners responsible for preparing the *Proposed Tasman Regional Policy Statement* and the *Proposed Tasman Resource Management Plan*. Further interviews with DOC planners and a TDC politician provide a different perspective on these RMA processes. Second, an interview is

conducted with a practitioner involved in drafting the *Nelson-Marlborough Conservation Management Strategy* and the *Abel Tasman National Park Draft Management Plan*, to gain a perspective on planning under the Conservation Act.

Plan analysis is used to examine the extent to which the plans produced by TDC and DOC show evidence of, and provide for, integrated management. The following plans are examined: the *Proposed Tasman Regional Policy Statement* and *Proposed Tasman Resource Management Plan* (incorporating the Regional Coastal Plan) of TDC; and the *Nelson-Marlborough Conservation Management Strategy* and *Abel Tasman National Park Draft Management Plan* of DOC. The plans are coded and analysed to assess whether they are complimentary or conflicting in their approach to the major issues confronting the two agencies. The level of co-ordination and integration in the planning effort on paper can thus be inferred. A more complete picture of the integration effort is obtained by comparing the results of this analysis with information derived from interviews.

Structure of thesis

A review of the literature concerning integrated approaches to environmental management provides the basis for Chapter Two. A variety of literature is canvassed from different fields including planning, environmental science, ecosystem and watershed management, and political science. The rationale and theory behind integrated management is discussed, and the barriers to its successful implementation are highlighted. Chapter Three looks at the potential for achieving integrated environmental management in the New Zealand context. Literature produced by various commentators is reviewed in order highlight the key changes to New Zealand's resource management regime, and to fully explore the opportunities and limitations for integration in the new context. In addition, the RMA and Conservation Act are assessed in terms of their actual requirements for planning and the integrated management of resources.

Chapter Four consists of the research design and methodology for this thesis. The physical and management context of the Abel Tasman National Park, and the management issues present there are fully explained. The selection of the two methods used in research investigations is discussed, and the interview schedules and plan coding form are then developed. Chapter Five

contains the research findings obtained during research investigations. The responses to the interviews are arranged under key headings, and the results of plan coding are presented in table form. Chapter Six consists of an analysis of the research findings in light of the analytical framework developed in Chapters Two and Three. Finally, the conclusions derived from the overall study are presented in Chapter Seven.

Chapter 2: Integrated environmental management

Natural and human systems are characterised by an array of complex interconnections. Yet the fragmented and piecemeal approaches to environmental management of the past have not effectively recognised this web of interrelationships, and many environmental problems testify to this. While there have been previous attempts to manage individual systems (especially river basins) in a comprehensive manner, it has become increasingly evident that more broadly based, ecologically sensitive, and integrated frameworks for environmental management are required. Paradigms for integrated environmental management have been advanced from various fields, and the central themes behind these approaches have much in common.

The aim of this chapter is to outline the theory of integrated approaches to environmental management by highlighting key insights from literature on the topic. The chapter is divided into four main parts. First, the rationale behind the calls for more integrated environmental management is examined. Second, the various elements that make up an integrated approach to environmental management are identified and discussed. Third, the role of planning in integrated management is highlighted. Fourth, the reasons why integrated management is difficult to achieve in practice are outlined.

The need for integration

There is an immense degree of interconnectedness between the components that make up an ecosystem, and between different ecosystems (Risser, 1985). Likewise, there is a set of complex linkages between ecological systems and the sociocultural needs and economic activities of human beings (Slocombe, 1993). Further, when it comes to managing the environment, people have an array of interests and values, and an increasing number of disparate groups demand to be heard (Wilkerson and Edgell, 1993). In order to address environmental problems and issues, therefore, Margerum and Born (1995) suggest a comprehensive or holistic view should be employed, recognising that interactive systems have few components that can be viewed in isolation, and few problems that can be reduced to simple elements. Born and Sonzogni (1995) argue that with more intensive and conflicting

demands on resources and the environment, a holistic approach to management has become essential.

However, Margerum and Born (1995) observe that earlier approaches to environmental management usually failed to deal with interconnections, complexities, multiple perspectives, multiple uses and the resulting cross-cutting environmental problems. According to Buhrs and Bartlett (1993), most environmental policy-making of the past has proceeded by way of compartmentalised and unco-ordinated, if not conflicting, attacks on specific issues and problems. Put another way, traditional natural resources management has been largely reactive, disjointed, and for narrow or limited purposes (Born and Sonzogni, 1995). In many cases, such unco-ordinated management approaches have given rise to unsatisfactory or undesired environmental outcomes. A key question that arises, then, is how the interconnectedness which exists between human activity and environmental phenomena can be mirrored in the environmental management process (Buhrs, 1991).

In addressing this question, Born and Sonzogni (1995) emphasise the need to move away from incremental and functionally fragmented efforts to address complex problems. Watson *et al.* (1996) state that a growing recognition of the interdependent nature of land, air and water has lead to numerous calls for comprehensive, unified, integrated, co-ordinated, holistic, and ecosystem management approaches. Several different fields have responded to the clamour for more effective and ecologically responsible approaches; new paradigms include integrated environmental management, integrated resource management, ecosystem management, and integrated catchment management (Margerum and Born, 1995). Although directed at different management contexts, these paradigms are closely related. They suggest a more interactive and interconnective approach to environmental decision-making that takes into account the variety of ecosystem components, functions and affected entities.

Born and Sonzogni (1995) note that while the need for an integrated approach to environmental management is being increasingly emphasised, the approach has been evolving for some time. Much of the knowledge and experience with integration relates to watershed management. For example, Mitchell (1990) states that one of the first and best known models for integrated resource management was the Tennessee Valley Authority, established in 1933

as a multipurpose catchment management agency. Other precursors and foundations of an integrated approach include multiple use-sustained yield forest and land resources management, land use planning, coastal zone management, and environmental impact assessment (Born and Sonzogni, 1995). Since the 1980's, support for broader, more ecologically-minded paradigms have emerged (Margerum and Born, 1995; Watson *et al.*, 1996).

The greater impetus for integration since the 1980's can, in part, be attributed to recent international environmental agreements aimed at the sustainable development of the environment. The World Conservation Strategy (IUCN, 1980) emphasises the need to integrate conservation and development in the policy-making process (Buhrs, 1991). In addition, the influential Brundtland Report states that many of the environmental and development problems that confront us have their roots in sectoral fragmentation of responsibility for resources. Further, that sustainable development requires that such fragmentation be overcome (WCED, 1987). In summing up the central themes that underlie the 1992 Earth Summit, Cicin-Sain (1993, p. 15) notes that "the reality of interdependence hence necessitates integration: integration between environment and development, and integration among sectors."

What is integrated environmental management?

Of the various new paradigms put forward for managing environmental systems in an integrated manner, the term "integrated environmental management" is most inclusive (Margerum and Born, 1995). Other paradigms may be discussed under this all-inclusive label, as the literature suggests that most integrated approaches consist of a very similar process. The following definitions capture the basic idea of integrated environmental management:

> *The sharing and co-ordination of the values and inputs of a broad range of agencies, publics and other interests when conceiving, designing and implementing policies, programmes and projects* (Mitchell, 1986, p. 13).

A process of formulating and implementing a course of action involving natural and human resources in an ecosystem, taking into account the social, political, economic and institutional factors operating within the ecosystem in order to achieve specific societal objectives (after Dixon and Easter, 1986, p. 4).

Co-ordinated control, direction or influence of all human activities in a defined environmental system to achieve and balance the broadest possible range of short- and long-term objectives (Cairns, 1991, p. 5).

According to Mitchell and Hollick (1993), the building blocks for an integrated approach to environmental management should be: (1) a systems approach, in which attention is directed toward both natural and human systems; (2) a strategic approach, in which attention is directed to key issues and variables identified though consultation with stakeholders, and to the linkages among the key issues and variables; (3) a stakeholder approach, in which non-government groups and the public participate; (4) a partnership approach involving agencies, local government, non-government, and the public; and (5) a balanced approach, in which attention is directed to weighing concern about enhancing economic development, protecting the integrity of natural systems, and satisfying social norms and values. Born and Margerum (1993, p. 2) summarise the main components of this framework in the following comprehensive definition:

Integrated environmental management is an inclusive approach that takes into account the scope and scale of environmental and human issues and their interconnections. A strategic and interactive process is used to identify key elements and goals at which to direct attention, which in turn becomes the focus of an inter-organisational and co-ordinated approach to undertaking environmental management.

This definition provides a useful basis from which to discuss the main components of integrated environmental management. Born and Sonzogni (1995) and Margerum and Born (1995), drawing from Mitchell (1986), Born and Margerum (1993) and other literature, provide the most complete explanation of what an integrated approach entails. They

distinguish between the "substantive" and "procedural" characteristics of integration theory. In other words, the conceptualisation of integrated environmental management can divided into the "what" and the "how". The theory of "what comprises an integrated approach" is characterised by four central themes: *inclusive*; *interconnective*; *strategic*; and *goal-focused*. The theory of "how integration is achieved in practice" pertains to the *interactive* and *co-ordinative* approach of participants. These five main themes are represented in Figure 1, and are now discussed respectively.

Inclusive

Defining the scope and scale of the environmental management activities addresses the question of "what subjects should be included initially in the management efforts?" (Born and Sonzogni, 1995). This determination is part of the inventory and preliminary analysis stages of planning and management (Downs *et al.*, 1991). An inclusive approach requires that account is taken of: (a) the natural resource or ecosystem components; (b) the substantive resource management functions or jurisdictional setting; and (c) the stakeholders that affect or can be affected by management (Born and Sonzogni, 1995). In sum, a more comprehensive, holistic view of the issue is taken (Margerum and Born, 1995).

Interconnective

An integrated approach to environmental management requires that the interrelationships and linkages in a system be specifically addressed. These linkages are among: (a) physical, chemical and biological processes and components; (b) multiple, cross-cutting and often conflicting resource uses; and (c) among the many entities that collectively comprise the community of interest (Born and Sonzogni, 1995). According to Margerum and Born (1995), analytical tools and techniques—such as geographic information systems and systems analysis—play an important role in identifying interconnections in natural systems. Born and Sonzogni (1995) note that interaction among, and co-ordination of, diverse interests and entities constitutes a means of recognising and addressing interconnections in human systems, and these mechanisms are discussed later in this section.

Figure 1: Interaction and co-ordination during the management process

Source: Margerum and Born, 1995, p. 378

Strategic

Conducting an inclusive analysis and examining interconnections results in a very complex picture of the region or issue. Because of this complexity, there is a need to pragmatically scale down the effort. The number of variables and interrelationships subjected to further analysis must be reduced in order to analyse the key components and interconnections (Born and Sonzogni, 1995; Margerum

and Born, 1995). Put another way, "attention is directed toward a smaller number of variables which are believed to account for a substantial portion of the management problems" (Mitchell, 1990, p. 4). The strategic approach therefore falls somewhere between the rational comprehensive and incremental planning models, which are outlined in the next section of this chapter. According to Margerum and Born (1995), there are other planning models that demonstrate how the essential broader perspective can be reconciled with the requisite narrower focus.

Goal-focused

In narrowing the focus to key aspects, participants must develop common goals for the system being analysed. Integrated management requires a more proactive approach that looks at desired states for the system, rather than reacting to existing conditions (Margerum and Born, 1995). According to Buhrs (1991), many environmental advocates argue that common environmental principles or goals *must* be pursued across all policy areas if integrated management is to be meaningful at all. Buhrs (1991) states that having mutual goals is an effective approach to integrating actions because policy and management objectives are shared by stakeholders. The importance of goal setting is also highlighted by Slocombe (1993), who states that the core of integrated resource management has long been goal-oriented processes and co-ordination.

Interactive and co-ordinative

Integrated environmental management incorporates a holistic view that requires looking at the full range of activities and programmes that affect an area and developing strategies for managing critical components and interrelationships. A single organisation or individual cannot adequately provide this perspective (Margerum and Born, 1995). There are legitimate but

different and often conflicting societal interests in resources (Mitchell and Hollick, 1993). Therefore, the diverse values and inputs of various agencies and private interests must be identified and shared (Mitchell, 1986). This is achieved by *interaction*. Interaction among participants helps to define the interrelationships of concern (Born and Sonzogni, 1995), as well as identifying goals and the most critical issues to be addressed.

According to Mitchell (1986), the search for integration can occur at the normative, strategic and operational levels of management. It follows that interaction must occur at every stage of the management process, from scoping to plan development to implementation. Indeed, Margerum and Born (1995, p. 377) state that "the key operational component to achieving integration is interaction *throughout* the process of planned change" (italics added). According to Margerum and Born (1995), interaction can be divided into two forms: (1) with the more directly affected stakeholders (agencies, governments, interest groups and affected parties); and (2) with the general public. Interaction of stakeholders and the public throughout the management process is represented by the arrows in Figure 1.

Stakeholders are intensively involved throughout the process; here there is a need to identify and blend the sometimes complimentary but often conflicting values associated with different resource sectors (Mitchell, 1986). Relevant government policies sometimes conflict, and agency programmes are not always complimentary (Mitchell and Hollick, 1993). As a consequence, a comprehensive response to environmental problems requires an interweaving of agency missions, achieved through the process of *co-ordination* (Molnar and Rogers, 1982). As Minnery (1988) puts it, co-ordination is necessary if task specialisations are to be pulled together to achieve overall goals.

Co-ordination is defined as "a process of informed negotiation and bargaining, and an exchange of resources among parties at interest, to achieve mutually desired objectives" (Born and Sonzogni, 1995, p. 172). Co-ordination involves elements of: (1) communication; and (2) conflict resolution (Lang, 1986). Communication among participants is necessary to share information, analyses, goals and objectives. Conflict resolution is necessary for co-ordination because disagreements can be expected to occur between multiple participants with different ideas, perspectives and biases (Margerum and Born, 1995). Consequently, a need exists for an

explicit mechanism to facilitate the bargaining and negotiation needed to reach compromises (Mitchell, 1986). Molnar and Rogers (1982) stress that basic forms of interaction do not necessarily imply the sharedness of goals of purpose implicit in the concept of co-ordination.

According to Molnar and Rogers (1982), co-ordination is a process that requires some recognition of an inter-agency system accompanied by efforts to maximise the comprehensiveness, compatibility and co-operation between constituent units. The process implies some degree of timing, sequencing and accommodation among the interrelated activities of a set of agencies (Molnar and Rogers, 1982). As an "extended form" of interaction, co-ordination between participants can also occur at every stage of the management process (see Figure 1).

While co-ordination among governments and agencies is a vital element of integrated management, the values and interests of non-governmental groups should also be considered (Watson *et al.*, 1996). Interaction and co-ordination must extend beyond the more formal intergovernmental networks to embrace directly and indirectly affected interests (Born and Sonzogni, 1995). Grumbine (1993) states that it is difficult to envision any successful inter-agency co-ordination without substantive citizen involvement, and that for sustainable management, co-ordination needs to be an interactive process that includes all players. Buhrs and Bartlett (1993) conclude that truly comprehensive, integrated environmental policy requires extensive public participation, co-operation and support. In other words, there is a need for shared goals not only between agencies, but also with the general public.

Planning as a tool for achieving integrated management

According to Hufschmidt (1991), environmental management is a process involving the separate but closely linked stages of planning and implementation. Low (1991) defines planning as a rational process used by governments, organisations and other social groups in arriving at actions to be taken to achieve some future state of affairs. A plan offers a framing device, which serves to structure the decisions of those who implement it. It is thus potentially a powerful tool in both co-ordinating diverse sets of decisions and actions, and in translating policy into action (Healey, 1995). May (1997) states that plans provide a basis for co-

ordinated, integrated action in resource management. Therefore, planning can be regarded as a tool for achieving integrated management.

The IUCN (1991) recommends regional and local planning as a way of implementing national strategies for sustainable development. As noted previously, international agreements promote the use of integrated approaches to management in order to achieve sustainability. Planning processes are therefore thrown into the spotlight in terms of how well they provide for integrated management and sustainability. Much debate in planning theory revolves about alternative models for planning processes (Friedmann, 1996). Traditionally, two main models have been debated: rational comprehensive planning; and incrementalism.

Rational comprehensive planning involves setting goals, canvassing the alternative actions that might best achieve those goals, systematically comparing the costs and benefits of these alternatives, and then choosing the course of action that will achieve the goals at the least cost (Kingdon, 1996). Theorists have noted that rational comprehensive planning, while being extensively used, does not very accurately describe reality, and fails to provide planners with a workable normative framework for organising decision-making processes (Alexander, 1992; Wilkerson and Edgell, 1993). The major alternative that has been advanced is the incremental model of decision-making. Incrementalism describes the process of making small, incremental, marginal adjustments to the established pattern of behaviour, thus policy changes gradually (Kingdon, 1996). This model requires less information, and has been called a more "realistic" description of the planning process as it actually occurs in practice.

However, the appeal for integrated environmental management implicitly criticises the narrowly based, incremental, opportunistic style of planning so often encountered in practice. Lang (1986) states that "muddling through" is seldom sufficient to produce the multi-faceted, concerted, far sighted action that is necessary for good environmental outcomes. Dovers (1995) contends that integrated policy processes are required to address the interrelationships, complexities and cross-sectoral linkages that shape most environmental problems, and suggests a process similar to the rational comprehensive model for achieving this. Dovers (1995) stresses that good information, and the links between science and policy are of paramount importance in informing such a planning process. Wilkerson and Edgell (1993)

state that data collection for such a process needs to focused on vital issues and key management parameters; a more "strategic" approach.

There is a further dimension to planning theory. According to Healey (1995), plan-making can be seen as an exercise in integrating diverse issues and diverse interests in relation to environmental change: it is inherently an arena of political struggle. Healey (1995) simplifies the diverse political ideology of planning into a dual opposition between technocratic process forms and discursive process forms—in other words the tension between efficient economic organisation and broadly based democratic participation. On one hand, the neo-liberal aim is to construct regulatory regimes which operate through market forces, making those who benefit from a development internalise the full environmental cost of the impacts they create. On the other hand, interdiscursive policy formulation builds from a concern with empowerment: the aim here is for richer forms of democratic agreement through different forms of communication and debate.

Barriers to integration

While the concept of integrated environmental management has shifted attention towards co-ordinated (and strategic) planning and management processes among different resource sectors, there are often significant barriers and constraints which prevent integration from happening. It is widely argued in the literature that limitations in institutional arrangements constitute the main barriers to improved planning and management practice (Watson *et al.*, 1996). The term "institutional arrangements" refers to structures, processes and policy approaches for making public decisions and for influencing the behaviour of individuals, groups and firms (Watson *et al.*, 1996). Institutional arrangements are defined by Mitchell (1990, p. 6) as the combination of: (1) legislation and regulations; (2) policies and guidelines; (3) administrative structures; (4) economic and financial arrangements; (5) political structures and processes; (6) historical and traditional customs and values; and (7) key participants and stakeholders.

Barriers to integration manifest themselves through these factors in the following ways. In relation to legislation, policies and administrative structures, Watson *et al.* (1996) identify

weak legislation, overlapping agency responsibilities, and fragmented administrative structures as significant barriers to integration. Mitchell and Pigram (1989) note that shared and fragmented responsibilities between and within agencies become both barrier to and rationale for integration. Economic and financial arrangements within agencies are also important because co-ordination and integration involves high transaction costs—time and money spent interacting with multiple parties at multiple levels (Born and Sonzogni, 1995). Watson *et al.* (1996) identify inadequate financial provision as a major barrier to integrated management, while a lack of time can also hinder efforts to achieve integration.

Political structures and processes that may limit integration include a divergence between agencies in methods of planning and implementing policy (Watson *et al.*, 1996). Closely related to this are the historical and traditional customs and values of organisations. Entrenched organisational structures (Watson *et al.*, 1996), and differences in philosophy and orientation (Petak, 1980) are barriers to successful integration. Further, Born and Sonzogni (1995) and Petak (1980) argue that models of professionalism and professional bias contribute to the perpetuation of a very narrow perspective within agencies. Key participants and stakeholders are, therefore, important factors in the integration effort, and personalities may hinder it through individual perceptions of the problem, and limitations to training (Petak, 1980). Watson *et al.* (1996) note that limited public participation is also an inhibitor of integration.

Mitchell (1986) points out that even if participants communicate effectively and reach consensus on goals, conflict will inevitably appear between collaborating agencies during the implementation stage. This raises the perennial issue in environmental management, namely that of policy integration. For example, in the USA, the coastal zone is a "policy battleground" despite years of interdepartmental, interstate and intersectoral co-ordination (O'Riordan, 1995, p. 152). According to O'Riordan (1995, p. 153), policy conflicts are rooted in the administrative history of the managing agencies; "they create beneficiaries who lobby hard and successfully protect their interest". With this in mind, Margerum and Born (1995) note that co-ordination is not a panacea, because it often cannot resolve fundamental policy differences or value conflicts.

Practical experience with integrated approaches to environmental management have yielded mixed results. Mitchell (1986) identifies several problems associated with comprehensive river basin planning in Canada: comprehensive plans were produced when not always needed; recommendations were often too numerous and ambiguous; and planning studies were expensive and time consuming. As Mitchell (1986) notes, not every interaction between sectors is problematic, and situations may well exist where an integrated approach is not required. Born and Sonzogni (1995) conclude that while integrated management approaches will be critical to effectively addressing many of the most complex environmental problems faced by society, it is unnecessary to deploy the approach ubiquitously. Cicin-Sain (1993) notes that in any case, integrated management generally does not replace sectoral management, but instead supplements it.

Summary

The main rationale for integrated environmental management is provided by the inescapable fact of ecological, social and economic interdependence, combined with a recognition that previous management frameworks did not adequately address these interconnections. Newer, more integrated approaches to environmental management are designed to: (1) be comprehensive and inclusive; (2) recognise system interconnections; and (3) be strategic and goal focused. In order to achieve this in practice, interaction and co-ordination between agencies and other participants in planning and implementation is vital. The implication, according to Watson *et al.* (1996), is that integration means joint decision-making, collective action, and adjustment among public and private sector resource interests. Mitchell and Hollick (1993, p. 741) neatly summarise the ideals of an integrated approach to environmental management:

As a philosophy [an integrated approach] should result in a shift of organisational cultures and participant attitudes towards acceptance and pursuit of co-operative approaches. As a process, [an integrated approach] should facilitate co-ordination between agencies, local governments and community groups. As a product [an integrated approach] should facilitate development of complimentary regulatory instruments...

Although integrated management is extolled by many, it appears difficult to accomplish in practice. Born and Sonzogni (1995) state that to the degree that some success has been attained, it has been more readily achieved in the planning phase than in implementation. Barriers to integration can be ascribed primarily to one or a combination of institutional limitations, such as shared or fragmented management responsibilities, entrenched organisational structures, and lack of finances. It is essential, then, to examine relevant institutional arrangements when assessing the potential for integrated management within a particular context. The other main barrier to integration may be difficulty with the "perennial issue" of policy integration. Co-ordination simply may not solve conflicting objectives.

Nevertheless, integrated approaches are being adopted and tried at every scale in the field of resource and environmental management. Born and Sonzogni (1995) observe that integration is the foundation for international and global environmental management initiatives aimed at more sustainable development. Numerous nations and their political subdivisions have formally provided for integrated approaches to environmental management, including the United States, Canada, Holland, Australia, and New Zealand. New Zealand is seen by some as a leader in this field, and the following chapter reviews the potential for integrated environmental management in this country.

Chapter 3: The potential for integrated environmental management in New Zealand

The history of environmental management in New Zealand has, like other countries, been characterised by ad hoc and incremental attempts to deal with specific issues. Until recently, environmental legislation had been developed in a piecemeal manner, resulting in a remarkably fragmented resource management framework. However, reforms of the environmental legislation and management agencies from 1984 have fundamentally reshaped the management setting. Although primarily motivated by economic considerations, these reforms were also specifically aimed at improving integration in planning and management. Indeed, since the passage of the RMA, New Zealand has been dubbed a "world leader" in integrated environmental management. Yet while the new regime contains opportunities for environmental management agencies to achieve integrated management, equally there are barriers to successful integration within the new context.

The objective of this chapter is to outline how the framework for integrated environmental management in New Zealand came about, and to highlight the opportunities and limitations for integration under the current legislation. This is achieved through a review of commentary surrounding the RMA, Conservation Act, and *Environment Act 1986*, along with an assessment of the legislation itself. Before reviewing the current situation, it is necessary to first describe the previous resource management regime and its shortcomings. After this, the post-1984 environmental reforms are outlined, followed by a discussion of the requirements for planning under the new regime. Then the current institutional and legislative context is assessed, in terms of the opportunities and limitations it presents for integrated management of the environment.

Environmental management prior to 1984

Prior to 1984, the government was the dominant developer of New Zealand's natural resources, and a great deal of private and public development was subsidised by the state (May

et al., 1996). According to Buhrs and Bartlett (1993), environmental policy was severely disadvantaged in a highly bureaucratised, centralised system. Decision-making processes were dominated by central government, with government departments and legislative mandates largely pre-empting local decision-making authority on natural resource issues (Furuseth and Cocklin, 1995). In general, government responsibility for the environment was also highly fragmented.

Environmental management legislation in New Zealand had evolved in a piecemeal fashion over a relatively long period of time, with a number of laws addressing planning, coastal resources, and soil and water use and conservation (Memon, 1993). Up until 1984, the scope of environmental reforms under successive governments had been limited to incremental changes, and the legislative framework that came into being was characterised by problems of fragmentation, overlap, complexity, procedural inconsistency, and a degree of ambivalence and bias in the values underlying it (Memon, 1993). By the mid 1980's, environmental planning was spread across some 70 statutes that variously involved 20 central government ministries and departments, 20 catchment authorities, 22 united and regional councils, 234 local councils and a multitude of other ad hoc authorities (May *et al.*, 1996).

The most important resource management and planning statutes were the *Soil Conservation and Rivers Control Act 1941*, *Water and Soil Conservation Act 1967* and *Town and Country Planning Act 1977*. These laws were administered fairly independently, with little or no attempt at integrated environmental management (OECD, 1996). Instead, individual government ministries and departments pursued their missions and devised ad hoc environmental and natural resource policies in relative isolation (Furuseth and Cocklin, 1995). Other weaknesses in the resource management framework included overlapping responsibilities across agencies, and conflicts of interest within agencies responsible for both managing resources commercially and conserving them (OECD, 1996). The absence of a well defined national environmental policy was further hindrance to an integrated perspective in resource planning and management (Furuseth and Cocklin, 1995).

Public dissatisfaction with central government decision-making over major resource development projects became manifest from the late 1960's. Controversial, large-scale energy

projects such as Lake Manapouri, Huntly Power Station and the Clyde Dam resulted in significant public protest (Memon, 1993). In the late 1970's and early 1980's the statutory planning process itself came under attack. Environmental and Maori groups complained that planning processes gave inadequate recognition to environmental and Maori values in relation to economic concerns. In addition, there were calls for change from development interests frustrated with bureaucratic hurdles in the development process. Influence for reform also came from overseas, generated by increased awareness of human impacts on the environment, and also the IUCN agreement of 1980 (Memon, 1993). A major review of New Zealand's environmental policies by the OECD (1980) singled out two related concerns: a need to strengthen the primary source of advice on environmental policy within central government; and a need for more effective inter-agency co-ordination of environmental policy (Memon, 1993).

Post-1984 environmental management reforms

Upon coming into power in 1984, the Fourth Labour Government embarked on a series of radical state sector reforms based on New Right economic principles (Buhrs and Bartlett, 1993). The primary motivation for the reforms as a whole was to increase the competitiveness of the economy, combined with an ideological desire on the part of government to let the market determine the allocation of resources (Memon, 1993). According to Martin (1994), the major restructuring legislation of the 1980's was unquestionably "managerialist". The set of reforms enacted between 1985 and 1991 included the consideration of economic instruments in policy implementation; commercialisation of the public sector; and corporatisation and privatisation of the commercial operations of government (May et al., 1996). In addition, there was a total reorganisation of the national environmental administration, restructuring of regional and local government, and the integration of resource and environmental management statutes. These three reforms are outlined below.

National environmental administration reform

The first term of the Fourth Labour Government saw the complete reorganisation of the central environmental administration. These changes reflected the New Right philosophies which guided other reforms at this time, with Treasury advocating the break-up of the state

development bureaucracy on the grounds that it was economically inefficient. Meanwhile, environmentalists sought an end to "state sponsored vandalism" by calling for the separation of development and environmental responsibilities among government agencies (Buhrs and Bartlett, 1993). Thus the Ministry of Works and Development, New Zealand Forest Service, and Department of Lands and Survey were abolished: the government divesting itself of the role of developer.

The new public bureaucracy responsible for environment and resource management came about with the implementation of two legislative enactments. First, the *Environment Act 1986* created the Ministry for the Environment (MfE), focusing on environmental policy; and the Parliamentary Commissioner for the Environment (PCE), an "environmental watchdog". Second, the *Conservation Act 1987* created the Department of Conservation (DOC), which was charged with conservation advocacy and operations (May *et al.*, 1996). The environmental protection and enhancement elements from previous multi-functioned agencies went into these three new agencies, while the former resource production functions of the public sector were devolved to state owned enterprises or privatised (Memon, 1993).

The MfE is a "neutral advocate of balance" within government, as it is mandated to "balance all values" concerned with the environment (Buhrs, 1991). The overall mission of MfE is to promote the sustainable management of the environment (Bush, 1995). In contrast, DOC is an advocate of conservation values as well as a national heritage management agency, with specific "hands on" responsibilities for managing the Crown's conservation estate (Memon, 1993). DOC's mission is to conserve the natural and historic heritage of New Zealand for the benefit of present and future generations (DOC, 1993a). DOC has a policy advisory role to government, and it provides advice to local authorities to facilitate conservation through statutory planning (OECD, 1996). While MfE and DOC are an integral part of the executive branch of government, and are directly accountable to cabinet, the PCE is essentially autonomous, having wide powers to investigate and inquire into environmental issues (Milne, 1992).

Local government reform

Labour's second term in government heralded the most far-reaching structural changes to local government in the history of New Zealand. An important feature of the reorganisation was that it represented an extension of the economic ideology that characterised the state sector reforms in the period after 1984. Parallels with central government reforms included a drive for greater accountability, transparency of operation, economic efficiency, separation of regulatory and non-regulatory activities, and less central government interference in local decision-making (Martin and Scott, 1990). The primary intention of local government reform was to ensure that local and regional authorities could perform their wide range of policy, service delivery and commercial trading functions in an unrestrained, competitive economic environment (Memon, 1993).

The reforms also addressed wide ranging functional problems, including the fragmented and overlapping jurisdiction of local government, problems of intergovernmental relationships, and inadequate statutory powers (Memon, 1993). Rationalising the structure of local government involved replacing over 700 territorial and regional authorities and ad hoc boards with 12 regional councils, 74 territorial authorities and four unitary authorities. The *Local Government Amendment Act 1989* prescribes the functions of the new councils. In keeping with the philosophy of devolution, and the view that local communities should take greater responsibility for the effects of their resource development decisions, environmental planning and decision-making responsibility was thus largely delegated and decentralised (Buhrs and Bartlett, 1993; May *et al.*, 1996).

From the beginning, local government reform was closely co-ordinated with the concurrent review of resource management legislation; a single ad hoc cabinet committee being responsible for both reforms. Buhrs and Bartlett (1993) state that the greatest significance of local government reform was in establishing the structures, organisations, and basic processes that would be used by the RMA to assign functions and to redesign policy processes and institutions. The RMA would therefore "enable" local authorities in a significant way.

Resource management law reform

Resource management law reform consisted of an integrated review of the entire raft of planning, environmental and resource management legislation (Bush, 1995). As with concurrent reforms, the main goal was increased efficiency and steamlining of environmental planning processes. One of the driving forces behind the resource management law reform exercise was to resolve problems that had arisen from attempting to manage land, air and water separately, through conflicting laws, overlapping responsibilities and complicated procedures (Blakeley, 1995). Accordingly, a fundamental objective of the reforms was to make environmental policy more comprehensive and integrated (Buhrs and Bartlett, 1993). In addition, Gow (1995a) states that a general consensus emerged among environmental, resource user and industry groups of the need to secure higher standards of environmental protection.

The RMA was passed by a National Government, and took effect on 1 October 1991 replacing more than 70 statutes, passed at different times, with a single coherent resource management framework (Buhrs and Bartlett, 1993). The promotion of the sustainable management of natural and physical resources is the overriding objective of the RMA, and it is explicitly directed at integrating environmental, economic and social values in resource management (Buhrs, 1991). The RMA streamlines the procedures for decision-making in environmental planning and provides for the integrated management of land, air, water and geothermal resources (Memon and Gleeson, 1995). Under the RMA, integrated management is to be achieved through the process of planning, as discussed in the next section.

Planning under the new regime

According to May (1997), a distinctive feature of the RMA is the "legitimisation of planning". In other words, the RMA empowers planners and places an emphasis on planning as the key tool for achieving sustainable management. The RMA requires numerous plans from various agencies, each aimed at the integrated management of natural and physical resources. Perhaps in anticipation of the RMA, the Conservation Act was amended in 1990. The amendments contained significant new requirements for planning, and for the integrated management of natural and historic resources. It is the requirements of both pieces of legislation for planning

and integrated management, discussed below, that form the basis of research investigations into the case study of this thesis.
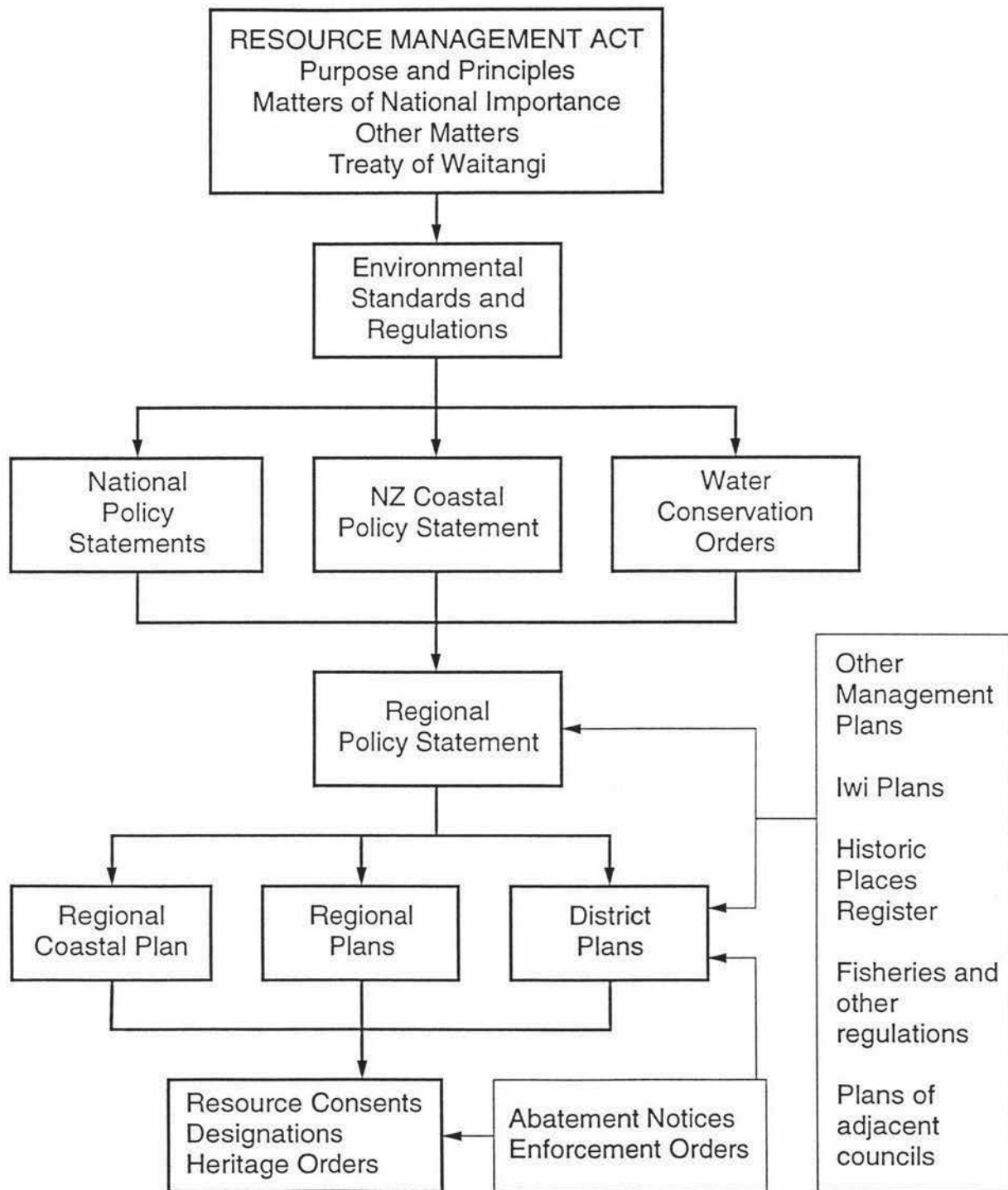
Resource Management Act 1991

According to Memon (1993), the RMA is essentially a planning instrument, highlighting the significance of environmental policy formulation. The RMA sets up a hierarchical, three-tier planning structure (Figure 2). At the central government level MfE may issue national policy statements and national environmental standards, while DOC is obliged to prepare the mandatory New Zealand coastal policy statement. However, most of the responsibility for identifying issues, and developing, implementing and monitoring policy has been delegated to regional and local levels of government. Regional councils must prepare a regional policy statement to provide an overview for the integrated management of the resources of the region. They must also formulate a regional coastal plan, and may produce one or more regional plans. At the local level, territorial authorities are charged with preparing a compulsory district plan. District plans must not be inconsistent with regional planning instruments, which in turn must not be inconsistent with any national policy, and all policy statements and plans are directed at fulfilling the purpose of the RMA.

Conservation Amendment Act 1990

Under the *Conservation Act 1987*, a statement of general policy for conservation areas was optional, and the establishment of a management plan for each of these areas was mandatory. However, there was no requirement for "integrated management" under these plans, and nor did they have to be specifically linked to general policy. *The Conservation Amendment Act 1990* ushered in much more comprehensive requirements for management planning (under Part IIIA). Now, all conservation areas and natural and historic resources are to be managed in accordance with general policy, mandatory conservation management strategies, and detailed conservation management plans. The purpose of the conservation management strategy is to implement general policies and establish objectives for the integrated management of natural and historic resources. Conservation management plans are to be prepared as required by a conservation management strategy for the integrated management of specific areas. Figure 3 shows the relationship between, and ambit of, these two types of plan.

Figure 2: Planning structure under the RMA


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┌─────────────────────────────────────┐
│     RESOURCE MANAGEMENT ACT          │
│       Purpose and Principles         │
│    Matters of National Importance    │
│          Other Matters               │
│        Treaty of Waitangi            │
└─────────────────────────────────────┘
                  │
                  ▼
         ┌──────────────────┐
         │   Environmental   │
         │   Standards and   │
         │   Regulations     │
         └──────────────────┘
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National Policy Statements	NZ Coastal Policy Statement	Water Conservation Orders

Regional Policy Statement

Regional Coastal Plan	Regional Plans	District Plans

Other Management Plans

Iwi Plans

Historic Places Register

Fisheries and other regulations

Plans of adjacent councils

Resource Consents
Designations
Heritage Orders

Abatement Notices
Enforcement Orders

Source: *Taranaki Draft Regional Coastal Plan*, 1993

Figure 3: Conservation management strategies and conservation management plans

Conservation Management Strategy Boundary

Conservation Management Plan Boundaries

• Wild Animal
Control Act

• Species protection

• Freshwater fisheries

• Marine mammals

National
Parks

Marine
mammal
sanctuaries

Covenants

Private Protected
land

Wildlife refuges

Integrated Conservation
Management Plans
• Conservation areas
• Reserves
• Wildlife protected areas
• Marine reserves

Walkways

Resource
Management Act

- Plans "have regard
to" CMS

Marginal
strips

Private or Leasehold Land
Fresh or Sea Water

Protected Crown areas
managed by DOC

Source: DOC, 1993d, p. 8

Opportunities for integration

According to Cicin-Sain (1993), institutional strategies, involving some type of organisational change, are one way of helping to achieve integration. Buhrs and Bartlett (1993) state that the reorganisation of the national environmental administration has created potential for achieving greater integration and comprehensiveness. The creation of the MfE on a statutory basis and in a policy advisory role for environmental concerns is an improvement—at least in relation to the Commission for the Environment which it replaced. The establishment of DOC has also created a better basis for more integrated environmental policy. Conservation concerns are now functionally integrated in a single agency, and DOC also has an explicit formal mandate to be an advocate for the environment. Further, the creation of the PCE as a system guardian should also foster a comprehensive view and integrative perspective through the contributions that office makes to policy development. However, Buhrs and Bartlett (1993, p. 146) note that:

It is with respect to new mandates, processes and organisational structures created in the linked local government and resource management law reform that the potential for more comprehensive, integrated environmental policy has been most extended.

According to May *et al.* (1996, p. 52), environmental policy under the RMA is more comprehensive and integrated than previously in four main ways. First, the RMA provides for both "substantive co-ordination and co-ordination by common principles" stemming from a single specific purpose. Second, it provides a number of procedural means to achieve integration and comprehensiveness (e.g., policy statements, plans, monitoring, consultation, and review). Third, environmental impact assessment is "integrated with the planning and decision-making procedures". Finally, the amalgamation of regional, local and ad hoc authorities makes it possible for "policy to be integrated administratively and politically within each district"; within the newly created autonomous regional councils it has enabled a "comprehensive perspective in integrating resource policies that transcend the boundaries of local authorities."

The RMA shifts much of the responsibility for environmental policy-making to regional councils (Buhrs, 1991). Gow (1995b) states that the regional policy statement is the key to integrated, sustainable resource management for each of the 16 regions of New Zealand. Campbell (1996) notes that the regional policy statement has the particular purpose to achieve the integrated management of the resources of the region in recognition of the way that resource issues interrelate most cogently at regional geographical (catchment) level. One of the purposes of a regional policy statement is that of recording arrangements to be adopted to achieve integrated management of the region. Other mechanisms for the achievement of integrated management at regional level include joint and combined hearings, transfers and delegation of responsibility and joint plan preparation (Hutchings, 1994).

Both the RMA and the Conservation Act require the integrated management of resources through the mechanism of planning. As integrated management is a tool intended to bridge resource and institutional issues (Campbell, 1996), it should allow the pursuit of sustainable management to be effected unconstrained by institutional boundaries (e.g., local authority-DOC). May (1997) notes that planning processes can allow for the development of consensus on policy goals. In the context of the RMA this involves consensus around local objectives for sustainable management, with respect to regional and national objectives. It also means incorporating different management agencies, legislation and environmental media when drafting plans (Barton, 1993). These separate but related requirements are discussed below.

Integration across agencies

Barton (1993) lists four ways in which inter-agency integration can be achieved under the RMA. First, joint decision-making with territorial authorities can occur, for example, through joint hearings. Second, formal channels of communication can be established between local authorities and DOC. Third, issues that concern the community can be drawn out in the consultation phase, helping integration across different agencies, including integrated decision-making, management responses, and implementation. Fourth, sharing of information between organisations could be provided for in the regional policy statement or dealt with more informally. Under the Conservation Act, the preparation of conservation management strategies and conservation management plans should also take place with consultation and input from local government.

Integration across legislation

Integration across legislation is perhaps the most complex area to deal with according to Barton (1993). For example, many different agencies are involved with management of the coast, including DOC, Ministry of Fisheries, Ministry of Transport, regional councils and territorial authorities. These agencies work under various acts of parliament, thus have different missions. In order to achieve desired resource management outcomes, local authorities therefore need to consider legislative instruments outside the RMA (Barton, 1993). The RMA makes provision for this, in that policy statements and plans should be prepared with regard to plans drafted under other acts. In addition, Section 33 RMA provides for the transfer of powers from a local authority to another public authority (e.g., DOC).

Integration across environmental media

According to Campbell (1996), the central and innovative thrust of the RMA is the repeated reference to ecosystems (in Parts I and II), a concern which crosses tenurial boundaries. The OECD (1996) observe that the RMA provides a framework within which policies and plans can be developed to provide a mechanism for broad ecosystem management, and for the protection of natural values irrespective of land tenure. In addition, management of areas under the Conservation Act must incorporate a special regard for the intrinsic values of ecosystems (Section 2). Therefore integration within and across environmental media is necessary. For example, policy on water issues needs to be developed in conjunction with policy on land matters that affect water. The land-sea interface is another boundary across which integrated management should be sought.

Recognition must also be given to the cumulative and synergistic nature of the effects of human activities on ecosystems (Section 3 RMA). This leads to issues of "integration across time" outlined by Barton (1993) and Campbell (1996).

Limitations on integration

While the RMA is a landmark achievement in providing a basis for more comprehensive and better integrated environmental policy, it does not, in itself, guarantee the integration of environmental, economic and social policies (Buhrs, 1991). Although providing for an

integrated approach to resource management on the basis of sustainability, the RMA gives no guidance for environmental *policy* co-ordination. May *et al.* (1996) state that the RMA itself has limited power to integrate the resource management policy initiatives of different agencies. Buhrs (1991) notes that at most, the RMA is a starting point for the development of substantive environmental policies, depending on how local, regional and central government give consequence to the provisions of the Act.

The RMA contains few concrete or specific policy directives, and no national policy statements or standards have been forthcoming from central government to guide the implementation of the RMA (Buhrs and Bartlett, 1993). Further, the MfE has limited regulatory, planning or advocacy authority, and this greatly circumscribes the integrative role it can play. The MfE cannot give directives to other national government agencies, nor can it require other agencies to co-operate or even provide information and the expertise needed for the development of more integrated environment policies (Buhrs and Bartlett, 1993). May (1997) states that local authorities rely heavily on MfE and DOC for guidance, but the ability of these agencies to respond is constrained by staffing limitations and the sheer magnitude of issues involved with implementing the RMA. The OECD (1996) contend that to be effectively implemented, New Zealand's ambitious overall strategy may require additional government effort.

According to Dixon *et al.* (1997), the RMA may be characterised as a co-operative mandate. This is because it enables regional and local councils to adopt a flexible and innovative approach to their environmental problems within the context of a devolved planning system. Indeed, the RMA contains few explicit incentives or penalties designed to induce local or regional councils to comply with its spirit (Buhrs and Bartlett, 1993). Therefore, according to May (1997), the efficacy of the institutional arrangements and procedures of the RMA is largely dependent on professionals having sufficient desire to take on environmental problems, and engage in a process for addressing them around co-operative principles. Of critical importance is the commitment of local government officials to the goal of sustainable management, and their ability to avoid the parochialism of past practices (May *et al.*, 1996). Montz and Dixon (1995) emphasise the need for co-operation and goodwill among professionals in achieving integration.

Central to the new regime is an intergovernmental system of policies and plans. There are clearly specified procedural requirements relating to such factors as plan and policy consistency between levels of government, consultation between all parties, and jurisdictional concerns (Dixon et al., 1997). However, while district plans are "not to be inconsistent with regional policy statements", and "shall have regard to other plans" the RMA contains few provisions for intergovernmental co-ordination, and is unclear as to how dialogue will take place between agencies (May et al., 1996). Certainly the Conservation Act gives no guidance on mechanisms for integration. Effective policy co-ordination requires the staff of agencies to meet regularly and agree on processes for achieving mutually beneficial outcomes. May et al. (1996) state that given the demanding statutory deadlines, not to mention traditional animosities, it is possible that such harmony will not universally result. The OECD report (1996) recommends a higher degree of co-ordination and collaboration within and among all levels of government, private sector and communities.

Montz and Dixon (1995) state that joint hearings are the only administrative provision for dealing with inter-agency issues (apart from in the coastal arena). They emphasise that in order to achieve integrated management under these conditions, new administrative arrangements to overcome any difficulties of humanly constructed boundaries need to be developed. Possibilities include independent or peer review of applications, holding joint hearings, the development of joint procedures, and the use of informal mechanisms of communication. The OECD (1996) urge greater use of multi-stakeholder decision-making processes and voluntary agreements so as to encourage constructive conflict resolution.

A further difficulty is highlighted in a series of case studies undertaken by McRae and Woods (1996). They note the difficulties that exist for local authorities and DOC in clarifying and reaching agreement on what is actually required to achieve integrated management. These difficulties can be illustrated by: the varying responses from councils to RMA provisions; inadequate processes involving limited consultation, challenges to information and rushed processes; poor use of ecological information; and uncertain performance standards. It is important to note that neither the RMA nor the Conservation Act define integrated management, so it is unclear whether different agencies are in fact aiming at the same goal.

Finally, given that integrated management involves high transaction costs—time and money spent interacting with multiple parties at multiple levels—it is questionable whether agencies will have the resources to achieve it. Reforms have shifted costs from central to local government (Bush, 1995), and DOC's budget has been cut by 20 per cent in real terms since 1987 (DOC, 1993a). Ericksen (1990) states that one of the main factors inhibiting integrated water and soil management in the past has been lack of finances to implement appropriate methods of management. Limited finances affect the amount of time and money available for planning processes and for interaction and co-ordination with other parties. Buhrs and Bartlett (1993) also note that "resourcing" is not only limited to money, but also includes the qualifications of personnel. According to Buhrs and Bartlett (1993), therefore, much depends on the adequacy of resources that will ultimately be dedicated to the task of integration. Lacking substantial new funding, the capacity of councils and DOC to adequately execute the new agenda is limited.

Summary

Buhrs and Bartlett (1993) state that institutional reform in New Zealand has greatly increased emphasis on anticipatory as opposed to reactive policy making, and further, the new system is forcing some degree of comprehensive and integrated management. The impetus for the reform was primarily on rationalising structures and processes in order to increase economic efficiency, and some of the institutional barriers to integration have been at least partially resolved by the new regime. The overlapping agency responsibilities, internally conflicting missions and fragmented administrative structures within agencies under the former legislation have been largely eradicated. In addition, the creation of regions that relate to catchment boundaries and the reference to ecosystems in the legislation allows a more holistic and ecosystem-based approach to environmental management.

Further, to some extent the RMA achieves and provides for substantive co-ordination between agencies and other stakeholders (Buhrs and Bartlett, 1993). Local authorities and DOC now have an explicit mandate to achieve integrated management through planning. Mechanisms to achieve co-ordination and integration through planning include requirements for agencies to have regard to other planning instruments, as well as extensive provision for consultation with other agencies and the public. Barton (1993) states that the RMA provides

for inter-agency co-ordination and integration through such concepts of joint decision-making, management responses and methods and actions, and working toward shared environmental goals. Figure 4 provides a summary of the requirements for plan-making and integrated management under the RMA and Conservation Act.

However, Buhrs and Bartlett (1993) note that institutional reform involves much more than government organisational change. Further, even more formidable, obstacles exist in economic structures and processes and in the broader sociocultural context. Mitchell and Hollick (1993) note that rearranging structures is not sufficient or adequate to achieve integration, as this simply moves ever-present boundary problems. Moreover, restructuring will not result in the immediate removal of long-entrenched organisational structures. Stewart (1994) contends that it would be naive to expect that legislation could fix institutional and personality conflicts which have been ongoing, often for a very long time. In addition, lack of time and money may be a major inhibitor to integration under the new institutional context.

The implementation of the new legislation does not just rest on resourcing issues, but also on other factors such as the commitment and capacity of local government to work toward new goals, the willingness of practitioners to adopt new ideas and methods, and a recognition of the need for realistic transition period (Dixon *et al.*, 1997). Molnar and Rogers (1982) state that efforts to co-ordinate generally rely on pervasive informal or "lateral" relations between skilled personnel who develop their own information networks. The achievement of integrated management is, therefore, largely dependent on participants in the process, and the statutory and non-statutory arrangements which may voluntarily be entered into by agencies (Hutchings, 1994).

Chapters Two and Three represent the theoretical framework for the research investigations carried out in this thesis. The next chapter presents the research design and methodology for this thesis, as well as introducing the Abel Tasman case study.

Figure 4: Requirements for planning and integrated management under the RMA and Conservation Act (as amended)

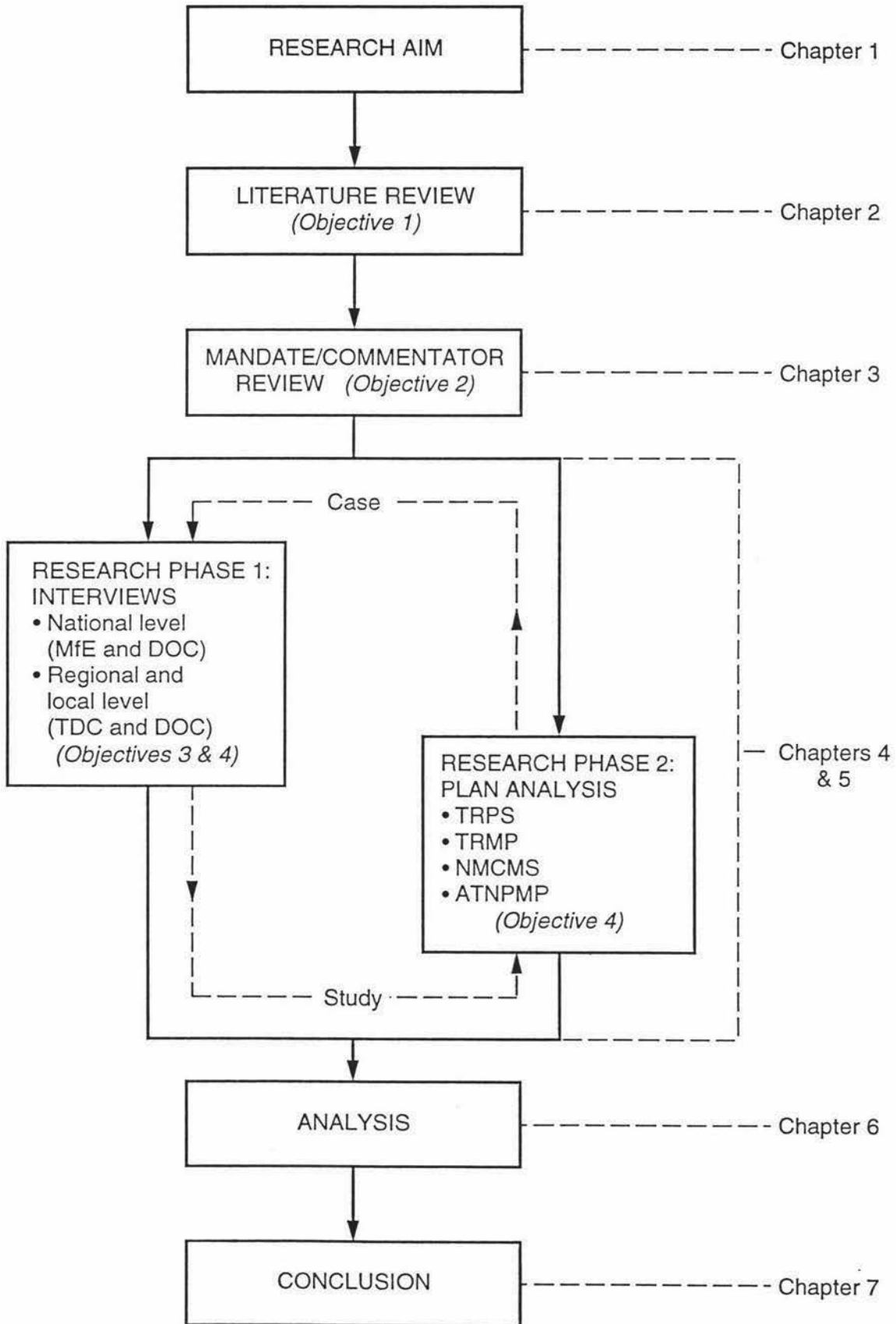|	RESOURCE MANAGEMENT ACT 1991	CONSERVATION AMENDMENT ACT 1990
Requirements for plan making	*Section 60*: regional policy statement (RPS) (compulsory) *Section 64*: regional coastal plan (compulsory) *Section 65*: regional plan (optional) *Section 73*: district plan (compulsory)	*Section 17D(2)*: conservation management strategy (CMS) (compulsory) *Section 17E(2)*: conservation management plan (CMP) (compulsory for national parks; or as required by CMS)
Provisions for integrated management	*Section 30(1)(a)*: regional council function "to achieve integrated management" *Section 31(a)*: territorial authority function "to achieve integrated management" *Section 59*: RPS purpose "to achieve integrated management"	*Section 17D(1)*: CMS purpose "for...integrated management" *Section 17E(1)*: CMP purpose "for...integrated management"
Regard to other plans	*Section 61(2)*: when preparing RPS, regional council "shall have regard to" other plans *Section 62(2)*: RPS "shall not be inconsistent with..." *Section 74(2)*: when preparing district plan, territorial authority "shall have regard to" other plans *Section 75 (2)*: district plan "shall not be inconsistent with..."	*Section 17D(8)*: during preparation of CMS "shall have regard to existing management plans under this or other act administered by DOC." *Section 17E(9)*: during preparation of CMP "shall have regard to fisheries plans under this Act"
Agency consultation	*First Schedule (3)(1)*: policy statement or plan prepared in consultation with MfE, and other ministers, local authorities, and iwi authorities who may be affected *First Schedule (3)(2)*: anyone else may be consulted	*Section 17F(a)*: CMS prepared in consultation with "such persons and organisations...as practicable and appropriate" *Section 17D*: CMP prepared in consultation with "such persons and organisations...as practicable and appropriate"
Public consultation	*First Schedule (3)(2)*: may consult with the public *First Schedule (5-8)*: public notification, submissions, council hearing on submissions	*Section 17B(d)*: during general policy development "encourage public participation" *Section 17F(i)*: during preparation of CMS "consider submissions and public opinion" *Section 17G*: during preparation of CMP "consider submissions and public opinion"
Other mechanisms for integration	*Section 33 and 34:* Transfer and delegation of powers etc. *Section 80*: Joint plan preparation	None evident
Incentives or sanctions for compliance	*Section 25*: residual powers of MfE	None evident
Prescriptiveness	Prescriptive on planning process	Not prescriptive

Chapter 4: Research design and methodology

This chapter presents the research design and methodology of the thesis. Following a brief explanation of how the research methods are employed to reach the thesis objectives, the physical and management setting of the Abel Tasman National Park area is introduced. Then, the management issues present in this area are illustrated, with an emphasis on the need for an integrated approach to address these problems. Next, there is a full discussion of the two research methods used in this thesis, which are: (1) interviews; and (2) plan analysis. These methods are explained, and their is selection justified by a summary of their advantages and disadvantages as research instruments. Finally, this chapter presents the development and detail of the methods as they relate to the case study and research investigations. For interviews, this means developing the questions; for plan analysis, the plan coding form and criteria are developed.

The four objectives of this thesis are to: (1) explore the notion of integrated environmental management in different contexts and summarise what it actually means; (2) investigate the specific requirements for integrated management in the New Zealand context under the RMA and Conservation Act, highlighting the opportunities and limitations for integration; (3) identify and analyse processes of interaction and co-ordination that are used by TDC and DOC in order to achieve integrated management; and (4) assess the extent to which co-ordinated and integrated management is actually occurring in relation to the case study. Figure 5 shows the phases of research undertaken to achieve these objectives.

Objective one was achieved by completing a review of the literature relating to integrated approaches to environmental management. Objective two was achieved by referring to the environmental management legislation in New Zealand, and by reviewing the literature relating to this context. Objectives three and four are achieved by research investigations. As shown in Figure 5, there are two distinct phases of research that relate specifically to the case study, and address objectives three and four. Phase one of the research is to interview those closely involved with implementing the RMA and Conservation Act: this addresses objective three, and contributes in large part to achieving objective four. Phase two of the research is to

Figure 5: Research design and methodology

analyse the plans which are relevant to the management issues surrounding the Abel Tasman National Park: this assists in the analysis of objective four. The results of the research investigations are presented in Chapter Five.

Figure 5 shows that the findings derived from the research are later synthesised and analysed in Chapter Six. Objectives three and four are analysed within the context provided by the results of objectives one and two. In other words, the processes of integration used and the extent of integration achieved are compared against the theoretical "ideal" of integration, and against the actual requirements for integration in the legislation. Therefore the "extent" of integration is judged against what is required, and this allows suggestions for improving the integration effort to be offered. Following this, conclusions about the integration effort in the case study, and about integrated management in general, are presented in Chapter Seven.
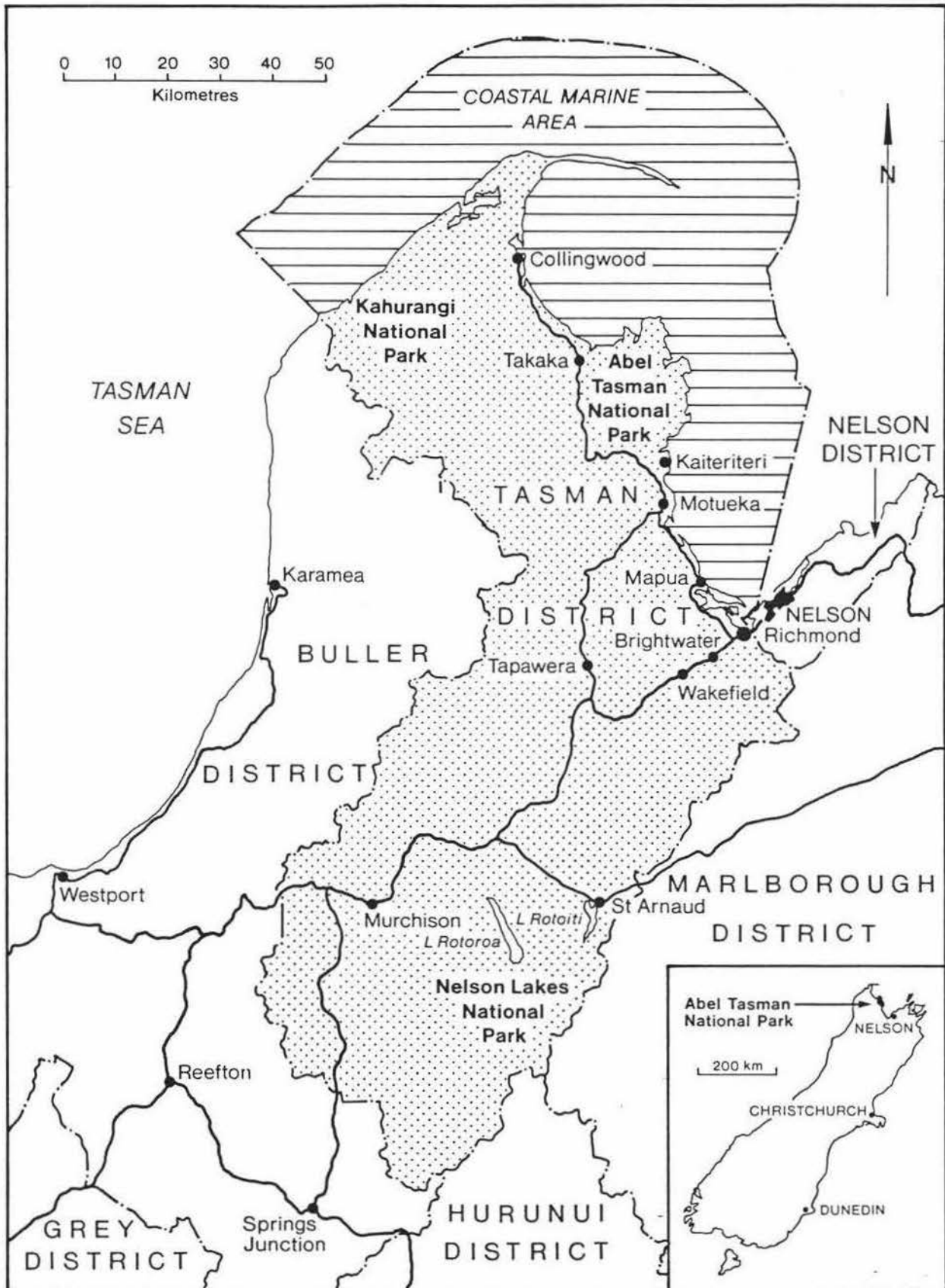
Case study

Physical context

Abel Tasman National Park (ATNP) is situated in north-west Nelson (see insert, Figure 6). ATNP is the smallest national park in New Zealand, with a land area of about 23 000 hectares. The unique natural values and rich cultural and historic heritage of this area have been protected by national park status since 1942. The Park is characterised by spectacular, granite dominated coastal geomorphology in the east, to rugged limestone and marble karst landscape in the western interior. Habitat ranges from regenerating coastal vegetation, through intact beech-podocarp forest, to frost hollow wetlands with an alpine character (DOC, 1995). The estuarine and subtidal communities that lie just outside the Park boundary are of international ecological importance. A marine reserve in the vicinity of Tonga Island provides protection for aquatic life along part of the Abel Tasman coast.

The golden sand beaches, clear water and hospitable climate of the ATNP coast have been the major attraction for Park visitors over the years, particularly during the summer months. Recreational activities along the coast include walking and camping, while swimming, fishing and boating take place in the sea immediately outside the park boundary. Huts and campsites within the Park provide basic facilities, and these are linked by two main track systems (Figure

Figure 6: Location of Abel Tasman National Park and boundary of Tasman District

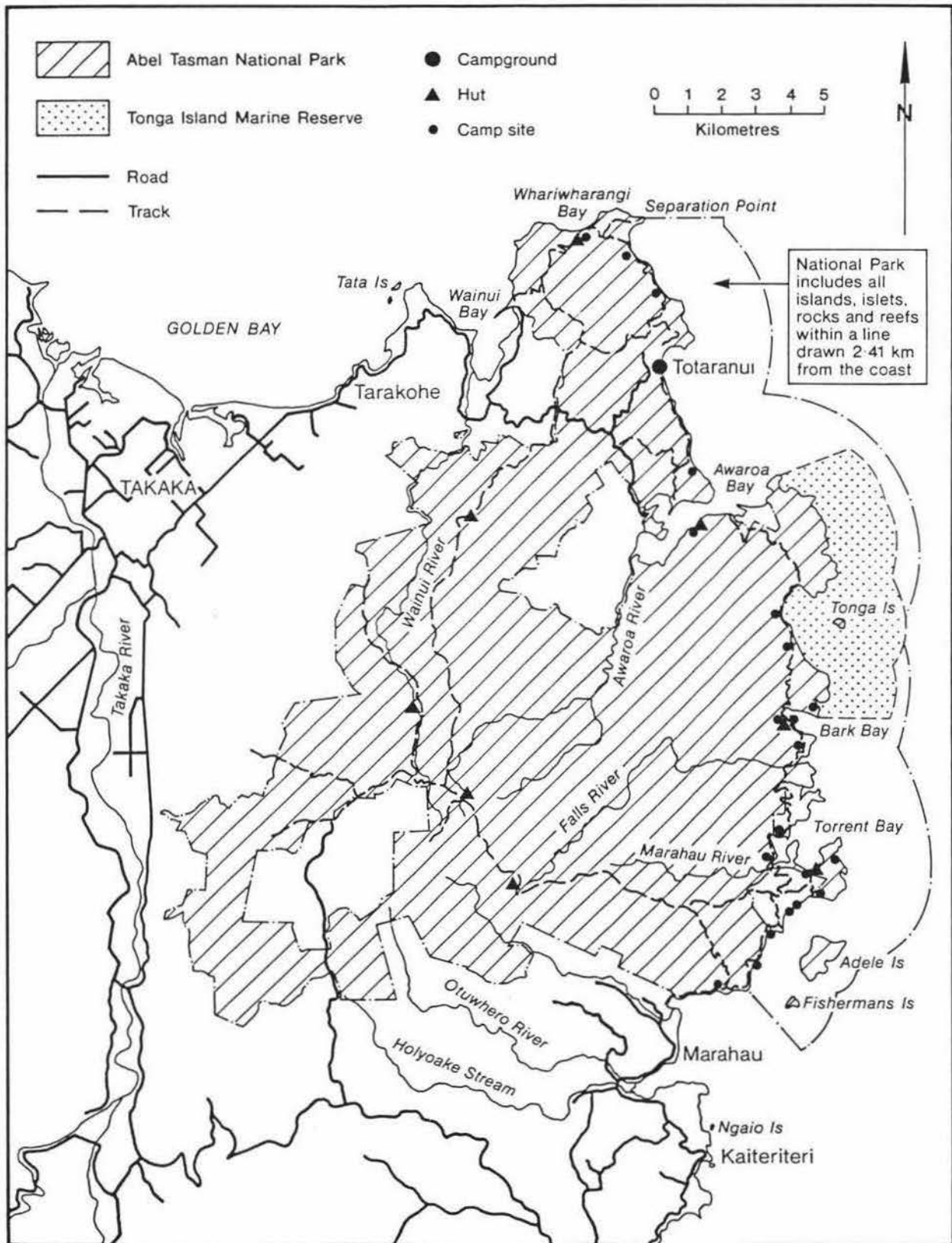Source: *Proposed Tasman Resource Management Plan*, 1996, p.1/5

7). The bays and beaches of the Park are accessed by two means. The first means of access is by land, via the Coast Track, which is the most popular walking track in New Zealand (DOC, 1995). The second means of access is by sea, using commercial ferry operations or private craft. In 1995, approximately 50 000 people used the Coast Track, while a further 50 000 people were estimated to gain access to the Park from the coastal marine area (DOC, 1995). The steeper interior track is used by only five percent of walkers.

Management context

The land and coastal marine area surrounding ATNP is administered by Tasman District Council (TDC). TDC has prepared the *Proposed Tasman Resource Management Plan* (notified 25 May 1996) for the Tasman District, in order carry out its functions under the RMA. As a unitary authority, TDC has the functions, duties and powers of both a regional council and a territorial authority (Appendix 1). The *Proposed Tasman Resource Management Plan* is a combined regional and district plan. The Plan also incorporates the Regional Coastal Plan, which is approved by the Minister of Conservation. The *Tasman Resource Management Plan* states the objectives, policies and methods to achieve integrated management of the natural and physical resources of the Tasman District. TDC has also published the *Proposed Tasman Regional Policy Statement* (notified 30 July 1994) which provides a regional overview of resource management issues, and outlines policies and methods to achieve integrated management of the resources of Tasman District. The extent of TDC's jurisdiction is shown in Figure 6.

Abel Tasman National Park is administered by DOC under the *Conservation Act 1987* and the *National Parks Act 1980*. DOC's function under the Conservation Act is, among other things, to foster the use of the Park for recreation and tourism, provided this is not inconsistent with its conservation (Appendix 2). A national park management plan is required for the management of ATNP under the *National Parks Act 1980*. The *Abel Tasman National Park Draft Management Plan* has been prepared (16 February 1996) to fulfil this requirement. The Plan outlines the vision, overall strategies and detailed management issues for ATNP. The Plan is subsidiary to the general policy for national parks and to the *Nelson-Marlborough Conservation Management Strategy* (24 September, 1996), prepared under the Conservation Act. The Draft Management Plan is therefore not intended to stand alone, but should be

Figure 7: Facilities and boundary of Abel Tasman National Park

Source: *Abel Tasman National Park Draft Management Plan*, 1996, pp. 7, 19

viewed alongside the Conservation Management Strategy. The Conservation Management Strategy outlines objectives and policies for the integrated management of the conservancy. The management boundary of Abel Tasman National Park is shown in Figure 7.

Management issues

Figure 8 shows that visitor numbers in ATNP have been steadily increasing in recent years. This fact is reflected by increasing concerns among Park users that the Park, and particularly the Coast Track, is overused. A survey conducted in 1985 showed that five percent of respondents considered the Park to be overused, compared with 40 percent of users in 1990 (DOC, 1995). A survey of New Zealand's major track systems carried out in 1994 showed that the Abel Tasman Coast Track was second only to the Routeburn in terms of overcrowding (DOC, 1995). Crowding occurs not only in huts along the Coast Track, but also on the track itself during the day. DOC (1995) suggest that facilities along the track are running at more than capacity, and that studies and management strategies are needed to preserve recreational experiences.

Figure 8: Trends in visitor numbers on Abel Tasman National Park coast

Location	1988	1990	1992	1994
Coast Track counters				
Tinline (Marahau)	30 200	31 800	46 600	52 200
Stilwell Bay	21 100	24 900	24 400	30 000
Falls River	18 400	22 900	23 200	29 300
Tonga	-	12 900	11 000	14 500
Totaranui Campground (bed nights)	-	30 000	30 000	30 000
Facilities passes				
Kayakers	-	2 000	2 484	4 187
Walkers	-	17 554	17 921	18 784
Inland Track	1 244	1 256	-	-

Source: *Abel Tasman National Park Draft Management Plan*, 1996, p.20

While DOC has options for managing the numbers of people using Coast Track facilities (e.g., by introducing a hut booking system), it can only address part of the overcrowding problem. The other part of the problem lies in the proliferation of visitors accessing the Park from the coastal marine area, which is under the jurisdiction of TDC. There has been a major increase in the scale of sea-borne tourist operations servicing the Park coast. Illustrating this, the number of kayakers entering the Abel Tasman coastline more than doubled between 1990 and 1994 (Figure 8). While TDC have licensing powers for commercial operations, they cannot make rules for craft landing on beaches (Jackson, pers. comm., 1996). This is because dealing with "people management issues" on the foreshore through regional coastal plan provisions is "cumbersome"; regional councils are unable to make by-laws on these issues (van Voorthuysen, 1994). DOC cannot manage the numbers of people arriving by boat either, because the beaches are outside the National Park boundary. But visitors accessing the Park from the sea are putting increased pressures on coastal facilities, and DOC (1995) warn that overcrowding problems now extend to campsites accessible only by boat.

There are three main issues associated with overcrowding. First, the general social needs and recreational experiences of Park visitors are compromised. Crowding on the tracks and beaches can diminish peoples' enjoyment of a relatively unspoilt environment, while large numbers of craft using the coastal marine area can detract from amenity values on the water. Second, overcrowding of huts and campsites can lead to health and safety problems (DOC, 1995). For example, an overcrowded hut may lead to people sleeping on the floor near cooking areas or fire exits. Third, large numbers of people visiting the coast can create environmental problems, such as damage to vegetation, over-fishing, increased erosion, and disturbance of organisms that use the surrounding habitat for feeding or breeding (Norse, 1993). Further, higher concentrations of people produce greater volumes of human waste and rubbish.

Visitor numbers in the Abel Tasman area are projected to continue to rise. The issues outlined above are therefore expected to become more pressing, and this is of mutual concern to DOC and TDC. On one hand, DOC has a responsibility to protect recreation and conservation values in the Park, while on the other, TDC must ensure safety and amenity issues in the coastal marine area are addressed. The management jurisdictions of these two agencies meet

at the mean high water springs mark along the Park coast. Integrated management across this land-sea interface is required by the RMA and the Conservation Act. As highlighted in Chapter Three, integrated management in this context involves the pursuit of mutual goals across institutional boundaries. Thus integrated management should be across agencies (TDC-DOC), legislation (RMA-Conservation Act), and environmental media (land-sea). The plans prepared by the two agencies should reflect this, by clearly outlining their responsibilities under the legislation, and by dealing with issues in an integrated manner. The issues outlined above are incorporated in the plan coding form, and plan analysis and interviews will test the extent to which integration is occurring.

There are potential difficulties and barriers to the achievement of integrated management along the ATNP coast. First, TDC and DOC are obliged to fulfil separate purposes, and must draft plans under different policies and guidelines. Policy integration may therefore be difficult, not only because the agencies have divergent goals, but also because of entrenched organisational structures and traditional value differences. Key participants in the planning process may also have a major influence on the co-ordination and integration effort. Second, there is a fundamental weakness in how the legislation provides for management of the foreshore: both agencies are restricted in their ability to manage activities on beaches (van Voorthuysen, 1994). Third, the agencies may have had insufficient time and money available to them to fully pursue opportunities for co-ordination. Interviews will reveal the extent of difficulties for integration.

Methods

Interviews

The first phase of research comprises a series of interviews with people who are closely involved with the planning and management process outlined above. The interviews provide the substantive information required to address the third objective of this thesis, which is to identify and analyse processes of interaction, co-ordination and integration that are used by TDC and DOC in relation to the case study. Analysis of the interviews also complements the data derived from plan analysis, helping to assess the extent to which co-ordinated and integrated management is occurring along the coast of Abel Tasman National Park. Six

interviews are conducted with various practitioners at national, regional and local levels of government.

At the national level, interviews were with a senior environmental analyst of MfE, Wellington; and a senior policy analyst of DOC Head Office, Wellington. This pair of interviews provides an overview of the opportunities and limitations for integration from the perspective of both central government agencies. At the regional and local level, interviews took place with the TDC planners responsible for preparing the *Proposed Tasman Regional Policy Statement* and the *Proposed Tasman Resource Management Plan* (incorporating the Regional Coastal Plan). Differing perspectives on this planning process are provided by the resource management planners of DOC, Nelson; and by the Chairman of the Environment and Planning Committee for TDC. The sixth interview was held with the Advocacy Manager and Community Relations person of DOC, Nelson, who had a key role in the development of the *Nelson-Marlborough Conservation Management* and the *Abel Tasman National Park Draft Management Plan*.

May (1993, p. 91) defines interviews as:

> *encounters between a researcher and a respondent in which the latter is asked a*
> *series of questions relevant to the subject of research. The respondent's answers*
> *constitute the raw data analysed at a later point in time by the researcher.*

There are different types of interview used for different purposes in social research. Interview types are classified according to the amount of structure provided in the data-gathering process. Interviews can be placed on a continuum with structured interviews at one end and unstructured interviews at the other (Burgess, 1982). May (1993) outlines the three main types of interview used in social research (excluding group interviews). These are the *structured interview*, the *semi-structured interview*, and the *unstructured interview*. May (1993) notes that research may constitute a mixture of two or more types of interview.

The structured interview is generally associated with survey research (May, 1993). The questions, order and coding of answers are predetermined, and the respondent is presented with alternatives for each question so that the phrasing of responses is structured (Krathwohl,

1993). One of the main reasons for using this method is that it permits comparability between responses (May, 1993). However, according to Burgess (1982), the structured interview defines situations in advance, and does not allow the researcher to follow up any interesting ideas. Burgess (1984) argues that the structured interview also puts the interviewer in an unnatural relationship with those who are researched. At the opposite end of the continuum, the unstructured interview is usually used as an exploratory tool. The interviewer "follows his or her nose", using a set of themes and topics to form questions in the course of conversation (Burgess, 1984; Krathwohl, 1993). Jones (1991) describes this type of interview as qualitative and "open-ended".

The semi-structured interview lies between the structured and unstructured interview, and it comprises techniques from both. The questions and order of presentation are predetermined, but the questions are open-ended (Krathwohl, 1993). Qualitative information about the topic can then be recorded by the interviewer who can seek both clarification and elaboration on the answers given. This enables the interviewer to have more latitude to *probe* beyond the answers (May, 1993), and open up new dimensions of a problem (Burgess, 1982). The semi-structured interview allows respondents to answer more on their own terms than the structured interview permits, but still provides greater structure for comparability over the unstructured interview (May, 1993). The semi-structured approach is therefore chosen as being the most appropriate interview method for this thesis. Appendix 3 shows the interview schedules that have been developed.

Plan coding

The second phase of research involves coding the plans relevant to the management setting of the case study. This method is used to complement the interviews in testing the extent to which co-ordinated and integrated management is occurring along the coast of ATNP. The *Abel Tasman National Park Draft Management Plan* and the *Proposed Tasman Resource Management Plan* (specifically the Regional Coastal Plan component) need to be analysed to assess how specific issues across the land-sea interface of the Park have been dealt with by TDC and DOC. In addition, the *Nelson-Marlborough Conservation Management Strategy* and the *Proposed Tasman Regional Policy Statement* must be examined for two reasons. First, both documents are meant to provide a regional overview of integrated management,

and contain policy relevant to integration. Second, the Abel Tasman Management Plan is meant to be viewed alongside the Conservation Management Strategy, and not stand alone.

Berke (1994), Berke and French (1994) and Berke *et al.* (1996) provide the methodological basis for plan analysis in this thesis. They developed a content analysis approach to assessing plan quality in relation to natural hazard provisions. A plan coding scheme was designed to identify and evaluate aspects that should be present in a high quality natural hazards plan. Computation of the coding results allowed the plans to be ranked in terms of quality. This method is adapted here to allow the quality of the above plans to be assessed in terms of their provisions for integrated management. Coding of the provisions that relate to integrated management allows for comparison and discussion of the plans, in light of the requirements of legislation outlined in Chapter Three.

According to Kaiser *et al.* (1995), two orientations co-exist in all stages of the planning process. The first is a vision for the future—what the community should become. The second is a specification of the means to attain that vision. Both are important to good planning. Kaiser *et al.* (1995) characterise the policy framework plan as a product of the *direction-setting* stage of planning. Specifically, Kaiser *et al.* (1995) see direction-setting as helping planners, elected officials and the community to do three things: (1) understand current and emerging conditions; (2) determine objectives to be pursued and issues to be addressed; and (3) formulate general principles (policies) to guide both further planning and day-to-day management decisions.

Three components of the policy framework plan emerge from direction-setting, paralleling the above three purposes: (1) the plan's *fact basis* specifies the existing and projected local conditions, and identifies needs related to community physical development; (2) plan *objectives* represent general aspirations, problem alleviations and needs that are premised on shared local values; and (3) *policies* (or actions) in the plan describe principles that guide management to ensure that plan goals are achieved (Berke, 1994; Kaiser *et al.*, 1995).

According to Berke *et al.* (1996), there is a growing consensus that solid facts and analyses; clear, substantive, and comprehensive objectives; and specific action-oriented policies are the

key characteristics that define plan quality. Berke and French (1994) state that the highest quality plans are characterised by the degree to which (1) fact basis defines local needs; (2) objectives are clear and comprehensive in demonstrating commitment to address needs; (3) policies are specific and action-oriented in achieving plan objectives. A content analysis approach to evaluating plan quality can therefore be developed, based on these characteristics. It is necessary to identify a number of substantive aspects that should be present in a high quality plan. The content of the plan can then be analysed to determine the degree to which these aspects are addressed. This assures that the necessary conditions for quality are met, and provides a good framework for comparing plans (Berke and French, 1994).

A plan coding form has been prepared in order to conduct a content analysis of substantive aspects of the plans. Figure 9 summarises the 23 fact basis, objective and policy items included in the form. To make the data more manageable, the items are combined under six headings which are used to report the results in Chapter Five. The fact basis shows how the plans articulate the need for integration across agencies, legislation and environmental media. The objectives component relates to whether the plans include integrated management in the overall objective, and in the specific issue-based objectives. The policy component relates to whether the plans include integrated management in the specific issue-based policies (after Berke and French, 1994).

The following coding scheme is used to rate the plans. Fact basis items are evaluated as: 0=not mentioned; 1=mentioned but not detailed; 2=mentioned and detailed. Objective items are evaluated as: 0=not mentioned; 1=mentioned. Policy items are evaluated as: 0=not mentioned; 1=suggested; 2=mandatory (after Berke, 1994).

Berke and French (1994) outline the three assumptions of this method of coding plans. First, it is assumed that higher quality plans are based on more detailed information, therefore have a better fact basis. Those plans that include more information therefore receive a higher score. Second, a simple measure of presence or absence of objectives related to integrated management is used. Thus, scoring assumes that having specific objectives that address particular aspects of the integration problem is characteristic of a high quality plan. Third, in terms of policy, plans that *require* various policy actions for integration are scored higher than

Figure 9: Plan coding form

	Headings and criteria
Fact basis	*Integration across agencies* • Regard to other plans • Relationship with other plans explained • Consultation with other agencies • Consultation with the public *Integration across legislation* • Legislative requirements for integration • Interpretation of requirements (rationale for integration) • Relationship of other legislation explained • Monitoring requirements *Integration across environmental media* • Depiction of physical context (environment) • Expression of environmental continuity (ecosystems) • Identification of major environmental issues • Quality of maps (showing jurisdictions)
Objectives	*Overall objective* • Statement of overall objective of the plan *Issues* • Public access • Overuse of facilities • Diminished amenity/natural character • Environmental degradation • Foreshore management
Policies	*Issues* • Public access • Overuse of facilities • Diminished amenity/natural character • Environmental degradation • Foreshore management

Source: adapted from Berke (1994), Berke and French (1994) and Berke *et al.* (1996)

those that merely suggest a similar action. This measure assumes that the stronger and more direct the policy, the more likely it is to have significant influence.

The main advantage of this kind of plan coding is that it is a systematic way of examining and comparing plans. Berke and French (1994, p. 239) highlight the main limitation of this type of coding, stating that the approach is "a bit mechanistic and may miss some of the synergistic qualities that are often found in high quality plans". Plan coding is subjective and relatively crude and simplistic, but nonetheless it is useful as a complement to other research such as interviews. Whereas coding does not provide much insight into the co-ordination efforts between agencies during planning processes (this is provided by interviews), it allows analysis of the extent to which plans make provision for integration during the implementation phase of management.

Chapters Two, Three and Four provide the necessary theoretical and substantive basis from which to carry out the research investigations. The next chapter presents the findings of the interviews and plan coding.

Chapter 5: Research results

This chapter presents the findings from the research investigations. First, the findings of the interviews are presented under key headings. The headings are designed to organise the responses to interview questions in a way which allows the different perspectives of the interviewees to be compared and contrasted. Second, the results of plan coding are presented in table form. The main findings of plan coding are drawn from the table, and are summarised under key headings in the subsequent text. Due to limitations in the method of plan analysis discussed in the previous chapter, more weight is accorded to the findings of the interviews. The extent to which the findings of interviews mesh with the findings of plan coding is discussed in Chapter Six, along with an overall analysis of the research results in terms of the thesis objectives.

Interview findings

A total of six interviews were conducted. A national level perspective of integration efforts around the country was obtained by interviewing Ian Lineham, Senior Environmental Analyst (MfE, Wellington); and Chris Richmond, Senior Policy Analyst (DOC Head Office, Wellington). To gain perspectives from the different parties involved in the Abel Tasman case study, the following interviews were conducted. First, a perspective on the *Proposed Regional Policy Statement* (RPS) and *Proposed Tasman Resource Management Plan* (TRMP, incorporating the Regional Coastal Plan) process was provided by Steve Markham, District Policy Planner; Neil Jackson, Policy Planner; and Eric Verstappen, Engineer Planner (all of TDC, Richmond). Second, a perspective on this same process was gained from Sarah McRae, Senior Planner; and Stephen Wynne-Jones, Resource Management Planner (both of DOC, Nelson). Third, David Ogilvie (Chairman of Environment and Planning Committee for TDC, Richmond) provides a local authority politician's perspective on this process. Fourth, a perspective on the *Nelson-Marlborough Conservation Management Strategy* (CMS) and *Abel Tasman National Park Draft Management Plan* (ATNPMP) planning process was gained from Alan White, Advocacy Manager and Community Relations (DOC, Nelson).

As shown in Appendix 3, a series of quite specific questions were asked in these interviews. Many of the questions overlap to an extent, and some are closely related to each other. In order to simplify presentation of the findings, therefore, it is necessary to condense the essence of the questions into a number of key headings. Moreover, the specific interview questions drew a range of responses from a number of different perspectives. Some answers pre-empted particular questions, while other answers returned to a theme discussed during a previous question, and enlarged upon that theme. The answers to the questions were also of varying specificity and relevance, and key points tended to be spread throughout the entire interview transcript. Thus, it is necessary to organise the main findings of the interviews under the key headings mentioned above. In this way, the essence of the questions are paired with the essence of the answers, and a clear picture of the planning processes in relation to the case study are able to be constructed.

The following discussion is arranged under 15 key headings. Under each heading, a short explanation is given of the exact nature of the question(s) put to the interviewees. Thus, both the headings and the key findings are able to be related back to the specific questions which are shown in Appendix 3. For ease of reference, the employing organisation of each interviewee is mentioned on the first occasion the interviewee is cited.

Mechanisms for inter-agency interaction

The respondents were asked what statutory mechanisms were available for integration, what statutory and non-statutory mechanisms were used in the planning process, and whether they relied mainly on formal or informal interaction with other agencies to achieve integrated management. The statutory mechanisms of interaction that are available to TDC and DOC under the legislation are shown in Chapter Three, Figure 4. Most of these were mentioned by the interviewees.

According to Markham (pers. comm., 1997; TDC), the overall planning process for both the RPS and TRMP was characterised by "a certain amount of consultation, research collaboration, and information sharing" with DOC. DOC staff attended meetings with TDC staff fairly early on in the process in relation to the RPS draft stage, while similar meetings occurred at a relatively late stage of TRMP preparation (Markham, pers. comm., 1997). In

addition, policy papers on coastal management issues were made available to DOC for comment for about six months in 1995, but this did not result in the interaction anticipated (Markham, pers. comm., 1997). DOC staff also attended workshops and a policy paper review during the TRMP process (Jackson, pers. comm., 1997; TDC).

McRae (pers. comm., 1997; DOC) relates the DOC perspective of the RPS and TRMP processes. The statutory mechanisms for interaction between the agencies were initiated when TDC published discussion documents for the RPS in 1993. The RPS was notified in 1994, and DOC made a submission on that and subsequently lodged an appeal after the council hearing. For the TRMP, TDC produced policy documents for discussion, and DOC commented on them (McRae, pers. comm., 1997). Non-statutory (i.e., informal) processes of interaction included a field visit to Abel Tasman by boat in March 1994, just prior to the ATNPMP being revamped, involving DOC staff, conservation board members, and TDC staff and councillors. This trip was described by White (pers. comm., 1997; DOC):

We went from Kaiteriteri up to Awaroa, stopping off looking at baches, legal roads, private subdivisions, enclaves, rubbish disposal, signs, checked out Awaroa township in terms of development and then came back to Kaiteriteri. And that was quite good, it brought in the political arm of TDC, the conservation board who are the public voice for conservation in the formal sense, plus planning officers and specialists of both agencies.

According to McRae (pers. comm., 1997), the trip did not involve formal negotiations, but a "reasonable level of agreement" was reached on the need to address some of the management issues on the coast. There was also "quite clear recognition" by both parties of the strong relationship between the way DOC dealt with coastal issues its management plan, and the way TDC dealt with coastal issues in their resource management plan (McRae, pers. comm., 1997). Other non-statutory interaction involved relationships that were developed for dealing with particular provisions in the RMA (McRae, pers. comm., 1997), and DOC involvement in a special working party in relation to significant natural areas (Wynne-Jones, pers. comm., 1997; DOC).

In relation to conservation estate planning, TDC staff were involved, first, in the initial scoping exercise for the CMS, which was facilitated by Dennis Bush-King (planning department manager, TDC). Then a pre-consultation draft was circulated to TDC staff, who were able to comment on it both informally during a one-day workshop, and then formally in writing. The CMS was then notified, and TDC made formal submissions at the hearing stage (White, pers. comm., 1997). With the ATNPMP, a working group of DOC staff drafted the plan, and when coastal issues were appraised, TDC's coastal planner (Eric Verstappen) was invited to attend two working group meetings. Meanwhile, planner to planner, planner to council officer, and manager to manager contact between DOC and TDC was occurring throughout the Abel Tasman management plan process (White, pers. comm., 1997). White notes that this interaction was informal. TDC staff commented on both the draft CMS and draft ATNPMP (Jackson, pers. comm., 1997).

Markham (pers. comm., 1997) states that TDC staff rely on both formal and informal interaction with DOC staff. Contact with DOC staff in the planning process had been both formal and informal, but there had not been "a very even process of interaction". For example, Markham thought that feedback from DOC on the policy papers for the TRMP would have been an opportunity for informal interaction, "and yet the response we got…was not particularly flash". Jackson (pers. comm., 1997) notes that the feedback "didn't really happen" from any party: not just from DOC; but also the public.

McRae (pers. comm., 1997) points out that there is a distinction between the results of informal and formal interaction. First:

> *in our non-statutory discussions with parties, including TDC, there is quite a high level of agreement, but then everybody goes back to their office to write their statutory submissions, and it's very easy to say "this is an adversarial process and this is our absolute bottom line". So what can be agreed in a general discussion isn't necessarily [what goes down on paper]. The person writing the submission is trying to create a really strong legal basis…*

Second, "while DOC can appreciate the value of non-statutory, informal discussions with TDC, we might not have time to do justice to our statutory minimum" because of resourcing pressures (McRae, pers. comm., 1997). Wynne-Jones (pers. comm., 1997) reinforces this by stating that deadlines can sometimes detract from good intentions to consult and discuss things with other parties.

White (pers. comm., 1997) emphasises the value of non-statutory and informal interaction in the estate planning process, and states that interaction has been very genuine:

The liaison we've had informally has been to address a uniform approach to the coast—that hasn't been resolved in a formal way, but the informal liaison that we've had has at least provided each party with a reasonably clear idea of what the other party's objectives and visions are.

While Lineham (pers. comm., 1997; MfE) states that there is no need for the agencies to develop non-statutory processes for the achievement of integration, Richmond (pers. comm., 1997; DOC Head Office), believes there is an expectation that non-statutory means of integration will be pursued.

Nature of the interaction

The respondents were asked whether the interaction that had occurred between the agencies served to define issues, interrelationships and common goals for the Abel Tasman coast. They were also asked whether communication and conflict resolution was used to reach compromises and common goals. Thus, the main thrust of the question was to determine whether the mechanisms of interaction used in the planning process could be construed as "co-ordination". A further question was whether the interaction or co-ordination was strategic and goal-focused, throwing more light on the overall process.

Markham (pers. comm., 1997) states that, from the TDC perspective, there was not a "conscious or structured" process of co-ordination with DOC. According to Markham:

co-ordination implies that there are two parties, each with their sets of tasks, and it's a matter of enhancing the links between the tasks. In relation to coastal management the primary set of tasks apply to TDC, not DOC as such. DOC have been in reacting or responding mode, rather than another actor carrying out another set of coastal management tasks. There has been co-ordination in the sense that DOC have been the Abel Tasman National Park estate manager, but that is the only sense in which true co-ordination has been relevant to the relationship that we've had with RMA processes.

Verstappen (pers. comm., 1997; TDC) uses the term "consultation" rather than co-ordination. Further, involvement with DOC staff "wasn't crucial in defining the issues": issues were defined "by the council itself through inquiry and information gathering from community interests" (Markham, pers. comm., 1997); and were to some extent based on previous interaction with DOC (Jackson, pers. comm., 1997). But according to Markham, DOC staff never suggested the coastal management issues outlined in the Regional Coastal Plan were insufficient.

McRae (pers. comm., 1997) recalls that the Abel Tasman field visit had been "quite good" for defining issues, interrelationships and common goals for the Regional Coastal Plan. To this extent the co-ordination had been quite goal-focused in relation to Abel Tasman (McRae, pers. comm., 1997). McRae states, however, that the level of co-ordination varied according to issue: it had been reasonably good for the Abel Tasman coastline, but not so good for other issues. Wynne-Jones (pers. comm., 1997) notes that one element of the Regional Coastal Plan that shows co-ordination is the inclusion of policy on jetties and moorings that reflect interest of both agencies. However there were "other issues where the level of agreement didn't reach the stage where conflicts could be resolved" (Wynne-Jones, pers. comm., 1997). McRae (pers. comm., 1997) states that the policy documents that were circulated by TDC in the lead-up to the TRMP being notified made co-ordination quite difficult, because there was the perception that "the council had already decided".

White (pers. comm., 1997) considers that "the interaction that we've had provides for an element of co-ordination", and that co-ordination had occurred over some issues in CMS

development. In terms of resolving conflict, White states that "we don't have a lot of conflict, but disagreements" and that "there is always a mediation process or a statutory process through which that can be sorted". This conclusion is supported by both Lineham and Richmond, who are satisfied that statutory processes allow for co-ordination (pers. comm., 1997). White (pers. comm., 1997) also thinks that DOC has taken a strategic approach to CMS development.

Interaction during the management process

The question "does interaction occur at all stages of the management process?" was designed to ascertain whether interaction between staff occurred evenly throughout plan scoping, plan development and implementation; and whether interaction was ongoing.

According to Markham (pers. comm., 1997), interaction occurred continuously through policy development, and ongoing interaction was anticipated during the implementation phase. Verstappen (pers. comm., 1997) pointed out that some feedback on issues has occurred through submissions by DOC on resource consent applications (for example, moorings in Torrent Bay), and fed into plan development. McRae (pers. comm., 1997) indicates a frustration with the development stage of both the RPS the TRMP, stating that there was a view that TDC had already made up their minds about what was to go in the plans. McRae states that time pressures eventually precluded effective participation during plan development, and that interaction occurred more during the presentation of submissions on the notified documents.

Interaction during the CMS process was characterised by White (pers. comm., 1997) as being "erratic" at all stages, although TDC staff were involved in scoping and plan development. Interaction during implementation was ongoing and issue driven; for example, staff "got together to address" issues such as moorings at Torrent Bay.

Extent of stakeholder involvement

In relation to the coast, the interviewees were asked: first, who the key participants (plan writers) in the planning processes were; and second, whether particular stakeholders and interest groups had a major effect on plan development. The purpose of these questions was to

ascertain who "the main players" in plan development were, and to assess the level of stakeholder involvement generally.

Lead plan writers. For the Regional Coastal Plan, Neil Jackson was the prime analyst and strategist for issue definition and the development of broad approaches to address those issues, in collaboration with Steve Markham (Markham, pers. comm., 1997). There was not much input from councillors; according to Jackson (pers. comm., 1997), the reason for this was that coastal management was not a high profile function within TDC, and it was not an election issue. However, Markham states that, with the interest generated by intertidal aquaculture proposals, coastal management was gaining a higher profile within the community.

For DOC, the key players in Abel Tasman management plan development were the senior planner, Alan White, Takaka and Motueka field centre managers, and three conservation board members (White, pers. comm., 1997). These people constituted a working group, and Eric Verstappen attended three working group meetings towards the end of plan development. White saw Eric Verstappen and Dennis Bush-King as being the key people from TDC with whom to discuss issues.

General stakeholders. There were few stakeholders involved in the initial planning process for the Regional Coastal Plan, and those that were involved were not very comprehensive in range (Markham, pers. comm., 1997). Jackson (pers. comm., 1997) states that at the early stage of plan development, the only people TDC heard from were commercial fishers and marine farmers. According to Jackson, there was little interest from the public during plan development (discussed in the next section). Since then, much of the interest has been defined by the issues (Markham, pers. comm., 1997). Much greater interest and stakeholder involvement was generated by intertidal aquaculture and mooring applications, but "there has been no significant challenge to the issues as we have defined them", although "there is some challenge to the kinds of outcomes we expect and the means of achieving those outcomes" (Jackson, pers. comm., 1997). Jackson states that:

the other big response has been from DOC and other conservation organisations saying that we have not adequately protected conservation values through the coastal plan, and we are arguing that one through in the submission process.

Wynne-Jones (pers. comm., 1997) states that DOC's submission on the TRMP was made in consultation with conservation groups and NGO's, but that time pressures precluded the involvement of other parties. Wynne-Jones notes that some coastal user groups were well organised, while others (e.g., recreational users) were not. Markham (pers. comm., 1997) notes that the Regional Coastal Plan is not yet complete, and the sections still to go in the plan (management of coastal discharges and water quality management) would "complete the picture on coastal conservation" for DOC and other stakeholders.

The increased interest in coastal management issues has obviously made an impact on the political wing of TDC, as Ogilvie (pers. comm., 1997) demonstrates an awareness of a wide range of stakeholders. The list includes: conservation interest groups (including DOC); Friends of Nelson Haven; Tasman Bay and Golden Bay Greens; marine farming groups; fishing groups (Fishing Industry Board; Ministry of Fishing); as well as the general public.

In terms of conservation management planning, the public process for the Abel Tasman coast was "pretty quiet" (White, pers. comm., 1997). The key stakeholders were identified as enclave residents, and tourism and concessionaire operators (White, pers. comm., 1997). White also mentions that the key participant in all planning is always "the general citizen".

Extent of public involvement

Most responses to the previous question included reference to the importance of public involvement in the planning process, and these responses are presented here. A further question was aimed at whether the practitioners thought the public process provided for in the legislation was sufficient for co-ordination between agencies and the public, and therefore the formulation of common goals.

As noted by Jackson (pers. comm., 1997), there was negligible public involvement in the early stages of plan development. Jackson states that:

We had to make an awful lot of assumptions on behalf of the public, and it wasn't until we received applications for intertidal aquaculture (and moorings in the Anchorage) that the public came out of the woodwork.

Markham (pers. comm., 1997) notes that much of the subsequent interest was defined by issues such as the "defend the beaches" campaign, in response to intertidal aquaculture proposals. Wynne-Jones (pers. comm., 1997) states that TDC had "not been very strategic", and unlike some other councils, had not begun by "trying to get the community thinking about goals". Further, McRae (pers. comm., 1997) believes that public involvement was curtailed by the rush to notify the document (discussed the "political commitment" section). According to McRae, DOC had notified TDC of their concern at the rush to notify the TRMP before adequate consultation with landowners had taken place, and TDC responded formally that consultation would be carried out as part of the submission process.

In relation to the differences between the agencies in terms of allowing for public goals to be incorporated in planning, Markham (pers. comm., 1997) observes that TDC has a mission that focuses on the community, and it has "far truer public goals" than DOC. DOC has more clearly identifiable agency goals: its goals are related to its corporate mission (Markham, pers. comm., 1997). Jackson (pers. comm., 1997) notes that the RMA provides extensive opportunity for public involvement. However, White (pers. comm., 1997) states that "agency goals for conservation have got to be public goals". The goals of DOC are derived from the legislation, but are subject to a public process—involvement of conservation boards ensure consistency with legislation and public (White, pers. comm., 1997). White concludes that:

within the constraints of the legislation I would say yes, there is strong public consultation and participation and the conservation boards ensure that amendments are made if it is appropriate.

The new institutional regime and integrated management

There are two parts to this section. First, it was asked whether the new institutional arrangements are an improvement in terms of doing away with the overlapping agency responsibilities, fragmented administrative structures, and weak legislation which characterised

the previous regime. Second, does the new regime really provide improved mechanisms for interaction and co-ordination?

According to Lineham (pers. comm., 1997), the new institutional arrangements, including the RMA and other legislation, have improved the situation for integration. Richmond (pers. comm., 1997) believes that reducing the number of agencies and the overlaps between them makes the resolution of conflict easier. In a similar vein. Markham (pers. comm., 1997) states that:

as a result of RMA and Conservation Act, there has been a vast improvement in the opportunities created by those two statutes to get a better regime than that which existed prior to RMA, particularly for a unitary authority.

In the Nelson-Marlborough region, the number of local authorities went from four to three, which suggested a degree of simplification (Markham, pers. comm., 1997). Markham states that from TDC's perspective, the creation of a unitary authority had been a "significant advance" for integrated management; for example, land and coastal marine issues could be looked at together. This perspective is echoed by McRae (pers. comm., 1997), who states that there is potential for "far more effective integration" under the RMA, "particularly with a unitary authority and a combined district plan-regional coastal plan". McRae also considers that the mechanisms for inter-agency interaction provided by the new regime are an improvement.

In terms of conservation estate planning, White (pers. comm., 1997) believes that the opportunities for integration had improved, for two reasons: first, the agency restructuring and new legislation had created a new environment with greater public input and a changed management ethos; and second, there was better technical expertise within DOC than previously, giving "enhanced ability to implement integrated management, and prioritise key threats and actions in the medium and long term". White also thinks the new institutional arrangements provide "far more formal and sophisticated processes to ensure that inter-agency communication and integration occurs", and that the greater availability of information increased the likelihood of integration.

However, McRae (pers. comm., 1997) makes the point that:

there is more to it than just having a good legislative regime; you've got to have good personnel and good political commitment to actually administer it... It comes down to the commitment within the individual organisations to actually put resources in, and that you've got the right people with the right skills doing the real integration, and community consultation has to accompany this.

Similarly, Markham (pers. comm., 1997) observes that:

the opportunities [for integration] have been improved, but I don't think the track record has necessarily shown that those opportunities have been fully taken advantage of, from both TDC's point of view and from DOC's point of view.

All three TDC planners note that the situation had perhaps become more complex for DOC. Now DOC have to spread its resources over three different district councils, compared to one regional council previously (Markham, pers. comm., 1997). Markham observes that over the last nine months the Marlborough Sounds Resource Management Plan had involved DOC planning staff quite intensively, while Jackson (pers. comm., 1997) notes that the Clifford Bay application—a proposal to build a new Interislander Ferry terminal near Blenheim—had the potential to divert a lot of effort away from the Nelson area. McRae (pers. comm., 1997) also comments that under the new regime, a decision authority had to actually effectively mediate contesting views. McRae surmises that "local government has encountered a lot of problems since the passage of the RMA; it puts enormous responsibility on back on councils".

Markham (pers. comm., 1997) concludes that:

in general the opportunities and arrangements are greatly improved for integrated management, but there are still some fragmented aspects about the current regime.

According to Jackson (pers. comm., 1997), the boundaries of the jurisdictions are still being defined as the various agencies work through their responsibilities. Richmond (pers. comm., 1997) states that there are some elements of boundary drawing between agencies which have "created intractable problems": for example, the mean high water springs boundary between districts and regions. Markham (pers. comm., 1997) notes that, while the overall situation had improved, there were still areas of statutory fragmentation in the coastal arena (discussed in the next section).

The coastal planning framework and integrated management

The question posed here was "do you think the planning framework for coastal management under the RMA is appropriate and lends itself to integrated management?

Both Lineham and Richmond give a "yes and no" answer to this question, giving conditional support to the new coastal regime, but conceding that it is not without problems (pers. comm., 1997). On the positive side, Lineham notes that DOC's role does lead to integrated management, because it "forces together regional councils and DOC". According to McRae (pers. comm., 1997), the New Zealand Coastal Policy Statement is "a really useful document", and it provides a "good articulation of national sustainability policy". The New Zealand Coastal Policy Statement was drafted after a "huge consultation process", and submissions from the various conservancies "attempted to give a local flavour to the provisions" (McRae, pers. comm., 1997). Wynne-Jones (pers. comm., 1997) notes that in the Nelson-Marlborough conservancy, because the coast is such a strong element of resource issues, the New Zealand Coastal Policy Statement has "probably been quite significant in assisting TDC to know what DOC's position is".

However, Richmond (pers. comm., 1997) notes that, while in theory the new regime had improved the situation, practice had demonstrated some significant impediments to implementation. Markham (pers. comm., 1997) states that the prime example of statutory fragmentation in the coastal arena is between statutory coastal management and statutory fisheries management. Markham (pers. comm., 1997) notes the difficulty of understanding and communicating to stakeholders where the boundaries are, "because in law it is an extremely complicated and subtle boundary". Further, "the impact of fisheries management cannot be

adequately addressed under coastal management or fisheries management" (Markham, pers. comm., 1997). For example, the regular scraping of the sea floor for scallops is totally outside TDC's jurisdiction (Jackson, pers. comm., 1997). McRae (pers. comm., 1997) states that the effects of trawling and dredging in the Marlborough Sounds, Tasman Bay, and Golden Bay is "a really big issue within the conservancy"; and concludes that this problem is a good example of "disintegrated management".

Other challenges include definition of the mean high water springs boundary between district councils and regional councils, which "are addressable in theory, but in practice seldom adequate" (Richmond, pers. comm., 1997). Jackson (pers. comm., 1997) supports this, stating that there is a problem in the legislation for the coastal plan, citing the mean high water springs boundary between district and regional council plans. In addition, White (pers. comm., 1997) states that from an estate planning perspective, the coastal land-sea interface is "a nightmare in legal terms, in relation to effectively managing some of the conflicts that currently exist in the coastal zone".

Further, with the Regional Coastal Plan, there is a question over "who owns the plan?", because the council prepares it and the Minister of Conservation approves it (Jackson, pers. comm., 1997). Markham (pers. comm., 1997) states that the Minister's role in the Regional Coastal Plan is "rather uncertain and potentially anomalous", because of the Minister's involvement with the Conservation Act, and because there is no similar role for the Minister in other public resources:

We don't see any particular reason why the Minister should have a statutory approval role over the Regional Coastal Plan. The Minister has no such role in relation to water management, river and lake management, yet arguably the same principles that drove the approval role for the coast could extend to freshwater bodies. But they don't, and I don't think that freshwater management is any the worse for it (Markham, pers. comm., 1997).

Jackson (pers. comm., 1997) notes that because of problems with the jurisdictional boundary between local authorities, and the role of the Minister, there is scope for conflicts and

disagreements, but "there isn't really a mechanism (other than working through the submission process) to help achieve integration". Markham (pers. comm., 1997) also highlights the split between territorial and regional jurisdictions, where coastal development and coastal land issues are carried out by separate units of local government. He states that this is another potential barrier to integrated coastal management.

McRae (pers. comm., 1997) questions the efficiency of having three regional coastal plans for the conservancy, returning to the TDC planners' concern that DOC had a complicated task in dealing with three unitary authorities. McRae thinks it may have been more efficient for the Nelson-Marlborough Regional Council that was, to have prepared one regional coastal plan for the coastline, although she concedes the coastline is diverse.

Interpretations of the "foreshore management problem"
The practitioners were asked what their understanding of the "foreshore issue" was. The question was designed to probe the problem and provide clarification on whether, and to what extent, foreshore management is an issue for the agencies.

There is a problem with foreshore management according to Lineham. District councils cannot make rules on the beach to control such activities as litter and cars (Lineham, pers. comm., 1997). Richmond's version of the problem is that regional council responsibilities under the RMA do not extend to the type of land-use activities that district councils are mandated to deal with, so they are constrained in their ability to deal with certain types of behaviour (pers. comm., 1997). Lineham (pers. comm., 1997) suggests two solutions: (1) delegation of powers under Section 33 RMA; for example, responsibility for noise from ships can be transferred from regional to district councils; and (2) one agency could write rules for the other as long as the other agrees with them. Richmond (pers. comm., 1997) agrees that delegation of authority is a potential solution, but both Richmond and Lineham observe that councils have been reluctant to use that mechanism. Lineham notes that in any case, there are always problems with boundary issues.

White (pers. comm., 1997) states that there is "no doubt" the Abel Tasman foreshore (including estuaries) poses problems for DOC in terms of managing some activities, including

horses, aircraft, filming, commercial activities and houseboats. Another problem is that while DOC can license commercial operators if they take their business into the park, they cannot license operators who are simply "dropping people off" on the beaches (White, pers. comm., 1997). According to White (pers. comm., 1997), there is currently "a proposal afoot (under Section 8 National Parks Act) to extend the Park boundary to mean low water springs, and there are some who feel it should go below that". If the foreshore is added to the Park, White thinks that some control capability will be gained over the above issues. However, he concedes that because of the complexity of the legislation at the land-sea interface, "adding the foreshore to the park would only address some of the issues". Meeting some of the other issues relating to water-borne activity and conflict would require either a co-operative partnership approach with TDC, or a review of some components of the RMA (White, pers. comm., 1997).

Wynne-Jones (pers. comm., 1997) comments that:

TDC has attempted to take a rather hands-off approach towards managing the passage of vessels in coastal waters, and by their reliance on safety and navigational issues as the approach to be taken in avoiding conflicts. They haven't included in their plan techniques which would help manage those problems on the foreshore of the national park—it's not in the document.

McRae (pers. comm., 1997) states that there is a "big issue" in the Abel Tasman in terms of the impact of the numbers of users. Wynne-Jones (pers. comm., 1997) raises the questions "would it be practicable for the TRMP to control, say, the numbers of people going into the park?"; and "is there a regulatory method that would be workable and meet the requirements of the RMA to address those effects?". Wynne-Jones (pers. comm., 1997) notes that there have been submissions lodged to the TRMP (by NGO's) seeking quite directly that the plan does adopt controls to: (1) address conflicts between different types of vessel; and (2) try and reduce the numbers of visitors to various parts of the park. "But the council hasn't responded to that yet" (Wynne-Jones, pers. comm., 1997).

Somewhat in contrast, Markham (pers. comm., 1997) states that "there are rules relating to foreshore issues in the Regional Coastal Plan, relating to vehicle passage and a few other things". Jackson (pers. comm., 1997) notes that there are some activities that aren't managed, because no one has spelt out the problem or stated appropriate solutions. According to Markham (pers. comm., 1997), the ATNPMP has "a pretty general description of problem". In short, the TDC planners are not convinced as to nature of problem on the foreshore, and are sceptical about DOC's rationale for extending park boundary, and DOC's ability to manage the issues (Markham, pers. comm., 1997). According to Jackson (pers. comm., 1997), "our concern is that the extension of the park boundary is being offered as a solution to an undefined problem, and we would like the problem to be defined".

So TDC has raised a series of potentially sceptical questions about the nature of the problem, and the range of solutions that might need to be considered, with the recognition that there is some discreet identified problem. But we don't seem to have had DOC responding to those questions. For example, when we put that scepticism in those questions to DOC in our submission on the Draft ATNP Management Plan, I'm not aware of any response by DOC to the council's submission on those matters, and that submission was made about 18 months ago (Markham, pers. comm., 1997).

According to Markham (pers. comm., 1997), DOC has given "cursory regard to the role of TDC" in respect of extending the park boundary. He states that the issue needs some detailed communication and critical inquiry to tease out the implications of the proposed extension. To this extent:

the initiatives and responsibility ball lies in the court of DOC as far as we're concerned, for them to clarify their concerns, clarify their aims, and clarify their views on particular methods including the Section 8 investigation. They also have the responsibility to receive the views of the council... (Markham, pers. comm., 1997).

Different values, organisational structures, and purposes

Three separate but related questions were designed to test the extent to which differences in values (and personalities), organisational structures, and purposes between the agencies affected the achievement of integration.

The first thing to note is that there were no obvious personality or historic conflicts between TDC and DOC staff. Markham (pers. comm., 1997) mentions that although there has been some disagreement on a number of issues, the interaction has been "cordial and generally positive". "We haven't had the battles that have been recorded elsewhere in the country" (Jackson, pers. comm., 1997). White (pers. comm., 1997) concurs with this, stating that DOC has a very good relationship with TDC at managerial level. In terms of entrenched organisational structures, there was general agreement that this was not a significant issue. As Lineham (pers. comm., 1997) observes, "organisations have changed so much that there shouldn't be entrenchment, and the functions are well defined".

In commenting on the effect of different organisational structures within the agencies, McRae (pers. comm., 1997) states that "the two agencies are very different beasts: DOC is a large government department; TDC is a small local authority". By the same token, Markham (pers. comm., 1997) states that TDC is more complex; while DOC has a "purer culture". TDC has technical staff reporting to body of laypeople who make decisions, whereas DOC is an integrated organisation, with staff and directors working to the same purpose (Jackson, pers. comm., 1997). Another difference is that the DOC estate is publicly owned, whereas TDC impose a management regime on private land (Jackson, pers. comm., 1997). There are also different strengths within each organisation: DOC is strong on ecology; TDC is strong on engineering (White, pers. comm., 1997).

Markham (pers. comm., 1997) observes that the different organisational structures are a product of the different legislative mandates that the agencies work under. Richmond, White and McRae all agree that any tension between the agencies is more likely to spring from the different statutory missions imposed by the legislation than from organisational structures (pers. comm., 1997).

White, for example, is not conscious of different organisational structures between the agencies, but is conscious of the different mandates. According to Richmond (pers. comm., 1997), the different objectives of statutes can cause policy conflicts. The RMA and Conservation Act "are intended to be complementary, but boundary issues may cause problems in implementation" (Richmond, pers. comm., 1997). The cultures are different in that DOC has single conservation mission, whereas TDC has multiple goals and has to make trade-offs (Markham, pers. comm., 1997). Lineham (pers. comm., 1997) states that there can be adequate co-ordination between agencies implementing the RMA and Conservation Act, but still policy conflicts:

because their purposes are different. DOC are advocates for conservation, whereas those operating under the RMA have the quasi-judicial role of making decisions based on evidence.

Markham (pers. comm., 1997) observes:

I don't think the different statutory mandates mean that there are necessarily different goals, there is some commonality in the missions of TDC and DOC. But there are additional goals that TDC has to focus on, and they relate to use value as much as conservation or protection value. Consequently there is scope for incomplete agreement on the means to pursue those goals. DOC may see the use and development goals as an unacceptable trade-off in relation to their conservation goals.

White (pers. comm., 1997) acknowledges that because of the different purposes, there may be some short-term conflict, but believes the agencies can usually work through those. As Lineham (pers. comm., 1997) notes, "to be effective, there has to be co-operation, no matter how good the system is". Richmond (pers. comm., 1997) believes the tools provided for conflict resolution are not being used creatively enough. McRae (pers. comm., 1997) notes the different purposes may also cause fragmentation of community perceptions: DOC may be seen as anti-people; whereas TDC may be seen as being more accommodating of the community view.

Extent of political commitment to processes of integration

The questions asked here related to whether the practitioners thought there had been political commitment from within their agency to processes of integration; and whether unrealistic political deadlines were imposed on plan notification. The purpose of these questions were essentially to confirm the importance of having sufficient time and resources for successful planning processes, and to ascertain whether any of the plans were negatively affected by insufficient time and resources.

Markham's (pers. comm., 1997) initial remark is that "the imposition of political deadlines curtailed a lot of potential interaction". Markham states that unrealistic political deadlines were imposed on both the RPS and TRMP. During RPS drafting, "I recall only one limited meeting with DOC staff on some of the features of that" (Markham, pers. comm., 1997). And during the TRMP drafting:

> *the plan preparation process that we followed for the Regional Coastal Plan did provide...quite a substantial period of opportunity in 1995, prior to plan drafting, to have interaction on the major policy features; but later on in the process the political deadlines imposed on the notification of the plan severely limited the opportunities for interaction, and therefore potential integration of views as to what should be in the plan... Once the plan was in draft form there was no commitment by council for the community at large or the statutory agencies, including DOC, to have an adequate opportunity to dissect and criticise the draft, and for those criticisms and views to be digested by council processes, and for revisions to be made to the plan. By early 1996, the council was very firmly committed to having the plan notified by a certain time-frame, regardless of the quality or time available for interaction between the council and stakeholders such as DOC. We got slagged quite understandably by DOC and the other statutory agencies for that* (Markham, pers. comm., 1997).

In addition, Jackson (pers. comm., 1997) notes that "there was no real political directive to consult, we were left to our own devices as to how to develop the plan and who to consult". Ogilvie (pers. comm., 1997; TDC), however, believes that there was political commitment to processes of integration, although he acknowledges that in hindsight the deadline for notification was "too tough". Ogilvie (pers. comm., 1997) also acknowledges that some parts of the plan (natural heritage, cultural heritage, some map work, and some issues and rules) "weren't up to scratch" because of the tough deadline. According to Ogilvie (pers. comm., 1997), the "committee felt that the plan was just taking too long" and he cited political pressures, costs, and responsibility to ratepayers as the other reasons for imposing the deadline. "Sometimes deadlines have good points as well as bad points" (Ogilvie, pers. comm., 1997).

White (pers. comm., 1997) notes that DOC is "very lucky in that our Minister is very interested...and he is interested in things that happen around his electorate", but that the Minister "doesn't necessarily have an influence" in terms of the detail of the management process. Within the Nelson Office, both White (pers. comm., 1997) and McRae (pers. comm., 1997) believe that DOC staff have shown commitment to processes of integration.

Agency reorganisation and restructuring

TDC and DOC have both undergone reorganisation and restructuring in recent years, and DOC continues to be restructured. Therefore, the interviewees were questioned as to what sort of effect restructuring within the agencies had in terms of achieving integration.

According to Verstappen (pers. comm., 1997), TDC has been a unitary authority for five years—TRMP processes didn't start until after that. So "it has been DOC's ongoing restructuring of a minor and major nature that has perhaps impacted more recently" (Verstappen, pers. comm., 1997). Specifically, Jackson (pers. comm., 1997) notes that it has been difficult to get feedback from DOC over the past few months because of restructuring. Staffing and restructuring problems are the TDC planners' perception of the reasons why DOC has not taken advantage of some of the opportunities for interaction provided by TDC (Markham, pers. comm., 1997). Jackson (pers. comm., 1997) states that:

the stability of staffing and continuity of staffing is important. DOC has been continually replacing their coastal resource persons over the last five years: that in itself is a big obstacle for effective integration.

White (pers. comm., 1997) concedes that restructuring affects the integration effort in that "it results in the departure of an amazing amount of corporate knowledge and memory". Further, "restructuring does tend to sap the energy out of an agency, and affects the speed of some processes, but once it is over, then you have the benefits" (White, pers. comm., 1997). From White's perspective "restructuring is just part of life". In the Nelson-Marlborough Conservancy there has been "either restructuring or reviews or reforms as an ongoing part of management" (White, pers. comm., 1997). While McRae (pers. comm., 1997) states that restructuring has not affected the DOC effort a lot, she concedes that:

the greatest effect would have been the change in RMA personnel in this organisation in the last five years with various comings and goings. And that's where continuity of employment, and having good people on the ground at the time dealing with the issues...it is really important to have that continuity, no matter how good the institutions are.

As for the reformation of TDC to a unitary authority:

the former regional council had a strong technical capability with ecologists and environmental technology staff, and to my mind TDC does not have any similar staffing, it often comes back to DOC for technical advice...they're getting better, but there's nothing like having ecological staff on board in an organisation (McRae, pers. comm., 1997).

Guidance from central government

The representatives from MfE and DOC Head Offices were asked to what extent the central government agencies have responsibility and influence over the achievement of integrated management at regional and local levels. Further, all respondents were asked whether they

thought the central government agencies were, in fact, providing sufficient guidance on integrated management to other implementing agencies.

From an MfE perspective, Lineham (pers. comm., 1997) states that "there is not sufficient guidance, and more could be done with increased funding". To this end, MfE are using some budget money on "improved performance and practice", and integrated management is one of the topics, as performance and practice here needs to be improved (Lineham, pers. comm., 1997). Similarly, Richmond (pers. comm., 1997) states that the failure to achieve integrated management in many cases is an indication of insufficient guidance from the national level agencies. Richmond (pers. comm., 1997) notes that the Minister for the Environment is responsible for ensuring the RMA is workable; and the Minister of Conservation is similarly responsible for the statutory provisions in the coastal marine area.

At the regional and local level, however, Markham and White are less concerned. White (pers. comm., 1997) comments that in terms of conservation estate planning, there is "sufficient guidance internally as to what we should be doing with other agencies". Markham (pers. comm., 1997) states that:

The opportunities for integration are by-and-large there, but it remains a matter of practice and performance by the local authorities and local DOC office to ensure that some level of integration is achieved. I don't think there's any great mystery about integration to warrant detailed guidelines from MfE or DOC.

McRae (pers. comm., 1997) believes there "could be more national co-ordination and training and upskilling within local government". Further, McRae (pers. comm., 1997) notes that MfE has "stood back from coastal planning submissions and left it for DOC to deal with". McRae questions whether MfE should do this, given that some parts of the country have integrated resource management plans, combined district and coastal plans, and coastal environment plans, while other parts of the country do not have such plans.

Definitions of integrated management

In view of the fact that "integrated management" is not defined in the legislation, it was asked whether the various different agencies have different interpretations of integrated management, in order to assess whether the lack of a definition meant the agencies were pursuing different goals.

Lineham (pers. comm., 1997) states that MfE and DOC probably do have a different interpretation of integrated management. Lineham (pers. comm., 1997) thinks it is more difficult for DOC because they use the term "integrated management" under both acts. Richmond (pers. comm., 1997) agrees, and adds that there is probably as much variation within the agencies as there are between them. He believes a distinction needs to be made. Integrated management is a term used very widely, and it may be misunderstood that it means different things in different contexts (McRae, pers. comm., 1997). Markham (pers. comm., 1997) states that agencies probably differ in the weight given to different values, but views of integrated management have never been up for discussion. White (pers. comm., 1997) is similarly unconcerned, pointing out that integrated management is defined in the CMS, in terms of the Conservation Act and how the CMS is supposed to achieve that. And "in terms of management between agencies, I don't think it's a major problem" (White, pers. comm., 1997).

Timing of plan preparation

All four plans were drafted at roughly the same time. The question posed was: "has the roughly simultaneous preparation of the plans been helpful or problematic?".

Markham and White think the roughly simultaneous preparation of the plans to be "useful" and "helpful" respectively (pers. comm., 1997). Markham, White and McRae all agree that there had been no difficulties associated with the timing of plan preparation (pers. comm., 1997). As summed up by McRae (pers. comm., 1997):

It's probably been quite helpful given that both agencies have been thinking about writing these plans at the same time, and had to make a really clear.

decision about which document deals with the issue or how to cover the interface of issues.

Adequacy, limiting factors and key requirements, and suggested improvements

There are three parts to this section. First, responses to the questions "is integrated management occurring in the way envisaged or provided for in the legislation?" (to the central government agency respondents), and "was there adequate interaction and co-ordination between TDC and DOC?" (to the other respondents) are presented. Second, the limiting factors and key requirements for integration noted by the respondents are highlighted. Third, the answers to the question "how could integration be improved?" are summarised.

Adequacy of co-ordination and integration. There was general dissatisfaction with the extent of integrated management, both at a national level, and in terms of the case study. Integrated management is not going as far as Lineham would have thought, and he believes that integrated management across environmental media could be improved particularly (pers. comm., 1997). Richmond (pers. comm., 1997) states that nationally, integrated management is occurring to a limited extent only.

In relation to the planning effort surrounding Abel Tasman, there "hasn't been particularly adequate consultation" (Markham, pers. comm., 1997), "particularly during the critical phase of getting from issue definition to defining mechanisms of solution" (Jackson, pers. comm., 1997). From the TDC perspective, interaction with DOC "has not been smooth, particularly efficient or consistent" (Markham, pers. comm., 1997). As far as conservation estate planning is concerned, White does not think there was adequate interaction and co-ordination between TDC and DOC (pers. comm., 1997).

Limiting factors and key requirements. In relation to the case study, the key limiting factors for integration have already been touched on in previous sections; they are elaborated upon here. According to the TDC planners, the main reasons why interaction and co-ordination with DOC has been insufficient are: first, a failure by DOC staff to "take advantage of the opportunities that we believe were put in front of them" (Markham, pers. comm., 1997) due,

perhaps, to "staffing and restructuring problems" (Verstappen, pers. comm., 1997); and second, inadequate staffing, resourcing and timeframes within TDC:

In other words time for developing policy research and appropriate policy development work. Time for developing coastal policy has had to compete with time for developing policy in a whole range of other areas. That has impacted on [Neil Jackson's] time and my time particularly... We had a lot of issues to define, and a lot of policy to develop, and we never had the luxury of time to say "shall we go and talk to this particular stakeholder", namely DOC, about these issues. If we had adopted that, we would never have achieved our targets... There were potentially many many stakeholders with whom we might have taken initiatives, but we ourselves didn't have the time for it, neither in the RPS or the TRMP (Markham, pers. comm., 1997).

White and McRae concur that time and resources are a key limitation in the integration effort. White (pers. comm., 1997) states that there was inadequate interaction and co-ordination "because both agencies are subject to a lot of pressures in terms of resources". The main constraint to integration is time:

there is a limit to the amount of time TDC can devote to our processes; and likewise with us to them...we just have to prioritise, as do they... So I'd say there's probably inadequate interaction and co-ordination, but I think that the end result is probably—because there is a limited number of policy conflicts—as good as we're going to get with the amount of resources both agencies are prepared to contribute. So it's not the ideal, but that's the reality of both agencies and the environment they're working in (White, pers. comm., 1997).

McRae (pers. comm., 1997) states that the agencies have "tried to work together as much as possible, but that's within the constraints of process, time, resources and change in personnel". White and McRae concede that restructuring and change in personnel has costs in terms of efficient planning processes and loss of corporate memory. A further limitation in the actual

process of interaction between TDC and DOC is introduced by Markham (pers. comm., 1997):

There's a curious situation that has prevailed now for probably two years or more, where there has been a liaison established between the senior staff of DOC and the managers of the council, where they meet periodically to talk through common issues. But from our point of view, we've never had a clear feedback mechanism for the outcomes of that liaison process, either from DOC themselves or from our own manager colleagues. The most I get from our departmental manager Dennis Bush-King is that there's been discussion on certain issues, and that's about it. No further information on the outcomes or the nature of the discussion. Because Neil [Jackson] and I have not been involved in those liaisons, we've had to take initiatives where time allows to interact directly with the relevant staff of DOC, and to the extent that's occurred it's been quite useful interaction—I'm talking about phone conversations and the odd face-to-face meeting. But from our point of view that liaison process hasn't been particularly effective or successful, for us, in keeping us in direct contact with what the relevant counterparts at DOC have been up to.

Markham (pers. comm., 1997) believes the key requirements for achieving integrated management between TDC and DOC are adequate staffing, resourcing and adequate time-frames. According to McRae (pers. comm., 1997), the key requirements are a good relationship between the agencies and other stakeholders, time, and good information. White (pers. comm., 1997) notes the importance of defining goals, acknowledging the mandates of other agencies, and maximising resources in a co-operative way.

From a central government agency point of view, the key requirements for integrated management are time, money, and political will (Richmond, pers. comm., 1997). Other requirements are: (1) a reciprocal understanding of mandates and responsibilities; (2) a mutual trust and respect for the other agency's intent and capacity; and (3) a willingness to delegate authority to ensure consistent decision-making (Richmond, pers. comm., 1997).

How could integration be improved? TDC is currently dealing with DOC's large submission on the TRMP and addressing DOC's appeal on the RPS. According to Markham (pers. comm., 1997), there needs to be more time and effort from DOC on RPS matters, and communication and discussion of concerns raised in submissions. Jackson (pers. comm., 1997) states that specifically, the biggest conflict is between identifying issues and attitudes to the Abel Tasman coastline. Jackson (pers. comm., 1997) comments that this is difficult because of the wide range values, uses and experiences associated with Abel Tasman. Markham (pers. comm., 1997) suspects the main issue is "nuisance" (nature of experience), rather than "ecological damage", but wants "a more measured and rational process of communication to validate issues". The TDC planners express a frustration over the unresolved issues, and highlight the ongoing need to identify and explore issues.

Wynne-Jones (pers. comm., 1997) confirms that there is a problem in the process of identifying what the problems are, and identifying conflicts between the use of an area and its natural values. McRae (pers. comm., 1997) notes that good information that accurately describes what the issues are is critical, and suggests that there could be more frequent contact between the agencies over how to deal with the issues. Further, given time and resources, "there could be clearer dual statements and co-ordinated processes to deal with issues in an integrated fashion, and more time for the community to comment" (McRae, pers. comm., 1997). McRae (pers. comm., 1997) believes that at times the public were being "fobbed off" by various agencies over who had responsibility for certain management issues to do with Abel Tasman. McRae (pers. comm., 1997) also thinks that TDC could do a lot more in terms of promoting non-regulatory techniques and education, for example, "coast care groups". Finally, McRae admitted that DOC were "fairly reactive" with its submission on the TRMP, and could afford to be more strategic and have more up-front consultation with user groups.

White (pers. comm., 1997) states that TDC and DOC are working through the conflicts in the submission process. Ideally, White (pers. comm., 1997) would want more time and resources, but:

> *it's not a perfect world—to make it better you probably want to have more*
> *resources, and in the current climate that's not on the agenda, in either local or*

central government. So it's just a question of ensuring the benefits of what we've managed to establish are retained, and the relationships and the processes we've got in place are continued.

White (pers. comm., 1997) also suggests a different, collective approach to managing the Park coast:

the way through [the problems] is for agencies like us and TDC to continue to strive to work closer together, and work co-operatively together, and the way to do that is through partnerships. And that's something that is working quite effectively overseas. I've been looking at similar situations where you've got different agencies with different mandates all with an interest in a defined area, working through a process to a set objective, and then coming up with strategies to actually achieve integrated management. That starts off with a very complicated mediation and conflict resolution process, but it's working overseas, and it's the sort of thing on the Abel Tasman coast, where I think we may be looking at similar sorts of regimes. Which means using existing legislation, existing regulations, but perhaps just approaching it differently and collectively—that's not just TDC and us; that's TDC, us, commercial operators, residents etcetera.

Finally, Richmond (pers. comm., 1997) believes there are opportunities for more effective incentives to achieve integrated management from central government. He also recommends that cross-delegation of powers be used in a more innovative way.

Plan coding results

The results of plan coding are shown in Figure 10. The plans subjected to analysis are the *Proposed Tasman Regional Policy Statement* (RPS), the *Proposed Tasman Resource Management Plan* (TRMP, specifically the Regional Coastal Plan component), the *Nelson-Marlborough Conservation Management Strategy* (CMS), and the *Abel Tasman National Park Draft Management Plan* (ATNPMP). All four plans are analysed in terms of 23 criteria

Figure 10: Plan coding results

	Headings and criteria	R P S	T R M P	C M S	A T N P
Fact Basis	*Integration across agencies*				
	-Regard to other plans	1	0	2	0
	-Relationship with other plans explained	2	2	2	2
	-Consultation with other agencies	2	1	2	2
	-Consultation with the public	2	0	2	0
	Integration across legislation				
	-Legislative requirements for integration	2	2	2	0
	-Interpretation of requirements (rationale for integration)	2	0	2	2
	-Relationship of other legislation explained	0	0	2	2
	-Monitoring requirements	1	2	2	0
	Integration across environmental media				
	-Depiction of physical context (environment)	2	0	2	2
	-Expression of environmental continuity (ecosystems)	1	2	2	2
	-Identification of major environmental issues	2	2	2	2
	-Quality of maps (shows jurisdictions)	1	1	1	1
Objectives	*Overall objective*				
	-Statement of overall objective of the plan	1	0	1	0
	Issues				
	-Public access	0	0	1	0
	-Overuse of facilities	0	0	0	0
	-Diminished amenity/natural character	0	0	0	0
	-Environmental degradation	0	0	1	0
	-Foreshore management	0	0	0	0
Policies	*Issues*				
	-Public access	0	0	1	0
	-Overuse of facilities	0	0	1	0
	-Diminished amenity/natural character	0	0	1	0
	-Environmental degradation	0	0	1	0
	-Foreshore management	0	0	0	0

which assess their fact basis, objectives and policies. The criteria have been arranged under six headings to make analysis and discussion of the data more manageable. As outlined in Chapter Four, each plan is coded according to how well it fulfils each criterion, and the "scores" are recorded on the right-hand side of Figure 10. The plan scores are presented alongside one-another in the table in order to compare and contrast the coding results. The coding results are then able to be broadly interpreted in the subsequent discussion, which is arranged under the same six headings featured in Figure 10.

Integration across agencies

There is a variable depiction of the need for integration across agencies in the plans. The relationship of each plan to the others is well explained by all plans. However, the TRMP does not mention that *regard* to other plans was a necessary part of plan drafting, and the RPS is not detailed on this matter. The CMS does explain that other plans had to have regard to *it*, while the ATNPMP does not mention the requirement at all, perhaps because it is not a "stand-alone" document. The need for consultation with other agencies is mentioned in detail by all plans except the TRMP, which is less detailed. The need for public consultation is mentioned in detail by the RPS and CMS, while the other two plans do not mention public consultation.

Integration across legislation

Again, the plans are variable in the way they explain the need for integration across legislation. The actual requirements for integration under the legislation are fully explained in all plans except the ATNPMP, which in any case, is supposed to be viewed alongside the CMS. The TRMP is the only plan that did not present an interpretation of the legislation, in terms of a rationale for integration. The relationship of *other* legislation is not articulated by either the RPS or the TRMP (for example, neither mention the Conservation Act). In contrast, both the CMS and ATNPMP are detailed in their appraisal of the RMA, although this may reflect the requirements of the legislation more than anything else. Monitoring requirements are mentioned by all plans except the ATNPMP.

Integration across environmental media

Overall, the need for integration across environmental media is well expressed in the four plans. There is detailed depiction of physical context in all plans except the TRMP, which does not describe the physical environment within Tasman District at all. The only plan not to make a full expression of environmental continuity and ecosystem functions is the RPS. All plans make a full and detailed identification of the major environmental issues within their ambit. The quality of maps is adequate in terms of showing tenure boundaries and agency jurisdiction, but none of the maps show the jurisdictions of *other* agencies. While there is no legal requirement to do this, it would be helpful to show them, particularly in relation to the coastal environment.

Overall plan objective

This criterion is designed to test whether "integrated management" is included as part of the *overall* objective of the plan. Figure 10 shows that only the RPS and the CMS give a clear statement of overall objectives for the plan, in terms of achieving integrated management.

Objectives relating to issues

Plan coding shows that there are no objectives in any plan that relate to addressing the issues by way of integrated management. The only document to mention integrated management as an objective is the CMS (p. 365), which states, somewhat ambiguously, that the objective of management planning is "to integrate management of particular places". While it can be argued that integrated management is not an objective in itself, and is something that may be pursued in the planning process, it can also be pursued during implementation, so should be given consideration during policy development.

Policies relating to issues

As would be expected from plans that have no objectives relating to integration, nor are there any policies to achieve integration in these plans. The only plan to include aspects of integration in policy is the CMS. The CMS does this on two levels: (1) on a general level, where "liaison will be maintained with local authorities...to address conservation issues generally..." (p. 362); and (2) on a more specific level, where "integrated management of land and sea will be encouraged" (p. 82) to address coastal protection, environmental degradation

and recreation issues (pp. 77-80). According to the CMS, DOC will also "maintain dialogue with other agencies" (p. 279), and "seek co-operation with local authorities" (p. 300), to share control of recreation opportunities and ensure effective provision of facilities.

The following chapter presents an analysis of these research findings. The findings of both the interviews and plan coding are synthesised and analysed in light of the theoretical framework outlined in chapters Two and Three.

Chapter 6: Analysis

The overall aim of this thesis is to determine whether co-ordinated, integrated management is occurring between different agencies operating under the *Resource Management Act 1991* and the *Conservation Act 1987*. This chapter addresses research objectives three and four in the following four-part analysis. First, the processes of interaction, co-ordination and integration used by TDC and DOC are identified and analysed in light of the theoretical framework for integration outlined in Chapter Two. Second, this management effort is analysed with reference to the opportunities and barriers for integrated management in the New Zealand context. The theoretical review in Chapters Two and Three informs this discussion, and thus the research findings are given a contextual basis. Third, the extent to which co-ordinated, integrated management is occurring along the Abel Tasman coastline is analysed, by incorporating the results of interviews and plan analysis with the analytical framework developed in Chapters Two and Three. Fourth, reflections on the case study and integrated management are offered.

Processes of interaction, co-ordination and integration

According to the theories highlighted in Chapter Two, the conceptualisation of integrated management can be divided into substantive and procedural elements (see Chapter Two, Figure 1). The substantive requirements for integration are characterised by an inclusive, interconnective, strategic and goal-focused approach to management. The procedural aspect of integration pertains to an interactive and co-ordinated approach by participants in the process. This theoretical framework is applied in the following analysis of the processes of integration pursued by TDC and DOC in relation to the case study. First, the substantive aspects of the process are discussed; and second, the procedural approach of the participants is analysed. Substantive and procedural elements are closely related and interconnected, and linkages are made in the discussion. Third, the extent of stakeholder and public involvement is analysed.

The substantive approach

Inclusive. For an inclusive approach, account is taken of: (1) the natural resource or ecosystem components; (2) the management functions and jurisdictions of other agencies; and (3) the stakeholders who affect or can be affected by management. While there were no specific questions about how inclusive the various planning processes were, some general conclusions can be drawn from analysis of the four plans prepared by both agencies. Overall, the depiction of physical context, expression of ecosystem continuity and identification of environmental issues indicates that the plans have been drafted with cognisance of the natural resource and ecosystem components of the Abel Tasman area. Moreover, plan analysis shows that the relationship with other plans and the need for consultation with other agencies has been taken account of, while the interview responses in general indicate a good understanding of the management functions and jurisdictions of other agencies.

There is a major question, however, concerning how inclusive some processes have been in terms of taking account of relevant stakeholders and the public in plan development. Jackson (pers. comm., 1997) notes that at a critical stage of TRMP development, feedback "didn't really happen" from DOC or the public. Moreover, DOC involvement "wasn't crucial in defining the issues" (Markham, pers. comm., 1997) and TDC had to "make an awful lot of assumptions on behalf of the public" (Jackson, pers. comm., 1997). On the other side of the coin, the public process for the CMS was "pretty quiet" (White, pers. comm., 1997). In addition, McRae (pers. comm., 1997) thought that DOC had been fairly reactive in its submission on the TRMP, and could afford to have more "up-front consultation" with user groups. The importance of comprehensive stakeholder and public involvement is discussed later in this section.

Interconnective. An interconnective approach means identifying and addressing the interrelationships and linkages in the system that is being managed. As shown in Chapter Two, the linkages are among physical and biological processes, multiple and potentially conflicting resource uses, and among those comprising the community of interest. Born and Sonzogni (1995) note that interaction and co-ordination among the various resource users and community interests is a means of recognising and addressing the interconnections in human systems. Thus, the extent to which interconnections are recognised may depend on the

inclusiveness of the process, and the effectiveness of participation. Inclusiveness as an element of integration has already been discussed, while effectiveness of participation is discussed later in this section. Tools for identifying the interconnections in natural systems include geographic information systems and systems analysis (Margerum and Born, 1995). However, assessing the extent to which the plans recognise natural interconnections is outside the scope of this thesis.

Strategic and goal-focused. There was not a very substantive response to the question "was the interaction or co-ordination during plan development strategic and goal-focused?". White (pers. comm., 1997) notes that DOC interaction with TDC is guided by the strategic direction of the CMS, but this does not indicate whether DOC and TDC were strategic in their approach to interaction (and co-ordination) during CMS drafting. An overall assessment of the interviews indicates that the interaction was primarily incremental, ad hoc, or "issue driven".

Discussion with TDC occurred over how to approach the issues along the Abel Tasman coast, so to that extent the interaction was goal-focused (McRae, pers. comm., 1997). TDC staff, however, responded differently to the above question, the initial remark being "we have different purposes" (Jackson, pers. comm., 1997). The agencies may not be able to focus on "common goals" as such, because they are planning for different areas, and operating under different mandates with different purposes. According to Markham (pers. comm., 1997), the different purposes "don't mean that there are necessarily different goals", but that "there is scope for incomplete agreement on the means to pursue those goals". This is an important point, as it affects the extent to which the two agencies can achieve *co-ordination*, which is discussed later in this section.

The procedural approach

As illustrated in Chapter Two, the diverse values and interests of various agencies and stakeholders need to be identified and shared by the process of interaction. Interaction helps define the interrelationships of concern, and as well as identifying critical issues and goals for the system. Formal processes for interaction between agencies in order to achieve integrated management are provided for under both the RMA and Conservation Act. These mechanisms

are summarised in Chapter Three, and include requirements for inter-agency consultation, public consultation, submission processes, and "having regard to other planning documents".

However, while statutory processes of interaction provide a starting point for agencies to pursue integrated management, it is clear that the development of non-statutory, informal mechanisms is also necessary. In the New Zealand context, Hutchings (1994) states that the achievement of integrated management is largely dependent on both statutory and non-statutory arrangements which may *voluntarily* be entered into by participants in the process. Moreover, Molnar and Rogers (1982) note that in practice, efforts to co-ordinate generally rely on informal relations between staff who develop their own information networks. Formal and informal interaction between the agencies is now discussed respectively, followed by an analysis of whether the "interaction" could be construed as "co-ordination".

Formal interaction. The interview findings confirm that all of the formal mechanisms for interaction provided for in the legislation were used in the RPS, TRMP, CMS, and ATNPMP processes. While "having regard to other plans" was conceivably difficult to achieve because of the roughly simultaneous timing of plan preparation, it was noted by respondents that plan drafts were available for review during preparation. The effect of simultaneous plan preparation was, in fact, useful for the agencies, because unequivocal decisions had to be made about how the respective documents should deal with the interface of issues (McRae, pers. comm., 1997).

Inter-agency consultation in the formal sense took place during meetings at various stages of the planning process for all plans. DOC staff attended meetings early in the RPS drafting process, and later on in the process for the TRMP. Similarly, TDC staff were involved in "scoping exercises" and "working group meetings" for both the CMS and ATNPMP (White, pers. comm., 1997). Another opportunity for formal (or informal) interaction came after TDC produced "discussion documents" for the RPS (McRae, pers. comm., 1997) and "policy papers" for the TRMP (Markham, pers. comm., 1997). DOC staff also attended workshops and a policy paper review session, and presumably had the opportunity to make formal comments on the plans after these meetings. TDC staff participated in a one-day workshop for

the CMS, and were able to comment formally in writing on the draft CMS, prior to the public consultation process.

A further opportunity for formal interaction between agencies occurred during the submission process, as part of the public consultation stage. After the RPS was notified, DOC made a formal submission to the council hearing. DOC has subsequently lodged an appeal on the council's decision in that case. DOC has also made a submission on the TRMP, which is currently being worked through. Similarly, TDC has made submissions on both the CMS and the ATNPMP. The agencies have also undertaken public consultation in accordance with statutory requirements. The public had opportunities for input during the drafting process, and made formal submissions on the documents once they were notified. Jackson (pers. comm., 1997) notes that public feedback "didn't really happen" during the drafting stage of the TRMP (the extent of public involvement is discussed later in this section).

Richmond (pers. comm., 1997) believes that in addition to formal processes, there is an expectation that non-statutory means of interaction will be also be pursued by agencies working towards integrated management. And indeed, non-statutory, informal interaction played a major role in the integration efforts surrounding the Abel Tasman case study.

Informal interaction. A good example of an informal "relationship-building" process was the field visit, by boat, along the coast of Abel Tasman National Park in 1994. A range of representatives from both agencies were present, including the political wing of TDC, conservation board members, planners and other specialists. The field trip occurred prior to both the Regional Coastal Plan and ATNPMP being drafted, and the relationship between the two plans, in terms of dealing with the management issues, was able to be informally discussed. While McRae (pers. comm., 1997) states that a "reasonable level of agreement" was reached on the need to address some of the issues, it is interesting to note that none of the TDC planners recall the visit.

Other informal processes of interaction included the opportunity for agency staff to comment on policy papers and draft plans. For example, the TDC planners thought that DOC staff were presented with a "golden opportunity" to respond informally to a range of policy papers

distributed in the lead-up to TRMP drafting (Markham, pers. comm., 1997). TDC staff were disappointed with the response. Conversely, TDC staff were able to comment on a pre-consultation draft of the CMS during an informal one-day workshop (White, pers. comm., 1997). TDC staff also commented on the draft ATNPMP. In addition, DOC and TDC planners have developed informal relationships for dealing with particular provisions in the RMA, and DOC staff have been involved in a special working party in relation to significant natural areas.

Informal interaction between TDC and DOC staff also generally occurred on a "planner to planner, planner to council officer, and manager to manager" basis throughout the ATNPMP development (White, pers. comm., 1997), or as Markham puts it, during "the last two years or more". Markham (pers. comm., 1997) notes that phone conversations and face-to-face meetings with counterparts at DOC have been "useful", but that informal "manager to manager" liaison has not been particularly effective and successful, because the actual *planners* were not kept informed of the outcomes of that process.

McRae (pers. comm., 1997) observes that non-statutory interaction, while valuable, can suffer when resources are limited. This is because agencies have a statutory minimum to achieve, and if pressed for time and money, will attempt to achieve this at the expense of non-statutory processes. Further, while it may be easy to reach agreement during informal circumstances, the reality of creating a strong legal basis for submissions means that planners may revert to the "absolute bottom line" of an "adversarial process".

Interaction as co-ordination. It has been established that there were a number of different mechanisms used by the two agencies to interact with one-another. However, as Mitchell (1986) notes, agency programmes are not always complementary, and there are often conflicting values associated with different resource sectors. Thus, interaction needs to be taken a step further, and the task specialisations of agencies need to be pulled together to achieve overall goals. This is achieved through co-ordination, where communication and conflict resolution are used to achieve mutually desired objectives. So to what extent can the interaction that took place between the agencies be construed as co-ordination? Markham (pers. comm., 1997) makes the crucial point that:

co-ordination implies that there are two parties, each with their sets of tasks, and it's a matter of enhancing the links between the tasks. In relation to coastal management the primary set of tasks apply to TDC, not DOC as such. DOC have been in reacting or responding mode, rather than another actor carrying out another set of coastal management tasks.

Markham (pers. comm., 1997) notes that in relation to coastal planning, true co-ordination with DOC is not "relevant" except to the extent that DOC is the Abel Tasman National Park estate manager. Thus, there is not a conscious or structured process of co-ordination with DOC. Verstappen (pers. comm., 1997) indicates that the term "consultation" is closer to the reality of interaction between the two agencies. These observations are borne out to an extent by the revelation that DOC involvement was not crucial in defining coastal management issues. It must be recognised that the Abel Tasman coastline is a relatively small part of the coastal marine area that is managed by TDC. While DOC advocacy and cognisance of the New Zealand Coastal Policy Statement *are* relevant inputs to the RMA planning process at a general level, some of the issues along the Abel Tasman coast are fairly discrete and localised. This poses some management problems for TDC planners, as the plan must address the coast in its entirety.

According to McRae (pers. comm., 1997), the level of co-ordination varies according to the issue. To illustrate, Wynne-Jones (pers. comm., 1997) observes that elements of the Regional Coastal Plan show that co-ordination did occur between TDC and DOC, for example, policy on jetties and moorings reflect the interests of both agencies. However, he notes that there were other issues where conflicts between the two agencies could not be resolved. If conflicts remain over some issues, therefore, it can be inferred that effective "conflict resolution" has not occurred, and thus "co-ordination" has not resulted for all issues. A lack of co-ordination is evident, for example, over the issues surrounding the proposed extension to the National Park.

On the whole, White's observations conform with the above findings. He reveals that there is "an element of co-ordination", and co-ordination occurs over "some issues". However, he notes that while the two agencies have "disagreements", they "don't have a lot of conflict",

and that there is "a mediation process or a statutory process through which that can be sorted" (White, pers. comm., 1997).

Stakeholder and public involvement

In order to achieve integration, according to the theory outlined in Chapter Two, interaction must occur at every stage of the management process, from scoping to plan development to implementation (Mitchell, 1986; Margerum and Born, 1995). Analogously, co-ordination can also occur at planning as well as operating levels (Molnar and Rogers, 1982). Both interaction and co-ordination can be with the directly affected stakeholders (e.g., agencies) and with the general public. As Born and Sonzogni (1995) note, interaction and co-ordination must extend beyond the more formal intergovernmental networks to embrace directly and indirectly affected interests. In sum, integrated management requires that there is participation from both stakeholders and the public throughout the planning process. The extent of stakeholder and public involvement is now analysed.

Markham (pers. comm., 1997) states that DOC was involved continuously through policy development for the TRMP. However, this is a general statement that does not elaborate on the extent or quality of the interaction. Further clues on the perceived effectiveness of the interaction are distributed throughout the interview with TDC planners. According to Markham (pers. comm., 1997), the two agencies did not have a very "even" process of interaction, and policy papers produced by TDC did not draw the anticipated level of response from DOC. In fact, Markham and Jackson state that interaction with DOC has not been smooth, efficient and consistent, and the part of the process that was particularly lacking was "the critical phase of getting from issue definition to defining mechanisms for solution" (pers. comm., 1997).

McRae (pers. comm., 1997) confirms that most of the interaction for the RPS and the TRMP seems to have taken place *after* the plans were drafted. For example, some feedback from DOC originated during the resource consent process and was fed back into plan development. McRae (pers. comm., 1997) states that time pressures eventually precluded effective participation from stakeholders and the public during TRMP development. She expresses a frustration with the method of releasing policy papers that TDC had used in plan preparation,

indicating that there was a feeling that "the council had already made up their minds" about what was to go into the plan. In relation to conservation estate planning, TDC staff were involved in the scoping, plan development and implementation phase of the CMS, but again, the interaction was "erratic" and "issue driven" (White, pers. comm., 1997).

As well as not having extensive interaction with DOC during plan development, nor was there a very comprehensive range of other stakeholders involved in the TDC processes. Only those stakeholders with strong vested interests in coastal management (commercial fishers and marine farmers) were involved at the early stage of plan development. It appears there was not a wide range of stakeholders involved in conservation estate planning either; again, those mentioned were the most directly affected parties (enclave residents and concessionaires).

The early stages of TRMP development resulted in little interest from the public, and just as DOC did not respond as anticipated to the policy papers, nor was there a great deal of public response. Interaction with the public and a wider range of stakeholders occurred to a far greater extent after the plan had been notified, and resource consent applications were being processed. The DOC planners assert that TDC did not begin their planning process by encouraging the public to think about goals for the community, and had then curtailed public involvement by rushing to notify the document. TDC responded to DOC concerns that public consultation prior to notification was inadequate by stating that public consultation would be carried out during the submission process (McRae, pers. comm., 1997).

Opportunities and barriers for integration

The first section of this chapter shows that there has been interaction and some co-ordination over the issues along the Abel Tasman coast. However, it would be fair to say that there could have been more comprehensive interaction, and more effective co-ordination. An interim conclusion from the above analysis is that integrated management is occurring to a degree, but it could be greatly improved. There is a need to explain the reasons why this is the case, with reference to the theoretical framework developed in Chapters Two and Three. As outlined in Chapter Two, the opportunities and limitations for integrated management are defined primarily by the institutional arrangements surrounding the planning effort. Chapter Three

shows that there are significant opportunities and barriers for the achievement of integrated management within the New Zealand environmental management context. The institutional opportunities and barriers are discussed below in terms of how they have affected the integration effort in the case study.

Opportunities

Buhrs and Bartlett (1993) state that the potential for integrated management in New Zealand has been most extended by the new mandates, processes and organisational structures created in the linked local government and resource management reform. Practitioners, both those representing the national level agencies and those involved in the case study, resoundingly agree with this. Reducing the number of agencies and the overlaps between them is seen as a major step forward for integration (Richmond, pers. comm., 1997). In the Nelson-Marlborough region, there has been a reduction in the number of local authorities and the creation of three unitary authorities. Markham (pers. comm., 1997) states that this is a "significant advance" for integrated management, in that land and coastal marine issues can be looked at together by one agency; in this case TDC. Councils such as TDC are now able to have a "comprehensive perspective in integrating resource policies that transcend the boundaries of local authorities " (May *et al.*, 1996).

In addition, a number of "procedural means" have been provided by the new regime, and this improves the opportunities for integration and comprehensiveness (May *et al.*, 1996). Procedural means include the general requirement for policy statements and plans, and in the case of TDC, this includes the ability to prepare a combined district plan and regional coastal plan. Further, regional councils (and unitary authorities) and DOC have to address coastal issues together (Lineham, pers. comm., 1997). This is because a regional coastal plan needs to be drafted "with regard" to the New Zealand Coastal Policy Statement and other DOC plans. McRae (pers. comm., 1997) believes that the New Zealand Coastal Policy Statement is very useful for integrated management; it provides articulation of national sustainable policy and assists local authorities to understand DOC's position.

Other procedural means outlined by May *et al.* (1996) are consultation, monitoring and review. "Consultation" provides an opportunity for interaction and co-ordination, and McRae

(pers. comm., 1997) states that the mechanisms provided in the new regime for consultation are "good". This is confirmed by Markham (pers. comm., 1997) who observes that "there are any number of opportunities for interaction under the statutes". White (pers. comm., 1997) notes that the new institutional arrangements provide far more formal and sophisticated processes to ensure that inter-agency communication occurs. In other words, the mechanisms for interaction between agencies have been improved, and these mechanisms are being used, as analysis in the first section of this chapter shows.

The opportunities for integration have also been improved for conservation estate planning. The *Conservation Amendment Act 1990* has introduced the requirement for integrated management through planning. White (pers. comm., 1997) states that restructuring and new legislation has also created a new management ethos within DOC, and there is a greater expectation of public involvement. Further, processes of interaction are "more sophisticated", and technical expertise is superior in DOC than it was prior to 1987, when the Department of Lands and Survey or the New Zealand Forest Service were operational.

Barriers

Chapter Two summarises the fundamental barriers to integration that can exist within institutional arrangements. Problems of weak legislation, overlapping agency responsibility, and fragmented administrative structures were major obstructions to integrated management within the previous resource management regime in New Zealand, as indicated in Chapter Three. While reforms of environmental administration and legislation have largely removed these fundamental structural impediments, Chapter Three shows that a number of barriers to integrated management still exist within the New Zealand institutional context. Markham (pers. comm., 1997) notes that while in general the legislation has been strengthened, "there are still some fragmented aspects about the current regime".

The first barrier to integration noted in terms of the case study is the "areas of statutory fragmentation" (Markham, pers. comm., 1997) in the coastal management arena. While identifying improvements in the coastal planning framework, both Lineham and Richmond acknowledge there are problems here. Richmond (pers. comm., 1997) states that practice has demonstrated significant barriers to implementation in coastal management. For example,

drawing the boundary between regions and districts at mean high water springs "makes it enormously difficult to get integrated management across that boundary" (Richmond, pers. comm., 1997). Mountford (1997) is more unequivocal, stating that from a Gisborne District Council perspective, the coastal marine area boundary is "impossible". Jackson (pers. comm., 1997) thinks that the jurisdictional boundary between regions and districts is "a problem". The problem is surely intensified, then, where the agency above mean high water springs is DOC, and is operating under separate legislation.

Indeed, in relation to the conservation estate management of Abel Tasman National Park, White (pers. comm., 1997) finds the coastal land-sea interface "a nightmare in legal terms". The foreshore management problem outlined in Chapters Four and Five is a product of the legislation. There is an anomaly in terms of the powers of regional and district councils to deal with certain activities on the foreshore, and this anomaly seems to extend to TDC and DOC in relation to the Abel Tasman foreshore. DOC cannot manage activities on the beaches adjacent to the park, and according to Wynne-Jones (pers. comm., 1997), TDC have not included techniques in the Regional Coastal Plan which would help manage those problems. McRae (pers. comm., 1997) states that complications arising from the foreshore management issue is the reason why DOC is pursuing an extension of the park boundary. However, in defence of the Regional Coastal Plan, Jackson (pers. comm., 1997) asserts that "no one has spelt out the problem or stated appropriate solutions". Moreover, Markham (pers. comm., 1997) is unhappy with DOC's rationale for extending the park boundary.

Other legislative barriers to integrated management of the coast are highlighted by the practitioners. The most significant of these is the statutory fragmentation between coastal management and fisheries management. Not only is the boundary between coastal management and fisheries management "extremely complicated and subtle", but the "impacts of fisheries management cannot be adequately addressed" under either mandate (Markham, pers. comm., 1997). There is also the question of "who owns the Regional Coastal Plan?", because while the council prepares it, the Minister of Conservation approves it (Jackson, pers. comm., 1997). TDC planners believe the Minister's approval role is uncertain and anomalous. Both of these issues are significant, although they do not have any direct impact on this research.

There are further barriers to integration which are not directly related to the legislation. International literature suggests that entrenched organisational structures, different methods of planning and implementation, and value and personality conflicts may be an impediment to integration. Other barriers mentioned by both the international literature and the New Zealand literature are a lack of time, money and expertise, all influencing the capacity of agencies to achieve integration. Specific to the New Zealand context, commentators note there are few directives and guidelines on integration, few incentives for achieving integration, and few actual mechanisms available for co-ordination between agencies. Thus, there is a reliance on practitioners showing the goodwill and commitment necessary to address the issues and to develop the non-statutory means necessary to achieve integration. These barriers are now discussed further.

The effects of different values and organisational structures between the agencies are not thought to pose any significant problems. There is no evidence of any value differences, in terms of either historic conflicts or personality clashes, between TDC and DOC staff. On the contrary, relations between the two agencies were described as "very good" by White (pers. comm., 1997). As far as different organisational structures between the agencies are concerned, the practitioners all appreciate these differences, but do not see them as a problem. It is noted that in any case, different organisational structures spring from different purposes, and it is the difference in *purpose* between the agencies which may be a barrier to integration.

Richmond (pers. comm., 1997) states that tension springs out of the different statutory missions of the two agencies. Both Richmond and Lineham agree that policy conflicts can occur between the agencies even if they do have plenty of effective dialogue, because the statutes require that different and sometimes conflicting objectives are pursued. Markham (pers. comm., 1997) articulates the main difference between the agency goals:

DOC has a single conservation mission or goal, whereas TDC has multiple goals; therefore the council is always in the position of making trade-offs between conservation values and development values.

As to whether the purposes are complementary or conflicting, Richmond (pers. comm., 1997) states that they are intended to be complementary, but the fact that conflicts occur indicates that there are some boundary issues that have not been addressed at the design stage, or are still causing problems with implementation. White (pers. comm., 1997) notes that for the most part, the agencies have complementary purposes, but the proportion of conflict that occurs is:

a natural thing to occur when you have got a department whose mandate is all about the preservation...of natural values in perpetuity; and you have another agency whose mandate is all about the sustainable management of resources...

The importance of having sufficient time to interact with stakeholders is a recurrent theme in the interviews. All of those involved in the planning processes surrounding the case study complained that a lack of time significantly hindered the degree to which interaction and co-ordination could take place between agencies and interested parties. Specifically, time constraints curtailed potential interaction for both the RPS and TRMP processes. For the TRMP, TDC politicians were firmly committed to having the plan notified by a certain time-frame "regardless of the quality, or time available for interaction between TDC and stakeholders such as DOC" (Markham, pers. comm., 1997). Markham states that TDC staff simply "didn't have the time" to interact with all the potential stakeholders. McRae (pers. comm., 1997) notes that the rush to notify the TRMP also curtailed adequate consultation with the public.

DOC staff are under similar pressures in terms of time. White (pers. comm., 1997) states that "the main constraint to integration is time", and "there is a limit to the amount of time TDC can devote to our processes, and likewise with us to them". The TDC planners speculate that DOC staff may not have had the time to contribute to TDC processes because of the pressure of work in other parts of the conservancy (DOC time is now split between three unitary authorities). McRae (pers. comm., 1997) also makes the point that recently, DOC staff have been trying to organise consultation with other stakeholders, but *they* don't have the time to talk to DOC, because they are "busy" with other RMA commitments. McRae notes that time pressures also undermine the extent to which non-statutory interaction can take place, as agencies will seek to fulfil the statutory minimum as a first priority.

Agency capacity is also affected by staffing levels and expertise of individual staff. The most prominent concern raised in this respect is by TDC planners commenting on staffing changes within DOC. TDC staff perceive that DOC did not take advantage of some of the important opportunities for interaction that were presented, because of a "manpower and restructuring problem" (Verstappen, pers. comm., 1997). The "manpower" problem may have been exacerbated by DOC staff having to split their efforts between three unitary authorities, and by large development applications such as Clifford Bay. The "restructuring" problem is highlighted by Jackson (pers. comm., 1997), who notes that "DOC has been continually replacing their coastal resource persons over the last five years: that in itself is a big obstacle for effective integration".

McRae (pers. comm., 1997) confirms that there have been "various comings and goings" within the RMA planning personnel in DOC over the last five years, and that this has been the "greatest effect" of restructuring on integration efforts. She stresses the importance of having continuity of staffing, and having "good people on the ground at the time dealing with the issues". White (pers. comm., 1997) also notes that changes in staffing affects the integration effort in plan development through the departure of corporate knowledge and memory. Moreover, restructuring "does tend to sap the energy out of an organisation whilst it's proceeding" (White, pers. comm., 1997).

Perceptions of the expertise of staff in the agencies gleaned from the interviews are revealing. McRae (pers. comm., 1997) believes the capability of TDC staff on ecological matters is not as strong as it used to be in the former regional council, and that TDC "often comes back to DOC for technical advice" on ecological matters. Interestingly, Markham has quite a different perspective. Markham (pers. comm., 1997) states that the corporate body of knowledge on coastal management matters in TDC is at a higher level than DOC's, and "it's been that way for some time". He observes that TDC have had staffing continuity and DOC have not, and TDC staff have learnt by working through the processes. Moreover:

> *[DOC] don't have a dedicated coastal planner. They've got a senior planner and a couple of new planners who are still learning the ropes and who have no particular coastal background or knowledge. That's not intended as a criticism,*

*that's just a comment on how we see their capability: they are limited. Yet
ironically in the early years DOC would question us on our capability for
coastal management.*

The other main factor influencing agency capacity for achieving integrated management is
money. While the word "money" was not specifically used, both TDC and DOC practitioners
refer to a lack of "resources" as being a significant factor in the planning processes. Markham
(pers. comm., 1997) states that, along with inadequate time and staffing levels, inadequate
resourcing was a feature of the TDC planning efforts. Specifically, there had always been "a
fairly modest level of resourcing for coastal management" within TDC (Markham, pers.
comm., 1997). White (pers. comm., 1997) believes that the inadequate interaction and co-
ordination between TDC and DOC resulted from both agencies being "subject to a lot of
pressures in terms of resources". McRae and Richmond also mention the importance of
adequate resources and money in achieving integration (pers. comm., 1997).

The capacity of agencies is closely tied in with the commitment of people within the agencies.
It is clear from the literature that a key ingredient for effective planning processes is
commitment from the various parties involved (Montz and Dixon, 1995; May *et al.*, 1996). For
the purposes of this thesis, agency commitment to processes of integration can be seen to
operate at two different levels: first, at the political and administrative level; and second, at the
individual practitioner level. Political commitment is necessary to provide practitioners with the
time and money needed to undertake the effective interaction and co-ordination required for
integrated management. Commitment from the practitioners themselves is also vital because, as
mentioned in Chapter Three, voluntary processes of achieving integration may need to be
developed, and there is a general requirement for effort and goodwill. The two types of
commitment are discussed respectively.

The imposition of political deadlines on plan notification had a major effect on the planning
processes for both the RPS and the TRMP. The deadlines negatively affected the extent to
which interaction occurred between TDC, and stakeholders and the public. The deadline
imposed on the RPS meant that there was time for "only one limited meeting with DOC staff"
on the features of that plan (Markham pers. comm., 1997). There was also a "tough" deadline

imposed on the notification of the TRMP (Ogilvie, pers. comm., 1997). Markham (pers. comm., 1997) states that once the TRMP was in draft form, the political wing of the council showed "no commitment" to potential processes of integration. For example, the deadline meant there was inadequate opportunity for DOC and the community at large to "dissect and criticise the draft, and for those criticisms and views to be digested by council processes, and for revisions to be made to the plan" (Markham, pers. comm., 1997).

As far as DOC are concerned, Wynne-Jones (pers. comm., 1997) agrees that deadlines can detract from good intentions to consult. DOC staff did not specifically complain about tight political deadlines imposed upon their plans, but generally acknowledged that interaction could be more comprehensive with more time. White (pers. comm., 1997) notes that the Minister of Conservation is "very interested" in conservation estate management, but he does not necessarily have an influence over the management process.

The level of commitment from the individual practitioners has to be inferred from the research findings. The first point to note is that staff showed commitment to the statutory requirements, by engaging in consultation with all the mandated parties. Second, there was a commitment to go beyond the statutory minimum, and a number of informal mechanisms of interaction were pursued by staff of both agencies. These mechanisms included informal meetings, workshops, phone-calls, and a field trip. Third, the relationship between the agencies is described as "very good" (White, pers. comm., 1997), and the interaction that took place was "cordial" and "positive" (Markham, pers. comm., 1997). This indicates a certain amount of effort and goodwill on the part of the practitioners to establish working relationships. Fourth, staff from both agencies attribute problems in the process to wider contextual factors, rather than a lack of individual commitment from their counterparts.

Another potential barrier to integration the New Zealand context is the apparent lack of guidance from central government on how to effectively implement the legislation to achieve integration at regional and local levels (Buhrs and Bartlett, 1993; OECD, 1996; May, 1997). Both Lineham and Richmond accept that the central government agencies have a responsibility to ensure the legislation works effectively, and believe that more guidance is needed on achieving integration. Richmond (pers. comm., 1997) notes that the agencies cannot compel,

but only offer guidance. He also observes that incentives, rather than sanctions, are a way of encouraging better practice. The practitioners involved in the case study believe that the opportunities for integration are provided by the legislation, although McRae (pers. comm., 1997) states there could be more "training and upskilling" within local government.

As shown in Chapter Three, McRae and Woods (1996) note that difficulties exist for local authorities and DOC to reach agreement on what is actually required to achieve integrated management. According to McRae and Woods (1996) these difficulties are illustrated by inadequate processes involving limited consultation, challenges to information and rushed processes, and uncertain performance standards. These factors seem to be present in the analysis here, and according to Markham (pers. comm., 1997), views of integrated management have never been up for discussion by between TDC and DOC. However, as McRae (pers. comm., 1997) notes, the term "integrated management" is used very widely, and it may be misunderstood that it means different things in different contexts. Richmond (pers. comm., 1997) believes a distinction needs to be made between interpretations of integrated management to ensure that agencies are aiming at the same goal.

Extent of integrated management

The first two sections of this chapter identified and analysed the processes of interaction, co-ordination and integration used in the Abel Tasman case study. Now, the extent to which co-ordinated, integrated management is occurring along the Abel Tasman coastline is discussed, by incorporating the results of interviews and plan coding with the analytical framework developed in Chapters Two and Three. As outlined in Chapter Three, integrated management in the New Zealand context should be pursued across agencies, legislation and environmental media. Integration across agencies receives the most attention in this discussion, because this is the focus of the interviews, and because it could be argued that inter-agency co-ordination dictates the extent to which integration occurs across legislation and environmental media.

Integration across agencies

This discussion draws on the theoretical framework for integration outlined in Chapter Two. Both agencies recognised the physical context and management functions that constituted the

setting for the plans, so to that extent their approach was "inclusive". However, there is a question-mark over how inclusive the drafting of the TDC plans were in terms of addressing the community of interest (it is more difficult to state how inclusive the DOC plans were on this matter). This is illustrated by DOC concerns that TDC did not have adequate consultation with stakeholders and the public for either of their plans—something which is acknowledged by TDC staff. Plan analysis shows that while the RPS makes detailed mention of consultation with other agencies and the public, the TRMP is not detailed in its description of agency consultation, and omits description of public consultation.

Consultation with stakeholders and the public also occurred more towards the implementation phase of the plans, rather than during than plan development. This, combined with the overall lack of lack of inclusiveness mentioned above, may have hindered the degree to which plan development could have made recognition of the human interconnections within the planned-for system. Born and Sonzogni (1995) note that interaction between agencies and the public also helps to identify goals and the most critical issues to be addressed. The interviews reveal that some critical issues along the Abel Tasman coast are ill-defined, perhaps due to insufficient interaction. Moreover, a general observation of the interaction and co-ordination between the agencies is that it was "not very strategic or goal-focused". The interviews reveal that common goals as such were not pursued, while plan analysis confirms this. Plan analysis also shows that only the CMS mentions "integration" itself as an objective.

Both agencies fulfilled their statutory obligations to interact and consult with other agencies and the public to an extent, and staff from both agencies developed non-statutory, informal mechanisms of interaction in order to define and address issues of mutual interest. Thus, there was a range of formal and informal mechanisms of interaction used in the development of the plans. However, the interaction could not be construed as a smooth process of co-ordination. At best, the co-ordination efforts could be described as "patchy", with co-ordination occurring over some issues, and not over others. At worst, co-ordination between the agencies, in the true sense of the word, did not occur at all.

With the above points in mind, it is possible to state that integration between the agencies occurred to an extent. This is highlighted by the fact that interaction and some co-ordination

took place in order to address some issues, and White (pers. comm., 1997) states that in the final analysis, there are "not a lot of policy conflicts" between the plans. However, the "extent" of integration between the agencies is probably not very great. The most telling piece of evidence for this is the general dissatisfaction of the overall level of interaction and co-ordination expressed by the planners involved. Clearly, inter-agency integration between TDC and DOC could be improved.

Integration across legislation

It is difficult to assess the level of integration across legislation, not least because "integration across legislation" is not easy to define, and the legislation covering coastal management is very complex. Barton (1993) suggests that local authorities need to consider legislative instruments outside the RMA in order to achieve the desired management outcomes. Lineham and Richmond both believe that delegation of authority is one way to achieve integration over complicated legislative boundaries (pers. comm., 1997). Nothing of this nature has occurred between TDC and DOC. Plan analysis reveals that the TDC plans do not mention the relationship of other legislation in the plans, and this may make integration across legislation difficult. Further difficulties highlighted in the interviews include complexities and inadequacies in the legislation itself, and Richmond and White believe some minor amendments may need to be made to the RMA (pers. comm., 1997). With the above difficulties in mind, it is possible to say that integration across legislation has not really happened, although interaction and co-ordination between TDC and DOC would imply integration across legislation to some extent.

Integration across environmental media

Integration across the land-sea interface is the crux of the problem that TDC and DOC have to address. Ecosystem processes operate across this boundary, and there is a great deal of human activity across it also. Obviously, DOC are unhappy with the management arrangement as it stands, and that is the reason why they are seeking a Section 8 National Parks Act investigation into extending the National Park boundary down to mean low water springs. DOC staff do not believe that TDC are adequately addressing the issues on the foreshore and the coastal marine area adjacent to the park. However, TDC staff indicate a frustration with DOC for pursuing their own solution to the foreshore issue without having adequate regard to

the role of TDC, and without having articulated a proper rationale for the extension. Whatever the perception, it does not seem as if either formal or informal processes of co-ordination are occurring to address the differences of opinion over this particular issue.

The legislation may not be entirely to blame for this problem. As Lineham and Richmond point out, the RMA provides for delegation of authority, and they note that this provision is not being used as creatively or as often as it could be (pers. comm., 1997). Plan analysis shows that there are no policies relating to integration across the land-sea interface in the TRMP, and the DOC plans are not detailed on this matter.

Reflections on the case study and integrated management

Analysis has shown that the management effort between TDC and DOC, in terms of both planning process and product (the plans), probably does not "qualify" as a case of integrated management. It would be more accurate to say that the case shows elements of integration, or that integration occurred to a limited extent only. The planning processes did not feature the comprehensive interaction and effective co-ordination needed for true integrated management. But what *is* true integrated management? And under what circumstances could true integration ever be fully achieved? Integration is an "ideal"; the degree to which it is achieved depends on the institutional opportunities and barriers that define the context for planning practice. In the New Zealand context, integration *has* to be an ideal, because it is not defined or explained in the legislation. This research has isolated some of the important contextual factors that influence the extent to which integration can be achieved, and these are now discussed.

It is clear that a fundamental requirement for achieving integrated management is having legislation which provides the appropriate organisational arrangements and mechanisms for integration. Commentary from overseas suggests that the current legislative regime in New Zealand "is more comprehensive and integrated than in any other country" (May, 1997). The practitioners interviewed generally acknowledge that the new institutional arrangements are "a vast improvement" on the previous regime. However, McRae (pers. comm., 1997) makes the key point that "there is more to it than just having a good legislative regime". Lineham (pers.

comm., 1997) agrees, stating that "to be effective you have got to have co-operation, no matter how good the system is". Put another way, while the legislation can provide the opportunities for integration, "it remains a matter of practice and performance by local authorities and the local DOC office to ensure that some level of integration is achieved" (Markham, pers. comm., 1997).

The implication is that to be effective, the legislation needs to operate within a wider context that allows practitioners to fully take advantage of the opportunities for integration provided. Dixon (1998) states that the delivery of the RMA is highly dependent upon local commitment of elected councillors and staff, as well as sufficient capacity in councils. Commitment and capacity are important contextual factors, because the achievement of integrated management depends on a range of formal and informal interactions between professionals and other interests, all of which involve "high transaction costs" in terms of time and money. If staffing levels, time and resources are limited, the effectiveness of formal arrangements for interaction will suffer, and the use of informal processes will also be reduced. For example, "consultation" may happen, but only to a superficial or limited extent. Jackson (pers. comm., 1997) pinpoints the difficult reality of practice:

> *Just the effort required within each agency to produce its statutory outcomes—*
> *we've had our heads down doing this, they've been engrossed in that. It gets*
> *back to the available staff for the task and the time-frame on the task. You just*
> *get on with what you're immediately focused on.*

This comment is given perspective by White (pers. comm., 1997), who notes "to make [practice] better you probably want to have more resources, but in the current climate, that's not on the agenda". The "current climate", as Dixon (1997) notes, is one in which local government is expected to implement a devolved and co-operative mandate for environmental management in a tight fiscal environment. In the case study, there are obvious examples of economic pressures affecting the extent to which integrated management could be achieved. Analysis has shown that planning processes suffered from inadequate staffing, time and resources which, in part, can be traced back to a lack of political commitment. Political pressures and costs are the main reasons why TDC councillors imposed deadlines on planning

documents which, in retrospect, were "too tough" (Ogilvie, pers. comm., 1997). Meanwhile, economic imperatives have resulted in ongoing restructuring within DOC, affecting staffing levels and the continuity of staffing and planning processes.

The need for commitment, staffing, time and money is even more pressing given the institutional barriers to integration that still remain. The new legislation is certainly not perfect, and as the interview findings suggest, there are some significant barriers to integration within the coastal management framework. There are difficulties with boundary drawing along mean high water springs, managing activities on the foreshore, and addressing the effects of fisheries management. Integration difficulties are not helped by uncertainty over some of the issues in the case study. Some of the issues associated with human impacts in or near Abel Tasman National Park are difficult to define, let alone to address in a plan, leading to questions such as "would it be practicable?" for this; and "is there a regulatory method?" for that (Wynne-Jones, pers. comm., 1997). Compounding the problems, there are few directives, guidelines and incentives from central government on the achievement of integration, at a time when reforms have put "enormous responsibility" on councils.

The implementation of the mandates needs to be viewed in parallel with other changes that are occurring, particularly within local government. Trends for the wholesale contracting out of planning services by some councils, in an attempt to reduce costs for ratepayers, raise important questions such as whether sufficient capacity will remain "in house" to oversee the implementation of the RMA. Other issues associated with contracting out of planning services are: the need for retention of corporate memory; the need for good feedback mechanisms so that councils are aware of the effectiveness of their plans; handling of delegation of powers; and the quality of services provided by contractors. Further, likely changes in governance as a consequence of roading reform are also likely to affect the organisational environment for integrated management (Dixon, 1998).

Finally, as Cicin-Sain (1993) notes, integrated management is a *supplement* to sectoral management, it does not replace it. Clearly, both agencies have to concentrate on the primary objectives within their own jurisdictions. Some of the integration issues are peripheral, and Markham (pers. comm., 1997) makes the point that "time for developing coastal policy has to

compete with time for developing policy in a whole range of other areas". Moreover, Markham (pers. comm., 1997) states that "true co-ordination" may not be relevant to the relationship between TDC and DOC, because TDC is the prime coastal management agency; it does not have to share tasks with DOC. Integrated management processes are "expensive and time consuming" (Mitchell, 1986), therefore an increased burden on agencies that are already under pressure. The costs of integrated management must therefore be weighed up against the benefits. Richmond, for one, does not believe councils and DOC value the benefits of integration highly enough to be prepared to pay the costs (pers. comm., 1997).

It is now possible to draw some conclusions from this analysis and from the research in general. The conclusions are presented in the final chapter of this thesis.

Chapter 7: Conclusion

This chapter presents the conclusions derived from the overall study. There are three parts to this chapter. First, the extent to which the research aim and objectives have been met is discussed, followed by an appraisal of the effectiveness of the research methods used to achieve the objectives. Second, the major research findings of the thesis are outlined, and synthesised into a discussion of key points pertaining to the effective implementation of integrated environmental management in New Zealand. Those findings which are outside the scope of this thesis are suggested as topics for future research. This discussion leads into the third section of this chapter, which suggests improvements to processes of integration. Although derived from the case study, the suggestions and observations have general relevance in the New Zealand context.

Research aim and objectives

The aim of this thesis was to determine whether co-ordinated, integrated management is occurring between different agencies operating under the *Resource Management Act 1991* and the *Conservation Act 1987*. A case study of management issues along the coast of the Abel Tasman National Park was selected to explore whether the issues were being dealt with in an integrated manner by Tasman District Council (TDC) and the Department of Conservation (DOC). Four research objectives were developed to meet the research aim.

The purpose of objective one was to explore the notion of integrated environmental management in different contexts. This was achieved in Chapter Two, which defined integrated environmental management, outlined the substantive and procedural aspects of integrated management in practice, and noted the main barriers to successful integration. The purpose of objective two was to investigate the specific requirements for integrated management in the New Zealand context under the RMA and Conservation Act. Thus, in Chapter Three, a picture of the opportunities and limitations for achieving integration in the New Zealand institutional context was constructed. In Chapter Six, the actual processes of interaction, co-ordination and integration used by TDC and DOC were identified and analysed,

thus fulfilling objective three. This analysis, combined with analysis of the relevant plans, allowed objective four to be reached, which was to assess the extent to which co-ordinated and integrated management is occurring along the coast of Abel Tasman National Park.

The methodology used in the thesis was effective in achieving the research aim and objectives. The literature review was necessary to define the theoretical parameters of integrated environmental management, and to set the scene for more detailed inquiry into the New Zealand context. The theoretical framework derived from the literature was also essential in order to analyse the management processes surrounding the case study. The mandate and commentator review was vital for two reasons: first, to give a historical and contextual basis for the thesis in terms of the New Zealand institutional setting; and second, to provide a theoretical base for development and analysis of the research methods.

Interviews with the practitioners were very revealing. Analysis of the interviews allowed a comprehensive picture of the management process to be constructed, complete with insight into the problems and issues facing the practitioners. Indeed, it may have been useful to conduct more interviews for this thesis, particularly with some of the concessionaires who operate under the plans on a daily basis. However, time constraints made it necessary to keep the research tightly focused. Analysis of the plans, while somewhat subjective, was helpful in relating the interviews (process) to the plans (product), and the findings reinforced the overall analysis. The methodology, therefore, provided a sufficient foundation upon which to conduct the analysis, and it enabled the following research findings to be distilled.

Research findings

First, reforms of New Zealand's environmental management regime have greatly improved the opportunities for agencies to achieve integrated management, at least on paper. New mandates have rationalised administrative structures and boundaries, and provided more effective mechanisms for agencies and the public to interact and co-ordinate during planning processes. The case study shows that the opportunities for interaction provided by the new regime were important in allowing TDC and DOC to achieve a degree of co-ordination and integration in

planning and management. Thus, the extent of integration achieved by the agencies is far greater than would have been possible under the previous legislation.

Second, an integrated approach to environmental management can be conceptualised in terms of its substantive dimension, which should be inclusive, interconnective, strategic and goal-focused; and its procedural dimension, in which the participants should interact and co-ordinate throughout the management process. This, at least, is the theoretical ideal; in reality there will always be barriers to the achievement of integrated management, due to constraints imposed by the institutional arrangements which define the context for management. Analysis of the environmental management context in New Zealand reinforces this point, and the case study demonstrates some specific manifestations of the problem.

Third, significant barriers to integration still remain in the environmental management context in New Zealand, and further difficulties have been created within the wider context of economic reform. As noted above, the degree of integration attainable is highly contingent on contextual factors. The case study provides graphic evidence of the constraints to integration imposed by tight time-frames, inadequate staffing and limited resources. All these factors affected the capacity of the management agencies to a greater or lesser extent: TDC's main problem was a lack of time; while DOC's main problem was with discontinuity of staffing. As a consequence, planning processes were not particularly inclusive, strategic or goal-focused; and the interaction between agencies was limited, ad hoc, and did not result in effective co-ordination of views.

An outcome of economic and public sector reforms is a tight fiscal climate, and this climate is not conducive to the extensive consultation and "broadly based democratic participation" that are key ingredients for integration. Within local government, there is now increased emphasis on outputs and meeting statutory requirements at the least possible cost. The pressures to be cost-effective in one set of mandates may potentially undermine the achievement of integrated management as prescribed in the RMA and Conservation Act. Of critical importance, therefore, is commitment to processes of integration, both from practitioners (to develop effective processes of co-ordination); and from politicians (to provide the necessary resources).

Commitment is especially important given the other barriers to integrated management which still remain, particularly in the coastal environment. Here, there is a variety of legislation and agencies involved, complicated legislative boundaries, difficulty in defining and addressing some issues, and a wide range of private and public interests. The lack of guidelines and incentives from central government only exacerbates the problems that implementing agencies face in achieving what is, after all, an undefined goal. The overall context, therefore, is far from ideal. In this light, Richmond's suggestions for achieving integration have particular relevance: (1) a reciprocal understanding of mandates and responsibilities; (2) a mutual trust and respect for the other agency's intent and capacity; and (3) a willingness to delegate authority to ensure consistent decision-making (Richmond, pers. comm., 1997).

Fourth, this thesis has raised a number of issues that could be the subject of future research. The first relates to jurisdictional boundaries in the coastal environment under the RMA. Drawing the boundary between regions and districts at mean high water springs means that there is difficulty with managing some activities on the foreshore, among other issues. Second, there is no relationship between the RMA and fisheries legislation, therefore the environmental effects of fisheries management are not able to be properly addressed under either mandate. Third, many issues are associated with the environmental and social impacts of increasing visitor numbers in New Zealand's national parks. Research into the threshold capacity of national parks could define and quantify issues arising from increased human use. In addition, a range of management responses to overcrowding in various parts of the conservation estate could be investigated.

Suggestions and observations

With the above discussion in mind, it is possible to suggest some improvements to the processes surrounding the case study, and make some general observations on the pursuit of integrated management in New Zealand. First, and most importantly, elected politicians and staff within implementing agencies need to be committed to the vision and principles of integrated management. This commitment is essential for the necessary interaction and co-ordination between stakeholders and the public to be carried out in a comprehensive and effective manner. Interaction and co-ordination need to be valued as worthwhile activities;

indeed, they are the foundation of integrated management. To this end management processes must be supported by adequate resources, staffing and time-frames. If this fundamental condition is met, the substantive improvements to integrated management processes outlined below are more likely to be achieved.

The second point is that management processes must be more inclusive. The pursuit of integrated management requires the close involvement of other stakeholders *and* the public at *all* stages of the process (Mitchell, 1986; Buhrs and Bartlett, 1993; Grumbine, 1993; Margerum and Born, 1995). A more inclusive process would improve the identification of interconnections, issues and goals within the managed area. Third, interaction between stakeholders and the public needs to be more effective; in other words proper *co-ordination* of the diverse values and inputs to the process is necessary. There may, therefore, be a need for an explicit mechanism to facilitate negotiation and conflict resolution in this context. Fourth, there needs to be more frequent—and more effective—interaction and co-ordination between key agencies such as TDC and DOC. While both formal and informal avenues of interaction are being used, there is scope for further use of informal interaction.

Fifth, within the constraints imposed by time and resources, key stakeholders should be more strategic and goal-focused in their interactions, rather than being reactive and ad hoc. The pursuit of integrated management is inherently a strategic activity. Sixth, given the problems associated with achieving integrated management, it is necessary for central government to provide more guidance and incentives to implementing agencies, such as "improved performance and practice" measures. The capacity within agencies would be improved with further education and training of practitioners.

In the final analysis, however, does it matter if integrated management is not achieved to perfection? Lineham (pers. comm., 1997) states that integrated management "is not an end in itself", because it is not in Part II of the RMA. Councils have their hands full trying to define and achieve the purpose of the RMA—sustainable management—through their plans. That is their first priority. In addition, DOC is "grappling" with issues related to their statutory mission, as increased visitor numbers force them to look at ways of solving conflicts between recreation and preservation issues in the conservation estate. It may be that pursuing the

"ideal" of integrated management in an over-zealous manner would divert attention and resources away from the primary tasks of the agencies. Realistically, in the current economic climate, integrated management is something to aim for, rather than perfect.

The pursuit of integrated management is intellectually and practically demanding, and is an ongoing process. Like "sustainable management", integrated management is an ill-defined concept that is subject to a wide range of interpretations. Given the subjective nature of integrated management, it may always be difficult to determine when practice actually meets the ideal. How do we know when integrated management is happening? One thing is certain: the environmental benefits arising from integrated management will take a long time to become apparent. Further, the successful implementation of a new paradigm in environmental management requires a huge shift in organisational culture, processes and practice. Thus, a long transition period is to be expected as implementing agencies work towards achieving integrated and sustainable management.

Appendix 1: Functions of regional councils and territorial authorities

30. Functions of regional councils under this Act—

(1) Every regional council shall have the following functions for the purpose of giving effect to this Act in its region:

(a) The establishment, implementation, and review of objectives, policies and methods to achieve integrated management of the natural and physical resources of the region:

(b) The preparation of objectives and policies an relation to any actual or potential effects of the use, development, or protection of land which are of regional significance:

(c) The control of the use of land for the purpose of—

(i)soil conservation:

(ii) The maintenance and enhancement of the quality of water in water bodies and coastal water:

(iii) The maintenance of the quantity of water in water bodies and coastal water:

(iv) The avoidance or mitigation of natural hazards:

(v) The prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances:

(d) In respect of any coastal marine area in the region, the control (in conjunction with the Minister of Conservation) of—

(i) Land and associated natural and physical resources:

(ii) The occupation of space on land of the Crown or land vested in the regional council , that is foreshore or seabed, and the extraction of sand, shingle, shell, or other natural material from that land:

(iii) The taking, use, damming, and diversion of water:

(iv) Discharges of contaminants into or onto land, air, water, and discharges of water onto water:

(v) Any actual or potential effects of the use, development, or protection of the land, including the avoidance or mitigation of natural hazards and the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances:

(vi) The emission of noise and the mitigation of the effects of noise:

(vii) activities in relation to the surface of water:

(e) The control of the taking, use, damming and diversion of water, and the control of the quantity, level and flow of water in any water body, including—

(i) The setting of any maximum or minimum levels or flows of water:

(ii) The control of the range, or rate of change of levels or flows of water:

(iii) The control of the taking or use of geothermal energy:

(f) The control of discharges of contaminants into or onto land, air, or water and discharges of water into water:

(g) In relation to any bed of a water body, the control of the introduction or planting of any plant in, on, or under that land, for the purpose of—

(i) soil conservation:

(ii) The maintenance and enhancement of the quality of water in that water body:

(iii) The maintenance of the quantity of water in that water body:

(iv) The avoidance or mitigation of natural hazards:

(h) Any other functions specified in this Act

(2) The functions of the regional council and the Minister of Conservation [under subparagraph (vii) of subsection (1)(d)] do not apply to the control of the harvesting or enhancement of populations of aquatic organisms, where the purpose of that control is to conserve, enhance, protect, allocate or manage any fishery controlled by the Fisheries Act 1983.

31. Functions of territorial authorities under this Act—Every territorial authority shall have the following functions for the purpose of giving effect to this Act in its district:

(a) The establishment, implementation, and review of objectives, policies and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the region:

(b) The control of any actual or potential effects of the use, development, or protection of land, including for the purpose of the avoidance or mitigation of natural hazards and the prevention or mitigation of any adverse effects of the storage, use, disposal, or transportation of hazardous substances:

(c) The control of subdivision of land:

(d) The control of the emission of noise and the mitigation of the effects of noise:

(e) The control of any actual or potential effects of activities in relation to the surface of water in rivers and lakes:

(f) Any other functions specified in this Act.

Source: *Resource Management Act 1991* (sections 30 and 31)

Appendix 2: Functions of the

Department of Conservation

6. Functions of Department—The functions of the Department are to administer this act and the enactments specified in the First Schedule of this Act, and, subject to this Act and those enactments and to the directions (if any) of the Minister—

(a) To manage for conservation purposes, all land, and all other natural and historic resources, for the time being held under this Act, and all other land and natural and historic resources whose owner agrees with the Minister that they should be managed by the Department:

(b) To advocate the conservation of natural and historic resources generally:

(c) To promote the benefits to present and future generations of—

(i) the conservation of natural and historic resources generally and the natural and historic resources of New Zealand in particular; and

(ii) The conservation of the natural and historic resources of New Zealand's sub-antarctic islands and, consistently with all relevant international agreements, of the Ross Dependency and Antarctica generally; and

(iii) International co-operation on matters relating to conservation:

(d) To prepare, provide, disseminate, promote, and publicise educational and promotional material relating to conservation:

(e) To the extent that the use of any natural or historic resource for recreation or tourism is not inconsistent with its conservation, to foster the use of natural and historic resources for recreation, and to allow for their use for tourism:

(f) To advise the Minister on matters relating to any of those functions or to conservation generally:

(g) Every other function conferred on it by any other enactment.

Source: *Conservation Act 1987* (Section 6)

Appendix 3: Interview schedules

National level

Institutional arrangements

- Overlapping agency responsibilities, fragmented administrative structures, and weak legislation have been identified in the literature as significant barriers to integrated environmental management. Have the reforms of environmental administration and local government improved the institutional arrangements for integration?
- Traditional customs and value differences (i.e., entrenched organisational structures, differences in philosophy and orientation) between the agencies can hinder the integration effort. Do you think that such conditions occur in some agencies implementing the RMA and Conservation Act?
- Local government and DOC have different organisational structures and mandates. Does this pose difficulties for coordination and integration on issues of common interest?
- Can you identify any other institutional constraints or opportunities for coordination and integration?
- What factors are important in influencing the capacity of the agencies to plan for integrated management? What do you think are the key requirements for the achievement of integrated management between local government and DOC?
- Can there be adequate interaction and coordination between agencies implementing the RMA and Conservation Act, but still policy conflicts? Why?
- Do you think the planning framework for coastal management under the RMA is appropriate and lends itself to integrated management?
- What is your understanding of the "foreshore issue" (i.e., regional councils unable to make rules for activities on the beach)? Is this problem being addressed?

General

- Does MfE and DOC have any responsibility to facilitate integrated management or is that responsibility entirely delegated to regional and local levels? What influence do the central agencies have, if any?
- Is there sufficient guidance from the national level agencies on the achievement of integration?
- Do the statutory mechanisms of interaction between agencies provided for in the legislation (e.g., "consultation" with agencies) allow for the development of consensus on policy goals (i.e., "coordination" between agencies)?
- If not, are the agencies expected to develop non-statutory means of coordination, and is this in fact the implicit requirement for achieving integration?
- In your opinion, is integrated management occurring in the way envisaged or provided for in the legislation? If not, why not? If so, why so?
- Are incentives and sanctions required from central government to bolster commitment to integrated management, or are current efforts satisfactory?
- How might integration across agencies, legislation and environmental media be improved under the RMA and Conservation Act?

- Do MfE and DOC have a different interpretation of "integrated management"? What does it mean under the different acts? Where is it defined? Can it be monitored?
- Do agencies working under the RMA and Conservation Act have purposes that are complimentary or conflicting; or both?

Regional level and local level

Procedural

- What statutory mechanisms of interaction with [TDC or DOC] are required or available to you under the RMA and Conservation Act, in order to achieve integrated management?
- What statutory or non-statutory mechanisms of interaction were actually used to collaborate on the development of the *Tasman Regional Policy Statement* and *Nelson-Marlborough Conservation Management Strategy*; and *Tasman Resource Management Plan* and *Abel Tasman National Park Management Plan.*
- Do you therefore rely mainly on statutory or non-statutory; formal or informal interaction?
- Does interaction occur at all stages of the management process (i.e., scoping, plan development, and implementation)? Is it ongoing?
- Did interaction with [TDC or DOC] during plan development serve to define issues, interrelationships, and common goals for the region? In other words, do any forms of interaction between TDC and DOC qualify as "coordination" (i.e., incorporating communication and conflict resolution to reach compromises and common goals)?
- Was the interaction or coordination during plan development *strategic* (attention directed toward a number of variables that are believed to account for a substantial portion of the management problems) and *goal focused*, as opposed to incremental and ad hoc?
- In the formulation of goals, can you discern a difference between "agency" goals and "public" goals? Does the public consultation process allow for coordination between agencies and the public and the formulation of common goals?
- Was there adequate interaction and coordination between TDC and DOC but still policy conflicts? Why?
- Have processes of interaction or coordination changed as a result of the RMA and Conservation Act, or have processes established under previous legislation been maintained? How did the reformation of TDC to a unitary authority affect integration efforts in plan development?
- Has the new legislative regime really improved the opportunities for coordination and integration, in terms of providing mechanisms for interaction and coordination?

Institutional arrangements

- Overlapping agency responsibilities, fragmented administrative structures, and weak legislation have been identified in the literature as significant barriers to integration. Have the reforms of environmental administration and local government improved the institutional arrangements for integration?
- Do TDC and DOC have traditional customs and value differences (i.e., entrenched organisational structures, differences in philosophy and orientation) and if so, did this hinder the integration effort?
- Local government and DOC have different organisational structures and mandates. Does this pose difficulties for coordination and integration on issues of common interest?

- Were there key participants and stakeholders who had a particular influence in the planning process, in relation to the coast?
- Was plan development (particularly with regard to the coast) affected by key stakeholders or interest groups? Who were they?
- Was there political commitment (from within the agency) to the processes of integration? Were unrealistic political deadlines imposed?
- What factors are important in influencing the capacity of the agencies to plan for integrated management? What do you think are the key requirements for the achievement of integrated management between TDC and DOC?
- Can you identify any other institutional constraints or opportunities for coordination and integration?
- Do you think the planning framework for coastal management under the RMA is appropriate and lends itself to integrated management?

General
- Is there sufficient guidance from the national level agencies on the achievement of integration?
- Is timing an issue when it comes to having regard to other plans? Has the (roughly) simultaneous preparation of the two plans, post RMA 1991 and Conservation Amendment Act 1990, been helpful or problematic?
- Is there any statutory or non-statutory facility for the joint adoption of policies in special areas (e.g., ecological areas)?
- Do the two agencies have a different interpretation of "integrated management"? What does it mean under the different acts? Where is it defined? Can it be monitored?
- Do the two agencies have purposes that are complimentary or conflicting; or both?
- Does the foreshore management issue complicate plan development?
- How could integration be improved?

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