

COASTAL CONSERVATION
IN NEW ZEALAND

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by
J.E. Gardner

University of Canterbury

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ABSTRACT

The problems and potential of coastal conservation are investigated in this thesis, focusing on policy and institutional arrangements. "Initiative" conservation is distinguished from "defensive" conservation by the way it explicitly recognizes the values of natural environments. The theories of environmental management, human ecology and social learning are used to develop normative principles for the relationship between policy and institutional arrangements. A model of the policy-making system is designed to reflect a holistic, process-oriented, perspective on the human-environment milieu.

The theories and principles are first investigated at the level of the nation-wide management field of coastal conservation in New Zealand and then through issue analysis at the local level. Case studies are undertaken in five conservation areas that represent a range of biophysical, political-cultural, and institutional characteristics. The hypothesis is confirmed that policies for initiative conservation will be effective only if they respond to the needs, and work within the constraints, of the community and the environment. Responsiveness is shown to be facilitated by an integrated approach to policy-making involving coordination through communication amongst government actors at the regional and national levels and the public. It is also enhanced by an adaptive, experimental learning and evolutionary approach. In the issues studied at the local level, institutional arrangements initially demonstrate a constraining influence on policy responsiveness, but then they adapt to the demands of evolving policy goals and ideals. They rarely prevent integration, and in some cases they promote it. Nevertheless, changes

could be made in the legal and organizational framework to encourage higher levels of responsiveness and integration in the policy-making process.

A significant constraint on policy evolution is the lack of government motivation to define policies. This reluctance is related to the individualistic political culture and the unpredictability of the policy-making environment. An equally important constraint is the lack of societal consensus which also stems from political-cultural factors. A purposefully integrated and experimental approach to policy-making by central and local government at the regional level could promote the evaluation of progressively more encompassing policies for environmental management. It could also lead to a broader consensus on societal priorities for the use and conservation of resources.

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LIST OF ABBREVIATIONS

ATNPB	Abel Tasman National Park Board
DSIR	Department of Scientific and Industrial Research
EPEP	Environmental Protection and Enhancement Procedures
FMD	Fisheries Management Division
HGMPB	Hauraki Gulf Maritime Park Board
IUCN	International Union for the Conservation of Nature and Natural Resources
m	metre
MAF	Ministry of Agriculture and Fisheries
MHWM	Mean High Water Mark
MLWM	Mean Low Water Mark
MOT	Ministry of Transport
MSMPB	Marlborough Sounds Maritime Park Board
NWASCO	National Water and Soil Conservation Organization
NZUA	New Zealand Underwater Association
OECD	Organization for Economic Cooperation and Development

CHAPTER ONE

INTRODUCTION: THE PROBLEM OF COASTAL CONSERVATION

Public interest groups and decision-makers in many countries, including New Zealand, recognize increasingly the limited ability of coastal ecosystems to absorb the impacts of human activities. Evidence of the vulnerability of the coastal environment mounts, as its natural diminished. Human responses prompted by this growing awareness include institutional and policy adaptations such as the establishment of new administrative units, the closure of fisheries due to depleted stocks, the increase of controls on water effluent to reduce pollution, the establishment of conservation areas, limitations on the reclamation of wetlands, and restrictions on urban development to maintain open space and public access to the coast. Among these responses, the provision of conservation areas is of primary interest to this thesis. These are areas in which natural processes, and opportunities for activities dependent on less modified coastal environments, can be maintained or enhanced. Policies and institutional frameworks for coastal conservation are investigated using New Zealand examples at both the national level and the level of the individual conservation area.

The theoretical context for the thesis, with respect to the relevant academic fields, is developed in section 1.1 of this chapter. Section 1.2 elaborates on thesis objectives and the organization of the thesis as a whole. The third and final section outlines the methodology and analytical approaches.

1.1 THEORETICAL CONTEXT

A detailed theory of policies and institutional arrangements is set forth, with related hypotheses and models, later in the thesis. Here, the more general background of theory is presented. The field of environmental management is identified as the substantive academic context. Within this, a definition of conservation is derived which distinguishes between "defensive" and "initiative" conservation arrangements. Human ecology is then introduced, with geography, as the conceptual foundation of the thesis.

1.1.1 Environmental management and conservation

Environmental management is concerned with the "management and control of people and environmental relationships", or resource systems, rather than with the direct physical manipulation of resources themselves (Henning 1974:xiv). Generally, environmental management involving regulation is a facet of public administration, and public bodies hold most responsibility for the regulation of resource use by public and private organizations and individuals. Laws are the main tools used by government for the regulation of resource systems. The responses to coastal problems mentioned above, such as controls on fisheries and pollution, usually have legal bases. However, regulation in the broadest sense also includes other means of influencing human behavior, like planning, policy making and programme implementation. The processes involved in the regulation of resource systems are all aspects of environmental management, where "resources" are assumed to be the elements of

the environment that are used or valued by people.

. . . the [goals] of environmental managers . . . are to minimise adverse links and to maximise beneficial links between resource systems and their environments, and to obtain desirable environmental systems states (Conacher 1978:441).

The resolution of conflict in resource systems and the definition of "beneficial links" and "desirable system states" inevitably involve values. In the present study, the ecological and values components of environmental management receive a greater emphasis than the more traditional technological and economic aspects. The values emphasis is chosen because values are both a partial cause of environmental problems, and the foundation of policies for management decisions. In practical as well as qualitative terms, the success of environmental management depends upon accurate interpretations of community or societal values. A sound understanding of ecosystems is also vital.

Broad interpretations of the conservation concept, such as J.W. Bennett's "lack of abuse of resources and their management on a sustained yield basis" (1976:268), encompass most aspects of environmental management. Naysmith (1972:5) presents a comprehensive conservation continuum:

- 1 Preservation: Designate areas for recreation, aesthetic, historic, wildlife, archaeological, or scientific purposes.
- 2 Protection: Maintain quality of the biosystem to prevent degradation of life-sustaining elements.
- 3 Managed use: Minimize disturbance from resource utilization to the resource base.
- 4 Restoration: Reclaim the resource base after disturbances.

Nelson (1979:31) lists three general approaches to conservation:

- 1 land use or other general laws and regulations

2 large-scale institutional changes

3 wildlands reserves.

Of these seven approaches, Naysmith's "preservation" and Nelson's "wildlands reserves" fit into the category of arrangements, measures or techniques which will be referred to in this thesis as "initiative conservation". The other categories in the two lists can be grouped under the label, "defensive conservation", for present purposes.

Initiative conservation addresses the qualities of areas that are relatively unmodified by human activity, in a positive manner. Several of the Oxford Dictionary's definitions for "positive" apply to initiative conservation as it is intended here: formally or explicitly stated; absolute, not relative; constructive; and, marked by presence, not absence of qualities. Areas subject to initiative conservation measures are meant to be appreciated for the options they maintain, rather than simply tolerated, because of the alternatives they preclude. By "preserving" relatively unaltered environments, initiative conservation measures provide opportunities for certain forms of recreation, spiritual pursuits, education and scientific study. Some Oxford definitions of "preserve" are, to keep safe or alive, to retain, and to keep undisturbed for private use. All of these are appropriate descriptions of the intentions of initiative conservation, if the word "public" is substituted for "private" in the last definition.

Under measures for defensive conservation, the continuance of activities that modify the environment is usually assumed. Measures tend to be mitigative rather than constructive, implying that negative impacts of resource use are acceptable to some degree. The emphasis of defensive conservation is on the

activities that are precluded rather than those which are facilitated.

Both types of conservation are employed in the coastal zone. For example, Rehling (1981) discusses various measures available in Denmark. The Danish "beach prohibition zone", and general rural zoning for the control of land uses typify defensive conservation measures, as measures "of a negative kind [which] . . . only prohibit certain kinds of actions according to certain standards". And the following is characteristic of initiative conservation measures:

If the area in question is threatened in special ways not dealt with in general zoning rules, or if some positive action must be taken to establish, restore or maintain certain conditions in the area, the appropriate tool is either a local plan or a preservation easement (Rehling 1981:200, emphasis added).

In New Zealand, as in Denmark and other countries, both initiative and defensive conservation measures are implemented in the coastal zone. Initiative conservation is applied in limited areas, as it provides for a narrow selection of the total uses which are made of the coast. Defensive measures are applied more comprehensively, in conjunction with other uses such as resource extraction and industrial and urban development.

1.1.2 Human-environment studies

The organizations, policies, institutions and decision-making processes involved in environmental management and conservation have been studied by practitioners of many disciplines including political science, engineering, sociology, economics, planning, public administration, and operations

research. The present approach adopts the perspectives of geography and human ecology, which both address the relationship between humans and their environment.

Part of the requirement of successful environmental management is the recognition of the interconnectedness of things, and the resulting repercussions of attempts to modify any portion of the human biophysical and cultural milieu. The comprehensive approach demanded is characteristic of geography and of human ecology. Both are seen as holistic and integrative fields of study. As Ophuls (1977:6) states:

. . . human ecology . . . is an effort to bridge the gap between specialties and make possible the rational management of the whole human household.

In human ecological terms, the environment is viewed as ecosystems in which people play a role. That role predominantly involves the pursuit of resources to fulfill material and other needs. Interaction or relations between people and the environment here will be termed "resource systems". In seeking to fill their needs, people "adapt" to environmental constraints; the environment, in turn, reacts to the impacts of human activities. If, as people and the environment accommodate each other, satisfactory order in resource systems, evolves, adaptation has occurred. If the consequences of interaction are destructive of ecosystems or contrary to social values, the human activities are "maladaptive". The concept of adaptation, central to human ecology and to notions of conservation, is thoroughly explored by J.W. Bennett (1976).

Geographers, who have expressly utilized human ecological approaches since the early 1900's, have often recast the "adaptation" orientation in terms of "man's control of nature" or "nature's dominance over man". In 1923, Harlan Barrows,

writing on "Geography as Human Ecology", cautioned against "the danger of assigning to the environmental factors a determinative influence which they do not exert" (p.3). In the mid-1900s, French geographers following on from Vidal de la Blache expanded the paradigm of human-environment interaction by stressing the investigation of cultural factors in addition to physical and ecological considerations (Thomas 1955:xxxiv). The impact of human activities on the environment was the theme of Marsh's Man and Nature; or Physical Geography as Modified by Human Action (1864) and Thomas' Man's role in Changing the Face of the Earth (1955). In the 1960s and 1970s writers in human ecology emphasized the problematic consequences of human impact such as pollution and resource shortages. Bennett and Chorley in 1978 (p.15) suggested that society is ready to transcend such problems, in their recasting of the human-environment equation:

The ecological model fails as a supposed key to the general understandings of the relations between modern society and nature . . . because it casts man in too subordinate a role Man's relation to nature is increasingly one of dominance and control, however nature lovers may deplore it.

Generally, geographers of this century have neglected an explicit human-environment perspective (Hewitt and Hare 1973:1, Norwine 1981:181, Holt-Jensen 1980:123). Hewitt and Hare (1973:34) attribute the "general barrenness of environmental geography" to its narrow focus on the natural environment with too little regard for "the power of artifice and culture in human affairs". Holt-Jensen (1980:126) concurs:

Those who describe geography as human ecology have often defined the concept too narrowly and have presented studies of man's relationship to his environment as if it only encompasses man's relationship to nature and not to his total physical and social environment.

Without calling for a return to determinism, these authors reject Chorley and Bennett's premise that man dominates and controls nature, and promote a view involving recognition of, and respect for, "the basic interdependence of all life" (Hewitt and Hare 1973:34) or the "constraints" posed by nature (Norwine 1981:186). In other words,

Our natural environment can be understood by us only in terms of life, history, and culture; and conversely, our life, history and culture can be understood fully only in terms of our natural environment (Caldwell 1975:410).

Implicit in present-day geographers' support of the human ecological perspective is a problem-solving orientation - "an applied human ecology that prevents malfunctions" (Odum in Henning 1974:153). Often, a more positive, goal-seeking motivation is also reflected in attempts to achieve adaptive forms of human-environment interaction. As mentioned earlier, environmental management does not only respond to changes causing imbalance in resource systems; it also seeks to promote changes according to desired future states. In this regard, the field of environmental management overlaps with that of planning. Although planning techniques traditionally have been applied mainly in urban or otherwise developed or settled areas, many of planning's precepts and theories are applicable to environmental management. The planning process, in the broadest sense, is the process by which policies are formed, and it is closely tied to institutional arrangements. Planning concepts contribute to the identification of normative principles for investigation later in the thesis.

1.2 THESIS OBJECTIVES AND ORGANIZATION

The remainder of the thesis is organized into three parts, followed by a concluding chapter. Each part comprises three or four chapters.

The challenge to environmental management in the coastal zone, particularly that of New Zealand, is outlined in Part I of the thesis - chapters Two to Four. The need for coastal conservation is justified in terms of human use pressures on the environment, societal demands for coastal resources, and uncertainty as to future use impacts and needs. Constraints on conservation posed by information shortages and public attitudes are explained.

In Part II, policies and institutional arrangements are investigated in terms of theory and of substantive experience in New Zealand at the national level. In chapters Five and Six, theoretical concepts of policy and institutional arrangements are set forth. They are viewed ideally as the means to the solution of the problems put forward in Part I; however, they are also recognized as partial causes of the problems. The discussion of these chapters concentrates on the development of hypotheses for testing against New Zealand experience, and develops a model for use as a framework for analysis.

The theoretical rationale for the main thesis objective which subsumes these hypotheses is also developed in chapters Five and Six. This objective is the evaluation of the adequacy of institutional arrangements for enabling the evolution of policies for initiative conservation, where "adequacy" is judged according to principles that are put forward as appropriate responses of policy to the types of constraints and needs

discussed in Part I. A model is developed in Chapter Five to summarize the theories and principles developed in chapters One to Five, and to provide a framework for the analysis and testing of these theories.

Chapters Seven and Eight examine conservation measures at the level of New Zealand's coastal zone as a whole, and include preliminary assessments of national policies and institutional arrangements for coastal conservation. They also set the context for Part III.

More detailed, local and regional experience of initiative conservation in the coastal zone is investigated in Part III. The five management units addressed as case studies are as follows:

- Abel Tasman National Park
- Marlborough Sounds Maritime Park
- Ahuriri Estuary Wildlife Refuge and Estuarine Park
- Mimiwhangata Peninsula (proposed) Marine Park
- Poor Knights Islands Marine Reserve

The location of these sites is shown in Figure 1.1. The analysis of specific issues within each case study area enables the final evaluation of policies and institutional arrangements, and the confirmation or modification of the principles and hypotheses developed in Parts I and II.

In the conclusion of the thesis, the results of the New Zealand analysis are summarized and potential solutions to conservation problems are assessed.

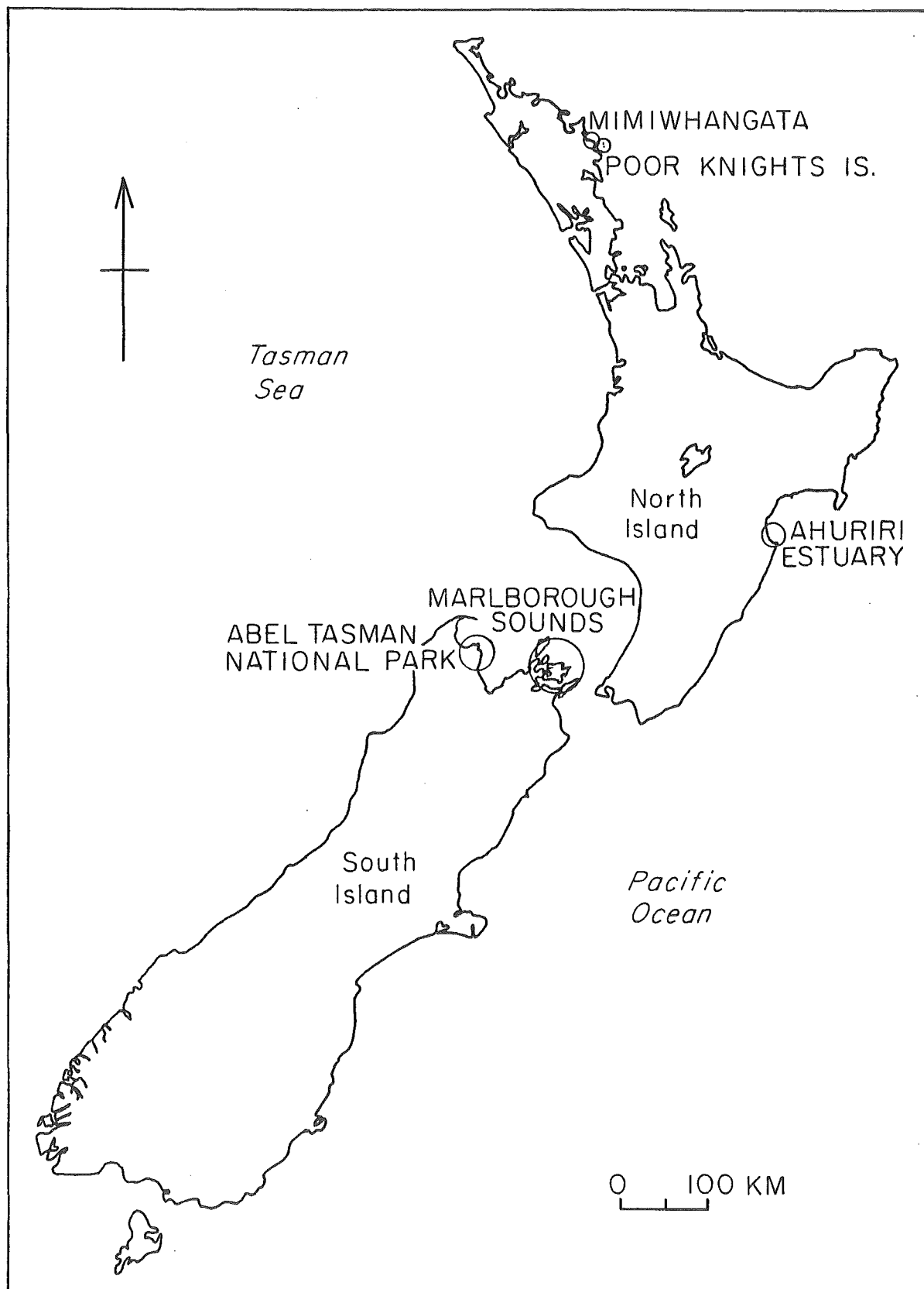


Figure 1.1

LOCATION OF NEW ZEALAND CASE STUDY SITES

1.3 APPROACH AND METHODOLOGY

The case study approach is the general approach used in this thesis. Case studies are conducted at several levels: coastal conservation is a case study within the field of environmental management; New Zealand is the country chosen for a narrower case study of policy and institutional arrangements for coastal conservation; within New Zealand, five specific coastal conservation sites are subject to more detailed case studies; and at these sites case studies are made of particular issues. Moving through these different levels, the theory of conservation needs and constraints is compared to New Zealand experience in Part I; the theory of policy and institutional problems and potential to fill these needs is combined with a national level investigation of conservation approaches in Part II; and issue-related experience in coping with the various problems and constraints is explored at the management unit level in Part III. Within the study of coastal conservation in New Zealand, the broader the level of the case study, the more descriptive and theoretical the discussion; as the case study arena narrows, a more detailed information base can be assembled, facilitating more rigorous comparison and analysis. A general rationale for the case study approach can be expressed as follows:

The general and the global are illuminating in their own way but by their very light we can be blinded. We must, in the realm of human ecology, keep them for the light they shed, but at the same time recognize the critical importance of the fundamental dimension where effective, positive decisions are made which affect immediately the environment (Denman 1972:496).

The research was conducted between mid-1980 and late 1983, with the bulk of the field work confined to the first half of

that period. Early investigations included correspondence with experts in coastal zone management in New Zealand, a survey of legislation applicable to the coastal zone, and attendance at the Coastal Zone Management Seminar sponsored by the Ministry of Transport in March 1981. These activities aided the preliminary identification of the central participants and sources of information in the field of coastal zone management.

Discussions with experts and reading of archival material led to the selection of the five case study areas.

National-level research was conducted concurrently with case study field work, and many of the information sources for the two levels of study overlapped. Most of the government, academic and consultant experts on coastal zone management were interviewed in Wellington and Auckland. Reports from agencies and conferences or seminars on general coastal zone management issues were studied and the perspectives of the various participants noted. Most of the case study field work was conducted at the administrative centres closest to the study areas. Regional centres, head offices in Wellington (the national capital), and the conservation areas themselves were also visited. Virtually all of the "actors" - government agencies, public interest groups, clubs, consultants and other individuals with interests in the issues under investigation - were contacted, and representatives of most were interviewed in person. Interviews were open; that is, structuring of questions around a set format was minimal, and interview subjects offered their views on many diverse topics related to case study issues. The selection of issues for detailed study evolved during the period of the field work, as topics were discovered that were most likely to satisfy thesis objectives

and shed light on hypotheses. The Department of Lands and Survey, as a central actor in each case, assisted in the preliminary identification of issues and actors. The Department also contributed financial and logistical support for the research.

To supplement the information acquired from the interviews, written sources were pursued. In most cases local newspaper archives were studied. Many interviewees made available files containing such things as correspondence, minutes of meetings and short reports. Government files, especially those of the Lands and Survey Department, were a major source of information. Published and unpublished documents were sought from contacts and local libraries. These were another important data source, including plans, research reports, impact statements and impact statement evaluations.

Visits to the field areas were undertaken to facilitate an appreciation of the physical setting of the issues. These were made in the company of management staff, members of the local community, or sports clubs, who assisted in the on-site interpretation of issue components.

Finally, various hearings and committee meetings related to the issues were attended for their contribution to the data base and to an understanding of the interactive processes.

PART I COASTAL RESOURCE SYSTEMS AND INITIATIVE
 CONSERVATION: NEEDS AND CONSTRAINTS

The following three chapters define the problem of environmental management in the coastal zone and establish the need for the control of coastal resource systems and for initiative conservation. Chapter Two examines pressures of use on the biophysical environment and delineates some peculiarities of coastal resource systems that should be taken into account in their management or conservation. Chapter Three focuses on societal characteristics and associated constraints on environmental management in relation to coastal conservation. The problems of limited knowledge of coastal resource systems, and the availability of information to people concerned with the coast form the topic of Chapter Four. Information, like societal characteristics, is considered as both a justification for, and constraint upon, conservation measures. In all three chapters, general principles or implications for management are drawn from the literature and from New Zealand experience.

CHAPTER TWO
BIOPHYSICAL ATTRIBUTES OF THE COASTAL ENVIRONMENT
AND HUMAN IMPACTS

The coastal zone is a region of transition between terrestrial and marine environments. It varies in width and includes land areas where cultural and biophysical forms and processes are affected by their proximity to the sea, and water areas where forms and processes are affected by their proximity to the land (Figure 2.1).

Concentration and interaction of terrestrial and marine processes give the coastal zone its distinctive character: wave energy keeps the form of the coast in flux; nutrients and sediments washed from land accumulate in coastal waters; sun-light penetrates shallow waters close to shore, ensuring their high biological productivity; and people are attracted to the coastal zone by its aesthetics and its utility for such functions as transportation, food production and waste disposal.

Biological processes that occur at the interface between land and sea characterize the coastal zone as an "ecotone" (Clark 1974, Ray 1976). Ecotones, which are at the junctions of biological communities, have an increased variety and density of species over the ecosystems they border (Dolan et al. 1976). Many terrestrial and oceanic species depend on the coastal zone for food or as habitat for part of their life cycle, giving the coastal ecotone "the greatest diversity of life on earth" (Ray 1976:17).

The interaction of human modes of resource use with the ecological processes of the ecotone poses extensive problems for environmental management.

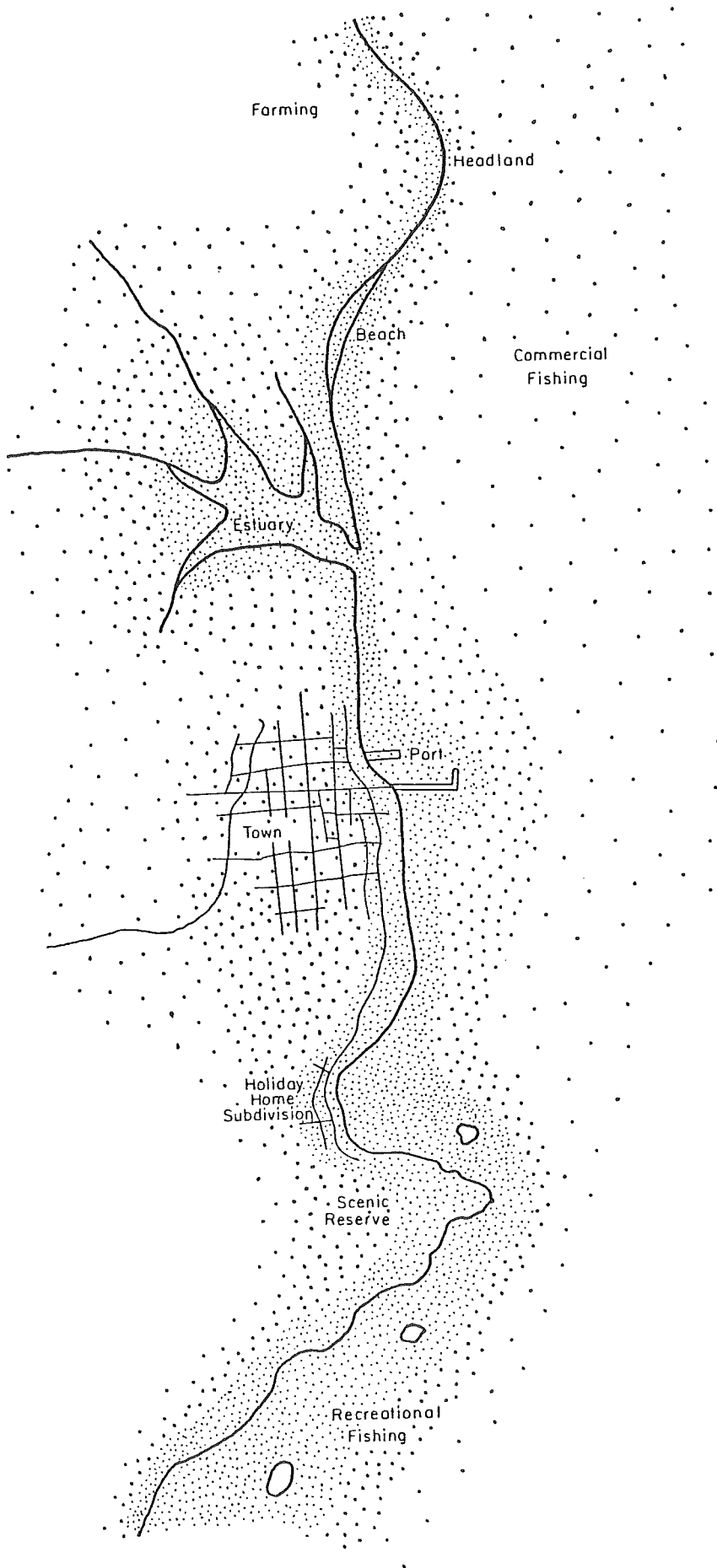


Figure 2.1

THE COASTAL ZONE AS A REGION OF TRANSITION
BETWEEN TERRESTRIAL AND MARINE ENVIRONMENTS

There can be no doubt that the total impact of man's activities on the coasts and seas is impressive - and frightening in a world which still deludes itself that the seas are a panacea to our overuse of the land (Ray 1976:18).

The character of human activities in New Zealand's coastal zone and the nature of their impacts will be discussed following a brief introduction to the coastal environment of this country.

2.1 THE NEW ZEALAND COASTAL ENVIRONMENT

The elongated shape of New Zealand's two major islands, and a convoluted 10,000 km coastline result in a large coastal zone relative to total land area. The continental shelf in New Zealand's jurisdiction is almost as large as the land area of the country. Around the New Zealand coast, many harbour systems have been formed through submergence of river valleys and volcano craters. Resistant volcanic rock and other hard rocks form the promontories and "corners" of the two main islands as well as numerous offshore islands and stacks. Faulting and tilting add dimension to the hard rock shores of the South Island, while cliff shores and rocky beaches are found on both islands. Between major headlands stretch long sandy beaches on sectors of the coast which are gradually straightening. In a few areas, river deposition allows progradation of the shore. Natural erosion is encouraged by a high energy wave climate caused by prevailing westerly winds, although northern aspects of the islands, capes and peninsulas tend to be relatively sheltered.

The variety of coastal environments combines with a

latitudinal range from sub-tropical to sub-antarctic to provide a broad range of habitat for a diverse flora and fauna. The pre-European coast was backed by lowland forests of podocarps, beech and hardwoods. Certain of these trees still characterise coastal vegetation, such as pohutakawa, nikau palm and rata, but few coastal lowland forests have survived the modifying influence of human settlement described in section 2.2. Pasture, scrub and exotic forests stand in their place.

Some 301 estuarine systems are widely distributed around New Zealand (McClay in Knox 1980:17). In the salt marshes or mud flats of the upper reaches of these harbours are found a range of plants, gastropods, and birds such as the banded rail, bittern and pukeko. The presence of mangroves on the tropical and subtropical estuaries of the North Island is remarkable at such a high latitude (thirty-eight degrees). The sand and sea-grass flats on most harbour shores are important habitats for wading birds such as the banded dotterel, caspian tern and eastern bar-tailed godwit. Estuarine and harbour fish include flatfish such as flounder, sole and grey mullet. Mussels, crabs and sea slugs may be found at harbour entrances. Many fish of the coastal waters such as snapper and trevally make extensive seasonal use of intertidal areas for feeding and reproduction; indeed, few inshore fish in New Zealand are entirely independent of the shore (Morton et al. 1973:37).

The sand beaches of New Zealand bays and peninsulas are characterised by molluscs such as toheroa and tuatua. Protected sand flats have a rich burrowing fauna including pipi, cockle, tube worms and shrimp. Behind the sand beaches lie coastal dunes occupying over 120,000 ha in total (Morton et al. 1973:20). They are partially bound by the native spinifex and

pingao, but more commonly by the introduced marram grass.

Typical of the intertidal rocky shore are barnacles, periwinkles, mussels, kelp, rock oysters and various species of algae,. Some lizards live on rocky shores, but the rare tuatara, a close descendant of the early reptiles, is restricted to certain offshore islands. Many islands and stacks are very important for breeding birds such as the black backed gull and the gannet, and for migratory birds.

Subtidal life forms are among the most diverse and abundant of the New Zealand coastal zone. Seaweed forests have resident fish species, corals, sponges, and sea urchins, and are visited by intertidal and offshore species. On their fringes live parrotfish, stingray and hapuka (groper). Caves harbour morays, stars, sponges, corals, rock cod and lobsters.

Many species of marine mammals frequent New Zealand waters, including whales, dolphins and seals.

The marine bird fauna is also diverse. While seagulls and petrels are the most common species, the tern, white faced heron, wrybill plover, New Zealand dotterel and variable oyster catcher also live on New Zealand shores. Other species such as the king shag, penguins and gannets are more restricted in their distribution. The buller's shearwater petrel breeds only at the Poor Knights Islands off the north-east coast of the North Island, and the only known mainland breeding colony of albatross is found on the South Island.

In spite of the restricted range of some species and the categorization of habitats described above, there is much overlap of life forms and living patterns in New Zealand coastal waters (Tortell 1981:11). Marine habitats often fall into mosaic patterns rather than zones. Marine species interact with

land-based flora and fauna at both the water surface and the shoreline. Populations of some species experience extreme natural fluctuations, adding to the dynamism of the coastal ecotone.

2.2 HUMAN ACTIVITIES, IMPACTS AND CONFLICTS IN NEW ZEALAND'S COASTAL ZONE

Early Polynesian and Maori peoples made few lasting impacts on New Zealand's varied coastal environment and its diverse and often unique biota. However, since European settlement began almost two hundred years ago, the coastal zone has been heavily exploited and modified. Although a lengthy coastline and a small population of around three million give the country a coastline to population ratio higher than that of many larger nations, a heavy concentration of settlement within 30 km of the coast results in a high potential for human impact. Activities that affect New Zealand's coastal zone include agriculture and forestry, industrial and energy development, shipping and harbour works, urban expansion, mining, fishing and recreation. While these activities pose threats to the environment, they also compete for space and conflict with one another because of incompatible impacts.

Urban development impacts the coast through reclamation for subdivision, roads and airports; through loss of habitat such as spits and estuaries due to building and roads; through alteration of shore sediment movement with protection works, often worsening erosion; and through waste disposal. Rubbish

dumps have been created in estuaries, mangrove swamps, and off seaside cliffs. Substantially untreated sewage is discharged through ocean outfalls for a population of 565,150 in various locations (Knox 1979:29). This pollution affects coastal aesthetics for recreation, renders shellfish inedible, degrades the ecological base of fisheries, and encourages plant growth and eutrophication of estuaries.

Similar problems have been attributed to subdivisions for holiday homes in New Zealand. In some ways such subdivision detracts from coastal resources even more than urban development because it exerts pressure on otherwise undisturbed stretches of coast; it spreads along the coast in a strip, limiting public access and precluding tourism; it is attempted on unstable locations, accelerating erosion; it leads to reclamation for facilities such as marinas; and it inflates land values from rural to residential levels. Large scale acquisition of land for holiday subdivisions began in the 1950s and accelerated in the 1960s. By 1972 most of the desirable coastal areas on the north-east coast of the North Island had been subdivided. The land market then took a downturn and pressure from second home development on the coast eased. Currently, the market appears to be favouring resort development catering to large scale tourism (Environmental Council May 1980, Lello 1980b).

Recreational use of New Zealand coasts is higher per capita than in many other countries, because of mild winters, an adequate standard of living, and easy access to the coast for most people (Burns 1978). During the summer, coastal areas are the primary destination for recreational pursuits such as swimming, picnicking, boating, windsurfing and surfing. Dunes behind the beaches are sometimes used by trail bikes and four

wheel drive vehicles, accelerating erosion. Rocky and sandy shores are frequented by shellfish gatherers, leading to the depletion of species.

A membership of 2,500 anglers and 6,200 game fishers in various clubs reflects the popularity of coastal fishing (Tortell 1981:18). Game fishing from charter boats is a significant contributor to some local economies. The popularity of fishing and boating has led to a demand for facilities such as jetties, launching ramps and club rooms which sometimes lead to erosion and accretion of the shoreline. Dumping of sewage from pleasure boats creates pollution problems in popular mooring locations, and recreational fishing is recognized as a contributor to the depletion of coastal fish stocks.

The total number of active divers in New Zealand is estimated at over 80,000 (Tortell 1981:19). Diving activities such as rock lobster collecting, shellfish collection and spearfishing have had a noticeable effect on coastal resources in certain areas.

On the landward side of the coast, agricultural use covers the greatest area. Coastal farms are often larger and less developed than other farms, with pasture and scrub dominating, interspersed with remnants of natural bush. Generally, clearing for pasture has removed most natural vegetation from coastal farmland; browsing by stock has damaged the remaining bush; and introduced plants have further altered coastal ecosystems. Other impacts of farming on the coast include destabilization of dune systems, pollution of estuaries by nutrient-loaded runoff, reclamation of mudflats by the introduction of spartina grass, and, in the past, reduction of wetland habitat by the erection of stop banks and pump houses.

Most coastal forests consist of exotic species planted for the stabilization of sand dunes or for commercial use, or both. Forests have been established on long stretches of coast to protect farmland from encroachment by sand by stabilizing many dune systems which were originally destabilized by farming practices.

Historically, a low level of mineral exploitation in New Zealand has meant little industrial pressure on the coast (Chapman 1974). More recently, large scale industrial developments have been encouraged by the Government and thermal power stations and an aluminium smelter threaten coastal areas. Such developments can displace wildlife habitat, pollute coastal waters with effluent, and alter ecology by dumping heated water into harbours.

Mining is also a more recent form of exploitation of New Zealand coastal resources, although removal of sand and gravel from dunes, beaches and the nearshore zone has been occurring for some time. Aggregate mining promotes the erosion of beaches, spits and dunes, and alters wildlife habitat. Kirk (1979:52) identifies such mining as "probably the most widespread and the most damaging of man's effects on the beach sediment budget throughout New Zealand".

Other coastal minerals that have been exploited are gold, tungsten, greenstone and granite, and salt from seawater. Mineral prospecting has been permitted on at least one of New Zealand's offshore islands. Mining of coastal lands can severely impact marine ecosystems through chemicals in runoff, increased sedimentation and turbidity, and reclamation with spoil. Dredging for minerals also destroys marine habitats. An offshore oil field is now producing oil, and exploration for

others is underway. Cargo vessels pose the greatest threat of pollution from oil spills (Tortell 1981).

Shipping is vital to the New Zealand economy. Most exports and imports are transported by sea, and the Cook Strait Ferry is an essential transport link between New Zealand's North and South Islands. Although shipping services declined in the 1960s and 1970s (Tortell 1981), shipping needs are increasing and port expansion and development is expected (Officials Committee for the Environment 1973, Environmental Council May 1980). Port construction often entails extensive reclamation and development around harbours, and it can increase erosion by interrupting longshore drift.

The biota of the seas around New Zealand provided the staple diet of the Polynesian and Maori people, and later formed the basis for the first commercial ventures undertaken by Europeans in New Zealand - sealing and whaling. However, only over the past two decades has the vast potential of New Zealand fisheries begun to be exploited in earnest. From 1965 to 1978, New Zealand catch increased 230 percent, and foreign catch increased by even greater proportions (Struik 1980:5). Some 5,350 New Zealand vessels take 50,000 tonnes of demersal and pelagic fish annually, with the bulk of the fish taken being snapper, tarakihi and trevally (Westerskov and Probert 1981). The most valuable species caught are the rock lobster and the Bluff oyster. Several near-shore species have been over-exploited to the point of economic collapse. In this century, trawling for mussels has become uneconomic and scallop fisheries have had to close. Returns on rock lobsters have declined and trevally and snapper have been over-exploited in some areas, largely as a result of increased fishing effort and

new techniques. Excessive trawling has damaged the habitat of organisms on the sea floor upon which the fisheries depend. Finally, some offshore islands face threats from fishing boats which moor nearby and could transport rats to these otherwise undisturbed environments.

Depletion of naturally occurring shellfish stocks led to attempts at cultivation which began to show potential by the late 1960s. By 1972, 131 marine farming leases had been granted and 325 applications lodged (Morton et al. 1973). Green lipped mussels have replaced Pacific oysters as the most important crop. In 1977, four hundred tonnes of mussels were harvested in the Marlborough Sounds; by 1980 this had increased to four thousand tonnes (Tortell 1981:14). Marine farming experiments with scallops and salmon are underway at present.

Mussel farms composed of ropes hanging from linked buoys have a small ecological impact which is often reversible, and shore-based support facilities hold some potential for impact. The areas for which oyster and mussel farms compete are also prime locations for other coastal uses such as swimming, pleasure boating and holiday accommodation which require clean, sheltered water of moderate depth. Marine farms can interfere with recreational activities, and recreationists can cause damage to the farms. Conversely, the farms attract fish for recreational fishers and they can provide a breakwater for passive, shore-based activities. Other resource uses such as subdivision, farming and forestry may conflict with mussel farming by introducing suspended sediment which mussels cannot tolerate, or pollutants which become concentrated in the shellfish.

While marine farming issues epitomize localized competition

amongst coastal uses, many conflicts involving other uses also occur. Mining effects, for example, can destroy habitat essential to commercial fisheries. Commercial fishing, in turn, conflicts with shipping near and within ports and with recreational activities such as water skiing. Sport fishing has the potential to deplete commercial species and divers compete with commercial fishers for lobsters. Farming clears forests which are attractive to recreationists; and seasonal recreation, holiday homes and tourism compete for beach frontage. All types of fishers may wish access to areas that otherwise could be used to protect fish stocks or for research purposes. Recreationists interested in more passive activities or in natural history may find their opportunities curtailed by various forms of resource exploitation.

2.3 OVERVIEW OF COASTAL USE IMPACTS AND CONFLICTS

Generally, conflicts amongst coastal activities, and the degree of resource use pressure on the coastal environment, depend upon the locality, characteristics and size of area required by different activities; the intensity and frequency of use by these activities; and the stability or condition of the areas used. Thus, pressure from recreation on a coastline is related to the area's proximity to population, its climate, physical features, accesibility and its ecological "delicacy". Activities that do not directly conflict at a particular place or time may conflict indirectly through their effects on coastal ecology, as, for example, juvenile populations of commercial

fish species can be destroyed by reclamation of wetlands.

Conflicts and pressures of coastal activities tend to concentrate on the inshore margin of the sea and on the land-sea interface, or foreshore, that is, in the highly productive coastal ecotone. Large stretches of this latter zone are highly valued because of their utility to a variety of activities. Intense use from both land and sea, the "public" nature of the shore, and the somewhat fragile character of intertidal ecosystems lead to intense conflicts and environmental degradation at the interface. Ecological stress is most evident in harbours and estuaries. Reclamation and pollution in these areas has contributed to a critical loss of wetland habitat (Pike, pers. comm. 1981; Knox 1979). Mangrove swamps have been most seriously threatened, through clearing and filling. Clearing of dune vegetation and removal of dunes for recreational development or housing has decreased coastal stability and accelerated erosion in many areas around the country. Inshore marine environments are threatened by the impacts of activities attracted to coastal lands, and by water based activities such as fishing and diving.

Following the "fuel crisis" and economic recession of the late 1970s, and with more active efforts to control subdivision by local authorities, development pressure on the landward side of the coast has eased somewhat. While there is still less scope for long recreational walks along the coast than there is for similar mountain travel, the rate of loss of public access to the coast by land has slowed. However, threats to the land-sea interface persist, and new and expanding uses of the sea threaten to limit the recreational experience of the marine environment.

The OECD's review of environmental policies noted that "New Zealand's marine resources are immense and are characterized generally by high quality and a low level of exploitation"(p.66). By global standards, New Zealand coastal waters are particularly clean. Nevertheless, a history of fisheries mismanagement and abuse of natural intertidal ecosystems leaves little room for complacency. Human impacts at the bottom of the marine chain of life, in estuaries and mangroves, can be disasterous. The food production potential of estuaries has been estimated as equal to that of agricultural land (Officials Committee for the Environment 1973), and at least thirty species of fish use mangrove wetlands at some stage of their life cycle (Ritchie 1979:25).

2.4 IMPLICATIONS FOR INITIATIVE CONSERVATION

Concepts and principles of environmental management and initiative coastal conservation drawn from the discussion of sections 2.1 to 2.3 are summarized in Figure 2.2. The diagram demonstrates that constraints related to the nature of the coastal environment and its uses hold implications for management. These implications apply generally to the control and regulation of coastal resource systems, including initiative conservation areas. Problems of the coastal environment which have arisen from the impacts of human activities provide the broad rationales for initiative coastal conservation. The concepts illustrated in the diagram are elaborated upon below.

The complex and dynamic character of the coastal

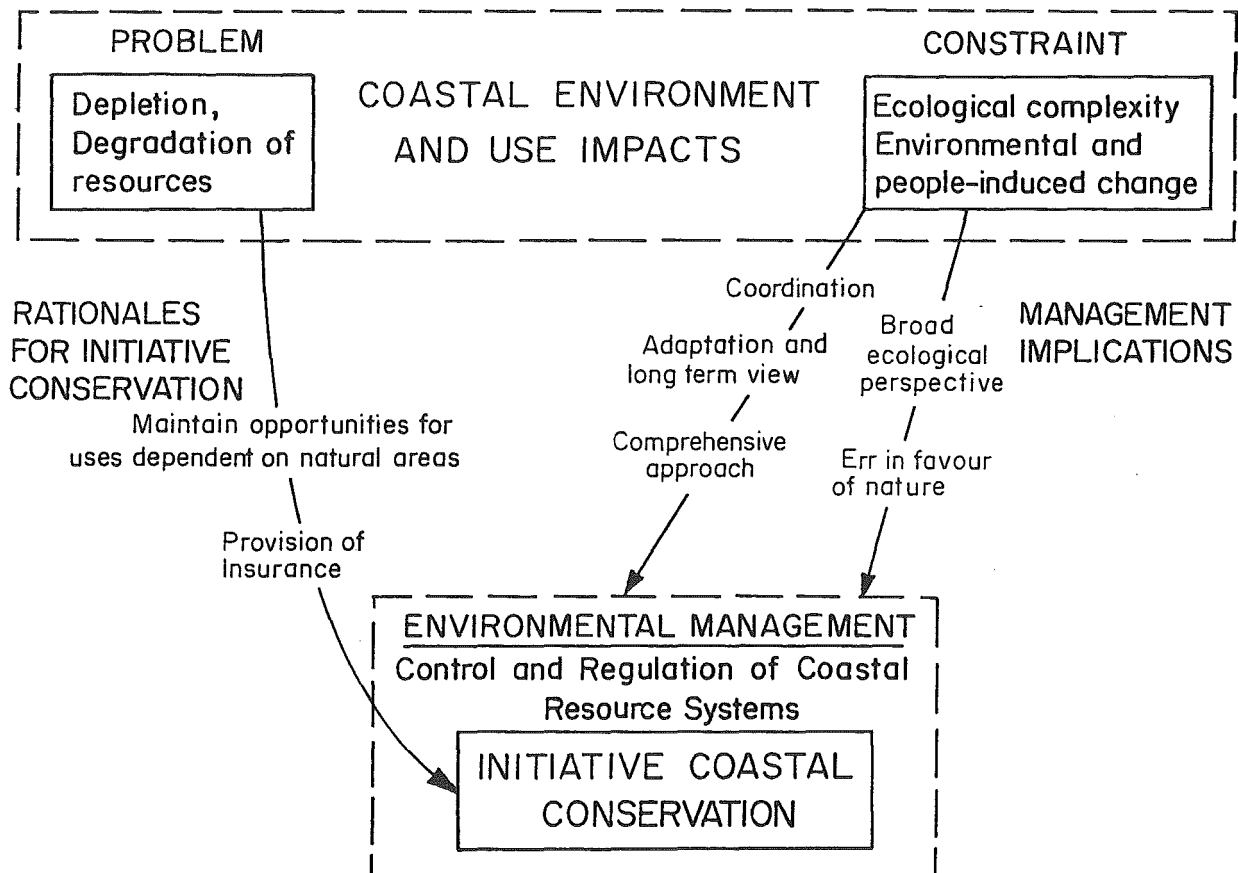


Figure 2.2

IMPLICATIONS OF PROBLEMS AND CONSTRAINTS
RELATED TO THE COASTAL ENVIRONMENT FOR
COASTAL MANAGEMENT AND INITIATIVE CONSERVATION

environment, especially in the nearshore and foreshore areas, demands of environmental management a broad ecological perspective and a long term view. An array of activities spanning the interface between land and sea presents a range of impacts and conflicts which further complicates the management problem and establishes the need for a comprehensive approach. At the same time, managers of portions of the coastal zone must take account of human and biophysical processes that originate both within and beyond the area of their immediate responsibility. They should integrate their actions with those of other managers so to avoid the "spillover" of undesirable impacts from one area to another, and to work towards the achievement of common purposes. This management implication of coordination or integration will be explored further in later parts of the thesis.

Other implications of the discussion of sections 2.1 to 2.3 relate to the need for initiative conservation. Two broad rationales for initiative conservation in New Zealand's coastal zone can be identified. The first, related to environmental needs, will be termed the "insurance" rationale, and the second, related to societal needs, will be called the "use" rationale. These will be discussed in turn.

The pressures of intensifying and expanding activities in the vicinity of the land-sea interface are threatening the existence of the myriad of non-human life forms that comprises the coastal ecotone. Coastal habitats and biota have an inherent value and also offer a range of current and potential benefits to humans. Initiative conservation can ensure that a range of relatively unmodified environments are protected in areas that cannot be encroached upon by forms of exploitation

that degrade those environments. In this sense, initiative conservation areas become a form of insurance, or a "fail safe" mechanism against foreseen and unforeseen impacts of human use. An assumption underlying this rationale is that whether or not less modified areas are currently valued in their existing state by society they should be guaranteed survival in their own right and in case they come to be valued in the future. A New Zealand marine biologist and a fisheries administrator have used this argument in their campaign for marine protected areas over the past decade (Ballantine in Moynihan 7/6/1980; Currie, pers. comm. 1980).

The insurance rationale draws out a basic principle of initiative conservation: that management decisions, particularly under conditions of incomplete information, should err in favour of ecosystem viability. Drawing from Canadian experience in the coastal zone, Scace describes an extreme interpretation of this tenet:

In principle any use of an area which imperils the conservation objectives for that area through selective or cumulative activities and direct or indirect effects is an incompatible use. An inherent problem with the application of any use to conservation areas is that misuse or accidental use will occur despite stringent guidelines and regulatory measures (1982:7).

A further management consideration for coastal conservation, stemming from the ecological priority, is the need to accommodate for the interaction of terrestrial and marine ecosystems in the area of the conservation unit. McMillan notes that all the international conferences and meetings on coastal conservation which he reviewed supported the need for "an understanding of the 'oneness' and inter-relationship of the land and sea" (1975:3). If the coastal ecotone itself is to be

protected, adjacent sections of land, foreshore and sea must be included in the conservation unit (Ray 1976:27). As Odum (1982:9) explains, "the key to effective [coastal] habitat preservation is to protect the complete sequence of salinity types encompassed in the entirely salinity gradient". However, because the protection of a large enough area to cover all likely sources of negative impacts is "virtually impossible and impractical" (Odum 1982:9), the administrators of the conservation area usually must seek cooperation from managers of surrounding land and sea. This approach agrees with the more general aim of integration in management for the coastal zone as a whole, mentioned above.

The second general rationale for initiative conservation, labelled as the "use" rationale, refers to the provision of opportunities for activities that depend on relatively unmodified, or "natural" environments. Under this rationale, educational, recreational, research and spiritual needs are assumed to coexist in society with economic, material, infrastructure and subsistence needs. Because the fulfillment of these different needs places various demands on the coastal environment, some of which are mutually exclusive, areas of the coastal zone must be allocated amongst them. The areas devoted to the non-extractive, or non-exploitative uses are the initiative conservation areas.

The two rationales overlap. Initiative conservation for insurance also provides continuing opportunities for uses dependent on conservation areas, if it is not taken to an extreme requiring the prohibition of all use. Both insurance and special use needs can be met indirectly by defensive conservation arrangements, but the satisfaction of these needs

is then likely to be less thorough, because of the less positive approach. As a coastal zone expert in New Zealand explains, areas must be provided for recreation now, because recreational needs can be assumed to last indefinitely, while threats to recreational opportunities are steadily increasing (Fookes 1974). Already, long years of use without protection mean that the coastal environment has been extensively modified, "becoming steadily withdrawn from the prospect of consideration within the rules of unmodified reservation" (Thom 1982).

Experts in the United States have noted that the principles that are ascribed to the initiative approach (for present purposes) have yet to be fully accepted in arrangements for conservation areas in coastal waters:

It is recognized a priori that consumptive uses of terrestrial resources in park ecosystems dramatically reduce or completely eliminate their values as dynamic standards, genetic reservoirs, and emotional and recreational reserves. Yet for some reason, that concept has not been completely and effectively extended to [coastal] aquatic resources (Davis 1981:68).

Societal expectations of coastal use and regulation partially explain this lack of acceptance. These expectations are explored in the following chapter.

CHAPTER THREE
SOCIETAL ATTITUDES TOWARDS THE COASTAL ZONE
AND ITS CONSERVATION

Ecology and values were identified in Chapter One as the objects of environmental management of central interest to the present study. Ecological or environmental needs and constraints were delineated in Chapter Two, and in this chapter, values or societal needs and constraints are discussed. Once again, general principles are combined with New Zealand experience, and much of the discussion addresses the broader field of environmental management which encompasses coastal conservation. In section 3.1, political-cultural characteristics and societal ideals which pose actual or potential difficulties to environmental management are outlined, and an overview of public attitudes towards the environment and conservation in New Zealand is presented. In the second section, attitudes towards the coastal environment and its conservation are investigated. The final section draws implications for the potential for initiative conservation in New Zealand. These are based on the observations of the first two sections.

3.1 POLITICAL-CULTURAL CONSTRAINTS ON COASTAL CONSERVATION

Environmental problems in the coastal zone, as elsewhere, can be largely explained by the theory of "the tragedy of the commons". As developed by Garret Hardin (1968), this theory states that degradation results from the tendency for users of a shared resource to maximize their personal gain regardless of detriment to the resource and other users. The sea has been considered common property since Grotius stated in his 1633 treatise, The Freedom of the Seas, that the use of it should be free, in the sense that "all citizens have equal and indiscriminate right to use rivers and public places" (1916:3). But Grotius added, "Laws moreover were given to cover both cases [individually owned and common things] so that all men might use common property without prejudice to anyone else . . . (1916:2). In a democratic society, these laws and other means of regulation are constantly subject to public scrutiny and political pressure. At a time when acceptance of the limitations on the environment's capacity to absorb human impacts is unevenly distributed through society, consensus amongst divergent interests is not easily attained. As a result, the public support necessary for the implementation of regulations to alter human behaviour in resource systems is often lacking.

An individualistic political culture, which is characteristic of many Western democracies, further limits the rule-making authority of government. This culture emphasizes the dominance of individual rights, such as those associated with property, and requires that personal freedoms be maximized and regulations minimized. Widespread use of coercive powers is

considered unacceptable (Muir and Paddison 1981:33, Bennett 1976:297). Governments must rely in part upon less forceful means of seeking public compliance with management objectives, such as financial or material incentives (remunerative power), and value-oriented or moral means of persuasion (normative power) (Etzioni 1969). Remunerative power is often used in coastal conservation in the expropriation of land or in the limitation of property use with financial compensation. When the funds required for this remunerative approach are meagre, the relatively unrestricted pursuit of personal interests can be a major contributing factor to "the tragedy of the commons" in the coastal zone.

The individualistic political culture is clearly a factor limiting conservation efforts in New Zealand, although the extent of its effect is debatable. In 1971, O'Riordan remarked that

. . . [New Zealand's] population has traditionally accepted a high degree of public control and social responsibility. There are thus unparalleled opportunities to introduce novel legislation in New Zealand [in environmental management] (p.208).

Other observers differ, holding the opinion that the independent spirit of New Zealanders engenders a widespread resistance to increased legislation and regulation (Williams, pers. comm. 1981; Gillam 1969:73; Sayers 1969:57). In 1979, a report by two central government agencies suggested: "We have to be extremely tolerant of a public which has almost trained itself to concentrate largely on self interest rather than public interest" (Commission for the Environment and the Ministry of Works and Development 1979:49). And in 1981 the Commissioner for the Environment stated that "New Zealanders individually are capable of phenomenal self-motivation. Collectively, it doesn't

come off . . ." (Piddington 1981:11)

Roche (1984) presents a historical view of New Zealand "attitudes and the perception of the environment", summarized in Table 3.1. Clearly, cultural factors outside the political realm also have a major effect on attitudes towards the environment and receptiveness to conservation. Some such factors will be reviewed here, emphasizing recent trends. Historical aspects of conservation are covered in Roche (1981, 1984) and Cumberland (1981).

Attitudes of the dominant New Zealand society derive largely from the approach to the country as a frontier by European colonists. (The Maori peoples' perspective is different from that of European descendants and is approached separately in section 3.2.2). The colonial pioneer focused on the need for economic growth and development rather than conservation, leading to a predominantly economic land ethos. A low population density, meaning less severe development pressure on the environment, has enabled this capitalist tradition to persist (Fookes 1974:90) - "For most New Zealanders, land has no value simply because it exists, rather it has a value because of the demand for products that can be derived from it" (Campbell 1980:70). Preoccupation with material values has led to a general reluctance "to appreciate the advantages of conservation, many of which will accrue only to future generations" (Nature Conservation Council 1981:16).

Despite the still prevalent materialistic attitude, observers have recognized intensification of environmental awareness in society which they attribute to various causes. Roche (1984:4) suggests that the economic prosperity and "minimal social unrest" of the 1960s and early 1970s "created an

Table 3.1

ATTITUDES AND THE PERCEPTION OF THE ENVIRONMENT

Period	Social Attitudes	Economic Attitudes	Political Attitudes	Perception of Environment
1870s/80s	Material improvement	Natural Resource exploitation and development	Elements of laissez-faire and State intervention	Wilderness to be conquered "Wastelands" to be utilised
1890s	Social Justice	Natural Resource exploitation and development	Elements of laissez-faire and State intervention	Public lands retained as reserves for scenery and flora and fauna preservation
1914?-30s		Economy regulated	Wartime regulation to Welfare State	"Caretaking"
1960s/70s	Quality of Life. Public participation	"Engineering" outlook	Cabinet decision making	Threatened "Nature"

(Roche 1984:3a)

atmosphere in which 'environmentalism' could develop". At the same time, an awareness of economic dependence on natural resources accelerated the shift towards environmental values (Barker and Brown 1979:2). Expanding environmental concern in New Zealand was also spurred on by the international conservation movement which began in the 1960s (Nature Conservation Council 1981:50, Fookes 1974:90). Recent indications of a growing conservation ethic include widespread public involvement in specific conservation issues (OECD 1981:10), and more active participation in the Nature Conservation Council's annual "Conservation Week" campaign (The Press 7/8/1981). In addition, studies suggest that New Zealand society is moving towards a more equal weighting of economic and environmental values (Commission for the Future, in The Press 20/11/1980) and that

Many people feel a sense of unease and insecurity at the rapid, man-caused changes that New Zealand's landscapes and natural systems are undergoing and fear that the country is losing its distinctive natural character (Nature Conservation Council 1981:18).

These latter, more subtle changes in attitude are connected to a growing recognition of New Zealanders' feeling of identity with the landscape. Many people appreciate New Zealand most for its accessible non-urbanized landscape; and the move towards "alternative" lifestyles in even closer proximity to that landscape is growing. In 1980, the New Zealand Department of Scientific and Industrial Research (DSIR) cited the following attitudinal factors as "advantages" to the potential implementation of a conservation policy:

New Zealanders are still broadly in tune with at least some aspects of the natural environment . . . and 'the quality of life' has an outdoor connotation in this country. . . . There is high public

consciousness of natural history and scenery . . .
 (p. 80).

In the opinion of the Commissioner for the Environment, the environment forms part of the New Zealand identity even for those who do not use it directly - "The environment is what New Zealand is and what we come home to; we destroy it and we destroy what makes us special" (Piddington 1981:13).

While the above observations look encouraging for increased support of conservation measures in New Zealand, other views are less optimistic. The era of the establishment of extensive conservation areas in national parks is past, and the financial resources for the creation of reserves through remunerative measures are no longer available to government. Less buoyant economic conditions may prove inimical to the sustenance of environmental interests in society (Roche 1984:5).

The philosophy of the frontier is still there, and may survive for a while, but it is essentially backward-looking. It is dangerous because it discounts the need for environmental protection (Piddington 1984).

Piddington urges the encouragement of more sustainable resource use, and the Nature Conservation Council (1981:16) feels that:

. . . positive action and some changes in traditional attitudes are needed if [New Zealanders] are to continue to enjoy the variety of important non-material benefits conferred by New Zealand's distinctive natural landscapes, flora and fauna.

3.2 ATTITUDES TOWARDS THE COASTAL ENVIRONMENT

In this section, attitudes of general New Zealand society, Maori people, and special interest groups towards the coastal environment and its conservation are discussed in turn.

3.2.1 General attitudes towards the coast

Historically, the descendents of European settlers have not appreciated the coast either as an area of biological productivity and economic value to rival farmlands, or as a natural environment worthy of protection - "The New Zealander consciously discovered his coasts only after he had long discovered a sentiment for the bush" (Morton et al. 1973). Nevertheless, the aesthetic and recreational appeal of the coast was great enough by the 1960s to motivate many New Zealanders to acquire their own sections of land by the sea in order to take fuller advantage of coastal assets.

As the general public became more aware of the fragility of the coastline and of "the pleasures of a natural beach or rocky shoreline" (Milne 1978:3), concern mounted over the uncontrolled expansion of holiday communities (Bellamy, pers. comm. 9/11/1980). However, a continued emphasis on recreational and aesthetic priorities has meant that the recognition of a broader range of coastal pressures has been slow to emerge (Chapman 1974:33, Milne 1978a:3). Tortell (pers. comm. 24/3/1981) notes that New Zealanders are generally insensitive to coastal processes and ecological damage to the coast, and unaware of the potential productivity of the coast. Other experts see local government authorities as disrespectful of the natural coastal

environment, and the population as a whole as taking for granted the extent and durability of the coastal resource (Environmental Defense Society 1976, Burns 1978:5).

Observations made over the past two decades indicate a trend towards increased recognition of coastal environmental needs. In 1969 the editor of one of New Zealand's major daily newspapers stated:

. . . we New Zealanders are great lovers of the beach and sea But how deep is our appreciation? Is there an awareness of the need for nationally-controlled development so that the coast may always be enjoyed by a growing population . . . ? On the contrary, people are by and large impassive (Sayers 1969:57).

Another media writer in 1976 was somewhat more positive:

Over the years, our attitude to the land has changed, often reluctantly, from one of personal greed to a feeling of collective responsibility But it's only recently that we've begun to regard the sea as a resource that needs similar protection (Listener 31/1/1976).

And by 1980, observers could identify a broad recognition of coastal conservation needs in society.

Over the last ten to twelve years there has been a gradual realization by the public in New Zealand of the value of our coastline and the importance of taking such steps as may be necessary to protect and preserve the coast as far as possible in the interest of the public as a whole (Healy 1980:234).

In order to describe more accurately trends in public awareness of the needs and vulnerability of the coastal environment, a survey of two media sources was undertaken.

Approximately eight issues per month of a major daily newspaper, the Christchurch Press, were examined for the period 1975 to 1980. During this period, the number of items based on coastal topics rose steadily from six in 1975 to twenty-seven in 1980. Most of the topics reported in the items were located in the foreshore environment, followed by those on the port or

harbour and then estuaries or wetland and other nearshore locations. The clear dominance of topics set on the nearshore and the land-sea interface reflects the pressures on that zone discussed in Chapter Two.

The prevalence of topics on pollution, as indicated in Table 3.2A also reflects concern for the foreshore and nearshore environment. Articles on coastal conservation, marine parks and reserves, and ecology, support the indication of environmental concern demonstrated by the high content of pollution-oriented items. Articles on erosion, research and planning, and recreation also have strong environmental and conservation implications.

To supplement the findings of the newspaper analysis, a weekly, entertainment-oriented magazine which carries articles of national social and political concern was surveyed. All issues of the Listener were examined for 1972 to 1980. While the rise in coverage of coastal topics in The Press is not supported by the content of the Listener, neither is there a substantial decline in Listener coverage over the years. Table 3.2B demonstrates clear emphasis on environmental and conservation topics. Of thirty-two features on the coast, twenty-two directly deal with conservation issues. Seventeen of these call for increased conservation measures. The pro-conservation features are written in response to specific threats to the coastal environment such as harbour development, over-fishing, oil spills and urbanization, or in response to a more general range of threats from human activity, or to the appreciation of a special coastal environment such as mangroves or a proposed marine reserve site. Other conservation-oriented features either refute the need for conservation or offer views

Table 3.2 A

COASTAL ISSUE TOPICS IN ITEMS SAMPLED FROM THE PRESS,
1975-80

Topic	Number	Total
Environmental topics		32
Pollution	21	
Conservation	6	
Marine parks and reserves	4	
Ecology	1	
Erosion and urban development, storms		13
Research, Planning and Seminars		8
Recreation		8
Industrial/Commercial topics		26
Port development and shipping	12	
Fishing	7	
Marine fishing	4	
Mining	3	
		87

Table 3.2 B

COASTAL ISSUE TOPICS IN ITEMS SAMPLED FROM THE LISTENER,
1972-80

Topic	Number	Total
Conservation		22
Supporting conservation measures	17	
Refuting the need for conservation in favour of development	2	
Giving positive and negative views on conservation	3	
Coastal management and planning		4
Environment and ecology		4
Uses of the coast - descriptive		3
		32

both for and against coastal conservation as an alternative to proposed recreation, harbour, and tourism developments. Four articles discussing the need for coastal zone management and planning and four relating to environmental or ecological aspects of the coast also reflect conservation priorities to some extent.

Overall, both of these written media have devoted a considerable amount of space to coastal topics over recent years. Content of the articles points towards a strong sense of concern for the condition of New Zealand's coastal environment. Because The Press and the Listener together are read by a large proportion of the New Zealand society, the environmental viewpoints they express can be said to support the opinions of observers who feel that awareness of the need for coastal conservation measures in New Zealand is increasing.

Regardless of these trends towards recognition of the need to regulate use of the coast, individualistic attitudes persist, with strong negative implications for coastal conservation. Such attitudes especially apply to the foreshore and coastal waters which most New Zealanders assume to be public property open to them for access, exploitation and enjoyment. In the words of a newspaper columnist:

Whether we fossick with an aqualung or with a fishing rod or with bare hands the principle is the same - the enjoyment of our coastline is a precious right and it ill behoves any politician to interfere . . . (New Zealand Herald n.d.).

In view of the range of opinions on attitudes towards the coast described here, the conclusion reached by a United States expert applies well in New Zealand:

. . . there is no consensus as to which social and economic values should be foregone and in what amounts

to protect various physical and biological systems in the coastal environment (Ketchum 1972:217).

This lack of consensus is inevitable during a time of political and economic change and increasing knowledge of coastal ecosystems. When the public interest in the coastal zone was closely associated with economic growth, and general ignorance of the need for healthy ecosystems dominated, goals for the coast were almost exclusively development oriented. However, as negative effects of coastal activities

. . . began to be apparent, concerned citizens started to view the coastal environment in a different perspective. This new perspective has usually resulted in conflicts of interest . . . (Caldwell et al. 1976:50).

Some indication of the variety of interests in New Zealand's coastal zone is evident in the following two sections.

3.2.2 Maori attitudes towards the coast.

The Maori people once had the most intimate contact with the coastal environment, and they still do in many New Zealand communities. Maori images of ancestry and of spiritual origins are associated with the sea. Traditionally, the Maori people have an innate sense of conservation, or ra hui, connected with their feeling of spiritual attachment to the land and sea. Their love for the environment is expressed through cultural, emotional, societal and spiritual values going beyond subsistence and economics (McKay n.d.). These feelings were clearly exhibited in their traditional way of life. One Maori recalls that, when taking seafood as a boy,

Conservation was properly practised because his family took no more than required for its needs and the gathering of food was always conditioned by the need

to leave some for the gods and others to grow for later (Jones 1980:29).

The Maoris believe that if they had control over their ancestral land today they would still be its best guardians. This sentiment is reflected in a decision by the Maori landowners of the northernmost coastal strip of land in New Zealand not to lease the land to a government department for conservation purposes (Northland Times 1982 vol.47 no.39). In deciding to control and protect the land themselves, the Te Hapua Maoris cited their spiritual responsibilities to the land:

From Te Hapua you can see the sleeping woman. Our role is to clothe her and give her life. How can we honour her by giving the land away or doing something almost equivalent? (Northland Times 1982 vol.47 no.39).

Today most Maoris no longer have the opportunity to make such decisions because they have lost their lands to the "Pakeha" (people of European descent). Much of the land that remains in Maori possession is marginal farmland or bush on the coast. A Maori speaker protests that these remnants are being subjected to "legislative onslaught through town and country planning schemes, creation of marine and coastal reserves, and the establishment of national parks" (Mahuta 1979:5). Thus, left with land that is of little productive use, the Maoris are told that they cannot even attempt to put it to economic use. A Maori Affairs Department district officer maintains that coastal lands designated by Government for reserve purposes in the north of New Zealand correlate almost exactly with Maori-owned lands (Paerori, pers. comm. 1981). Because the Maori people have been denied the chance either to use or to conserve their lands in their own way, the opportunity to demonstrate the effectiveness of traditional approaches in maintaining viable

resource systems to broader New Zealand society has rarely arisen.

3.2.3 Interest groups and the coastal zone

In this section, the special interests and roles of commercial and amateur fishers, divers, and environmental or public interest groups will be investigated briefly.

The New Zealand Fishing Industry Board is the organisation that represents commercial fishers and other participants in the fishing industry. The Board is primarily concerned with the promotion and development of the New Zealand fishing industry and it often plays an adversary role with respect to government policy and conservation interests. According to the Board's upper management, professional fishers are not necessarily opposed to conservation; in fact they sometimes press for increased restrictions on the fishing effort in order to allow stocks to regenerate. However, this conservation perspective is basically an economic one, constrained by a desire for the best and fullest use of all fishery resources. While professional fishers might support some reserves to represent marine biota, they fear a proliferation of reserves that would increasingly restrict the total available fishing area. They feel that the worst impacts on the marine environment are often land based, that arrangements for marine reserves are overly restrictive, and that marine farming has been unfairly administered; and they are therefore suspicious and resentful of further regulation over the fishing industry (Branson, pers. comm. 1981). In general, commercial fishers are independent and competitive and exemplify the New Zealand aversion to rules and

regulations.

Amateur fishers similarly resent restrictions on their activities and resist the establishment of marine reserves that preclude recreational fishing. They are, however, more accepting of general conservation measures than are the commercial fishers, as the following objective of the New Zealand Angling and Casting Association demonstrates:

. . . to promote the conservation of fish and game and the natural resources of New Zealand and to encourage the observance of all laws governing the conservation and preservation of New Zealand's natural resources (Tortell 1981:18).

The dependence of amateur fishers on marine species gives them an environmental perspective that may be lacking amongst recreational boaters. The insensitivity of boaters to environmental needs has led to the observation that the views of large boating groups should not be taken as representative of the general public (Lang, unpub. 1979:19). In contrast, recreational divers may be amongst the most environmentally aware of all coastal users. Numerous dive clubs, which are all affiliated with the New Zealand Underwater Association (NZUA), have voluntarily restricted the taking of some species of fish by spearfishing in certain areas. Many dive clubs know of areas they would like to see protected by statute. However, divers, like commercial fishers, are wary that extensive marine conservation measures would overly restrict their activities (NZUA, unpub. 1980:82). Divers are knowledgeable of the extent and condition of marine resources in the areas they frequent, and Government has looked to the NZUA for this type of information in the past. At least one dive club has made a concerted effort to study the marine environment. This club has learned that such efforts can lead to a change in attitudes

amongst users:

We have been heartened to find that perhaps because of our dive line many divers are generally becoming more interested in the conservation of the whole area around Kapiti (Kapiti Underwater Club 1982:2).

Those in the wider New Zealand society who have a strong feeling of concern for the environment and its conservation often join non-governmental organizations - public interest, or environmental groups - in order to make their opinions heard. These organizations are mainly staffed by volunteers, and financial contributions from the Government are minimal, ostensibly because they represent special interests (Town, pers. comm. 1981). Some observers feel that the groups should have more funding to perform their role as public watchdogs (Bellamy, pers. comm. 1981, Cleveland 1984:41).

As adversaries for the environment, interest groups make submissions to judicial hearings, discuss concerns with officials and politicians, make petitions to Parliament, and keep the public informed on environmental issues. One group, the Environmental Defense Society, has special skills in litigation. The Society often represents the public interest in coastal conservation at hearings on development proposals. Several groups undertake extensive research on the environment and management problems and sometimes advise the government on this basis. Some interest groups devote most of their efforts to a certain aspect of the environment, such as forests, or to a particular local issue or area. Generally, the larger groups deal with specific issues as they arise.

The large number of assorted groups and the considerable memberships of some groups indicate a broad current of awareness of environmental problems in New Zealand (OECD 1981:10).

However, none of the groups expressly addresses coastal issues on an ongoing basis, and interest group efforts to promote conservation have been directed predominantly towards native forest and mountain lands. Amongst the groups, the Royal Forest and Bird Protection Society shows the most concern for the coastal zone. Because this concern stems from the Society's interest in wildlife, and particularly birds, advocacy efforts tend to focus on combating threats to estuaries and other wetlands (Collingwood, pers. comm. 1981). The Society's executive has always included coastal experts who are aware of the fragility of coastal ecosystems and of the fact that many of New Zealand's endangered birds are coastal species.

Accordingly, the Society is regularly involved in town and country planning hearings on coastal matters; it helps raise funding for reserves through national appeals; it lobbies for marine reserves; it opposes applications for water rights that would have deleterious effects on coastal waters; and it applies "careful persuasion" to many government bodies and various authorities in support of coastal protection (Collingwood, pers. comm. 1981). Because the Royal Forest and Bird Protection Society has the largest and most broadly-based membership of all the environmental groups in New Zealand, its active interest in the coastal zone partially compensates for the lack of a general coastal focus in other interest groups.

3.3 IMPLICATIONS FOR INITIATIVE CONSERVATION

An individualistic political culture is widely recognized as a constraint on reformations to resource systems through environmental management (Shepard 1973, Tuan 1971:33, Bennett 1976:150). This applies with respect to the establishment of conservation areas in New Zealand's coastal zone, even though societal awareness of the need for such measures appears to be increasing. Following the development of principles on the needs of the coastal environment in Chapter Two, the conclusion was reached that conservation area management must cope with social constraints without irreversibly compromising environmental quality:

The incorporation of [cultural and traditional] values into habitat preservation in a changing world involves the most careful, detailed and sensitive consideration, which must, however, be interpreted so as to avoid ecological compromise (Ray 1976:36).

Acceptance of these management tenets presents a major challenge to initiative conservation - that of devising conservation measures that are at once environmentally sound and socially acceptable.

One means of seeking to meet the challenge of combined social and environmental constraints is by adapting management techniques to cope with the political-cultural constraint without compromising goals related to environmental needs. This approach is explored in section 3.3.1. Another means is the encouragement of society-wide adoption of environmental quality as an ideal, thus alleviating the political-cultural constraint. This method depends upon societal consensus on an objective principle or a "coherent and persuasive doctrine to legitimize and reinforce an ecological approach to man-environment

relationships" (Caldwell 1974:181, Odum in Henning 1974). As discussed in section 3.3.2, the seeking of such a consensus, as well as less comprehensive support for environmental conservation, provide additional rationales for initiative coastal conservation.

Figure 3.1 shows the relationship between societal attitudes and initiative coastal conservation within environmental management. The concepts and principles shown in the figure are developed below. The implications for management prompted by societal constraints on the right of the diagram are the topic of section 3.3.1. The rationales for initiative coastal conservation stemming from problems posed by societal attitudes on the left are delineated in section 3.3.2.

3.3.1 Adaptations to the political-cultural constraint

Two general, overriding management adaptations to the political-cultural constraint are, first, the maintenance of open goal setting and decision-making processes, and second, the provision of an "intellectually respectable rationale for management actions" (Firey 1960:250).

The first adaptation holds the implication that sound management depends upon decisions being made at "the lowest level of government consistent with the scope of the problem" (Ketchum 1972:21), and on the various techniques of public participation. O'Riordan (1971:207) points out that

. . . most conservationists now feel that sound environmental management will only be possible with the support of an aware and informed public and with adequate provision for public participation.

The management process must attempt to interpret community

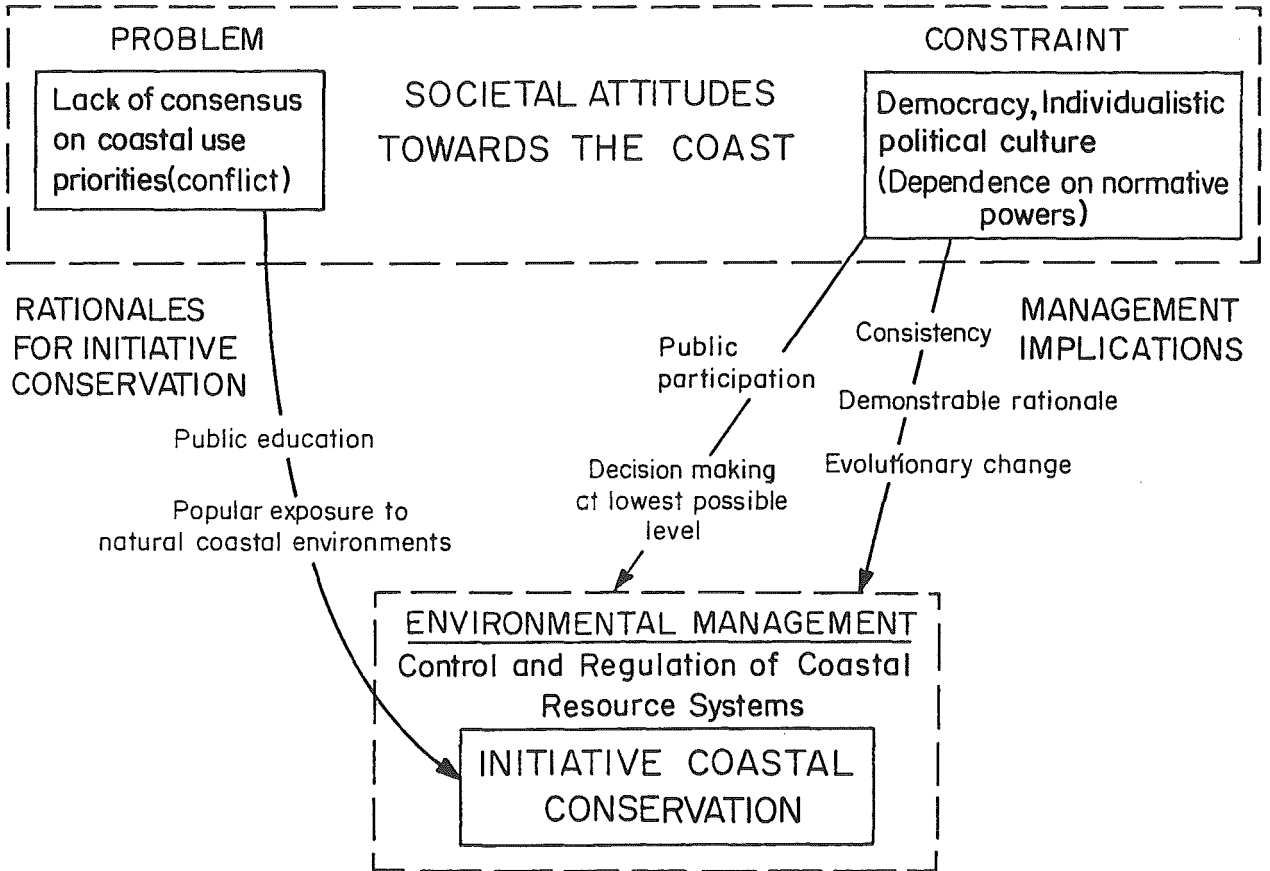


Figure 3.1

IMPLICATIONS OF PROBLEMS AND CONSTRAINTS
 RELATED TO SOCIETAL ATTITUDES TOWARDS THE
 COAST FOR COASTAL MANAGEMENT AND INITIATIVE
 CONSERVATION

values and traditions in order to devise conservation programmes that are as compatible as possible with the interests of the people affected.

Efforts to protect coastal waters by means of various sorts of protected areas are not likely to succeed if they are carried out in the absence of an understanding of [local customs and sentiments] and a willingness to consider them as an integral part of any proposed new system of management (Johannes 1982:3).

Respect for tradition and existing resource systems is complemented by an "evolutionary" approach to legislation and administrative arrangements, starting with minimum interference with existing resource systems, and continuing with active community involvement in all aspects of policy implementation and management. Sudden or radical changes in behaviour or values cannot be demanded without risk of social discontent and lack of cooperation.

The concept of an evolutionary approach supports the second management adaptation - the "intellectually respectable" policy rationale. Such a rationale implies that sound management depends on the extension of familiar concepts and on relevance to socially accepted values and activities. In connection with coastal conservation areas, users should be involved in management in such a way as to make the benefits of conservation measures direct and obvious, or demonstrable, to them. When people no longer depend upon the ecosystem in which they live for income or subsistence, and their experience does not encompass a conservation rationale, then:

. . . the reasons for the programme, the ecological bases for the land-use restrictions that are proposed, must be very carefully explained and justified. One must be optimistic that, with a careful job of explanation, wide public acceptance of the needed restrictions can be achieved (Koeswadji 1982:8).

Apart from the requirement of clearly understandable ecological motivations, conservation objectives must be coherent and consistent in order to gain the respect of the public. People's suspicions are easily aroused when agencies respond to recurring events and problems in an unpredictable and apparently inexplicable manner, when statements of intention are reversed, and when policies are declared but never implemented. Agencies must actively demonstrate that stated intentions are genuine by putting them into practice with adequate personnel and financial support.

In theory, conservation measures which associate sincere management priorities with physical reality and familiar values should increase the chance that the public will be morally persuaded to accept the measures, reducing the need for coercion and increasing the emphasis on normative power. The ideal result would be social consensus on the type of environmental regulation which is necessary. This is Hardin's solution to the tragedy of the commons and Firey's (1960) "attribute of willing conformity" or "criterion of planee's consent".

To recapitulate, regulations and conservation measures are more likely to be acceptable to the public if the rationale is relevant, familiar, demonstrable, coherent and consistent. Most of these requirements could probably be met by measures that are rooted in the traditions of society and based on an open exchange of information and ideas with the public. However, those involved in coastal conservation often express doubts that either respect for tradition, or an open goal-setting and decision-making process, will result in both environmentally sound and socially acceptable conservation measures. Ray

(1975:25) states that an ecological basis for human behavior is not traditional (in Western society), and Koeswadji (1982:8) cites "the strong cultural tradition that estuarine resources are common property resources" as a stroke against public acceptance of limitations on coastal uses. Ketchum (1972:16) is also pessimistic:

Obtaining public action to protect the natural ecology of the coast is not, as some would hope, simply a matter of making information about the problem known. Defining, agreeing upon, and implementing measures that require a large and heterogeneous body of people to forego or reduce the level of utilization of valued resources is seldom easy.

The skepticism related above regarding management adaptations to the political-cultural constraint on conservation cannot be ignored. Alternative adaptations must be sought in order to promote the evolution of conservation measures that satisfy both societal and environmental needs. The means proposed in the following section addresses the possibility of alleviating the political-cultural constraint through conservation initiatives, rather than just coping with it. However, the measures for coping put forward in this section are, and will continue to be, vital to the satisfaction of societal needs, regardless of the severity of the political-cultural constraint.

3.3.2 Encouragement of environmental ideals

Levels of awareness in society of the benefits to be derived from a "healthy" environment (including less-modified areas of the coastal zone), and of the threats posed by human activities to the environment, indicate the degree of public acceptance of conservation measures that can be expected. The

more acceptable the measures, the more successful they will be in meeting the ecological needs of the area concerned.

Generally speaking,

Awareness encourages the development of positive attitudes toward the needs of nature, and the needs of mankind, which ultimately are the same. The absence of this quality usually marks insensitivity - the cruel attitude which begets, among other things, disrespect for the natural world with abuse and even destruction of its wonders (IUCN Bulletin December 1973 in Lucas 1977).

Figure 3.1 shows two rationales for initiative coastal conservation stemming from the problem of a lack of societal consensus on the use of the coast. One is the need for public education on the value of natural environments on the coast, and the other is the need for popular exposure to natural coastal environments. The grounds for these rationales are explained below.

Sections 3.1 and 3.2 described New Zealander's awareness of coastal attributes and vulnerabilities. In some sectors of New Zealand society, attitudes towards coastal conservation are so positive that the public, rather than environmental managers or administrators, instigates conservation considerations. During a parliamentary debate over a bill to enable the dumping of waste into a harbour, a politician observed that

. . . the difficulty the Harbour Board has had in gaining approval for the Bill is an indication that society no longer looks with favour on the use of estuary areas for the disposal of rubbish (in Milne 1978a:4).

However, a large sector of the New Zealand public comprises people who continue to take the aesthetic, recreational, and other "natural" assets of the coastal zone for granted, who do not recognize the growing threats to these assets, and who are likely to resent and object to restrictions on their use of

coastal resources.

This sector is likely to become progressively more receptive to normative measures for conservation as a result of the publicity efforts of the media and environmental groups, and government planning and educational programmes. Encouragement of environmental awareness is also promoted by the provision of convenient opportunities for a positive personal experience of coastal environments with natural qualities. As a conservation proponent suggests, "People as a rule can be expected to place more value on the things that they can see, touch and experience than those that they cannot" (Hutchins 1980:60). And, as a workshop on "the case for preservation" concluded,

Man's freedom and "at-oneness" in the presence of nature will involve, as must be recognized, a responsibility to commend to others (other leaders and administrators included) an experience that will be fully understood only by sharing and partaking in it. (Morton 1980:35).

The provision and maintenance of this opportunity is crucial, therefore, to instilling in the New Zealand public a sense of respect and affinity for the coastal environment. This respect should lead to support for management that respects the vulnerability of coastal ecosystems.

Thus, while initiative conservation helps to protect the environment, it also provides the public with the opportunity to appreciate the inherent qualities of areas less affected by humans. In the coastal zone aesthetic and recreational values lead to an especially high demand for space; therefore, this opportunity has to be purposefully maintained by providing for public access and protecting natural areas. As Holt and Segnestam (1982:11) state in their paper "The Seas Must Live: Why Coastal and Marine Protected Areas are Needed", protected

areas will ultimately be ecological remnants of little value unless some access to them is permitted:

They need to be places where particular controlled uses are encouraged, . . . so long as they are not incompatible with the defensive [protection] function. In this way more people, and more kinds of people, who engage in such use, will be recruited to the movement for conservation.

The potential outcome of initiative coastal conservation could thus serve a broader purpose than protection of the coastal ecosystem. In the long term, coastal conservation measures could assist the evolution of a consensus on ecological priorities for society. This type of consensus has been termed an "environmental ethic" (Leopold 1933, Dansereau 1975, Ray 1976). Initiative conservation could serve as a catalyst for an environmental ethic.

Mankind today is in desperate need of reestablishing some intimate and meaningful contact with his environment, which can serve as the basis for an environmental ethic. Parks [and coastal reserves] can help us to rediscover . . . our place in Nature's scheme of things (Fuller 1971:14).

Earlier, a "coherent and persuasive doctrine" was described as a requirement for an ecological approach to environmental management in democratic societies characterized by the individualistic political culture. An environmental ethic would provide the grounds for such a doctrine.

CHAPTER FOUR

INFORMATION FOR COASTAL ZONE

MANAGEMENT AND CONSERVATION

Shortages of information for environmental management act as both a problem which needs to be alleviated and an ongoing constraint to which administration must adapt. The information factor acts in conjunction with the problems and constraints outlined in chapters Two and Three, in that managers can only respond to environmental and societal factors if information on them is both adequate and accessible.

General and theoretical descriptions of the information constraint are set forth in section 4.1. Section 4.2 provides a summary of the sources of information on New Zealand's coastal zone and the ways in which this information is communicated. The adequacy of the information base is evaluated from the point of view of those involved in coastal zone management in section 4.3. The final section of the chapter suggests implications of information problems for initiative conservation.

4.1 THE INFORMATION CONSTRAINT

Some of the difficulties of managing coastal resources relate to the ecological complexity of the ecotone, as explained in Chapter Two. Changes in the ecological systems and in the interaction of biophysical and cultural processes of the coastal zone require adaptive and sometimes innovative management. Often, a shortage of information on resource systems or particular environmental factors means that changes are not

fully understood and impacts of development cannot be predicted accurately. Management consequently has undesirable outcomes - in effect, problems are complicated rather than ameliorated (Holt and Segnestam 1982, Ketchum 1972). A lack of data, especially on the marine environment, also means that threats to the ecosystem are difficult to prove and degradation may be severe before the need for remedial action is acknowledged (England, Natural Environment Research Council 1973; Davis 1981).

Information on the interests of the community affected by management decisions is also vital. Methods by which administration seeks community views and advice are investigated in the case study analysis of Chapter Twelve. Ways in which information is disseminated to the public by central government agencies and from other sources are included in the discussion of section 4.2. National-level publicity about coastal characteristics and management problems is an important means of increasing societal awareness of the need for conservation.

It is only when human understanding of the problems involved attains a certain level, that the necessity for protection of the coastal zones becomes obvious .
. . . (Salvat 1976:77).

A third type of information is that which describes and explains the policies and programmes of the agencies involved in coastal zone management. Perceptions of management problems and preferred approaches to solutions vary widely amongst agencies. Coordination of management in the coastal zone, as called for in section 2.4, requires the open communication of information on agency ideals and management priorities or policy.

While information has been categorized here according to its substance (resource systems, societal characteristics and

policy), it can also be classified on conceptual lines.

Information referred to as technical or scientific data fits into Friedmann's (1981:106) typology of "processed knowledge".

Friedmann describes this type of knowledge as:

ephemeral, conservative, sequential, tenuous,
incomplete, fragmented, probabilistic, oriented
towards the recent past, prone to large and undetected
error, and likely to generate images that are
reality-distorting.

These drawbacks of processed knowledge commonly are not recognized, and technical approaches dominate attempts to fill the information gap in most environmental and coastal management problems.

But information on such complex problems is never complete, and even if it were, many direct conflicts between users could never be solved by scientific and technical information alone, for the dispute may be based on incompatible demands (Ketchum 1972:203).

Friedmann contrasts "personal knowledge" to processed knowledge. Personal knowledge is experience-based, and includes ideals and values, such as those reflected in community opinion and agency policy. Information on values is increasingly called for in response to environmental problems. Vickers (1968) feels that knowledge of "objective reality" is relatively well-developed and it is an understanding of the appreciative or value systems of others that managers should seek most urgently.

An approach to coastal zone management described by Dorcey (1983:5,6) depends on two types of information defined on yet another axis. These are "descriptive information", on elements of the system in question, whether biophysical, institutional, technological or ideological; and "functional information", on the cause-effect relationships among elements of the system. Functional information relates to processes whereas descriptive information relates to things. The trend in environmental and

coastal zone management is currently towards a more process-oriented perspective.

4.2 AVAILABILITY OF INFORMATION ON NEW ZEALAND'S COASTAL ZONE

In this section, information related to New Zealand's coastal zone is discussed in terms of its sources, subject matter and means of communication. In this manner, the information base can be characterized according to some of the above features, facilitating an evaluation of its utility to coastal zone management and conservation.

4.2.1 Academic and consultant research

A high level of academic interest in the coastal zone is indicated by a large number of master's or doctoral theses on subjects located on or near the coast (Table 4.1). Four universities have marine laboratories which provide bases for teaching, research and visiting scientists. These encourage the production of theses on marine biology. Physical and mangement studies are much less prevalent than biological studies, and management studies are the least common type. However, trends towards ecological topics amongst the biological theses, and towards a process emphasis in the physical theses, are providing biophysical data of more potential utility to management than did the former "species" or "feature" oriented research. Moreover, recent biological studies of the impacts of pollutants, and physical theses on the causes of erosion,

Table 4.1

MASTER'S OR DOCTORAL THESES ON SUBJECTS LOCATED ON OR NEAR
THE COAST

Field	Date	Number	Coastal Subject
Marine biology	1960-69 1970-79	64 53	
Ecology	1960-79	25	mangroves, estuaries, lagoons, beaches, dunes, nearshore marine eco- systems
General coastal biology (includes above)	1921-79	165	
Physical topics	1932-79 (mainly 1970-79)	57	earlier: features such as minerals or dunes later: shore morphology, coastal processes
Management	1934-79 (mainly 1970-79)	23	earlier: ports, fishing later: coastal planning and management, hazards, institutional arrange- ments

reflect increasing efforts on the part of academics to do work that will hold management implications.

The other index used to estimate the extent of information on the coastal zone provided by academics is coverage of coastal topics in journals over the past fifteen years. Twelve out of the sixteen academic journals surveyed had some coverage of coastal topics. The four with the strongest coastal emphasis were the New Zealand Journal of Marine and Freshwater Research, the New Zealand Journal of Geology and Geophysics, the New Zealand Geographer, and the Town Planning Quarterly. The subject matter of the articles generally parallels that of the theses discussed above, for more recent years. The biological emphasis was ecology and the physical emphasis was on process. Articles on the physical processes of the coastline were the most common type. Apart from the Town Planning Quarterly and the Australasian Environment, few of the journals had articles on coastal uses and management, and even fewer included environmental or conservation topics.

Work carried out by academics or professional consultants for government or private agencies constitutes a large portion of coastal research.

Thus, through the immediate concerns of developers and local authorities for studies leading to protective works and engineering solutions, much has actually been learnt about wave, coastal and estuary behaviour (Environmental Council 1980:17).

In particular, expertise on coastal hazards has expanded through the work of consultants on problem-ridden coastal subdivisions and other large scale developments (Thom pers. comm. 1981). The government also consults "overseas experts" who come to New Zealand to share experience gained elsewhere. New Zealand public servants and academics similarly gain knowledge of use in

New Zealand through visits to other countries.

4.2.2 Government research

At least nine central government agencies either undertake, sponsor, or participate in coastal research. The coastal zone management roles of some of these agencies will be more fully discussed in Chapter Seven. The emphasis of the coastal research undertaken by the nine agencies, and relevant programmes and publications, are summarized in Table 4.2.

The table demonstrates a wide range of research emphases. Together, the research efforts of the various agencies amount to a broad coverage of technical, resource-oriented topics, even though much research is oriented towards individual projects. Some comprehensive coastal research programmes have been undertaken, with conservation-related objectives. These include the Lands and Survey Department's Coastal Reserve Survey (discussed further in section 8.4), the Wildlife Service's wetlands and offshore islands surveys, and the Commission for the Environment's Atlas of Coastal Resources. The publications listed in the Table have varying levels of distribution, but virtually all are freely available to anyone interested. The Coastal Processes newsletter is specially designed for the exchange of technical research findings; it clearly reflects the process emphasis in this type of research. Few of the research programmes or publications are directed towards a general public audience, with the notable exception of the National Conservation Week Campaign, which has had a coastal emphasis. Of the nine bodies, only the Harbours and Foreshores Section of the Ministry of Transport disseminates published

Table 4.2

INVOLVEMENT OF GOVERNMENT AGENCIES IN COASTAL RESEARCH AND INFORMATION DISSEMINATION

Agency	Coastal Research Emphasis	Research, Reports, Programmes and Publications
NZ Oceanographic Institute, DSIR	ocean water movements, aspects of the sea floor, harbour and estuarine studies	<u>Journal of the NZ Oceanographic Institute</u> <u>Coastal Processes</u> - newsletter "to aid communication and coordination between people interested in coastal studies" Bibliography (Estecourt 1976)
Water and Soil Division, Ministry of Works and Development	erosion and water quality related to coastal development (site and project specific)	Jointly publishes <u>Coastal Processes</u>
Estuarine research unit (within Water and Soil)	water quality (general New Zealand coastal zone)	Bibliography of data on estuaries and coastal waters (Carrig & Spence 1977)
National Water and Soil Conservation Organization (research services from Water and Soil Division)	water and soil conservation, erosion	Reports and educational aids <u>Soil and Water</u> - includes articles on coastal zone management and conserv- ation, reports on conferences and research on coastal topics, reviews newspaper coverage of coastal issues
Fisheries Research Division Ministry of Agriculture and Fisheries	research relevant to fishing industry, e.g. commercial species, also nearshore and coast	<u>Catch</u> "a journal of fishing, sports, technology, planning and management of the New Zealand coast"

(Table 4.2)

Agency	Coastal Research Emphasis	Research, Reports, Programmes and Publications
Wildlife Service, Department of Internal Affairs	wildlife habitat and wildlife conservation needs	Survey of New Zealand wetlands Survey of offshore islands
Harbours and Foreshores section, Ministry of Transport	coastal management options and suitability to various areas research for authorization of activities affecting foreshores, coastal waters and the seabed	pamphlets on coastal administration and regulation
Nature Conservation Council (serviced by Department of Lands and Survey)	environmental impacts, conservation	National Conservation Week Campaign (annual) disseminates basic environmental information to public in various forms <u>The New Zealand Environment 1968-1974</u> (and subsequent years) - biblio- graphy including references on coastal topics
Commission for the Environment	environmental impacts of projects involving Government agencies	Environmental Protection and Enhancement Procedures - for the production and audit of impact reports on development proposals. <u>New Zealand Atlas of Coastal Resources</u> (Tortell 1981) - text, and maps at 1:500,000 showing distribution of fish, birds, commercial fisheries, minerals, parks and reserves, recreational activities, areas vulnerable to oil damage

information on its coastal management role and policies; however, policy topics are covered in Soil and Water and Catch.

Most of the research efforts of the different agencies are undertaken independently, and cooperative projects or surveys are uncommon. The following comment on research for general environmental conservation in New Zealand can be said to encompass research for coastal conservation:

. . . notwithstanding the work being done, there is a general lack of integrated commitment and co-operation towards the national objective of a quality landscape There are scattered examples of good . . . co-operation, but generally each agency proceeds independently (DSIR 1980:73).

The information gathered by central government bodies is available to local and regional bodies in varying degrees. Project-oriented work carried out by the Ministry of Works and Development and the Ministry of Transport is usually undertaken to resolve a local management issue. Up to thirty percent of the Coastal and Estuarine Research Unit's time is spent servicing agencies like local councils (Hume, pers. comm. 1981). To a large extent, however, councils are dependent on the expertise of their own planning and scientific personnel. Local and regional bodies with adequate funds, like most harbour boards, make extensive use of consultant services. By this means, environmental impact reports of a similar high quality to those produced for the Commission for the Environment have been compiled on proposals for reclamations, port development, and marine parks. Sometimes, local or regional-level cooperation amongst agencies is used to overcome difficulties of finance and expertise.

4.2.3 Interest group information sources

Apart from the academic and government sources of information discussed in this section, organizations such as the Fishing Industry Board, the New Zealand Underwater Association, and public interest groups also provide information on coastal processes and issues. The publications of some environmental interest groups frequently supply information on coastal issues to members. Scientific organizations also disseminate information on the coast. The Marine Sciences Society, for example, publishes a newsletter which contains bibliographies of current research, and an annual directory of coastal research and the people involved.

General text books and pictorial publications on coastal topics are likely to be more widely read than these more technical publications which are directed to special interests. Seacoast in the Seventies (Morton et al. 1973) was the first book of general interest to draw attention to the mismanagement of the coastal environment. Field guides such as Collins Guide to the New Zealand Seashore (Gunson 1983) may also reach a wide audience. Newspapers reach a wider audience than any other written information source, so their coverage of coastal topics, as reflected in the survey of The Press in section 3.2.1, is important to public education on coastal issues.

4.2.4 Information exchange through conferences and seminars

Another form of information exchange, which has involved academics, government, consultants, other professionals, interest groups and members of the public, is the conference. At least eleven conferences, seminars or symposia held throughout New Zealand since 1969 have directly addressed problems of coastal zone management and conservation. Table 4.3 lists nine conferences with coastal themes and two with more general environmental themes which gave coastal topics considerable coverage. All of these approached a broad range of coastal topics at the national scale, although some emphasized certain regions of New Zealand or particular coastal environments. Other conferences or seminars of narrower coastal interest, like the 1974 Waitemata Harbour Conference and the Nature Conservation Council's Mangroves Symposium, are not included in the list.

Table 4.3 shows that earlier conferences tended to be sponsored by professional groups, while more recent meetings have been initiated by government agencies or conservation interests. The Ministry of Transport has indicated that coastal zone management seminars are to be held biennially (Harbours and Foreshores Newsletter 1, 1984:3). This trend reflects a shift in awareness of and responsibility for coastal problems, evolving from a technical orientation around physical problems, to a more wide-ranging approach to general management problems.

The Physical Environment Conference was the first national gathering to address seriously the problems of managing coastal waters, lands, and the sea bed. While each ensuing conference has produced more coastal information and educated more people concerned with coastal problems, some participants have

Table 4.3

CONFERENCES ADDRESSING COASTAL ZONE MANAGEMENT

Year	Conference Title	Sponsor
1969	Coastal Development	NZ Institute of Surveyors
1970	Coastal Symposium: How can New Zealand best use its coastal heritage?	Coromandel County Council
1970	The Physical Environment Conference	Ministry of Works and Development, NZ Institute of Engineers
1974	Regional Management of Sea Coasts and Lake Shores	NZ Institute of Engineers: Technical group on water
1976	Estuary Seminar	Invercargill Conservation Council
1977	Environment 77 Coastal Zone Workshop	Environment Centre (Canterbury) Inc.
1978	Between the Tides	Nature Conservation Council
1978	Joint Seminar on Coastal Planning and Development	Environmental Council, Nature Conservation Council
1980	Seminar on Preservation and Recreation	Land Use Advisory Council, Environmental Council, University of Otago
1980	Coastal Zone Management Seminar	Ministry of Transport Maritime Policy Branch
1982	Coastal Zone Management Seminar	Commission for the Environment

expressed frustration with the little progress in management that has resulted from the various gatherings:

Seminars on harbours and the coast have become a New Zealand custom. At regular intervals concern erupts about reclamation, pollution, . . . and many other issues. Coastal and maritime problems of every kind are described in papers (most of them excellent) and fragmented, weak management is inevitably deplored. Strong recommendations, usually calling for an effective control system, are made. The rest is silence; until the next conference or seminar, as if some national fever has been purged (Lello 1980b:6).

Government conference organizers appear to have recognized the problem of lack of practical outcomes of conferences, for the next biennial conference is to "focus on how to resolve problems in coastal management rather than to identify more" (The Press 20/6/1984).

Altogether, the various sources of information on the New Zealand coast promise the potential for a broad, if not comprehensive, information base for coastal zone management and conservation. Government and academic research indicates a dominant process orientation. Agency and consultant research that was project-oriented is increasingly recognized as having broader applications. Information is still dominantly technical, but it is collected and presented in forms that have direct implications for management. Some values-type information is provided in special interest group publications, in some environmental impact reports, and in the occasional general publication, such as Seacoast in the Seventies (Morton et al. 1973).

Although there exist several coastal research publications and bibliographies, much data that might be useful to management is not accessible. Unpublished results of work carried out by

scientists, consultants or departmental employees for specific projects is not often collated into a form that would be useful to those not directly involved in those projects. While an informal network of information exchange between government agencies and interest groups aids in the dissemination of research findings, communication of technical coastal information remains inadequate. Cooperative research efforts have shown more potential at the regional than the national level.

Much effort has been put into the exchange of experience-based knowledge and policy information through conferences and seminars. The published or unpublished proceedings of these meetings constitute a valuable written source of policy, resource system and values related information, even if they do not always result in the solutions to management problems that participants seek.

4.3 ADEQUACY OF THE INFORMATION BASE FOR COASTAL MANAGEMENT AND CONSERVATION

Discussion at most conferences and seminars has touched on the subject of information, usually identifying the lack of information on the coastal zone as a major impediment to national planning and management. The 1969 seminar called for a study group that would spend one year defining coastal problems, as a basis for national policy. Later meetings drew attention to deficiencies in knowledge of the character of the coastal resource, rather than management issues. A paper presented in

1978 stated that

Many costly and difficult problems have already been created as a result of inadequate understanding of the processes governing coastal stability and the debate on the forms which national coastal policy and administration should take has masked serious deficiencies in research and survey procedures used to generate data for planning purposes (Kirk 1979:abstract).

And at the 1980 Coastal Zone Management seminar the need for more information on almost all aspects of the coastal environment was again a frequent topic of discussion.

Throughout the 1970s almost everyone concerned with coastal matters called for more research: the Officials' Committee for the Environment (n.d.) commented that "there is a serious lack of knowledge of the nature, quality, and quantity of resources available to New Zealand in its coastal waters and sea bed"; and the Environment Defense Society (1976) perceived an urgent need for an extensive study of the coastal zone. Specific gaps in the data base, such as the ecology of estuaries and fisheries resources, mineral potential, and community social demands on the coast, were highlighted.

Since 1980, more positive views on the adequacy of the coastal information base have been put forward. A participant in the 1980 seminar commented that a substantial amount of information on the coastal environment exists, but decision makers are unaware of it (Hickman 1980). Researchers for the Atlas of Coastal Resources found that "the volume of information exceeded all expectations" (Tortell 1981:5). Westerskov and Probert (1981:30) note that "marine research in New Zealand has developed rapidly in the last thirty years", and a coastal consultant has observed that the range of information on the coast has improved rapidly over the past ten years (Thom

1982:2).

However, those who recognize an extensive coastal data base temper their views with qualifications related to persisting information gaps and the utility of existing data. The Nature Conservation Council (1981:52) observed that while existing information sources are well developed, the data is fragmented and large gaps exist on topics such as the biological resources of marine waters. The DSIR (1980:72) notes the lack of:

. . . a checklist of all the communities and landscape types found in the country which should be protected [and knowledge of] what communities are already contained in the greater part of existing parks and reserves.

Other organizations and individuals note further deficiencies of information on estuaries (OECD 1981:66); the nearshore, sea bottom, tidal and intertidal zones (Dingwall pers. comm. 1980); the life cycle of seabirds (Owen pers. comm. 1981); and the dynamics of coastal landforms (Environmental Council 1980:17).

Other problems stem from the character and use of information rather than its completeness. For example, coastal research in New Zealand tended to be site specific and problem specific, so that its results were applicable only in limited areas and narrow fields. A continuing restriction on the utility of information is the difficulty of interpreting technical data for management purposes.

Both the interpretation of existing information and the collection of new information are affected by the expertise available in agencies with management responsibilities. Sound coastal management is facilitated by planners and managers with ecological expertise and specialized training in resource management or planning. The expertise of planning and

scientific personnel employed by local councils is often considered to be inadequate, especially in cases where councils are too small to attract experienced staff (Fookes 1974:92).

Lack of financial resources is often cited as an impediment to ongoing coastal research. While more data is desired by everyone involved, agencies are slow to volunteer the necessary funds. One means of relieving this problem is the sharing of the financial burden in cooperative research projects. Joint efforts also promote the dissemination of research results and ensure a more coherent approach to coastal zone research that otherwise might be artificially discontinuous at the boundaries of agency jurisdictions.

4.4 IMPLICATIONS FOR COASTAL ZONE MANAGEMENT AND CONSERVATION

Although the costs of generating and disseminating information on the diverse social and biophysical elements and processes of the coastal zone are high, they must nevertheless be borne, because an adequate information base is essential to sound environmental management (Sabatier 1977:455). Assessment of the coastal resource base and the demands likely to be made on it is prerequisite to the formation of definite management objectives, while ongoing responsive management depends on continuing interpretation of changing resource needs. A lack of recognition of the nature of coastal processes in New Zealand has led to critical physical problems, such as erosion, which could be avoided with the help of a sound data base (Healy 1980, Kirk 1979, Environmental Council 1980). Inadequate information

has also been a factor in the degradation of fisheries resources and intertidal ecosystems.

Information that is accessible to coastal interests other than scientists, planners and managers, provides those interests with the opportunity to become involved in the decision-making process. Education of the public in general on the needs of the coastal environment promotes support of measures taken in response to those needs. As discussed in Chapter Three, initiative conservation areas can provide the opportunity for direct exposure to less modified coastal environments and for the acquisition of personal, or experience-based knowledge on such environments by large numbers of people. Conservation areas also maintain opportunities for the acquisition of processed or technical knowledge through scientific research. Natural areas reserved from the effects of human exploitation provide the opportunity for study of "healthy" coastal ecosystems and maintain baselines against which impacts in other coastal areas can be measured. Data gathered from them can aid in the efficient long term development of commercial fisheries. The pooling of information from research in a system of reserves could eventually contribute to more sensitive and responsive management of the coastal zone as a whole.

In various ways, information is important to the selection, establishment, and management of protected areas on the coast. Because of the need for the coordination of coastal conservation measures with other regulatory and administrative activities, information on agency management priorities should be exchanged. Also, a knowledge of the range of alternative measures for conservation aids the selection of arrangements most suitable to the characteristics of a particular area. These policy and

institutional factors are fully investigated in other chapters.

A lack of information is frequently cited as the major constraint on system planning for reserves in New Zealand. A national inventory of coastal resources would facilitate the design of a reserve system that would include examples of all coastal and marine ecosystems. A survey of coastal resources would also assist: the identification of vulnerable areas with special characteristics deserving protection; the selection of reserves on the basis of their potential individual contribution to conservation needs; and the ranking of areas for acquisition through the allocation of scarce financial resources (DSIR 1980:72). The Coastal Reserves Survey has partially filled these needs with respect to coastal lands, but nothing comparable has been undertaken for the marine or intertidal environments.

Protected area planning also requires information on socio-cultural factors such as those determining the human demands on coastal resources. The management adaptations to political-cultural constraints discussed in section 3.3 depend on such values-oriented information. The survey of section 4.2 indicated that this type of information is not widely available in New Zealand. However, if the local or regional community, rather than the public-at-large, is regarded as the relevant social unit, then information on values must be collected at the level of the individual conservation area and its region. Technical information necessary to the ecologically-sound management of conservation areas, as described in Chapter One, must also be collected through research at the management unit level. Environmental and community needs can only be accommodated fully by management based on detailed inventories

and ongoing monitoring of resource condition and use pressures. When constraints preclude the building of a comprehensive information base, as is usually the case, management techniques must be flexible enough to accommodate new data and unexpected change without allowing environmental degradation.

Clearly, the adequacy and availability of information on the coastal zone has potentially strong implications for the success of initiative coastal conservation, and participants in coastal zone management everywhere agree that increased research efforts are necessary. Nevertheless, most would also agree that "significant action" must be taken before information needs are fully met (Ray 1976, Koeswadji 1982). Coastal development frequently proceeds regardless of the completeness of the data base, with a greater risk of irreversible environmental degradation than conservation measures could present. This bias towards development in the face of uncertainty is one of the root causes of existing coastal management problems, especially concerning initiative conservation:

What is now uncomfortably and most seriously clear is that, in the lowland areas of New Zealand (and this includes the coast), development is destroying or changing the ecosystems which should be identified and considered for reservation, at a rate which much exceeds that of surveys, reporting, evaluation, selection, recommendations and purchase (Thom 1982:1).

Initiative conservation must be implemented in the coastal zone while "making do" with the information currently available.

Ballantine (1980:2) notes that, in New Zealand,

We are even more ignorant of the marine world now than our predecessors were of the land when they began the process of reserving from exploitive activity large pieces of everything they came across.

As a general principle, "ignorance" of the social and biophysical nature of the coastal zone should be regarded as an

incentive, rather than a deterrent, to initiative conservation measures.

PART II POLICIES AND INSTITUTIONAL ARRANGEMENTS FOR
INITIATIVE CONSERVATION IN THE COASTAL ZONE:
THEORY AND THE NEW ZEALAND EXAMPLE

For the purposes of the present thesis, policy is regarded as the core of environmental management. Policy, including policy for initiative conservation arrangements, is the key to the solution of the problems discussed in Part I; yet it is subject to the constraints on management associated with the biophysical, societal and informational characteristics of the coastal zone which cause those problems. It is also subject to constraints inherent to the policy-making process and the institutional arrangements surrounding policy.

The elements and processes contributing to the formation of policy, and the theory of policy performance and problems, are discussed and then modelled in Chapter Five. Chapter Six examines the nature of institutional arrangements and their relationship to policy. It also suggests principles for institutional arrangements that will promote the development of policy to minimize management problems. Chapters Seven and Eight return to the empirical New Zealand example. They describe national level institutional arrangements and policies (respectively) for coastal conservation and draw some broad-based observations in terms of the theory presented in Chapters Five and Six.

CHAPTER FIVE

POLICY COMPONENTS AND PROCESSES: A MODEL

In this chapter, a normative theory is developed which brings together the sources (or determinants), components, and outcomes of policy, and identifies the processes connecting these various elements of the policy system.

A definition of policy suited to the purpose of the present thesis, and the analytical orientation towards policy adopted here, are explained in section 5.1. Policy components and their determinants are described in the second section, and policy outcomes, in terms of management operations, are outlined in section 5.3. In section 5.4, the active connections or processes which build the policy system are explored, focusing on problematic aspects of interaction. Also in section 5.4, social learning theory is put forward as the foundation for principles of sound environmental policy. Then, building on these sections, a policy model is developed in section 5.5. Sections 5.2 to 5.5 provide a normative framework for analysis which encompasses the recommendations made in Part I for adapting to coastal management needs and constraints.

5.1 DEFINITION AND ANALYTICAL ORIENTATION

Policy reflects the attitudes, priorities, goals and ideals that form the values framework of a management agency. It can be seen as an "appreciative system" (Vickers 1968), or "a texture of maps, rules or diagrams for the performance of certain acts when certain conditions are present . . . precedents for behaviour" (J.W. Bennett 1976:260). It provides principles and guidelines against which alternative actions can be evaluated (O'Riordan 1982:103) and forms the basis for purposive (goal-oriented) choice and action (Mitchell 1979:295). Simmons et al. (1974) provide a definition which is appropriate to present purposes:

Policy is regarded as an indication of intention, a guide to action (rather than a decision which implies immediate consequence) and encompasses values which set social priorities in relations between government and society.

A theory of policy as an amalgam of mandate, goals and ideals is developed in section 5.2. This theory, and the use of the term policy in other sections of the chapter, is consistent with the above interpretation.

In this thesis, policy concepts will be pursued through a range of analytical objectives including description, explanation (analysis), evaluation and prescription.

Policy description is difficult because agencies do not always state policies explicitly. The existence and nature of policies may have to be detected indirectly, by examining the behaviour of a policy-making or -implementing body. The case study approach, as described in Chapter One, was chosen to serve this purpose.

Social scientists, including geographers, are divided over

the type of policy analysis they advocate. Some would only look at policy outcomes or implications, because they believe it is not the scientist's role to determine policy (Cook and Scioli 1975:95, Coleman 1975:25, Mitchell 1979:293). The stand is taken in this study that policy analysts must consider determinants of policy in order to fulfil the explanation, evaluation and prescription objectives. This standpoint does allow that actual policy decisions should be made by the various levels of government, through the political process. Support for this perspective on policy analysis is outlined below.

Social scientists are increasingly interested in process and interaction (see section 5.4); and as they seek to explain phenomena, they are now more willing to consider subjective factors such as perceptions, attitudes and values. As Wengert (1971:437,438) observes:

. . . much in present-day social science stresses the complexity of the goal or value structure, and emphasizes the contextual as well as the pragmatic relationships between ends and means More attention should be directed to questions of what ends are being sought, whose ends, how have these ends been determined [sic].

Johnson (1975:78) argues for a critical approach to policy research on the grounds of the social utility of improving policy-makers' choices. The scientist can provide information to assist the evaluation of alternative policies by explaining connections between policy inputs and impacts. He or she can also increase the range of alternatives considered by the policy-maker. Finally, by evaluating policy impacts from a perspective "outside the particular frame of reference of the policy-maker" (that is, outside the terms of the policy itself) and then relating these impacts to policy inputs or environment, the scientist can help "enlarge the conceptual framework within

which policy choices are made" (Johnson 1975:82). In other words, without actually prescribing policy, the social scientist can prescribe frameworks and principles that contribute to the design of effective policies.

If the analyst is to go beyond the policy-maker's framework in the evaluation of policy, another framework, or set of criteria for judgement, must be devised. Criteria can be developed from a theoretical base or model, or from empirical evidence of past experience. Suggestions for sound environmental management and initiative conservation made on the basis of New Zealand and more general experience in Part I also can be viewed as aids to appropriate policy. Similar criteria for judging policy will be established on theoretical grounds in this chapter.

Because the evaluative and prescriptive objectives assume an intent to improve upon the status quo, and depend upon comparison with idealized criteria, the approach can be termed normative. A survey of approaches to policy analysis by ten authors is summarized in Tables 5.1A and 5.1B. All of the components of the various models are categorized into two or three groups corresponding to the parameters: 1) determinants of policy or policy environment, 2) policy, and 3) policy outcomes. An emphasis on policy outcomes tends to dominate amongst the models, especially the descriptive models of Table 5.1A. Most models that do cover determinants of policy place equal emphasis on policy outcomes. However, two - Vickers' (1965) model of the appreciative system, and Keith's (1976) model of technology assessment systems - exclusively focus on the determinants parameter. These latter are amongst the normative models of Table 5.1B. Overall, there appears to be a

Table 5.1 A

COMPARATIVE MATRIX OF POLICY MODELS: DESCRIPTIVE MODELS

Author	Burton 1979	Coleman 1975	Cook and Scioli 1975		Johnson 1975	Kasperson (in Mitchell 1979)	Vickers 1965
Short Title	Decision	Variable Classes in Methodology for Policy Research	Public Policy Evaluation	Policy Impact Model	Policy Analysis	Model of Stress Management	Regulatory System
Emphasis	Policy Outcomes	Policy Outcomes	Policy Outcomes	Policy Outcomes	Policy Outcomes	All Parameters	Policy Outcomes
<u>Determinants of Policy or Policy Environment</u>		<u>Situational or Control Variables</u> not subject to policy control			<u>Target Population population condition</u>	<u>Perception of Stress in the Environment</u>	
<u>Policy</u>	<u>Goals Policies</u>	<u>Policy Variables</u> Amenable to policy control	<u>Policy Objectives</u>	<u>Effectiveness Criteria</u> <u>Objectives Procedural and outcome</u>	<u>Conceptualizing and selection of observable Indicators</u>	<u>Evaluation using Goals, Values</u>	<u>Policy Making element</u>
<u>Policy Outcomes</u>	<u>Planning and Programming</u> <u>Implementation</u>	<u>Outcomes of policy;</u> intended and unintended	<u>Action to achieve objectives</u> <u>Policy Consequences</u>	<u>Programme Activities</u> <u>Impacts intended unintended</u>	<u>operating characteristics of Programmes</u> <u>Programme Consequences</u>	<u>Decisions to resolve stress in the environment</u>	<u>Executive element</u>

Table 5.1 B

COMPARATIVE MATRIX OF POLICY MODELS: NORMATIVE MODELS

Author	Burns and Chevalier 1977	Keith <u>et al.</u> 1976	Mitchell 1979	Morrison 1974	Sabatier 1977	Vickers 1965
Short Title	Field Concept of Public Management	Technology Assessment Systems	General Model for Policy and Decision Making	Collective Decision Making (or problem solving) System of Society	Determinants of Agency Policy	Appreciative System
Emphasis	All Parameters	Policy Determinants	Policy Outcomes	All Parameters	All Parameters	Policy Determinants
<u>Determinants of Policy or Policy Environment</u>	<u>Policy Field:</u> fields of related activity co-produced by the inter-penetrating effects of programmes	<u>Substantive Issues</u> unresolved questions perceived by actors	<u>Problem Constraints</u>	<u>Society and Problem Areas</u> the environment and pressures generated from society	<u>Inputs into decision making</u> <u>External Environment Resource and Attitudinal Variables.</u> <u>Situational variables</u>	<u>Reality judgements</u>
<u>Policy</u>	<u>Activity Initiative</u> Bringing together and application of knowledge. Includes objectives and goals. Symbolic component. <u>Contextual Values or Norms</u> relevant to all activities	<u>Technology Assessment System Issues</u> information, Actors & interrelationships	<u>Objectives</u> Criteria	<u>Policy Design System</u> Decision making (policy) apparatus	<u>Policy Outputs</u> goals, regulations	<u>Value judgements</u>
<u>Policy Outcomes</u>	<u>Activity Intervention</u> Manipulation of resources to carry out the activity Energetic component <u>Output of Activity</u>	<u>Decision</u> (also a technology assessment system issue)	<u>Strategies</u> <u>Implementation</u>	<u>Policy Outputs</u> (decisions) policy implementation programme and policy impact	adjudicative decisions <u>Impacts of policy on agency's external environment</u>	<u>Instrumental judgements</u> (decision making)

connection between a normative or descriptive approach and a determinant or outcome emphasis. Five out of six normative models include some emphasis on inputs, while six of the seven descriptive approaches have a bias towards policy outcomes.

In the present thesis, the pattern identified in Table 5.1 is maintained. The approach is normative and the emphasis of analysis is on determinants of policy, or the policy environment.

5.2 POLICY COMPONENTS AND DETERMINANTS

The discussion of policy composition in this and the following sections relate to Figure 5.1. This section relates to the upper two levels of the diagram - policy determinants and policy components. Section 5.3 is oriented around the lower two levels which describe the management operations of an agency. The section numbers are labelled on the diagram to assist in its interpretation.

Policy here is interpreted as a mixture of three components: mandate, goals and ideals. A policy-making agency's ideals are the core of policy, influencing, and influenced by, mandate and goals. A central premise of this thesis is that policy ideals should be founded in societal or community attitudes and values (as discussed in Chapter Three). Goals are oriented around the resource or resources of concern to the agency and societal priorities for those resources. These priorities influence, and are influenced by, societal values. Mandate is determined by institutional arrangements and

by political culture. Political culture is a function of institutional arrangements and societal values, and it also affects societal values to some extent. The overall relationship between policy components and determinants is outlined in Figure 5.1. Each component is defined and its composition and determinants are elaborated upon below. The subsection headings correspond to the components, and determinants are underlined.

5.2.1 Agency ideals

The agency ideals component of policy encompasses the values and the ideology of the policy-making agency, which should be determined by the values and ideology of society or the community served by the agency. General definitions of these terms are adopted, as described below.

Values are the "things or relationships which people would like to have or to enjoy" (Muir and Paddison 1981:26) including "ends, goals, beliefs, ethics, biases, attitudes, traditions, morals and objectives" (Henning 1974:15). A definition researched by Potter and Norville (1981:179) for their study of social values in policy statements suits present purposes:

. . . values are conceptions of the desirable that help to guide decision making, and they usually contain criteria for preferences by providing codes or standards for conduct.

These authors characterize values as "enduring, stable and learned"; however, values do change over time and "vary substantially in their specificity/generality (sic) and their abstractedness/concreteness", and they may contradict one another (D.E. Mann 1981:23). The need for values as an

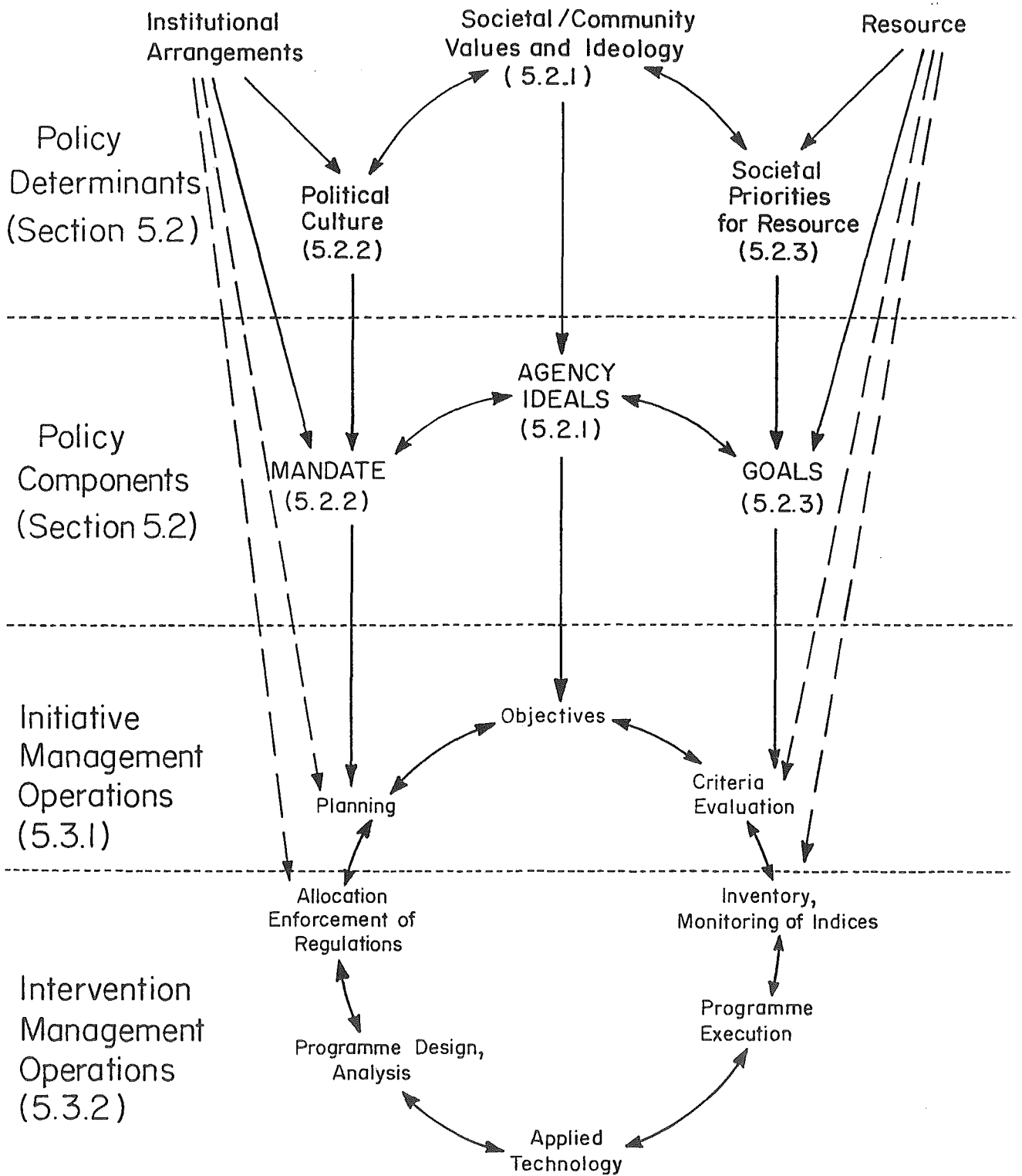


Figure 5.1

INTERRELATIONSHIPS BETWEEN POLICY DETERMINANTS, POLICY COMPONENTS, AND MANAGEMENT OPERATIONS

integrating focus or purpose around which to orient technical knowledge was pointed out in Chapter Four (see also Caldwell 1970:9, Oakley 1978:302, Murphy 1978:8).

With increasing awareness of the importance of values to policy, researchers and analysts are becoming more cognizant of problems involved in dealing with values. Most writers agree that societal values are difficult to analyze and describe, and especially to predict, with acceptable levels of accuracy (e.g., Bennett and Chorley 1978:251, Henning 1974:3, D.E. Mann 1981:1). "[Values] are believed to be general and abstract concepts, and thus they, themselves, are not directly observable but must be inferred from the behaviour they elicit" (Potter and Norville 1981:179). In this way, attitudes towards the coast in New Zealand were estimated in Chapter Three, using indices such as newspaper articles, and drawing on observations of public reactions to threats to the coast.

Ideologies encompass and help to explain or justify systems of values. Specific values within an ideology can evolve or be replaced, while the ideology is both more durable and broader than the values. D.E. Mann (1981:13), introducing his edited volume on the impact of values, ideology and standards on environment policy formation, states that "ideologies include within them not only the values that guide behaviour but also a vision of an anticipated world in which those values may be paramount". Their prescriptive aspect leads agency ideologies to act as both guides and constraints to policy (Muir and Paddison 1981:29).

5.2.2 Mandate

A factor that can either facilitate or interfere with the integration of societal values into agency ideals is policy mandate. Mandate interacts with agency ideals, but it is largely a function of the institutional arrangements which define an agency's responsibilities and grant it powers to meet these responsibilities. Institutional arrangements include statutes and legal regulations, and organizational or administrative structures. The set of laws or statutes administered by an agency is a primary determinant of mandate, in that the agency's official, long term governmental mission is founded in these statutes. Administrative systems, including personnel interaction and the allocation of resources to the agency, also affect the mandate. The impact of laws and administrative systems on policy mandate and the subsequent impact of mandate on ideals is a major focus of the present thesis. The theory of this interaction is explored in more detail in Chapter Six.

Political processes help to determine mandate by delimiting the practical extent of an agency's powers. A relatively stable factor affecting political processes and thus mandate is political culture. "Political culture is the pattern of individual attitudes and orientations towards politics among the members of a political culture system" (Almond and Powell in Muir and Paddison 1981:24). It is usually a national concept, as it includes "the set of traditions, conventions and expected ways of doing things which drive the machinery of government" (O'Riordan 1982:108). Two political culture categories delineated by Sabatier (1976:449-450) are the "individualistic" and the "moralistic". In the former, community intervention

into private activities is limited, and government is regarded as an arbiter among interests. In the "moralistic" political culture, politics is seen as a means of advancing the common good and government is a promoter of general welfare. Countries with parliamentary governments, such as New Zealand, have political cultures that possess both individualistic and moralistic attributes. Policy is defined more or less centrally, in departments of state, but regulatory intervention into the affairs of individuals is minimized. Implications of the individualistic political culture for coastal zone management and conservation were explored in Chapter Three with reference to New Zealand.

5.2.3 Goals

Goals include the stated and unstated intentions of agency officials which may relate to mandated duties or to the administrative experience of the agency. They also include specified or unspecified images of future states sought by an agency through its operations, but they tend to be more purposive and more changeable than are ideals. Different levels of goals exist, so that achievement of one goal may be part of the means to achievement of another.

Within the field of environmental management, ecological values and scientific knowledge of the resource being administered should be dominant bases of policy goals. Bennett and Chorley (1978:439) describe the "biological goal: This is designed to protect nature (flora, fauna, waters, air and earth resources) and to counteract the damaging effect of human intervention". Biological, ecological, resource or

environmental goals have to compete with technological, economic and organizational priorities; accordingly, natural resources are a common focus of political debate. The nature of the coastal resource, which should help determine the character of goals for coastal conservation, was investigated for the New Zealand case in Chapter Two.

An agency's interpretation of community priorities for resource use should also have a strong influence on policy goals. These priorities were explored at the national level for New Zealand in Chapter Three.

5.3 POLICY AND MANAGEMENT OPERATIONS

Often, planners or public policy theorists include an active component in their consideration of policy (Aucoin 1979:21,22, O'Riordan 1982:104, Dorsey 1983:10). The active, implementation aspects of other approaches to policy are considered as policy's reflection in management operations for present purposes. Given a broad definition of policy covering ideals, mandate and goals, most of an agency's operations can be viewed as policy outcomes. Because different management operations are closely interconnected and are also affected by factors other than policy, they cannot be attributed entirely to particular policy components. Nevertheless, those outputs with a symbolic character are more directly related to policy than are the energetic or active operations of an agency. These two types of policy outputs will be discussed under the headings initiative and intervention management operations. Individual

elements of such operations, as delineated in Figure 5.1, are underlined in the text.

5.3.1 Initiative management operations

Planning, objectives, and criteria definition and evaluation fall into the symbolic category, or the initiative type of policy outcome in management operations.

Initiative connotes the bringing together and application of knowledge in a purposeful manner by a set of individuals functioning in an organization (Chevalier and Burns 1977:18).

Initiative output is more specific and more applied, or more operational than is policy itself. The specific theoretical connection between policy components and initiative operations are shown in Figure 5.1. Criteria for evaluating changes in the resource administered by an agency, particularly those changes attributable to the the impacts of agency operations, are derived from policy goals and, in part, from detailed objectives which are based in policy ideals. Evaluation focuses on the changes in the resource which can be attributed to the impacts of agency operations. Planning, at the operational level, is usually perceived as "management planning", in which specific control mechanisms are selected from alternative approaches on the basis of objectives. The plan itself should be "a flexible guide for changing needs and environmental considerations" (Henning 1974:37), which closely reflects operational objectives. Policy mandate and institutional arrangements often provide for formal, statutory planning procedures. An agency's mandate can also limit or facilitate participation in ad hoc planning exercises at the regional level.

5.3.2 Intervention management operations

The more active operations of an agency which are connected to policy by initiative operations can be described as control-oriented policy outcomes or intervention management operations.

Intervention connotes the manipulation of resources to carry out the activity, in configuration established by the relationship of knowledge and interests (Chevalier and Burns 1978:18).

The connections between initiative management operations and intervention management operations, as well as other factors affecting intervention measures, are outlined in the bottom level of Figure 5.1. In operational terms, intervention by "manipulation of resources" is achieved primarily through allocation and the enforcement of regulations to change peoples' behaviour. In environmental management, the resources which are mobilized, manipulated or allocated are the human energy and expertise, and the capital, put at the disposal of the agency through institutional arrangements. Natural resources belonging to the public also will be allocated. Allocation decisions are guided by planning and by institutional arrangements. Resource distribution is executed largely through the design of programmes of activity which are limited by the technology made available to an agency via the expertise of its personnel or consultants. Execution of programmes is the most obvious means by which the uses, and therefore the condition, of the natural resources under the control of the agency will be affected by management operations.

While agency resource allocation, particularly in the form of expenditures, is often taken as the main indicator of policy outcomes, regulation is another important expression of policy

(Aucoin 1979:3). Here, regulations per se are understood as institutional arrangements, while enforcement or implementation of regulations is an intervention-type policy outcome. Murphy (1977:14) suggests that regulation is the means of intervention preferred by decision-makers:

It is far more appealing to the bureaucratic decision-maker to employ the negative tool of regulation and to risk only failure of omission than to launch out on a positive course of action that could lead to indictable disaster.

In the conservation field, where policies commonly "intervene against natural economic processes" (Muir and Paddison 1981:135), regulation is often used extensively to control unwanted disturbances to the environment. Initiative conservation measures are a more positive form of intervention for conservation.

Intervention also depends on procedures that are less manipulative of people and resources, such as the observation of resource indices through inventory and monitoring, and the analysis of resource data. Indices of resource character are selected to meet the needs of evaluative criteria and to provide the information necessary for programme development, analysis and execution. They are essentially a more detailed representation of the criteria defined by initiative management operations, which measure key characteristics of the resource in question.

5.4 POLICY PROCESSES, INTEGRATION AND SOCIAL LEARNING

The policy determinants, components and outcomes discussed above are not static but dynamic; they change and interact with one another continuously, through various processes. Much recent writing on environmental policy emphasizes the need for a process orientation (Chevalier and Burns 1977:3, Bennett and Chorley 1978:545). Waddington (1977) contrasts a Heraclitan "process" philosophy with a Democritan "thing" view. He suggests that modern systems approaches to research are still basically "things" oriented, and he feels they hold little potential "for making major advances in human comprehension" (p.21, 24). In place of these "mechanistic" or "reductionist" approaches, Waddington supports a view of science reflecting a return to the Heraclitan philosophy in which:

. . . science is based on observations, which, made in a controlled and organized way, amount to experiments. Now an observation, or an experiment, . . . involves the experiencing person Thus phenomena like mind, or conscious perception, are included in the very foundation of knowledge (1977:22).

Processed knowledge, discussed in Chapter Four, can also be seen as things oriented and reductionist. Friedmann would temper an over-emphasis on processed knowledge with "personal knowledge [which] is limited to the experiences that one has had" (1981:99). Either type of knowledge on its own is inadequate to social problem solving; the two must therefore be integrated, as Waddington's "experiments" perforce involve the "experiencing person". Notions of change and process are integral to the pursuit and integration of the two types of knowledge.

Henning (1974:15) observed that, while the science and technology of resource management are relatively well developed,

"present problems and political realities call for emphasis on values, power conflicts and human interaction in determining environmental policy". Power, information and interaction are central to policy processes. The effectiveness of policy for regulatory measures involving resource systems depends on adequate information on the values of those involved, including management agencies and the public. The acquisition of information, especially on values, depends on interaction and communication. When information is openly exchanged through interaction, coordination of interests and processes related to policy can be attained.

The harmonious interaction or coordination of those interested in, or affected by, policy, will be termed integration for the purposes of the present thesis. The need for integration of environmental management and initiative conservation measures with societal attitudes and values was a theme of Chapter Three. The setting of priorities "that correspond with the interests of the governed" (Aucoin 1979:21) depends on a "minimum of consensus" on basic values in society (Murphy 1977:8); yet social agreement on environmental "goals, risks, standards [and] judgemental means" (Murphy 1977:11) is lacking. The absence of well-defined overriding societal values or ideals around which to orient policy increases the possibility that policy will be short range, pragmatic, limited in scope, incremental, satisficing and lacking in overall ideology (Henning 1974:8, Muir and Paddison 1981:139, Dunn 1971:158, Wengert 1971:438). It is also likely to be less innovative and more subject to influence from special interests, and to ignore important variables. These problems are discussed as symptoms of "disjointed incrementalism" in section 6.2.

Potential management responses to constraints on policy posed by societal attitudes were proposed in section 3.3. Responses such as open planning, evolutionary change and public education focus on ongoing processes rather than specific ends. An interactive, process emphasis enables both a responsiveness in policy to existing societal priorities, and the encouragement of societal consensus through policy processes (O'Riordan 1976:262-63). Ketchum (1972:25-26) describes this process in terms that are very similar to those of social learning theory:

Thus, as we proceed into the future by a successive series of approximately informed and rational decisions, we can periodically adjust coefficients of the use-environmental quality equations for achievement of successively perceived optimum states. These optimum states in turn, will we hope, reflect a wiser and better informed consensus of public opinion.

Social learning concepts are closely tied to notions of process, adaptation and integration in social systems (or, for present purposes, resource systems). They have been thoroughly explored by Dunn (1971), as a model for social change, and by Friedmann (1981) and others, with reference to social change, planning, and policy evolution and evaluation. Dunn (1971) suggests that the social learning process is manifest in three forms of directed behaviour: behaviour directed to organizing behaviour, behaviour-analysing behaviour, and behaviour-changing behaviour. The social system exercises its unique capacity to reprogramme its own behaviour through "evolutionary experimentation".

From the perspective of evolutionary experimentation (Dunn 1971), or "experimental evolution" (Friedmann 1981),

. . . history appears as a process of social learning in which old knowledge yields to new as it emerges from the interplay of theory and practice (Friedmann 1981:230).

Friedmann declares experimental evolution to be unique amongst explanations of social change because it accommodates guided social change. Guidance begins with "behaviour-analyzing behaviour" determining social system performance. "Performance" is measured normatively in terms of goal realization. New social practices, actions or innovations will be reinforced if they seem to promote goal achievement; otherwise they will be replaced, and new practices or forms of organization will be developed and tested (behaviour-organizing behaviour). Sometimes, problems or opportunities may be encountered that cannot be dealt with suitably by any conceivable social practices within the existing system. Then, goals and perhaps concepts of the system itself may have to be reformulated (behaviour-changing behaviour).

Applications of social learning concepts to policy formation and analysis clearly emphasize process, integration and experimentation. Friedmann and Hudson (1974:10) explicitly connect policy evolution through experimentation and adaptation to social learning: "Policy analysis becomes increasingly experience-based . . . [as the] reciprocal nurturing of theory and practice approaches . . . social learning". Friedmann (1981:xvii) has conceptualized "social learning as an approach to planning in which practice would be joined to theory within a single movement involving four intersecting dimensions (Figure 5.2). The four elements are relatively stable as long as "critical consciousness" is satisfied by "social practice". When this is not the case, strategies are questioned first, but if modification of strategies does not provide a solution, then theory of reality and perhaps even social values may need to be

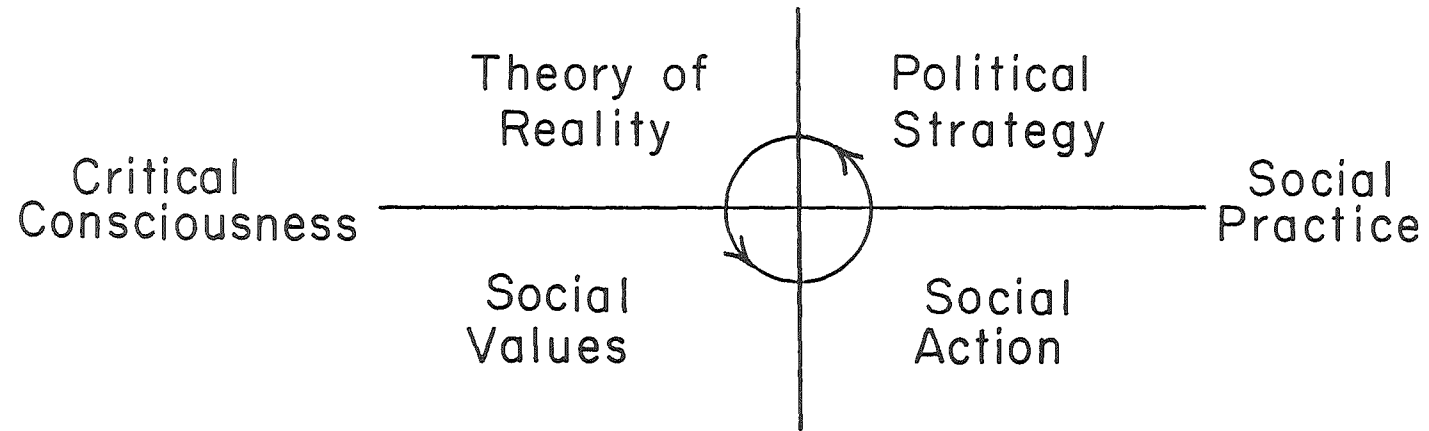


Figure 5.2

INTERACTIVE FORMULATION OF SOCIAL LEARNING

(Friedmann 1981:xii)

examined. A change in values in turn requires new social actions. Friedmann's integration of "social practice" with "critical consciousness" through process fits Waddington's view of the Heraclitan philosophy of science while allowing for the contribution of a more mechanistic "theory of reality".

Other authors have also associated normative approaches to policy with learning and experimentation (Aucoin 1979:16, Simmons et al. 1974:466, Dorsey 1983:226). The experimental approach assumes that policy evolves over time as a consequence of decisions (O'Riordan 1982:104), and that the policy making process must be iterative or cyclical (Hickley 1974:4-6). An iterative process permits policy to search out successively perceived ideals without necessarily seeking a final, static optimum state (Dunn 1971:247). It is the task of the policy critic to examine policy outcomes for their adaptability to perceived ideals. The following excerpt from a New Zealand planning document demonstrates the way an experimental approach to policy-making can be encouraged in practice:

. . . the establishment of a sound foundation upon which decisions can be based . . . then allows the council to consider each problem as and when it arises, against a background of policies. The effectiveness of these policies will be determined only with time and experience. There is no doubt that some will continue to prove effective and achieve the desired results while others will not. This then indicates whether or not policies must be changed or continue to be accepted. The revision of policies and objectives is of utmost importance if current trends and attitudes are to be reflected (Edmonds 1978:10).

Together, policy components and the very closely connected initiative management operations as discussed in sections 5.2 and 5.3 are central to the expression of social learning precepts in environmental management. They form the core of behaviour directed to analysing behaviour, facilitating changing

behaviour, which is the key to improving human-environment relationships. Mechanisms to accommodate social learning will be discussed in Chapter Six, which addresses "behaviour-organizing behaviour" in the form of institutional arrangements.

5.5 A POLICY MODEL

In order to convey the concepts, principles and relationships put forward in sections 5.1 to 5.4 simply and concisely, a model is developed here in diagrammatic form. The elements of the model and the rationale for its configuration are presented in section 5.5.1. The application of the model in the present thesis, and potential broader applications are explained in section 5.5.2.

5.5.1 Building a new policy model

In this section, the concepts put forward in sections 5.1 to 5.4 are built into a new policy model. The presentation of the model follows a brief summary of drawbacks and needs of modelling with respect to present purposes.

The degree of abstraction in policy concepts discussed in sections 5.2 and 5.3 tends to decrease from policy determinants, to policy components, to initiative and then intervention management operations. Yet this progression is by no means linear or deterministic; the arrows in figure 5.1 imply structures that are more formal than is warranted by their

heuristic bases. Many of the connections between elements in the figure are two-way. Others, progressing down the diagram in one direction, were made uni-directional for the purpose of simplifying the development of the theory. They too could indicate a two-way interaction between the elements of the policy system. The policy milieu is thus an interactive, dynamic "collectivity of decisions", of which many outcomes are unanticipated (Simmons et al. 1974:458).

Standard flow chart modelling of systems does not easily express the above concepts. The format of elements in boxes connected by uni-directional arrows implies conditions of stability, predictability, separation of elements and limitation of processes that do not exist in real societal, resource or policy-making systems. Accordingly, Dansereau (1975:9) cautions on the use of his own flow chart model of environmental decision-making:

It is never safe to take such formulations literally, for they lead to the compartmentalized thinking that is most inimical to the holistic point of view. In fact, we do not really separate these categories in our perception of environmental situations,

Integration of elements, or high levels of complex, continuous interaction in a system, may be better represented by situating elements adjacent to one another than by boxes and arrows. Friedmann's social learning model in Figure 5.2 demonstrates this technique.

Another characteristic of real systems that is not well represented in most flow chart models is the "nesting" of groups of smaller elements within larger elements, reflecting overlap and inclusivity. Some elements only affect a system when they are aggregated with other elements, to comprise subsystems. Any system studied at the operational level will have an environment

which will be part of a larger system. Gallopin (1981:148) refers to the various levels of aggregation of elements or systems as "levels of conceptualization", while Morrison (1974) uses the term "levels of analysis". A graphic means of representing levels of analysis, while also eliminating misconceptions associated with flow charts, is found in set theory. Set diagrams, by emphasizing groups of elements rather than individual elements, allow for overlap between groups and for expression of an element as an aggregation of smaller elements or as part of a larger element.

D.L. Mann, in a 1978 thesis, compares seven "man-environment models" devised by geographers and others (Table 5.2). With some refinement, the four part model summarized by Mann's composite terms is flexible enough to be useful "at different levels of generalization" (Nelson in Mitchell 1980:42), and it can be applied as an organizational device to approach a particular problem within its wider environment (Mitchell 1980:42). In this manner it helps the user maintain the holistic perspective central to the human ecological approach and essential to social learning. Even if all the elements contributing to, or emanating from, a particular environmental problem cannot be known in detail, an awareness of their existence and consideration of their possible roles will increase the likelihood of an adaptive or goal-satisfying response through experimental evolution. For this reason, a slightly modified version of this all-encompassing model is used as a foundation for the policy model developed here. Three of the sectors go by the same name as Mann's composite terms; policy is replaced by "institutions". Brief definitions of the four sectors are as

Table 5.2 COMPARISON OF HUMAN-ENVIRONMENT MODELS

Authors Components	DUNCAN (1969)	NELSON (1974)	CRAIK (1972)	WHITE (1961)	PHILBRICK (1964)	FIREY (1960)	SCHON (1971)	MANN (1978)
Human mental processes responses to environmental stimuli, ideas	population	perceptions, attitudes, and values	the personality system	ranges of choice, estimate of resource	values	ethnographic	theory	IDEOLOGY
Human organisation of mental processes, goals, goal formation, ends	organization	strategies and institutional arrangements	the social system	economic efficiency, policies, social guides, strategies, and institutional arrangements	ways	economic concerns	structure	POLICY
Human physical processes, technical means of goal achievement, practices	technology	technology		technological trends	works		technology	TECHNOLOGY
The biophysical environment together with human impacts and interactions	environment	ecology	the environmental system	spatial linkage, physical environment, resource	resource	ecological concerns		ECOLOGY

follows.

"Ideology" is used in a very general sense in the model, to cover perceptions, attitudes and values. Ideology is more specifically defined and its relationship to values is discussed in section 5.2.

The term "institutions" applies to generally agreed upon sets of guidelines for the ordered functioning of society, hence, the economic institution, property, education, family, religion and government. Institutions represent more functional and more formalized and structured belief systems than those upon which ideologies are based. The government institution includes laws and organisational means of performing environmental management, or institutional arrangements.

"Technology" covers "human physical processes - technical means of goal achievement" (D.L. Mann 1978:12). While the popular image of technology for environmental management probably relates to the "hardware" of man-made tools and structures, actual management technology is much broader. It includes the organized application of knowledge through programme development and execution.

The composite term "ecology" refers to "the biophysical environment together with human impacts and interactions" (D.L. Mann 1978:12). Often the term "environment" is used in the same sense, as it has been here in reference to "human-environment relations" and "environmental management". Both terms encompass resources, which are defined for present purposes as anything used or valued by people.

The model illustrated in Figure 5.3 shows the situation of policy determinants and components from section 5.2 and management operations from section 5.3 within the broader

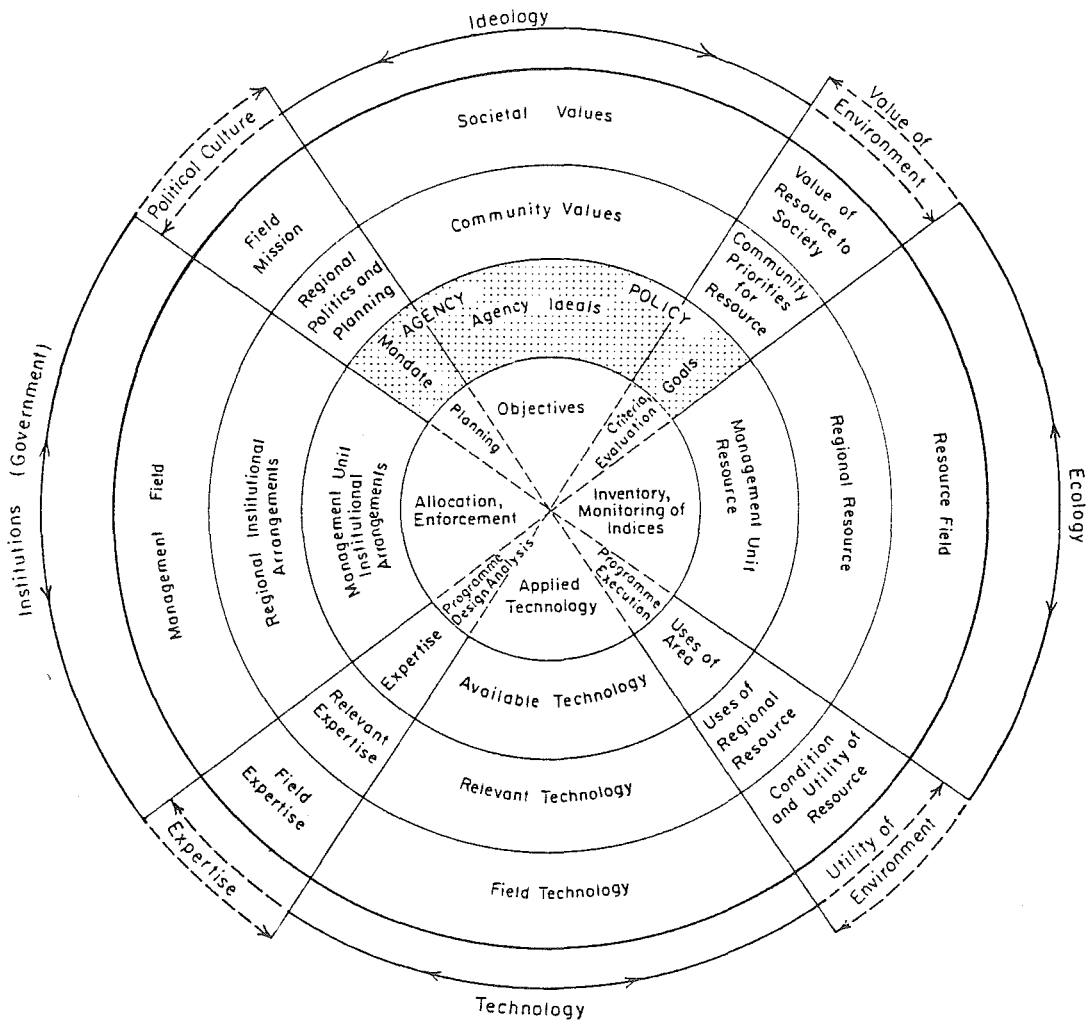


Figure 5.3

A MODEL OF AGENCY POLICY AND ITS SITUATION WITHIN THE POLICY-MAKING ENVIRONMENT

human-environment system. The model is divided into four main quadrants in terms of the human ecological perspective defined above, namely, ideology, institutional arrangements, technology and ecology. Five levels of analysis overlying these quadrants are described below. Moving from the outer layer of the model to the inner, these are the levels of people and the environment, the field, the region, the management unit, and management operations. Elements at each level are subsets of elements in the next broader level within the same quadrant, as the management unit resource is a subset of the regional resource, which is in turn a portion of the resource field. Overlap at the boundaries of the quadrants produces hybrid interface elements such as political culture and value of the environment. Elements of all quadrants have been defined at two or more levels of analysis in sections 5.2 and 5.3. All of the elements of Figure 5.1 are included in Figure 5.3. The meanings of those that have not been explained should be understood following a description of each level.

The five levels of analysis comprising the policy model are shown successively in Figure 5.4. The first level, "people and the environment", is all-encompassing and is discussed above in terms of the four human ecological divisions.

The second "field" level is derived from Chevalier and Burns' (1977:17) "field perspective" which provides a framework for the management of complementary programmes and activities. The definition of a field is flexible. The field relevant to the present study can be defined around the management needs of the coastal zone. "Societal values", then, cover values relevant to the coastal resource; the "management field" includes all institutional arrangements, or forms of government

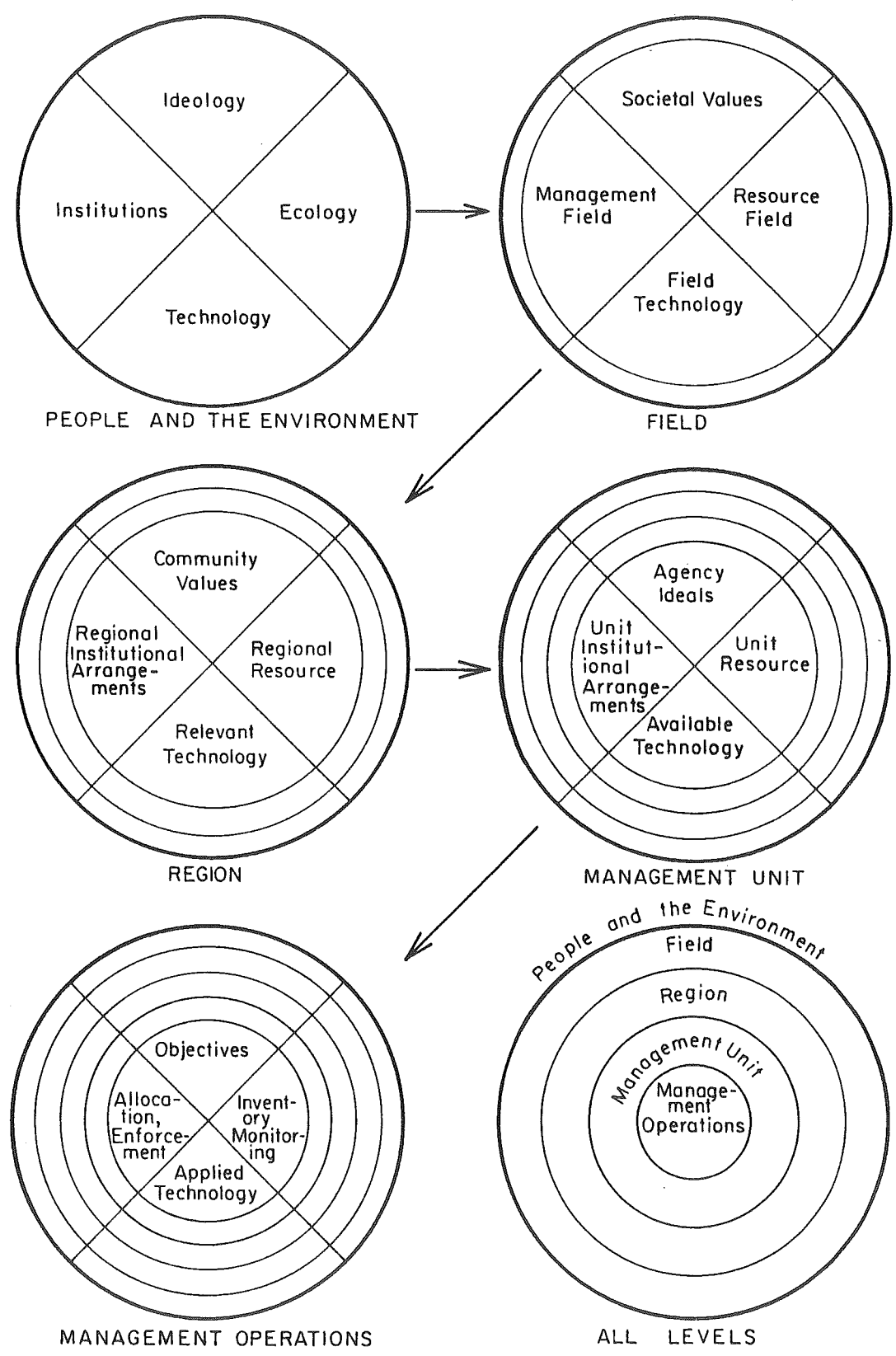


Figure 5.4

LEVELS OF ANALYSIS IN THE POLICY MODEL

organization applicable to the coastal zone; and "field technology" is all the techniques and tools for the management or exploitation of the coastal zone.

The "region" is defined in relation to a small sector of the field. In this case the "regional resource" would be a part of the coastal zone which would have an associated community of people, a set of relevant management techniques and an assortment of institutional arrangements.

The "management unit" is an important level of analysis, because this is the level at which the policy of an individual agency can be analysed with reference to the coastal resource administered by the agency and its institutional arrangements. Agency policy is indicated by the shaded area in Figure 5.3. The ideals component of policy falls in the ideology quadrant, while mandate and goals fall on the interfaces of ideals with institutional arrangements and with ecology, respectively. A limited amount of relevant technology will be available to an agency.

The innermost level of analysis in the model is labelled "management operations", which can be conceptualized as the actual behaviour of an agency. These were described in terms of policy outcomes in section 5.3. Operations immediately adjacent to policy are "initiative management operations", and the remaining components of the inner circle are "intervention management operations".

All of the elements of the model are variable sets, of flexible composition. Interactive processes connect all adjacent elements, and elements that are not adjacent to one another interact via the intervening elements. The interface elements in particular perform a connection role. Interaction

is thus multi-directional, radiating around the circle, from the centre outwards, and from the outer rings inward. However, integration is most comprehensive at a particular level of analysis. That is, there are closer connections amongst the elements at, say, the management unit level, than there are between management unit and regional elements. Interaction amongst elements is most dynamic at the lower levels - changes occur much more rapidly in management operations than in the people-environment system as a whole. The dashed lines separating the components of management operations at the centre of the model reflect the high levels of overlap and interchange which continually occur amongst these elements.

5.5.2 Present and potential applications of the model

The generality of the model developed above reflects the holistic, human ecological perspective. Its emphasis is on locating a system or a component in its environment rather than on dividing the system or component into smaller, isolated parts. This emphasis is based on the assumption that the understanding of an element and the assessment of that element's performance is as dependent upon knowledge of the element's relation to its context or its role in broader systems as it is upon study of the element's subsidiary parts. The model is thus integrative rather than reductionist.

From the perspective of an individual agency represented at the management unit level of the model, comprehensive knowledge of the policy-making environment will increase towards the centre, that is, towards the lower levels of analysis. Uncertainty about the agency's environment will increase towards

the periphery. Yet, as the agency experiments with management operations, it defines and evaluates its activities in terms that are strongly influenced by its ever-changing environment. The theoretical perspective of a policy-making agency in the model points to one of the central questions of the present thesis: to what extent is the agency aware of these processes and to what extent does it exploit them?. In other words, is the agency purposefully adopting an experimental approach to learning in policy-making, or is it inwardly focused, inattentive to interaction with its environment, and only reacting to external factors when this becomes a practical necessity?

In addition to assisting in the formulation of general questions for research such as the above, the model aids in the definition of more specific hypotheses which are based on the arrangement of the cells of the model. If the cells of the model were rearranged, different relationships concerning the composition of policy could be hypothesized. At a broader level, if the quadrants were realigned, new interface elements would be defined at their junctions. The present configuration of the model accommodates the principles and hypotheses developed on environmental policy in this chapter. When the model is understood as normative, it can be said to contain the criteria necessary to the evaluation of policy from outside the frame of reference of the policy itself or of the policy-maker. These criteria then provide the key to policy analysis and evaluation.

In its present configuration, the model suggests that agency ideals should form the core of policy and that they should be based in societal and community values. A hypothesis

for analysis that stems from this assumption is that actual policy may be disproportionately affected by elements from outside the ideology sector of the model. Within the conservation field, technology is of less relevance than the other sectors, and attention to ecology in resource-oriented goals is an asset to policy formation. Institutional elements are necessary to the achievement of conservation, but because they hold the potential to either facilitate or constrict the development of conservation policy, they are a major focus of the present thesis. The institutional factor is further developed in Chapter Six, and more detailed hypotheses are developed, following on from the principles summarized in the model.

If testing confirms the hypotheses, the model may serve a prescriptive function by suggesting changes in existing systems. It is thus a theoretical or experimental rather than an operational model. Instead of presenting an algorithm for solving policy problems based on a large volume of technical information, the model demonstrates principles which have been induced from a broad base of theoretical and practical experience. At best, it may offer an approximate solution that can be improved with additional experience; at least, it will enable the contextual definition of research questions, as described above. It will also provide an organizational tool for analysis, as described below. In keeping with the principles it portrays, the model is primarily a learning device.

The use of the model as an analytical tool for locating concepts within broader systems is demonstrated in Figures 5.5 and 5.6, which delineate the coverage of certain portions of the

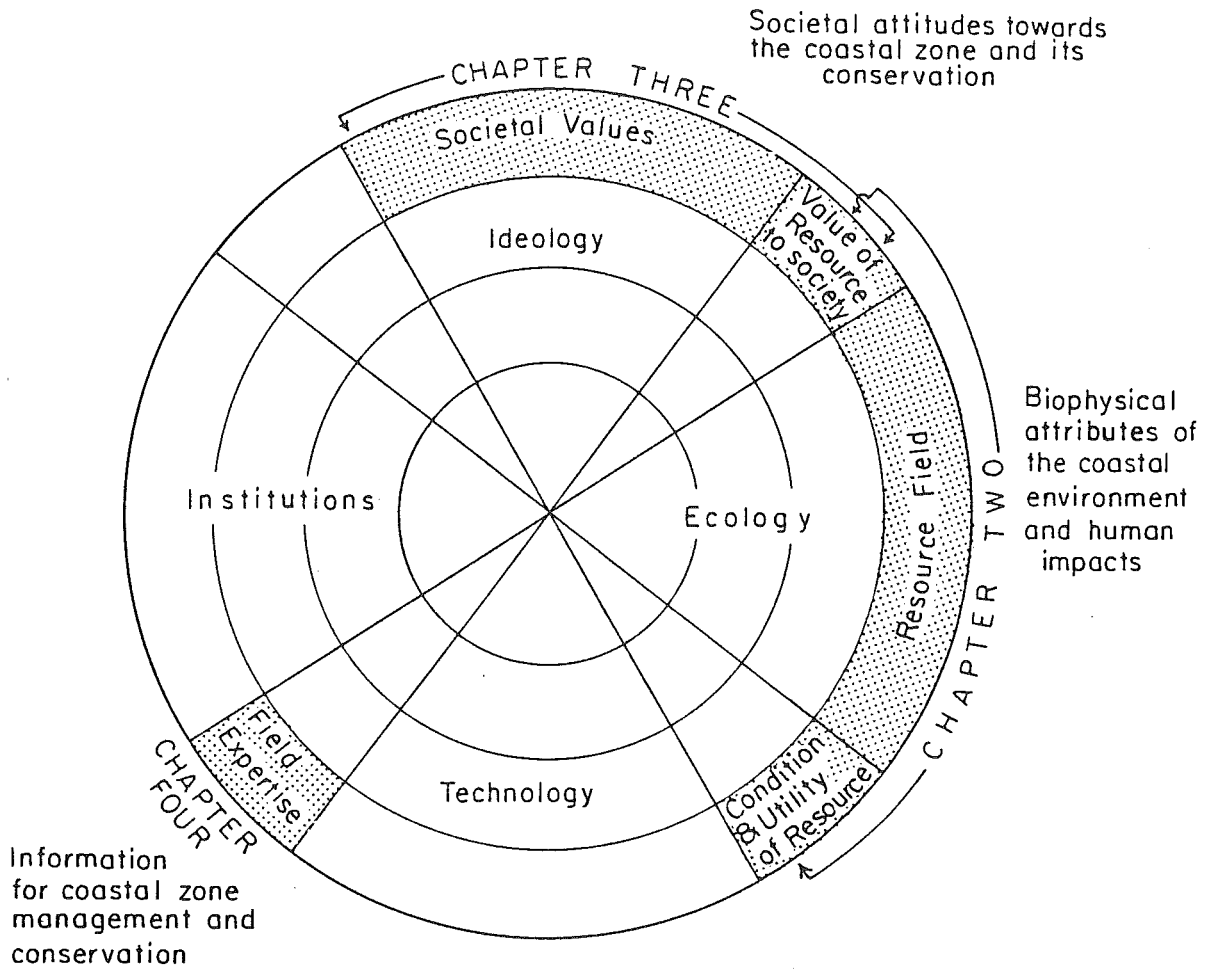


Figure 5.5

SITUATION IN POLICY MODEL OF CHAPTERS TWO, THREE AND FOUR (PART I): FIELD LEVEL ANALYSIS OF POLICIES AND INSTITUTIONAL ARRANGEMENTS FOR COASTAL CONSERVATION

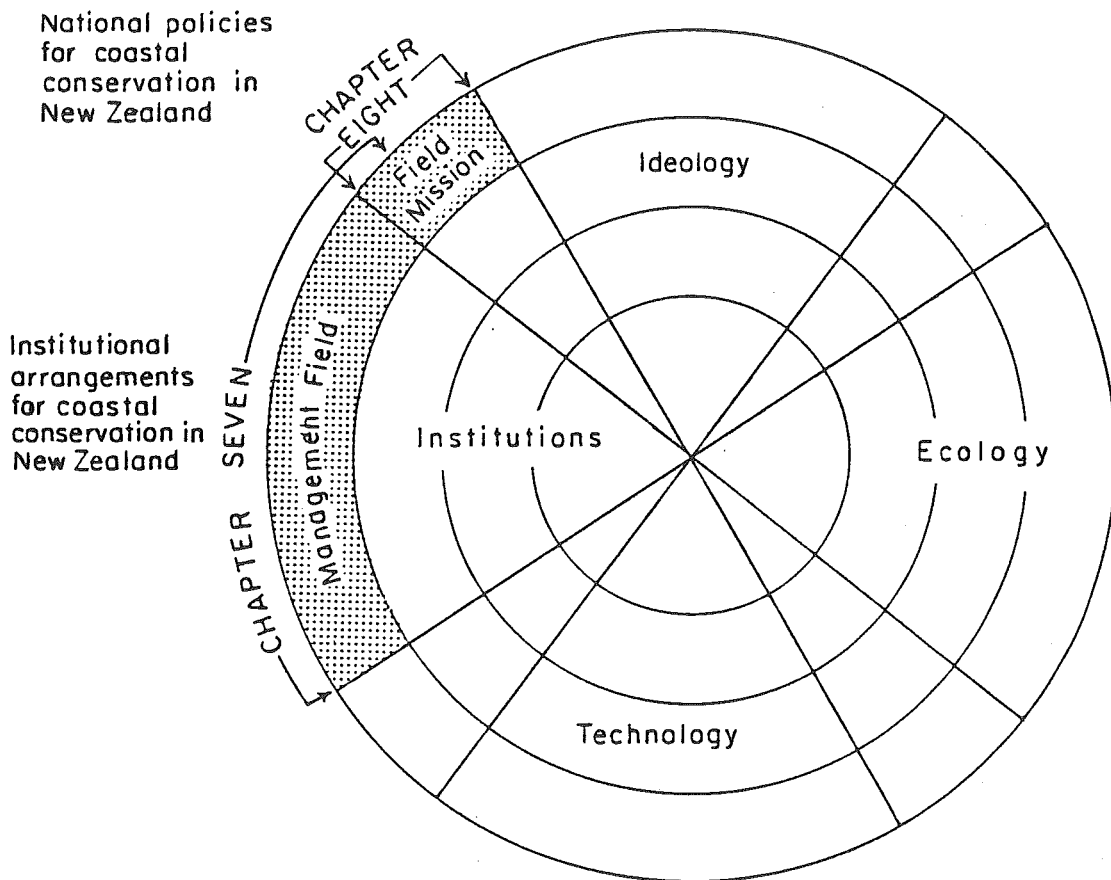


Figure 5.6

SITUATION IN POLICY MODEL OF CHAPTERS SEVEN AND EIGHT (PART II): FIELD LEVEL ANALYSIS OF POLICIES AND INSTITUTIONAL ARRANGEMENT FOR COASTAL CONSERVATION

model in chapters of the present thesis. Figure 5.5 locates the three chapters of Part I in the framework of the policy model, and Figure 5.6 shows where the last two chapters of Part II fall. Both figures indicate overlap in the coverage of certain chapters. The boundaries of the shaded areas are indefinite because coverage of the labelled elements is not comprehensive, and aspects of elements outside the shaded areas are also included in the five chapters. For example, Chapter Four addresses information factors that fall outside the realm of expertise held by agencies involved in the coastal field, as well as "field expertise" per se. The two figures reflect the field level emphasis of Parts I and II. Regional and management unit factors in the policy system are the topic of Part III. Figures in the introduction to that Part show the conceptual areas covered by chapters Nine to Twelve.

This last application of the model, as an organizational mechanism for analysis, is significant for its potential for assisting in the achievement of the higher research goals of evaluation and prediction or prescription. Also, because of its generality, the model could function as a framework for comparative studies of environmental or conservation policies, much as its predecessor, the human-environment model, has been applied by Nelson et al (1978).

The model's utility for the framing of research questions, the delineation of criteria and hypotheses, the organization of policy analysis, and the prescription of improved approaches to policy-making, is tested in the remainder of the thesis.

CHAPTER SIX

THEORY OF INSTITUTIONAL ARRANGEMENTS

The suggestion has been made that institutional arrangements - legal and administrative systems - may have a significant effect on policy for environmental management and coastal conservation. This suggestion is developed into a hypothesis for testing later in this chapter. First, a theory of institutional arrangements and their general relationship to policy is outlined.

The perspective on institutional arrangements taken here is clarified in the first section of this chapter. As well, approaches to the study of institutional arrangements taken by geographers are reviewed and the relationship of institutional arrangements to policy is elaborated upon. In section 6.2, problems for environmental policy caused by institutional arrangements, including those associated with bureaucratic organizational structures, are examined. Adaptation of institutional arrangements to circumvent such problems is the topic of section 6.3. The final section develops criteria for judging institutional arrangements on the basis of theories developed in Chapters Five and Six.

6.1 GENERAL PERSPECTIVE ON INSTITUTIONAL ARRANGEMENTS

An institution is a social system or structure that serves a particular human purpose within a framework of rules (J.W. Bennett 1976:262, Manion and Flowerdew 1982:20, Denman 1972:43). The rules "determine what man can and cannot do, does and is likely to do, in response to his physical environment and towards his fellow" (Denman 1972:43). The institution of interest here - the government institution - is comprised of arrangements to meet public demands and to "exercise the coercive functions of the state" (Aucoin 1979:17). According to Mitchell (1979:282) institutional arrangements include:

- (1) legislation and regulations;
- (2) administrative structures;
- (3) economic and financial arrangements;
- (4) political structures and processes; and
- (5) historical and traditional customs and values.

Here the emphasis will be on the first three components; aspects of the fourth and the fifth are considered independently of institutional arrangements as policy determinants (section 5.2). Gale's (1982) description of institutional arrangements as "two-dimensional" suits the present application of the term; more complex components of the environmental policy system such as values and ideology warrant separate treatment.

Institutional arrangements are thus interpreted as the legal and organizational or administrative arrangements defined by government for carrying out of its various functions, including the regulation of resource systems. Legal arrangements include acts of parliament, regulations, court decisions, executive orders, definitions of tenure and statutory

plans. Administrative arrangements, which may be legally defined, include organizational structure and rules of conduct, as well as professional and technical staff or personnel holding expertise, and financial resources. Mitchell's (1979:282) "political structures" could be included here. The dominant organizational structure of government is the bureaucracy. This involves a centralized hierarchy of control, with

. . . divisions horizontally into government departments and vertically into central and local government, the latter of which is itself subdivided into specialist departments. Such divisions have been accompanied by the delegation of specific functions attached to which are certain responsibilities, financial, legislative and ideological (Manion and Flowerdew 1982:26).

Regional and local levels of government possess varying degrees of autonomy.

Birch (in Park 1980:220) suggests that institutional relationships are one of three main aspects of the study of resource systems to which geographers have made valuable contributions (the others being spatial and ecological). The geographer's role in the study of institutional arrangements is evaluated by Mitchell (1979), Gale (1982) and Manion and Flowerdew (1982). Mitchell (1979:291) suggests that the main interest of the geographer should be in using analysis of institutional arrangements to understand phenomena of traditional geographical interest such as spatial distributions and man-environment relationships; but he allows that geographers may aim for a prescriptive approach to the analysis of institutional arrangements and that "understanding the way in which arrangements function also provides appreciation as to how they may act as constraints upon, or create opportunities for, management decisions". Gale (1982:51,66) would like to see

theories developed that would show how institutions "influence the design, operation, and impacts of individual and social behavior". This theory would facilitate

. . . a general understanding of the role of institutions and institutional rules in different situations and the development of a methodology which allows for explicit consideration of the impacts of alternative rules (p. 53).

Along these lines, the present thesis attempts to form theories on how institutional arrangements influence "the design, operation, and impacts" of environmental policy, particularly policy for the initiative conservation of coastal areas.

In a general sense, institutional arrangements exist to accommodate policy (Aucoin 1979:16-17). In democracies, the legislative, judicial and administrative sectors of government all have an influence on policy formation. Democratic principles presume that the legislative sector, as representative of the public, should play the dominant policy-making role. Nevertheless, the influence of the administrative sector cannot be denied:

There is growing evidence to suggest that the form, structure and operational guidelines by which resource management institutions are formed and evolved clearly affect the implementation of resource policy
 . (O'Riordan in Mitchell 1979:281).

Administrative structures also have a major effect on policy determination (Simmons et al. 1974, Henning 1974:20). Although the mission of an agency as defined by the legislature will dominate the mandate portion of policy, most authorizing statutes are too general to provide "clear and unequivocal mandates" (Wengert 1971:445), and Governments are not always explicit in their directives as to how statutes are to be interpreted. Therefore, "institutional styles may develop which are largely independent of the mission" (Manion and Flowerdew

1982:33). The influence of "institutional styles" on environmental policy, and the factors that create these styles, are explored in the following section.

6.2 PROBLEMS FOR ENVIRONMENTAL POLICY ARISING FROM INSTITUTIONAL ARRANGEMENTS

Simmons et al. (1974:457) link "a crisis in the institutions of democracy" with expanding interest in policy-making, and Dunn (1971:221) suggests that "all social problems and social problem solving emerge out of the anomalies of social organization". In terms of social learning, the anomalies arise from the failure of social system controls to meet social system goals. When efforts to solve problems under a particular organizational system fail repeatedly, modification or replacement of the organizational controls may be required, through "behaviour organizing behaviour" (Dunn 1971:141). Many problems confronting managers are related as much to the institutional mechanisms for solving the problems (the system controls) as they are to the problems themselves, to the extent that "the ultimate question" becomes

. . . one of social organization - that is, the creation of an institutional arrangement that will engender the appropriate incentives for protecting both environmental and social values (D.L. Mann 1981:5).

In this section, institutional arrangements are considered as potential constraints on the evolution of policy that will meet the environmental and social needs discussed in Part I.

Legal provisions most obviously constrain policy

delineation through their influence on mandate: various policy options are eliminated when the mandate does not provide the legal power for their development or execution. However, legal arrangements vary considerably in their influence according to:

- a) the nature and clarity of policy directives (room for agency discretion);
- b) the geographic and substantive rule-making authority accorded the agency;
- c) the adequacy and application of sanctions (enforcement powers);
- d) administrative structure;
- e) opportunities provided for citizen participation (Sabatier 1977:432).

In addition, financial, physical, personnel (or professional) and technical resources available to an agency can also have a considerable effect on policy formulation (Simmons et al. 1974:464, Sabatier 1977:432). These agency resources are part of "administrative structure" which is as important as legal provisions to policy expression - "The best laws will not prove to be effective unless the administrative structures for carrying them out and for making sound interpretations and judgements on specific issues are present" (Dean 1979:304).

In bureaucracies, controls are formal, based on rigid rules and procedures, and implemented through a well defined chain of command (Dunn 1971:222). Policies are set through the process of "goal reduction" which involves a hierarchical ordering of societal values as perceived by administrators. From estimated general societal values are derived major goals, which lead to subsidiary goals, then objectives, targets and actions (Friedmann 1981:123). The bureaucratic system of goal-setting and control cannot function properly when its environment is rapidly changing and its boundaries overlap with other systems

(Dunn 1971:226,230-31), because of "the cognitive limits of a central intelligence and its inherent incapacity to gain a comprehensive overview of large, complex, and rapidly changing social systems" (Friedmann and Hudson 1974:7). Accordingly, the ecological, societal and informational constraints discussed in Part I mean that the conventional policy-making approach of building goal hierarchies is severely constrained (Friedmann 1981:124).

In a policy-forming environment dominated by uncertainty, the ideas and values of bureaucratic policy-makers take on importance disproportionate to value determinants that are external to the agency, and the agency as a whole tends to develop an obsession with its own power, perpetuation and expansion (Manion and Flowerdew 1982:33, Henning 1974:36). As a result, the active policy focus tends to be on objectives which are used to initiate and evaluate short-term programme procedures and impacts, or operations internal to agency organization. The objectives may be technologically, economically or politically derived, and they tend to be compatible with notions of organization connected to the bureaucratic ideology. Attainment of this type of objective is often used as the primary measure of effectiveness of agency activities, with the attendant neglect of broader goals, especially those dealing directly with the biophysical environment and community ideals of the agency's jurisdiction (Chevalier and Burns 1977:14-15). Consequently, the evolution of consensus on environmental priorities in society is stifled (Dunn 1971:299,231).

. . . social alienation results from individual reactions to forms of governance . . . that are

hierarchical, authoritarian, rigid, formalistic, non-participative and distant from the needs perceived by their dependent subjects (Freidmann 1981:154).

Under conditions of uncertainty, the mode of administrative decision-making that tends to emerge is called "disjointed incrementalism" or "muddling through", conceived as a descriptive model for decision-making by Charles Lindblom (Mitchell 1979:297). Incrementalism is generally characterized by:

consideration of a restricted range of policy alternatives, as close as possible to the status quo; modification of goals to agree with what the policy-maker feels is realistically attainable; and policies which are remedial and oriented to solving immediate, short-term goals (summarized from Mitchell 1979:297-8 and Ophuls 1977:191).

Mitchell (1979) found that this type of approach does not facilitate public involvement, and it leads to confusion amongst decision-makers who have to act without conception of ultimate aims. It also contributes to the lack of responsiveness described above, creating "institutional inertia" and hindering adaptation and innovation in management. Widespread institutional inertia limits the evolution of adaptive capabilities in society.

In this context, institutional change is significant not only for its own sake but as a means of producing cultural change - almost the only means which our culture allows to society (Vickers 1965:90).

The lack of higher order, long term ideals or goals also means that agencies with adjacent jurisdictions or overlapping responsibilities have no common purpose around which to coordinate or integrate their activities. "Fragmentation of management" is the term applied to this compartmentalization of policy-making in separate agencies. Fragmentation encourages

competition rather than cooperation, and engenders a perspective that fails to recognize the effects of policy outside an agency's immediate perceived sphere of influence. The resulting segmentation of management approaches leads to potentially severe social and environmental ramifications.

Ophuls (1977:193) summarizes the institutional dilemma of bureaucracies:

. . . we have in fact taken the radical position that there can be no common interest beyond what muddling through produces. In brief, we have elevated what is an undeniable administrative necessity into a philosophy of government, becoming in the process an "adhocracy" virtually oblivious to the implications of our governmental acts and politically adrift in the dangerous waters of ecological scarcity (Ophuls 1977:193).

Together, the constraints of societal attitudes, described in Chapter Three, and institutional limitations, described theoretically above, have been termed, "the dual crisis of attitudinal and institutional inadequacy" (Caldwell 1974:177). Vickers (1965:90) highlights this set of problems: ". . . the major limitations on the policy maker today are not physical or technological but institutional and cultural". And Henning (1974:175) too, agrees that "fundamental changes in institutional arrangements, policies, and values, as well as political and social systems, will have to occur before obstacles [to implementation of environmental policy] can be overcome".

6.3 ADAPTATION OF INSTITUTIONAL ARRANGEMENTS

An idealistic solution to the problems of bureaucratic organizational structures outlined above is the replacement of bureaucracy with institutional arrangements based in a social learning approach to management. However, changes in the approach to management itself or the policy process do not necessarily depend on the immediate redesign of structures. One of Dunn's (1971:244) fundamental assumptions is that "The seductive appeal of utopian social engineering must be put aside", because experimentation and social learning will not be facilitated by "the design of optimal static state networks". A more pragmatic rationale for accepting the continued use of current arrangements is that:

In the short run we cannot simply discard our institutional and cultural heritage, however much we realize that it has created the bad situation in which we find ourselves. We have no choice but to keep it in operation for some time while we work towards its change and ultimate replacement by something better (Burger 1974:252).

A promising starting point for the adaptation of existing systems is an expanded awareness, and thence exploitation, of the processes of interaction, integration and learning (section 5.4). Theorists suggest that while systems generally change and improve automatically, through experimentation and learning, the change would be more efficient and more directed if these processes were explicitly recognized and made purposive.

The evolutionary experiment should be frankly conceived as an experiment and deliberately provided with information feedback that monitors goal convergence and sets the stage for the next round of experimentation (Dunn 1971:244).

Gale (1982:65) concurs:

. . . the nature of data, models, and

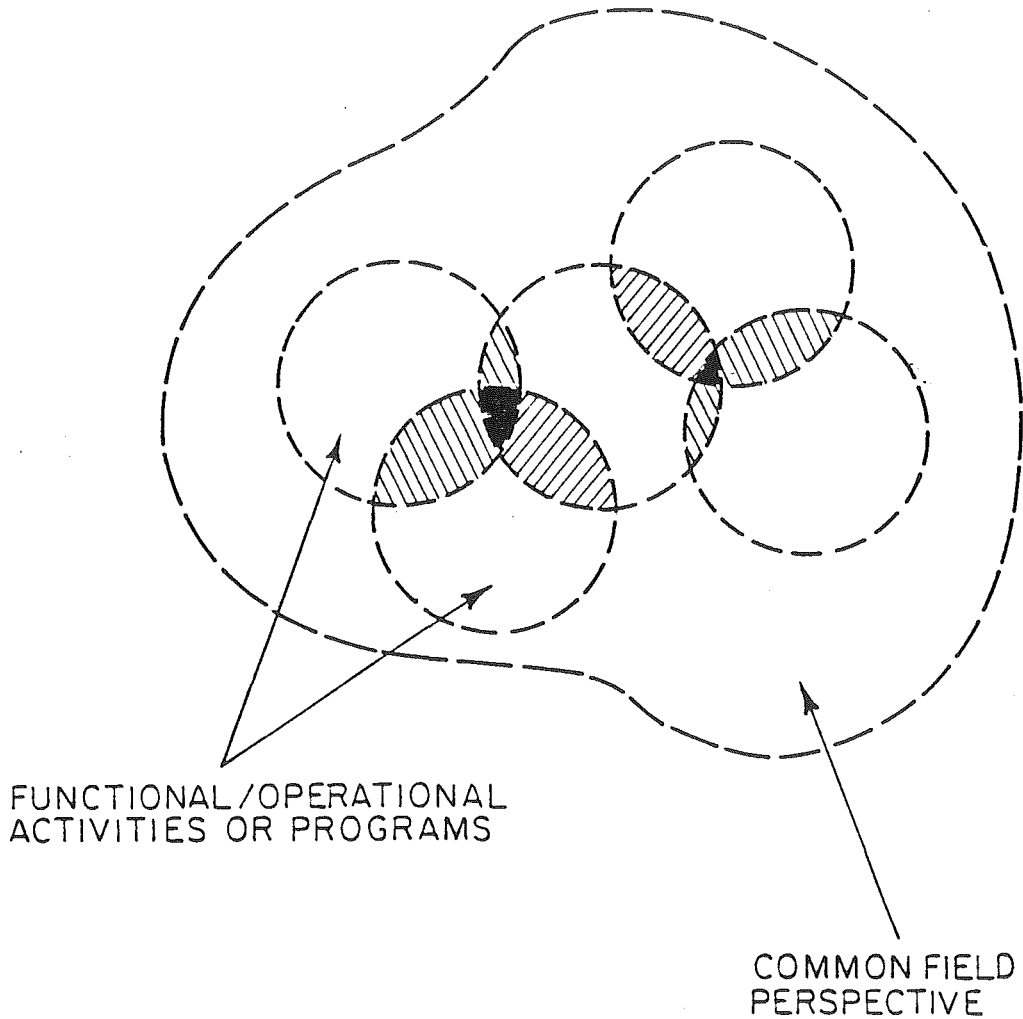
institutionalized decision procedures must explicitly address some relevant monitoring and learning scheme. The potential for policy to learn depends in part on an open approach to planning or policy-making which demands of the agency a lessening of bureaucratic responsibility for deciding independently what is good for society (Wengert 1971:445); instead, administrators assist the political processes that lead to social valuations and consensus formation. Outcomes of social interaction involving environmental considerations should be granted at least as much priority as the administrative goal hierarchies of the bureaucracy.

Open planning, experimentation and social learning all depend upon close and continuous cooperation amongst agencies with administrative powers and the public through dialogue. Dialogue communication facilitates individual involvement in planning experiences and is the key to social agreement on goals - through dialogue, society will be able to choose consciously what suits it best (Feyerabend in Camhis 1979:87). According to Rappaport (in Dunn 1971:230), the essential features of dialogue are the exchange (mutual understanding) of roles, "the recognition that any position has some region of validity", and the recognition of common values. Dialogue facilitates bargaining and negotiation. These are processes of interaction amongst groups or individuals with interests in a particular management problem who seek solution through trade-offs and compromise. Bargaining, like evolutionary experimentation, is more or less inherent in policy-forming and environmental management, yet it has only recently been recognized explicitly as a policy or management tool (Dorcey 1983).

The effective use of experimentation, negotiation and bargaining depends on affected interests having at their

disposal an adequate information base. If information is to facilitate learning in environmental policy formation, it must be freely exchanged through dialogue across the jurisdictional boundaries of administrative structures (Aucoin 1979:16). This exchange could be simplified and made more efficient through a special, shared, non-technical language or vocabulary - "an organic metaphor, a description of a process not structural arrangements" (Bennis and Slater in Dunn 1971:223). Such a language would permit horizontal linkages between interests in areas of overlapping function, and would enhance vertical linkages in hierarchical administrative structures. These linkages would in turn facilitate a coherent policy response to societal and environmental needs through dialogue focusing on management functions rather than on bureaucratic objectives. The "field language" proposed by Chevalier and Burns (1977) potentially could meet these requirements. It is oriented around "fields of related activity co-produced by the interpenetrating effects of their own and other programmes" (p. 2) (Figure 6.1).

The "field concept of public management" not only provides a language to facilitate dialogue and integration; it forms the basis for the evaluation of "field performance in relation to contextual values or norms which by their nature are relevant to all activities which are or might be carried out within [an agency's] jurisdiction" (p. 19). These norms facilitate the consideration of policy outcomes "from outside the particular frame of reference of the policy-maker" (Johnson 1975:82), further alleviating the limitations of bureaucratic policy-making. In other words, they provide a higher order goal that embraces lesser, conflicting goals (Dunn 1971:158).



NOTE: SHADED AREAS REPRESENT ACTUAL OR
POTENTIAL OVERLAP AND COMPLEMENTARITY

Figure 6.1

A FIELD MANAGEMENT CONCEPT

(Chevalier and Burns
1977:4)

Alternative means for reorienting institutions to improve environmental management have been proposed and tested in several countries. One is the realignment of government departments around resources rather than particular resource uses, so that mandates explicitly address "fields of management" such as the coastal zone or conservation lands. Where resource-oriented government sub-divisions already exist, these are being re-grouped under an environmental rationale; in some instances, departments of "the environment" or of "natural resources" have been created. Caponera (1973:121,2) suggests that resource-oriented laws and institutions would facilitate "decided progress in the direction of the harmonious planning of natural resources . . . [and] the solution of problems posed by the protection of the environment".

In lieu of departmental restructuring, a wide range of integrative arrangements and techniques have been used to augment existing structures. These vary from the informal exchange of memoranda, through joint planning exercises and programme reviews, to the statutory creation of councils or committees with representatives from different government bodies (Dean 1979:299). Experts often favour coordinative arrangements amongst existing agencies over the creation of special agencies for the integration of administration (Sproule-Jones 1978, Ketchum 1972). They also support the alternative of appointing a lead agency specializing in the field to initiate coordination. As well, general planning provisions can be used in certain areas to prevent spillover of deleterious land use impacts.

Advisory or management committees may also be established to provide for communication between a management agency and

non-government interests. Groups of this type that are more functionally specialized are usually termed "task forces". O'Riordan (1976) evaluates several variations on this advisory group theme, including community workshops. Research on the utility of some of these arrangements is often cautionary in its conclusions. Garratt (1982:7) suggests that "the choice between a committee with an advisory role and one with direct management powers is often difficult". Yet these committees are often developed for short term political ends and may not be given any real decision-making power. Their deliberations seldom result in fundamental changes to policy.

6.4 CRITERIA FOR JUDGING INSTITUTIONAL ARRANGEMENTS

In section 6.2 the theory of problems of environmental policy caused by institutional arrangements was set forth, and solutions to these problems through institutional adaptations were suggested in section 6.3. A central objective of the present thesis is to explore the potential of the proposed solutions and to identify and evaluate other alternatives for the improvement of policy systems for coastal conservation in New Zealand. In order to perform the evaluative task, criteria for judgement have to be set explicitly (Mitchell 1979:282).

The five aspects of legal influences on policy delineated by Sabatier (1977:432) (listed in section 6.2) form criteria for judgement when normative qualifications are attached to them. Other writers have devised similar sets, such as the nine organizational criteria applied in "General Specifications for

an Enhanced Institutional Structure for the Great Lakes": jurisdiction, enforcement powers, staffing adequacy, administrative discretion, flexibility, visibility, accountability, and structural compatibility (Canada-United States University Seminar 1973). A smaller set of measures was used by Friedmann (1981:159) for judging "guidance systems": autonomy, responsiveness, innovative ability, effectiveness, efficiency and legitimacy. This set draws closer to meeting the requirements of the present work because of its more direct relation to the real needs of society and environment. Here, potential for meeting these needs is assumed to lie in appropriate policies, and institutional arrangements can be judged on the basis of how well they facilitate such policies.

Investigations of the present thesis so far suggest that appropriate policy is responsive to the needs of the public and the environment. Societal consensus on environmental values will be fostered through a responsiveness to "qualitative, humanistic considerations" (Jackson 1971:408) and the "relatively diffused or generalized needs of the community or society as a whole" (Chevalier and Burns 1977:5). Consideration of "the public interest" should allow development of policy that meets community needs and is therefore implementable with a minimum of coercion. Sound environmental policy requires that social needs must be met without compromising the needs of natural ecosystems, so institutional arrangements must also encourage in policy a responsiveness to environmental factors, and to the values and activities of those who use resources.

Continuous change in societal and environmental circumstance requires that institutional arrangements promote adaptability, if responsiveness is to continue and if "learning"

is to take place. Adaptability depends on the availability of a range of legal mechanisms from which regulatory measures can be selected to suit current needs, or on the flexibility of the mechanisms to suit conditions that vary from place to place or time to time. Responsiveness, adaptability and learning all depend upon open communication and exchange of information - both scientific and value-based - through dialogue.

Coordinating interaction through dialogue here is termed integration. Policy-makers must achieve integration with the public and with other agencies involved in the same resource system or management field in order to develop responsive policies. Integration with the public is enabled by techniques of public participation including open goal-setting and decision-making processes. Integration amongst agencies depends on mutual recognition of common or overlapping interests in a resource - a field perspective. Various coordinative mechanisms can assist the formation of a field perspective.

All of the above principles, reiterated from arguments developed in Chapters Two to Six, form the criteria to be used in the evaluation of policy and institutional arrangements in Chapters Seven to Thirteen. In summary, sound environmental policy must be responsive to environmental and societal needs. In order to permit this responsiveness, the institutional arrangements for the formation and expression of environmental policy must facilitate adaptability and integration in policy processes. These criteria are framed according to appropriate policy determinants in the model of Figure 5.3 in section 5.5, which is essentially normative. The model locates agency ideals, the core of policy, within the community and societal value milieu. Policy goals in the model are founded in the

needs of the resource being managed and the community priorities for the regional resource which includes that of the management unit; but goals are also influenced by agency ideals and vice versa. The policy mandate, which also interacts with ideals, is mainly determined by the institutional arrangements available to the agency, and by the regional political and statutory planning system (a subset of the missions assigned to the various agencies involved in the relevant field of management). In terms of the above criteria, institutional arrangements are inadequate when they have an inordinate influence on policy in relation to the other determinants, that is, when they curtail the influence of resource and community needs on policy. A portion of the policy model is reformulated in Figure 6.2 to illustrate these connections.

Clearly, the criteria outlined here are wide-ranging and unspecific. These attributes allow for an open approach to the investigation of real policy systems and for the contribution of detail and elaboration of principles on the basis of actual experience. The possibility of rejecting the criteria in favour of more vital policy requirements that may be identified through in-depth empirical analysis is also recognized. However, the discussion of needs and constraints in Part I, and the academic literature reviewed here, suggest that this is unlikely to eventuate, given the limited time-frame of the present work.

In the remaining chapters of the thesis, the above criteria will be tested against New Zealand experience, first at the national level in chapters Seven and Eight, and then at the individual management unit level, in Part III. Particularly in the national level study, the analysis is not restricted to the

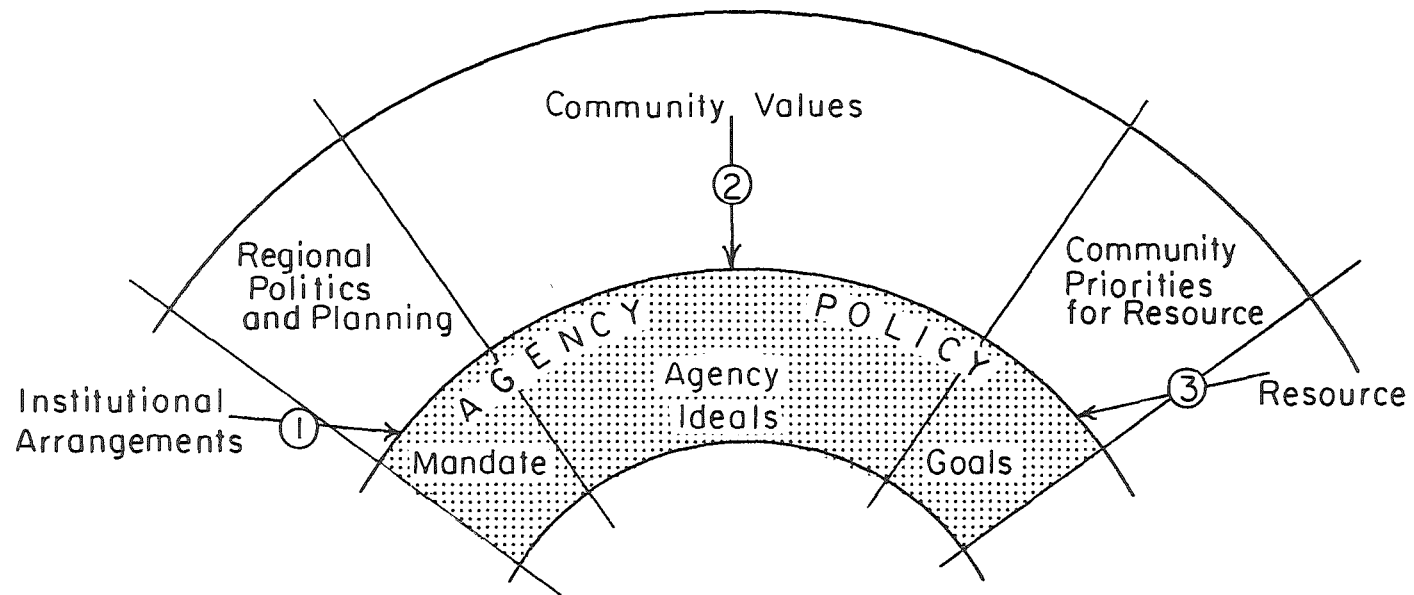


Figure 6.2

RELATIVE INFLUENCE OF POLICY DETERMINANTS ON AGENCY POLICY

consideration of the criteria themselves, but most of the analytical objectives depend on these criteria for judgement, whether implicitly or explicitly. The objectives may be summarized as follows: to determine to what extent the needs described in Part I are being met, to identify institutional limitations on policy, to determine the extent to which proposed solutions are already in practice and examine their performance, and to identify other institutional aids to policy-making currently in use.

CHAPTER SEVEN

INSTITUTIONAL ARRANGEMENTS FOR COASTAL CONSERVATIONIN NEW ZEALAND

Over forty Acts of Parliament impinge upon the coastal environment in New Zealand. Those of central interest to the present thesis will be reviewed in this chapter, emphasizing conservation provisions and associated administrative frameworks. This information is essential background to Chapter Eight, in that it identifies the policy-making agencies and their mandates. It begins to establish the coastal conservation mission of the government departments involved in the field of coastal zone management in New Zealand. The policy delineation of Chapter Eight continues this national-level definition of mission, which is complemented by case study experience in Part III.

Legal and administrative arrangements are outlined in sections 7.1 to 7.3 according to the framework of Figure 7.1. As the figure indicates, a selection of arrangements beyond those directly addressing initiative coastal conservation are covered in this chapter. This is in keeping with the holistic approach, recognizing the importance of the context of the conservation problem. Arrangements for coastal planning and administration (section 7.1) delimit the system within which initiative conservation measures are applied, and provide mechanisms for integration. Defensive conservation arrangements (section 7.2) supplement initiative ones and often are adapted to serve initiative conservation purposes. The latter purposes can be served directly by institutional arrangements in a number of ways, which are reflected in the subdivisions of section 7.3.

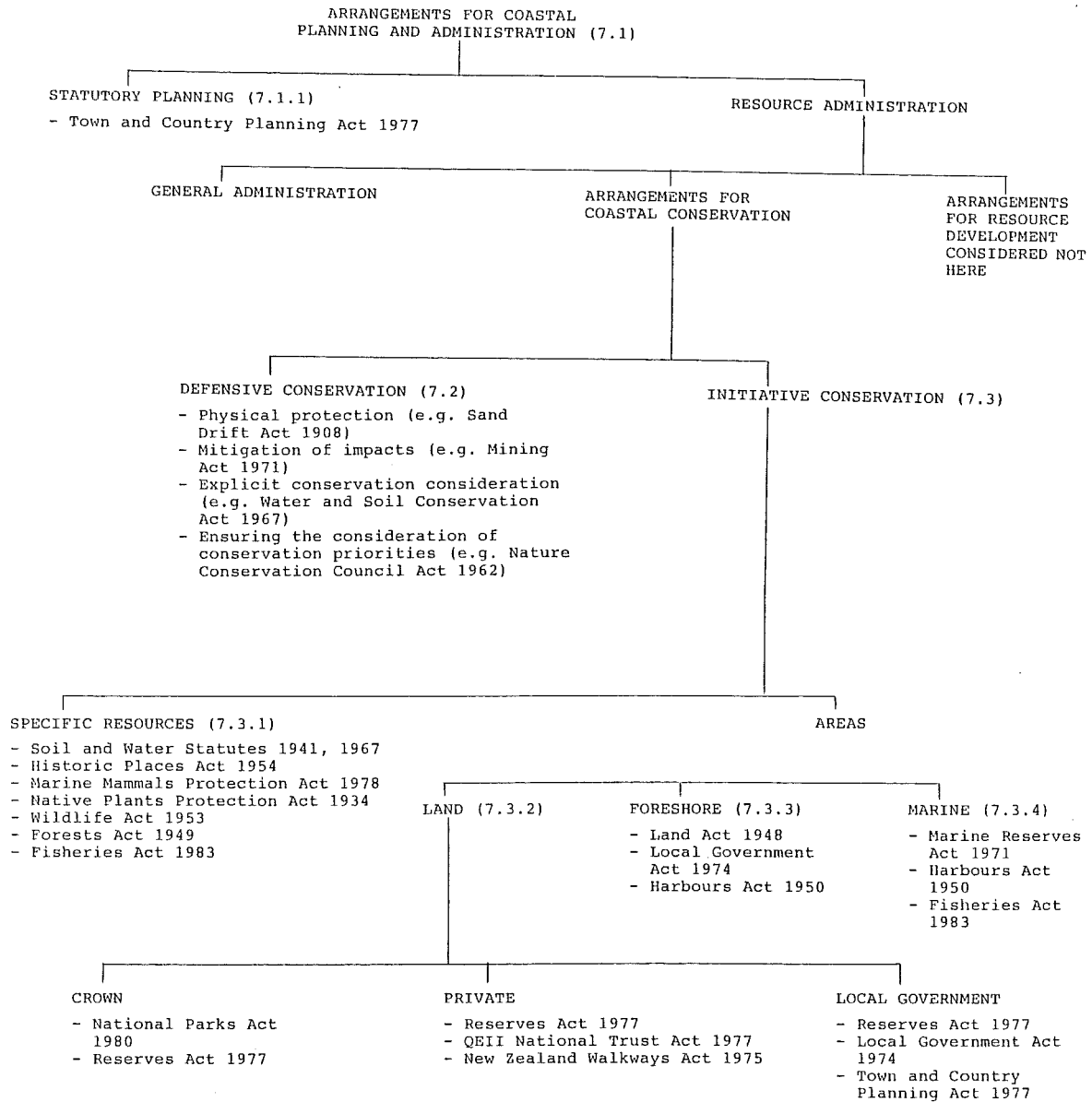


Figure 7.1

FRAMEWORK FOR DESCRIPTION OF INSTITUTIONAL ARRANGEMENTS FOR COASTAL CONSERVATION (section number indicated by 7.1 etc.)

The discussion of sections 7.1 to 7.3 is predominantly descriptive, focusing on the "two dimensional" character of institutional arrangements. Evaluative comments are reserved for section 7.4, where general patterns in the institutional arrangements for the coastal zone are identified and assessed. Before entering into the description of the various arrangements, the distinction between defensive and initiative conservation arrangements will be reiterated, with an emphasis on statutory implications.

Generally, defensive conservation arrangements are based in legislation that focuses on a particular resource and the regulation of human impacts upon it, and in the mandates of agencies that play a role in the surveillance and prevention of environmental impacts. The main purpose of defensive arrangements is to "defend" the environment against the impacts of resource development, or to mitigate the effects of resource exploitation. Initiative conservation arrangements are those that promote positive action to provide for activities dependent on a "natural" setting that do not involve any marked degree of modification to the existing environment, or for the opportunity for ecological functions to continue with little human interference. The resources involved are appreciated for their inherent qualities, and for non-extractive uses connected to these qualities. In practice, defensive and initiative conservation efforts overlap. Measures for initiative conservation automatically perform a defensive role, but this is in the service of overriding positive purposes, much as any land or water use may require defence against infringement by conflicting uses.

The categories of sections 7.1 to 7.3 are not mutually

exclusive, so some statutes and agencies will be addressed more than once.

7.1 ARRANGEMENTS FOR COASTAL PLANNING AND ADMINISTRATION

In this section, laws and agencies are addressed which provide for broad-scale coastal administration and planning. The Town and Country Planning Act 1977 (the Planning Act) and the Harbours Act 1950 dominate administrative and planning provisions in the coastal zone. The Land Act 1948 and two acts dealing with the administration of water and soil are also important. These statutes are reviewed below.

Many other statutes make administrative and planning arrangements of a more limited nature for specific purposes. Several of these, such as the Forests Act 1949, are discussed in other sections. Some provisions of the Fisheries Act 1983 and the Marine Farming Act 1971 are included here because of their relevance to later chapters.

7.1.1 Statutory planning

The Planning Act is administered by the Town and Country Planning Division of the Ministry of Works and Development (MWD). The Act's stated purpose indicates its wide latitude of intent: planning and administration are for

. . .the wise use and management of the resources, and the direction and control of the development, of a region, district, or area in such a way as will most effectively promote and safeguard the health, safety,

convenience, and the economic, cultural, social, and general welfare of the people, and the amenities, of every part of the region, district, or area (section 4(1)).

Consideration of coastal needs is required by the Act as a "matter of national importance". This provision is addressed later as a form of defensive conservation.

There are three types of planning, with district and maritime planning overlaid by regional planning. Elected local authorities are responsible for the production, administration and review of district schemes, which cover all of New Zealand down to mean high water mark. Most coastal land use is regulated by county councils through their schemes under the Planning Act, and via their powers under the Local Government Act 1974. Controls on subdivision and other types of land use have strong implications for the coastal environment: they can decide the location of rubbish dumps, the range of uses of an estuary, the provision of boating facilities and other matters. Under past legislation the Ministry of Works and Development represented the "public interest" at hearings on departures from schemes; now interested parties must represent themselves. (see Bush (1980) for a fuller explanation of local government in New Zealand).

Regional and maritime planning were instituted in 1977 by the new Planning Act. In contrast to district planning, these arrangements are oriented more towards resource management than the control of human settlement; they include the marine environment; the plans are less detailed; and their administration does not necessarily constitute a formal tier of government. The authorities responsible for regional and maritime planning are advised by "planning committees" which

include representatives of bodies with adjacent or overlapping management concerns and other interests.

Only in the two main centres of population are the regional councils directly elected and accorded powers of taxation. Elsewhere, the twenty united councils are composed of representatives of constituent local councils and funded by central Government. Regional schemes, once approved by the Minister of Works and Development, take precedence over district and maritime schemes within the region and require the compliance of central government organizations. The schemes are thus coordinative vehicles for "the resolution of the differences between various interest groups within the region and between the region and the remainder of the country" (OECD 1981:33). Regional planning can apply over any area of territorial sea approved by the Minister of Works and Development.

Four maritime planning areas have been established in New Zealand waters. Any public authority can take on the task of maritime planning, but where the planning area is within harbour limits, the relevant harbour board has the first option. While maritime schemes are designed at the same level of detail as district schemes, the former are not supported by powers of regulation. Instead, a mixture of controls such as licensing procedures established by various statutes are expected to be applied by their respective administrators in accordance with the maritime plan. Maritime schemes generally apply up to mean high water mark.

7.1.2 General resource administration

General provisions for the administration of soil and water resources, Crown lands, and foreshore and sea are outlined in this section.

The administration of the Soil Conservation and Rivers Control Act 1941 and the Water and Soil Conservation Act 1967 is the responsibility of the MWD, but it is structured through the National Water and Soil Conservation Organization (NWASCO) which has fifteen members representative of various interests. The Water and Soil Division of MWD services NWASCO. At the regional level, a complex administrative system is defined by the two water and soil statutes. Catchment authorities, which are usually joint catchment and regional water boards, manage "natural water" in catchment districts which extend twelve miles out to sea. As catchment boards, the authorities administer control works for rivers, soil conservation, and land drainage. As water boards they administer water resources by granting rights to the use of natural water (and to discharging effluent into it) and by ensuring the maintenance of minimum water quality standards. The legislation gives rights of objection to those who oppose applications for various water and soil uses. Conservation aspects of the soil and water legislation are discussed later.

Crown lands are administered under the Land Act 1948, which is the responsibility of the Lands and Survey Department. Under this Act, millions of hectares of Crown land are leased to individuals as farms, other public land may be devoted to parks and reserves, and the Lands and Survey Department controls much of the remaining Crown land. For the execution of its responsibilities the Department has regional "land districts"

which are administered by Commissioners of Crown Land and their staff. The Land Act specifically provides for a 20 m wide reserve along the coast (see section 7.3.3).

The foreshore and seas around New Zealand's coast are administered by the Ministry of Transport (MOT) as representative of the Crown owner, under the Harbours Act 1950. The Harbours and Foreshores Section is responsible for the approval of all structures and dredging in tidal waters, the licensing of various uses of the foreshore and seabed, the granting of mining privileges, and recommending to parliament on large reclamations. A 1973 amendment to the Harbours Act made the consideration of the public interest obligatory in the approval of works and other permanent uses of the foreshore and seabed. MOT also manages various other coastal activities such as navigation, and recreation and structures on the foreshore. Responsibility for these activities, with its daily management implications and its close interaction with adjacent land management, is frequently delegated to local bodies through "grant of control" provisions. Approximately one third of all foreshores and coastal waters are managed by local authorities under bylaws associated with grant of control (Milne 1980).

The principle harbours of New Zealand are administered by harbour boards which are elected and have their own powers under the Harbours Act including those obtained through grant of control. MOT oversees harbour board activities, which are funded in the main by commercial enterprise.

The Fisheries Act 1983, which replaced a 1908 statute, is administered by the Fisheries Management Division of the Ministry of Agriculture and Fisheries (MAF). The Fishing Industry Board must be consulted by the Minister of Agriculture

and Fisheries under several provisions of the Act. This Board, established by the Fishing Industry Board Act 1963, represents the interests of the fishing industry (see section 3.2.3). Fisheries management plans are intended "to conserve, enhance, protect, allocate, and manage the fishery resources" (Fisheries Act 1983 section 4), and they provide for the integrated management of inshore marine biota. Eventually, management areas for planning will be declared around all of the New Zealand coast. Hearings and inquiries may be held on the plans. Associated regulations are flexible because they can be defined at the regional level and they are approved by the Director-General rather than the Minister. Controlled fisheries are more strictly and less flexibly regulated than planning areas, with the use of licensing and regulations that require the approval of the Minister and the Governor-General. They usually apply to individual species of marine life in particular areas. General regulations on commercial and recreational fishing are more broadly applied. All regulations are enforced by locally-based fisheries officers.

The Marine Farming Act 1971 is also administered by MAF. It provides for controls on the farming of fish, shellfish or marine vegetation through the granting of leases or licences. The authority or person in which the adjoining foreshore and land is vested must be notified of applications and may lodge objections. The Minister of Fisheries must consent to the granting of leases and licences and he or she may also declare certain areas either available, or not available, for marine farming. Applications are processed at the regional level.

7.2 ARRANGEMENTS FOR DEFENSIVE CONSERVATION

Institutional arrangements for defensive conservation are summarized in Table 7.1. The table stresses regulatory rather than administrative provisions and it is not exhaustive. However, it does illustrate the range of statutes involved in protecting the coastal environment from the impacts of human uses usually related to settlement or resource extraction. The four types of arrangement listed in the Table range from the strictly defensive arrangements which provide physical protection of the coast to arrangements with strong initiative conservation undertones or implications, such as those which ensure the consideration of conservation priorities.

The protection of the physical shape of the coast lessens the extent of widespread and drastic modifications to the coastal zone, maintaining the opportunity for more directed conservation arrangements. Mitigatory measures directly address the negative impacts of use, striving to control or compensate for specific effects, such as pollution. Explicit conservation measures within development-oriented statutes aim to prevent negative impacts. Measures that provide for the setting aside of areas for conservation purposes will be discussed as initiative conservation arrangements in later sections. Some measures that defend the capacity of the environment to support natural ecosystems and uses dependent on them in a manner more closely integrated with resource development are the third group in the table. These include the most pervasive defensive conservation arrangements for the coastal zone - those of the Town and Country Planning Act 1977. Conservation provisions required of the various planning schemes are summarized in Table

Table 7.1

DEFENSIVE CONSERVATION ARRANGEMENTS

Type of Arrangement General Purpose	Statutes	Conservation Measures
<p><u>Physical protection of the Coast</u> Prevention of physical loss of beaches, dunes and soil resources to wind and wave erosion; prevention of loss of coastal marine areas through reclamation</p>	<p>Town and Country Planning Act 1977, Local Government Act 1974 Sand Drift Act 1908 Soil Conservation and Rivers Control Act 1941, Water and Soil Conservation Act 1967 Forests Act 1949 Harbours Act 1950</p>	<p>Controls on coastal development Operations for controlling sand drift Research, planning and regulation of soil and water uses Afforestation for stabilization Controls on reclamation</p>
<p><u>Mitigation of Resource Use Impacts</u> Mitigatory measures to reduce environmental degradation from resource use</p>	<p>Litter Act 1979 Mining Act 1971 Soil Conservation and Rivers Control Act 1941 Fisheries Act 1983 Marine Pollution Act 1983 Fisheries Act 1983 Water and Soil Conservation Act 1967</p>	<p>Prohibits deposition of litter in public places Sets conditions relating to prevention or reduction of injury to land Classifies lands for their capability to sustain various uses Declaration of closed season, or ninety day restriction on fishing in controlled fisheries Prohibits pollution from ships etc, emphasis on oil pollution Prohibits pollution to freshwater, estuaries or marine waters Controls water pollution through discharge of pollutants, classifies water according to minimum standard acceptable</p>

(ctd)

(Table 7.1)

Type of Arrangement General Purpose	Statutes	Conservation Measures
<p><u>Explicit conservation considerations</u> Measures that protect natural ecosystems and related uses within development-oriented legislation</p>	<p>Soil Conservation and Rivers Control Act 1941</p> <p>Water and Soil Conservation Act 1967</p> <p>Fisheries Act 1983</p> <p>Marine Farming Act 1971</p> <p>Mining Act 1971</p> <p>Town and Country Planning Act 1977</p>	<p>Various measures to conserve resources</p> <p>National Water and Soil Conservation Organisation to examine problems concerning, and make plans in respect of, conservation of natural water, and the needs of fisheries and wildlife and all other recreational uses of natural water</p> <p>Regulations, controlled fisheries and fisheries management plans for the conservation of fisheries</p> <p>Farms not to interfere unduly with any existing or proposed usage for recreational or scientific purposes of the foreshore or sea in the vicinity</p> <p>Consent for mining licence may be withheld if the area applied for contains any natural features, flora or fauna that in the public interest should not be disturbed.</p> <p>Conservation matters to be provided for in regional, district and maritime schemes (see Table 7.2)</p>
<p><u>Ensuring the consideration of conservation priorities</u> Measures that ensure conservation provisions are taken into account</p>	<p>Town and Country Planning Act, Fisheries Act 1983, Mining Act 1971, National Development Act 1979</p> <p>Various statutes</p> <p>Nature Conservation Council Act 1962</p>	<p>Planning Tribunal conducts hearings and/or inquiries; Tribunal decisions may or may not be final (see text)</p> <p>Provisions for public participation and inter-agency notification and consent</p> <p>Nature Conservation Council has various conservation responsibilities (see text)</p> <p>Commission for the Environment, Environmental Council (see text)</p>

7.2. Section 3(1)(c) of the Planning Act is the broadest coastal conservation provision on the New Zealand statutes, making coastal protection and preservation a matter of national importance.

Arrangements for ensuring the consideration of conservation priorities provide for the oversight or cross-checking of the provisions summarized in the other three categories. They involve opportunities for public scrutiny, requirements for inter-agency approvals, judicial arrangements involving the Planning Tribunal, and a range of advisory body activities. Arrangements for the Tribunal and the advisory bodies are described below; the roles of these agencies in relation to government policy are investigated in Chapter Eight.

The Planning Tribunal, established under the Planning Act, is a judicial body in three divisions which each have three judges. It plays a major role in coastal administration by resolving disputes that arise through the planning process under the acts administered by the MWD. While the Tribunal has the final say in matters brought before it under planning legislation, its recommendations under some development-oriented statutes are not binding on administrators.

The ministerial portfolio for the Commission for the Environment was established by Cabinet decision in 1972. While the Commission has, as yet, no statutory mandate, it does function like a government agency by reporting to its Minister on environmental matters and by providing administrative support. The Commission exercises "a general overview of environmental policies within the Government", promotes coordination, and ensures "that environmental considerations are reflected in departmental operations" (OECD 1981:14), and acts

Table 7.2

DEFENSIVE CONSERVATION PROVISIONS IN THE TOWN AND COUNTRY PLANNING ACT 1977

Type of Scheme	Conservation Measures
All schemes	<p>Matters of national importance shall be recognized and provided for, including the conservation, protection and enhancement of the physical, cultural and social environment, and, in section 3(1)(c) the preservation of the natural character of the coastal environment and the protection of it from unnecessary subdivision and development.</p> <p>Mechanisms include zoning, legal ordinances defining predominant and conditional uses, controls over subdivision.</p>
Regional schemes	<p>Consideration of the preservation of the region's natural resources, including natural systems and areas of value for the enjoyment of nature and the landscape; identify areas to be excluded from urban development including land with high aesthetic or recreational value; deal with regional needs for land and water-based recreation.</p>
District schemes	<p>Provide for recreational opportunities and the preservation or conservation of trees, bush, plants, or landscape of scientific, wildlife, or historic interest, or of visual appeal.</p>
Maritime schemes	<p>Deal with protection and conservation of the resources of the area; the preservation or conservation of flora and fauna and their habitats, and stretches of coastline of scientific, fisheries, or wildlife importance, historic interest or of visual appeal; aesthetic considerations and the preservation of views.</p>

as "a channel through which individuals, organizations and local authorities [can] draw matters of environmental concern to the attention of Government" (Hutchison 1979:119). In 1978 a Cabinet decision gave approval to new research and advisory roles and granted additional authority to "make submissions on environmental aspects of policies and projects to statutory planning authorities" (Commission for the Environment, unpub. 9/1978:3).

Since 1973 the Commission has been responsible for the administration of the Environmental Protection and Enhancement Procedures (EPEP). The Procedures must be applied to all major projects in which government departments are involved that may affect the environment. The Commission, in consultation with the Minister involved in a project, decides whether an impact report or assessment is required by the proponent. The firm or agency producing an impact report is to consult agencies with relevant concerns and to invite submissions from anyone interested in the project in response to the completed report. The Commission then produces and makes public an audit of the report, which analyses the proposal in the light of submissions received and its own investigations, draws conclusions and makes recommendations. The Minister of the Government department involved may or may not heed its recommendations.

The Environmental Council was established by Cabinet in 1970 on the recommendation of the Physical Environment Conference. The staff of the Council is domiciled with the Commission for the Environment. The Council has fifteen members, of which six are appointed from the public, three are nominated from local government organizations, and the other six include the heads of government departments that hold

environmental responsibilities. The role of the Council is to advise the Minister of the Environment "on the state and trend of the environment and on measures to be taken to manage it", to issue publications on environmental problems, and to maintain liaison with related advisory bodies and governmental and non-governmental interests (Commission for the Environment 1976:104, OECD 1981:14).

The Nature Conservation Council was established by Act of Parliament - the Nature Conservation Council Act 1962. It has seven to nine members appointed on the recommendation of the Minister of Lands and Survey for their "special knowledge, scientific qualifications, or interest in matters connected with nature conservation" (section 3(3)). Its principal functions are to act as a central coordinator of all types of conservation interests; to advise the Minister of Lands and Survey on the scientific and technical aspects of conservation; to inquire into the effects of proposed works (including mining) on places with scenic, scientific, recreational or other conservation values (including parks and reserves); and to prepare a national conservation policy. It is also to advise the Minister on the reservation of sites and the protection of plant and animal species of special scenic, scientific, recreational or educational interest. The dominant ongoing role of the Nature Conservation Council involves "co-operating with development agencies to see that environmental research is carried out and to ensure that desirable modifications [to development proposals] are made at the planning stage" (Harris 1980:2).

The Nature Conservation Council has a strong role in initiative conservation even though its activities are predominantly of a "defensive" nature. The policy evaluation

and reporting functions of the Environmental Council and the Commission for the Environment similarly accord these agencies subsidiary initiative conservation roles. Agencies and legislative provisions with conservation roles that are primarily initiative are discussed in the remaining sections. These include the Queen Elizabeth the Second National Trust, which also plays a defensive, advisory role.

7.3 ARRANGEMENTS FOR INITIATIVE CONSERVATION

Specific resources may be subject to initiative conservation arrangements wherever they occur, or in defined areas. These arrangements are the topic of section 7.3.1. Otherwise, initiative arrangements are applied in particular areas to cover virtually all of the resources found within the boundaries of those areas. These are the parks and reserves, or protected areas, which typify initiative conservation arrangements and dominate the investigations of the present thesis. They are discussed in sections 7.3.2 to 7.3.4. The organization of section 7.3 is summarized in Table 7.1, in the introduction to the present chapter.

7.3.1 Initiative conservation of specific resources

Arrangements that apply to only a certain group of species or other type of resource are sometimes regarded as narrow measures, ineffective in the conservation of ecosystems. Nevertheless, they can have far-reaching applications, particularly when the resources concerned are broadly defined or when the need is recognized to protect the systems that support those resources. The latter need may be provided for in the resource conservation arrangement itself, or through the use of complementary measures of a defensive nature for the conservation of the area in which the resource occurs. New Zealand statutes for the protection of various resources that can be found in the coastal zone are listed in Table 7.3. Elaboration on the provisions of some of these is warranted.

The water and soil conservation legislation summarized at the top of the table has potentially broad implications for coastal conservation because it covers all of New Zealand to the limit of the territorial seas. The preamble to the Water and Soil Conservation Act 1967 states that the purposes of the Act include the following initiative measures:

provision for the conservation . . . of natural water, and for promoting soil conservation . . . and for ensuring that adequate account is taken of the needs of . . . all forms of water-based recreation, fisheries, and wildlife habitats, and of the preservation and protection of the wild, scenic, and other natural characteristics of rivers, streams, and lakes.

Most of the statutes listed in the table include provisions for some form of protected area, but the initiative conservation purposes of these areas are more limited than those discussed in section 7.3.2, in their emphasis on a particular resource. Protected areas under the Wildlife Act 1953 and the Forests Act

Table 7.3

ARRANGEMENTS FOR THE INITIATIVE CONSERVATION OF SPECIFIC RESOURCES

Resource	Statutes	Administration	Conservation Measures		Coastal Application	Inter-Agency consultation and public participation
			General	Protected Areas		
Water and Soil	Soil Conservation and Rivers Control Act 1941	Water and Soil Division of Ministry of Works and Development NWASCO, Catchment Authorities (see section 7.1)	Provision for the conservation of soil resources	Soil conservation reserves in which soil and vegetation not to be disturbed	Helps prevent pollution of coastal waters	Appeals against the conservation orders or notices may be made to Planning Tribunal
	Water and Soil Conservation Act 1967, 1981 Amendment		Provision for the conservation of soil and water resources and water quality	National and local water conservation orders and notices to preserve or protect a river, stream or lake in its natural state		
Historic Places	Historic Places Act 1954	New Zealand Historic Places Trust, reports to Minister of Internal Affairs	Record of historic places, steps to manage and preserve them	Some historic places purchased by Trust	Many historic places on coast shipwrecks included	
Marine Mammals	Marine Mammals Protection Act 1978	Ministry of Agriculture and Fisheries	Seals, whales and dolphins may be taken only by permit	Marine mammals sanctuaries in which specified activities may be restricted		Consent of other controlling Ministers required for sanctuary

(ctd)

(Table 7.3)

Resources	Statutes	Administration	Conservation Measures		Coastal Application	Inter-Agency consultation and public participation
			General	Protected Areas		
Native Plants	Native Plants Protection Act 1934	Department of Lands and Survey	All indigenous plants except for eleven species are protected			
Wildlife	Wildlife Act 1953, 1980 amendment, Reserves Act 1977	Wildlife Service in Department of Internal Affairs, Acclimatization Societies administer game	Administration of game hunting and breeding - closed season, various species of wildlife protected in wildlife districts throughout New Zealand	Closed game areas wildlife refuges, sanctuaries and management reserves (see Table 7.4)	Protected areas can apply to harbours or the sea, sanctuaries are usually islands, many refuges on coast	Application to harbours and sea requires consent of Minister of Transport
Forests	Forests Act 1949	New Zealand Forest Service, regional level conservancies headed by conservators	Acquisition of land for the protection of trees and other conservation purposes, management of State forests for conservation purposes	State forest parks with protection zones forest sanctuaries, ecological areas, open indigenous State forests (see Table 7.4)	Few forest parks reach the coast	
Fish	Fisheries Act 1983	Ministry of Agriculture and Fisheries	Defensive measures (see Table 7.1)	Waters set apart for the purposes of conservation of fish, oysters and marine mammals	Areas adjacent to waters also may be set apart	

1949 have the broadest initiative conservation intentions, as demonstrated in Table 7.4. Because the protected wildlife areas can be revoked by proclamation by the Governor-General, their status is relatively insecure. Nevertheless, they are of considerable utility in the coastal zone, especially in conjunction with other conservation mechanisms such as the convention on Wetlands of International Importance, to which New Zealand is a party. In this regard, two coastal wetlands in New Zealand are recognized as being of potential international significance. Coastal reserves established under the Reserves Act 1977 are occasionally protected to seaward by wildlife sanctuary designations.

While most of the Forest Act 1949 is devoted to the regulation of commercial exploitation of Crown-owned "State forests", a variety of initiative conservation provisions is included. The powers of the Minister of Forests include the acquisition and use of land for purposes including the protection of trees and other plants; the protection of the natural environment and native wildlife; scientific, research, educational, historical, recreational, cultural, scenic, aesthetic, or amenity purposes; and the establishment, management, and protection of areas for public recreation. The Forest Service is to manage State forest land for similar conservation purposes (among other purposes), while "having regard to the production of timber or other forest produce" (section 14(a)). Large expanses of coastal land in New Zealand are occupied by State forest.

In addition to the setting apart of waters and adjacent areas for conservation purposes under the Fisheries Act 1983, as shown in the table, various restrictions that can be imposed on

Table 7.4

PROTECTED AREAS UNDER THE WILDLIFE ACT 1953 AND THE FORESTS ACT 1949

Type of Area	Purpose and Conservation Measures	Where Established
Means of Establishment and revocation		
<u>Wildlife Sanctuary</u> Proclamation by Governor-General	Protect wildlife and habitat through strict controls on use and access. Also protected under Reserves Act 1977. Management plans required.	Most of the twelve sanctuaries are islands to which public access is prohibited. Any crown land or harbours or estuaries.
<u>Wildlife Management Reserves</u> Proclamation	Sanctuary provisions used to protect wildlife and habitat, but public access is not prohibited. Also protected under Reserves Act 1977. Management plans required.	New category, partially intended to allow reservation of areas of seabed (Adams 1982:2) also crown land. Few so far established.
<u>Wildlife Refuges</u> Proclamation	Protect wildlife or game, but not habitat. Pollution may be prohibited. Management plans required.	Privately owned lands and waters. Many of the fifty-three refuges located on coast
<u>State Forest Park</u> Proclamation	Multiple use with management planning and zoning; protection, production or recreation purposes predominate. Soil and water conservation objectives dominant.	Crown-owned forest

(ctd)

(Table 7.4)

Type of Area	Purpose and Conservation Measures	Where established
Means of Establishment and revocation		
Forest Sanctuary Act of Parliament	Protect wildlife and habitat through strict controls on use and access.	Within State forest parks.
Ecological Area Gazette Notice	Preserve representative flora and fauna.	Within State forest parks.
Open indigenous State forest Gazette Notice	Facilitate public access.	Within State forests.
Wilderness Area Order in Council	Keep and maintain in, or allow to revert to, a state of nature. Public access permitted but no roads or facilities to be constructed.	Within open indigenous State forests.

fishing methods and on fish species have also been used to protect marine environmental features of particular value. Such features include special reefs and fish nursery areas around the New Zealand coast.

The following three sections cover initiative conservation arrangements that apply to spatially-defined areas and all the resources falling within the boundaries of those areas. The sections correspond to the types of areas covered: land, foreshore and marine areas.

7.3.2 Initiative conservation of land areas

The discussion in this section falls into three categories related to the tenure of the land involved: Crown lands, local government possessions, and private property.

Conservation of Crown lands under the National Parks Act 1980 and the Reserves Act 1977 is described in Table 7.5. The National Parks Act 1980 revised the administrative structure of parks and reserves, replacing boards which had been elected for individual areas with twelve district national park and reserve boards with appointed members. The boards prepare management plans, recommend to the Authority and Commissioners of Crown Land on "the effectiveness of the administration of the general policies for national parks" (National Parks Act 1980 section 30(d)), and exercise powers in respect of reserves in their districts. The National Parks and Reserves Authority is serviced by the Department of Lands and Survey but is independent of the Department in its role as general policy-maker for national parks, except that it must have regard

(Table 7.5)

Statute Administration	Conservation Area	Means of Establishment and revocation	Purpose and conservation Measures	Planning and Public Participation	Coastal Application
	Wilderness Area National Reserve	Gazette Notice Order-in-Council, revoked only by Act of Parliament	classification. Nature and scientific reserves most protective of indigenous flora and fauna, natural environment and ecological associations No developments or facilities permitted Extra protection for reserves of national or international importance to be managed to protect their special value	Public comment invited on declaration	Located within other reserves

to the policy of the Government through consultation with the Director-General of Lands and the Minister of Lands and Survey. The Authority approves management plans and advises and reports to the Minister or Director-General on the administration of the two Acts. The Authority is composed of ten members appointed by the Minister from: the Royal Society, the Federated Mountain Clubs, tourist and government interests, and persons with special knowledge of parks, reserves or wildlife.

The purposes of the various types of protected area listed in Table 7.5 cover the complete range of initiative conservation objectives, as reflected in section 4(2)(e) of the National Parks Act 1980:

the public shall have freedom of entry and access to the parks, so that they may receive in full measure the inspiration, enjoyment, recreation, and other benefit, that may be derived from mountains, forests, sounds, seacoasts, lakes, rivers, and other natural features.

General purposes of the Reserves Act 1977 not included in the table include the establishment of a system of areas that represent all natural ecosystems in New Zealand, and an objective directly relevant to coastal conservation, in section 3(c):

the preservation of access for the public to and along the sea coast, its bays and inlets and offshore islands . . . and fostering and promoting the preservation of the natural character of the coastal environment . . . and the protection of [it] from unnecessary subdivision and development.

This coastal emphasis has been demonstrated in the implementation of the Act, in a number of ways. A "Coastal Reserves Survey" identified coastal areas with potential for reserve status (see section 8.4). Maritime parks and coastal farm parks are both composed of different types of reserves. Maritime parks, while defined on land, have a definite marine

orientation. Water-based recreational activities link the reserves of the maritime parks, so many of the reserves involved are classified for recreation. More protective categories are also represented, with several islands protected as nature reserves for their value as habitat for rare or endangered species. Of the three maritime parks, only one has legislation giving it special status - the Hauraki Gulf Maritime Park Act 1967. The other two parks achieve their coherence through administrative and planning arrangements alone.

Local authorities, voluntary organizations, other agencies such as the Wildlife Service and the Historic Places Trust, or specially appointed boards, may be granted the responsibility to control and manage reserves. The national park and reserve boards increasingly take over control of reserves from pre-existing boards; however, a large proportion of reserves will continue to be administered by local authorities.

As well as administering some Crown-owned reserves, local and regional authorities purchase land for reserve purposes for which they may or may not seek protection under the Reserves Act. Provisions are made for the acquisition of lands for local and regional reserves under the Local Government Act 1974. Many such reserves are established on the coast. Central Government assistance in funding the purchase of reserves is often sought. Local authorities also manage reserves created upon subdivision of land in their districts. These reserves are required by section 284 of the Local Government Act and are mainly for recreation and aesthetic purposes. Local councils often own land in the form of strips adjacent to the foreshore which were set aside for roads but were never developed as such - these are "unformed legal roads" under the Local Government Act. When the

decision is made not to develop these unformed roads they are "closed" and are generally devoted to reserve purposes (see also section 7.3.3).

Various aspects of district planning closely involve local authorities in reserve establishment, as discussed in section 7.1.1. The schedules to the Planning Act 1977 require that:

Planning schemes at both regional and district levels should spell out the policies relating to the overall provision of reserves, and how these might form a coherent reserve system and contribute to community development (Ministry of Works and Development, unpub. 12/1978:2).

While zoning is predominantly limited to the pursuit of defensive conservation aims, it is increasingly implemented in such a way as to achieve initiative ends as well, under such zoning labels as "coastal protection zone" and "estuarine park". These are discussed further in section 8.3.

Alternatives to government acquisition of private land are found in the Reserves Act 1977, the Queen Elizabeth the Second National Trust Act 1977, and the Walkways Act 1975. These are summarized in Table 7.6. The table shows three different approaches under the Reserves Act 1977. Section 38 is usually applied to private land adjacent to land with a more formal conservation status. Section 76 is applied to land that is like reserve areas, and section 77 is used to encourage the preservation of more general landscape values.

The Queen Elizabeth the Second National Trust was created to supply an option to the conservation covenant for landowners who prefer not to deal with government agencies. The Trust has a board of ten directors appointed by the Minister of Lands and Survey which includes representatives of the Maori people, farmers and local government. With Government funding and

Table 7.6

ARRANGEMENTS FOR THE INITIATIVE CONSERVATION OF AREAS OF PRIVATE LAND

Statute Administration	Type of Area or Arrangement	Means of Establishment	Purposes and Conservation Measures
Section 38 of <u>Reserves Act 1977</u> Lands and Survey or its trustees or the administering body of a reserve	Land that is not a reserve	Agreement with owner, may be attached to land title	To manage land that is not a reserve for reserve purposes; to provide public access to private land while ensuring uses compatible with the owner's interests. Technical and financial assistance for management may be provided by Lands and Survey.
Section 76 of <u>Reserves Act 1977</u> Lands and Survey landowners	Protected private land	Gazette notice, agreement with owner and Minister of Lands and Survey may be attached to land title	To protect for nature, scenic, historic or scientific purposes, land that is of similar character to land that would be considered for equivalent reserve status. Land involved must be protected from damage by stock. Management assistance may be provided.
Section 77 of <u>Reserves Act 1977</u> Lands and Survey, Local bodies, landowners	Conservation covenant	Agreement, may be attached to land title	To preserve the natural environment, or landscape amenity, or wildlife or freshwater life or marine-life habitat, or historical value of private land. To protect general landscape values, public access may not be permitted. Compensation may be paid.
Queen Elizabeth the Second National Trust Act 1977 QEII National Trust landowner	Open space covenant	Agreement, covenant may be binding in perpetuity or set number of years	Similar purposes to conservation covenant but more flexible requirements. QEII National Trust may provide management and financial assistance.
New Zealand Walkways Act 1975 Walkways Commission District Walkway committees, controlling authorities	New Zealand Walkways	Agreement or lease with private owners. Bylaws	Walkways established, mainly over public lands such as State forests and reserves. Compensation may be paid to owners of private land involved, to facilitate public access to countryside. Rangers appointed for surveillance.

donations the Trust hires its own employees and is able to acquire land to serve the overall purpose of provision of open space to the public. Currently it is fostering a research and educational role, but it holds other legislated functions such as the formulation of policies on the provision, protection, preservation, restoration, enhancement, and use of open space in New Zealand.

The Walkways Commission has two central government members and representatives of local government, farming and outdoor recreation interests. The Commission is serviced by the Department of Lands and Survey and it delegates its powers to district walkway committees or to local authorities. Several walkways are being established in rural coastal settings.

Until recently, legal designations in district schemes could also be used as an initiative conservation arrangement over private land. Designations served "to ensure that the right land is available for a reserve when it is needed, and that in the meantime the attractive qualities of the land are not lost" (Town and Country Planning Division 1972:84). The designation mechanism was used extensively by local bodies and the Lands and Survey Department to achieve long term protection when immediate acquisition of land was not possible, especially along the coast. However, as designations remained on lands for prolonged periods without purchase by the designating agency, the Planning Tribunal increasingly commented against the use of the mechanism because of its limitations on the rights of landowners. The 1980 amendment to the Public Works Act removed reserves from the list of purposes for which land can be designated. Only land of scientific importance, often as habitat for rare or endangered species, can now be designated

for conservation uses.

7.3.3 Initiative conservation of foreshore areas

The "foreshore" and "esplanade" reserves discussed here are strips of land adjacent to the foreshore rather than portions of the tidal zone. Other methods of conservation, also discussed, are used to protect the foreshore itself.

In 1851 the first legislation was passed providing for the "Queen's chain" - a 20 m wide reserve adjacent to navigable waters. Since 1885 this strip has been reserved from sale along all coastal Crown land measuring landward from mean high water mark. At first this "foreshore reserve" took the form of provision for legal road, and the land involved (unformed legal road) has subsequently been made subject to local government control. Section 58 of the Land Act 1948 now provides for this reserve of generally 20 m but no less than 3 m. In most rural areas the strip is managed by adjacent land owners as farm land, while in urban centres it is usually managed as reserve by the local council. Lands and Survey Department can have portions of the foreshore reserve classified under the Reserves Act 1977. Otherwise, there is no legislative guarantee of public access rights to the area, but successive Governments have always provided these rights.

In order to reestablish the opportunity for public access to the coast in areas where the coastal strip was alienated from the Crown prior to its firm legal protection, provision has been made for the dedication of a 20 m coastal reserve upon subdivision by private owners. This "esplanade reserve" provision is enforced by county councils under section 289 of

the Local Government Act 1974. In some cases the requirement may be waived, or compensation may be paid to the owner. Esplanade reserves are set aside as "local purpose reserves" under the Reserves Act 1977 to provide access to the sea (or other areas of water) or to protect the environment. They are usually managed by the local authority to protect their features and maintain their conservation values, and public access is not impeded unless the stability of the land or biological values are threatened (Devine 1982).

Section 167 of the Land Act 1948 allows the reservation of foreshore by the Minister of Lands and Survey with the consent of the Minister of Transport. This action is usually taken over foreshore adjacent to a coastal reserve, whether new or established. The provision does not expressly allow for the protection of national park foreshores. However, national parks may be extended over the foreshore with the agreement of the agencies involved in its administration.

A section of the Harbours Act 1950 also addresses foreshore conservation (section 156(dd)). Harbour Boards or local authorities may license and permit foreshore under their control to be used for "the protection and preservation of any building, object, feature, or other thing of national, historical, or scientific interest". Also, grant of control arrangements under the Harbours Act can be applied to foreshore and seabed adjacent to a park or reserve, in which case the public body administering the land area has first option on assuming the grant of control. Some initiative conservation objectives can be achieved under grant of control provisions.

7.3.4 Initiative conservation of marine areas

In contrast to the variety and scope of institutional arrangements for initiative conservation on land, the selection available for application over marine areas is limited and narrow. Two institutional alternatives exist for initiative marine conservation - marine reserves and marine parks. These will be discussed in turn.

The Marine Reserves Act 1971 has the main purpose of

preserving, as marine reserves for the scientific study of marine life, areas of New Zealand that contain underwater scenery, natural features, or marine life, of such distinctive quality, or so typical, or beautiful, or unique, that their continued preservation is in the national interest (section 3(1)).

Subject to provisions for the protection of marine life and maintenance of its habitat, the public is to have free access to reserves to "enjoy in full measure the opportunity to study, observe, and record marine life in its natural habitat" (section 3(2)(d)).

An application for a marine reserve can be made to the Minister of Agriculture and Fisheries by a university, the National Parks Authority, an authority administering a coastal land reserve, a scientific organization, or the Director-General of Agriculture and Fisheries. The applicant must publicly advertise the reserve proposal. The Minister can uphold the objections to the proposal if they show that the reserve would interfere unduly with adjacent land interests, navigation, commercial fishing, existing recreational use, or the public interest. Declaration of marine reserves is by Order in Council. Two marine reserves have been established to date.

Over recent years the Ministry of Agriculture and Fisheries has had one executive officer at the central level devoted to

marine reserve matters. This officer's main task has been the formation of policy for marine reserves and the drafting of legislation to replace the current Act. The new Marine Reserves Bill is reviewed in section 8.4. The six regional offices of MAF employ fisheries officers, part of whose job is to investigate marine reserve possibilities in their regions. Only one regional officer has a major responsibility for marine reserve investigations. Management committees of five to seven members, including representatives of the public, are established for each marine reserve. The management committee recommends on the conditions that should be placed on recreational fishing in the reserve by Gazette notice and through bylaws. In the absence of restrictions, fishing is precluded. Management planning is not required but bylaws for various management purposes have to be reviewed every five years. Police and fisheries officers act as rangers in marine reserves.

The "marine park" arrangement is promoted by the Ministry of Agriculture and Fisheries as an alternative to marine reserves. The marine park category has no legal basis of its own; rather it uses a combination of statutes: the Harbours Act 1950 and the Fisheries Act 1983. Establishment of marine parks is generally initiated by public bodies controlling coastal lands that wish to conserve areas of adjacent land and sea. The agency involved first seeks grant of control over the foreshore, coastal waters and/or seabed that it wishes to administer under sections 8A and 165 of the Harbours Act 1950. Public notification of the application must be made. The Ministry of Transport recommends on an application to the Governor-General who grants control by Order in Council, for a

period not exceeding twenty-one years, over an area extending 200 m to 800 m from the shore. A body that has acquired grant of control must make bylaws for the regulation of its area which are recorded in the Gazette after approval by the Minister of Transport. The bylaws mainly apply to the use of the foreshore and to public recreation in coastal waters. Other activities besides those regulated by the Harbours Act, such as mining and fishing, remain under the control of the relevant agencies, whose cooperation must be obtained in order to achieve marine park objectives. Primarily, section 5(1)(pp) of the Fisheries Act has to be implemented for the conservation of marine life. This section allows the making of regulations for:

Setting apart any waters or areas adjacent thereto for the purposes of conservation and propagation of fish, oysters, and marine mammals (including seals) or any of them; and prohibiting the taking, injuring, or disturbing of them in any waters or areas so set apart.

Only one marine park had been established at the time of writing, with others perhaps imminent.

7.4 OVERVIEW AND ASSESSMENT OF INSTITUTIONAL ARRANGEMENTS FOR COASTAL CONSERVATION

Because the criteria for judgement of institutional arrangements established in Chapter Six involve the interrelationships between policy and institutional arrangements, the arrangements of sections 7.1 to 7.3 cannot adequately be evaluated on the basis of the present Chapter's discussion alone. The following assessment therefore must be

regarded as a preliminary estimate of responsiveness and integration based on the "face value" of available arrangements, which will be complemented by more complete assessments in the remaining chapters of the thesis. It is drawn from a general overview of the arrangements described above, augmented by comments from experts with experience in the fields of coastal zone management and conservation in New Zealand. It focuses first on the responsiveness criteria and second on integration.

7.4.1 Responsiveness in institutional arrangements

Clearly, there exists in New Zealand a range of institutional arrangements that can be used to achieve coastal conservation objectives in general and initiative coastal conservation in particular. The extent of their application in the coastal zone is, however, uncertain, because no inventory of coastal conservation areas has been completed. Experts generally agree that certain types of environments, including coastal ecosystems, are seriously under-represented in protected areas (Lucas 1980, Barker and Brown 1979:15). The statistic which states that more than ten percent of New Zealand's land area is protected is often cited and it is an accepted fact that only a fraction of this area is located on the coast. In comparison, the total of marine areas under initiative conservation arrangements is almost negligible. Thus, in terms of implementation, institutional arrangements are not being applied in a manner that is thoroughly responsive to coastal conservation needs. The potential for responsiveness in arrangements available for coastal conservation is also questionable, on the grounds of their suitability to the

character of the coastal resource.

No initiative conservation arrangements have been designed specifically for use on the coast. Traditional land-oriented designations such as national park status do not easily fit the conditions of the coastal environment where very large unmodified areas are now scarce. Conservation through zoning in schemes is not as dependable as more explicitly initiative arrangements because of the close competition with development uses within the scheme structure. The marine park arrangement, like zoning, depends on the use of a series of regulations or by-laws which imply a coercive approach to conservation. Formal parks and reserves express a more positive view, in which the benefits to be derived from the conservation measures are explicit, and administrative bodies are assigned the task of pursuing conservation goals. The absence of arrangements for the unified management of conservation areas spanning the land-sea interface is the most frequently cited obstacle to the achievement of initiative coastal conservation (e.g. McMillan 1975:3).

A lack of planning controls over coastal waters means that no "default" system of defensive conservation exists when explicit initiative conservation arrangements are absent. However, where planning controls are well established on the landward side, their adequacy for conserving the coastal zone is still questioned by observers of coastal development (e.g. Bellamy, pers. comm. 9/12/1981). The grounds for this criticism are developed in Chapter Eight. An overall emphasis on development and associated defensive conservation arrangements has led to a rearguard approach to coastal conservation. The relative neglect of initiative measures,

especially those that reflect an appreciation of natural processes for their own sake, has encouraged managers to assume that land has to be purchased by the Crown for the public in order to be protected (Joint Centre for Resource Management 1980:AP19; Taylor, pers. comm. 7/12/1981). The use of limited funds for the acquisition of coastal lands depletes management resources, so that operations to achieve conservation objectives may be curtailed. Resources may be degraded where public access is provided but on-site management is minimal. Implementation of arrangements for the conservation of private lands is increasingly encouraged, but this approach is of course dependent on the willingness of land owners to become involved.

The limitation of conservation options to public purchase or voluntary arrangements with owners was clarified by the elimination of the designation option. Although designation (in connection with the Coastal Reserves Survey) fulfilled a recognized societal need for coastal recreation space, it also placed restrictions on alternative uses of the areas selected for reserve status through designation. Because these restrictions were considered to be unfair by landowners and the Planning Tribunal, Government annulled the use of the designation mechanism as a conservation arrangement (see section 7.3.2). This action illustrates the criteria that policies must reflect societal values and priorities for resource use.

Although development-oriented laws were not addressed in this chapter, measures stressing utilization are far more numerous than those for conservation (Baumgart and Howitt 1979:67). The assumption tends to be made that preservation and conservation are passive and secure and do not require the purposeful actions that development does (Walker in Bishop

1980:10). In broad terms of land management, the provisions of the Water and Soil Conservation Act 1967 and the Soil Conservation and Rivers Control Act 1941 must be respected when actions are taken under almost any other legislation, thus establishing some general conservation priority. Otherwise, statutes facilitating development are usually at the top of the hierarchy. Most conservation measures may be overridden by the National Development Act 1979, which was promulgated to speed the process by which public or private works of national importance are considered so that they can receive the necessary consents more quickly. The Coal Mines Act 1979 and the Mining Act 1971 also override most conservation legislation.

Marine legislation emphasizes development even more strongly. The Marine Reserves Act 1971 essentially is overridden by the Marine Farming Act 1971, the Coal Mines Act 1979, the Petroleum Act 1937, the Iron and Steel Industry Act 1959 and the Continental Shelf Act 1964. While a great range of resources are regulated by legislation on land, particularly through defensive conservation arrangements, resources beyond the mean high water mark are legally described in broader terms in legislation facilitating their development: for example, the Continental Shelf Act 1964. Closer to land, controlled use is emphasized, as in the Marine Farming Act 1971; and at the land-sea interface, more defensive conservation measures are available.

7.4.2 Integration in institutional arrangements

As explained in Chapters Five and Six, responsiveness in policy is closely related to the level of integration encouraged in policy development and expression. Integration must be facilitated between administration and the public, and within the administrative system.

In the review of agencies and statutes of this chapter, a range of provisions for the involvement of the public was indicated, from the opportunity for objections to license applications, to representation on advisory bodies.

Most statutory planning requirements in New Zealand, including those for reserves and national parks, provide for some form of public consultation, or at least notification. Opportunities for public involvement in district planning are well established in the scheme review process. Indirect public input into planning is achieved through the election of local officials who direct planning. Outside of the town and country planning system, the public interest is supposed to be represented by Members of Parliament who serve the public through the state services. Many bodies appointed to assist or advise Government administration, such as the National Parks Authority, have no elected membership. Like government departments, these are bound by their legal mandates to serve the public. With increasing control over environmental resources by government has come increasing recognition of the role of the public in decision-making (Baumgart and Howitt 1974:67). Statutes such as the Harbours Act 1950 have been amended to increase the opportunity for public participation. In some cases the public only has to be notified, while in others individuals must be granted a hearing before a

decision-making authority. Almost invariably, groups or individuals representing a conservation interest are cast in the role of objector.

Integration among administrative bodies is more often the object of concern in the coastal management field. The complex nature of administration in the coastal zone is at least as problematic for initiative and defensive conservation as is the shortage of statutes for the protection of areas that lie across the coastline or seaward of it. The description of institutional arrangements in this chapter indicates the broad range of management, government, and planning agencies with overlapping jurisdictions in the coastal zone. Figure 7.2 illustrates the range of statutes applying to the coastal zone and the geographical limits of the associated administrative jurisdictions.

The various agencies, bodies or authorities administering the coastal zone can be described according to the scale of their jurisdiction and the nature of their functions. Functions can centre on certain activities or resources regardless of location, or on all activities or resources in a defined area. Elected planning bodies control the distribution of uses in their districts, where the same uses or activities may be regulated by sectoral national agencies and territorial authorities with jurisdiction over the resources concerned. For example, control of activities affecting hydrological systems is divided between catchment authorities and planning bodies, and structures on the foreshore are regulated by several agencies. Thus, functions of New Zealand agencies are activity or resource-based (usually the former), and the scale of jurisdiction is national, regional (territorial), or local

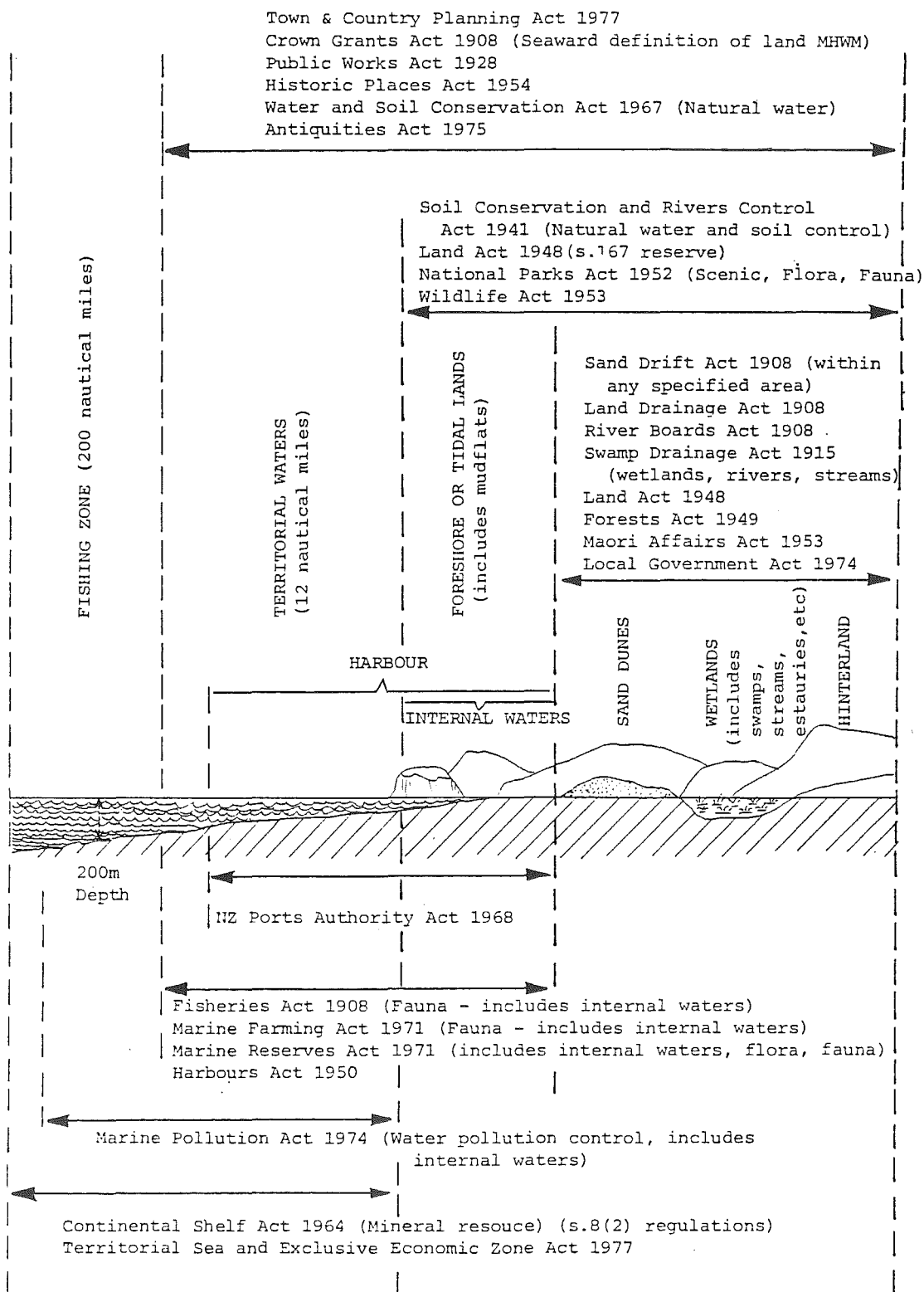


Figure 7.2

LEGISLATIVE ADMINISTRATION OF THE COASTAL ENVIRONMENT

(after Dart et al. 1982:117)

(McCombs 1980). The implementation of predominantly activity-based, sectoral policies, overlain by political or planning jurisdictions, leads to fragmentation, division, overlapping and duplication of administrative responsibilities in the coastal zone. Figure 7.3 shows, hypothetically, the resulting pattern. Such constraints also apply more generally to the field of environmental management which is characterized by "confused interrelationships between departments and organizations with environmental responsibilities" (OECD 1981:17).

A network of consent requirements established in legislation for the control of activities promotes some interaction amongst agencies; however, this is not enough to rationalize the multitude of management responsibilities in the coastal zone. Most observers agree that more national level coordinative mechanisms or policies for the coastal field would alleviate management problems, especially regarding initiative conservation (eg. Environmental Defense Society 1979:127). Regional planning provides the only mechanism for the formal coordination of coastal management. However, the consideration of land-sea inter-relationships is further encouraged under Planning Act requirements that all planning and administration have regard to the principles and objectives of soil and water legislation, that district and maritime schemes deal with the relationship between land use and marine activities, and that maritime planning authorities are to recommend on schemes for lands adjacent to their planning areas (see Table 7.2).

Overall, the New Zealand experience is not dissimilar to the Canadian or United States situations, reflected in the following quotations:

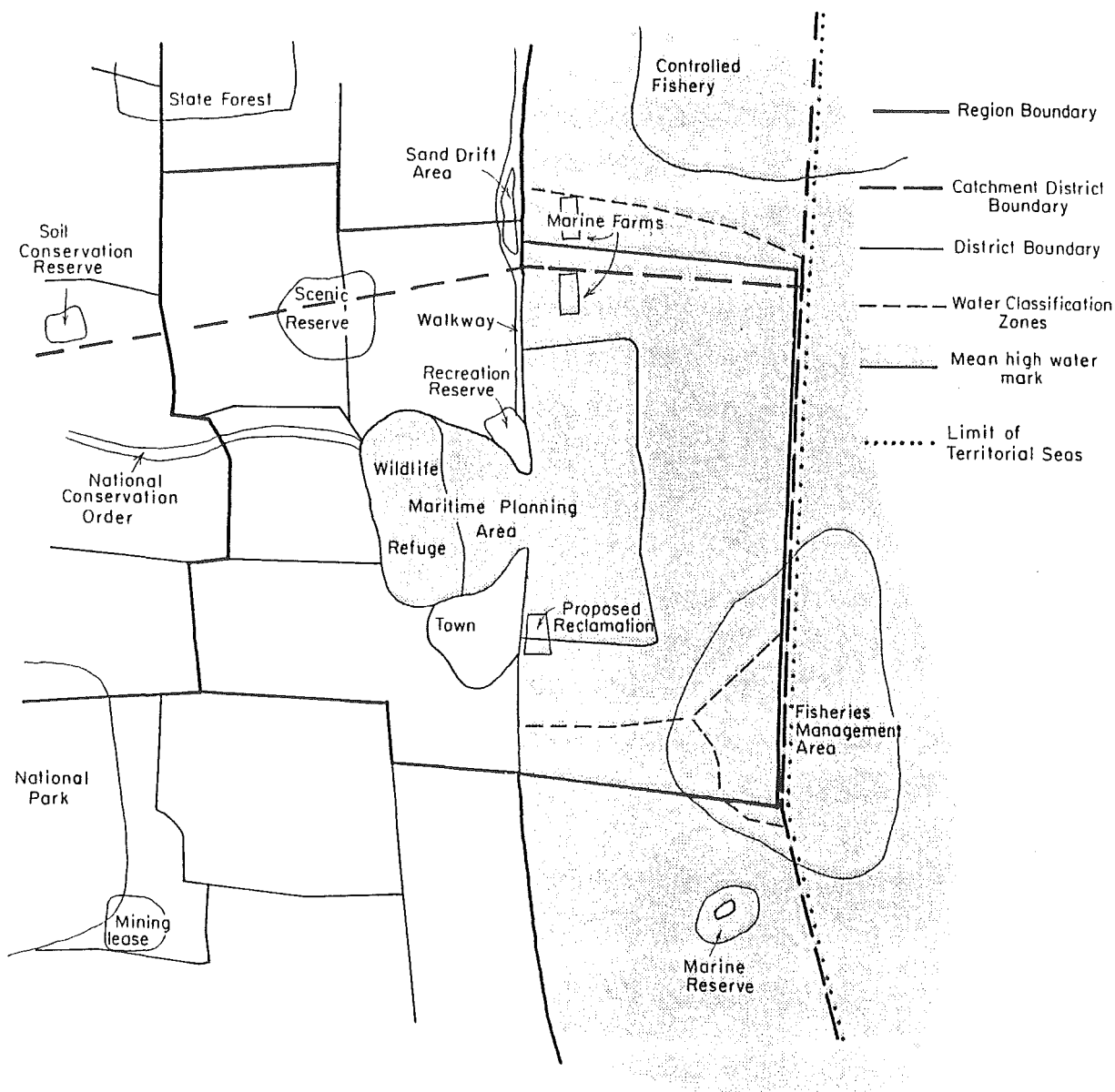


Figure 7.3

HYPOTHETICAL CONFIGURATION OF VARIOUS POLITICAL,
 PLANNING AND MANAGEMENT UNITS IN THE COASTAL ZONE

A fundamental problem relates to the fact that current institutional arrangements have failed to ensure that shorelines are an integral component of a coordinated land and water management system (Day and Parkes 1978:11).

While natural processes, and the patterns of man's use, cross this land and water line freely, the discontinuity of jurisdictional authority is a major problem for coastal zone management (Ketchum 1972:22-23).

Nevertheless, some New Zealand experts express confidence in the existing institutional system. An officer of the Commission for the Environment observed that,

In spite of some administrative difficulties and the lack of a sound legal backing, a number of public bodies have entered into cooperative partnership which enables them to consider coastal resources in a comprehensive manner (Tortell 1981:5).

Also, a report from the Environmental Council (1980) stated that the problem of coordinating the management of the foreshore and the adjacent seabed may be more apparent than real "and that existing mechanisms are not being used as effectively as they should be".

Both the positive and the negative perspectives on institutional arrangements are currently held by coastal administrators in New Zealand. A central government official feels that the approach to coastal conservation and planning in New Zealand which has "avoided major changes to existing responsibilities and management" is adequate (McCombs 1981:2), whereas a regional planner believes that "any general improvement in coastal and marine planning and management . . . is most unlikely to result under the present system" (Willis, unpub. 28/5/1981). Via the analysis of Chapter Eight and Part III, the adequacy of the existing system with regard to policy for coastal conservation will be further evaluated.

CHAPTER EIGHT
NATIONAL POLICIES FOR COASTAL CONSERVATION
IN NEW ZEALAND

The institutional arrangements discussed in Chapter Seven provide the organizational framework for coastal zone management and conservation in New Zealand. Their associated provisions and statements of purpose also reflect the policies of the Government which designed them and Governments which have used them. The relative level of support that the Government and its departments lend to the implementation of the various statutes is a key indicator of policy priorities, but national policies outside of legislation are also explicitly stated on occasion. In this chapter, explicit policies for the fields of environmental management, coastal zone management and coastal conservation in New Zealand are described and evaluated.

Figure 8.1 illustrates the theoretical location of coastal conservation policy within the broader fields of management. The configuration explains the need to consider the wider fields in order to reach an understanding of the narrower one. The emphasis of the present chapter is on formal policies and the administrative branch of government as an ongoing source of policy, rather than on Parliament. Studies of policy processes which cover less formal sources of policy, including public opinion, are reserved for the management unit analysis of Part III.

The description of coastal conservation policy is divided into three sections, following a review of broader environmental policies in section 8.1. The coverage of sections 8.2 to 8.4 is delineated in Figure 8.2, which shows the connections between sources of policy and the formal modes of policy expression.

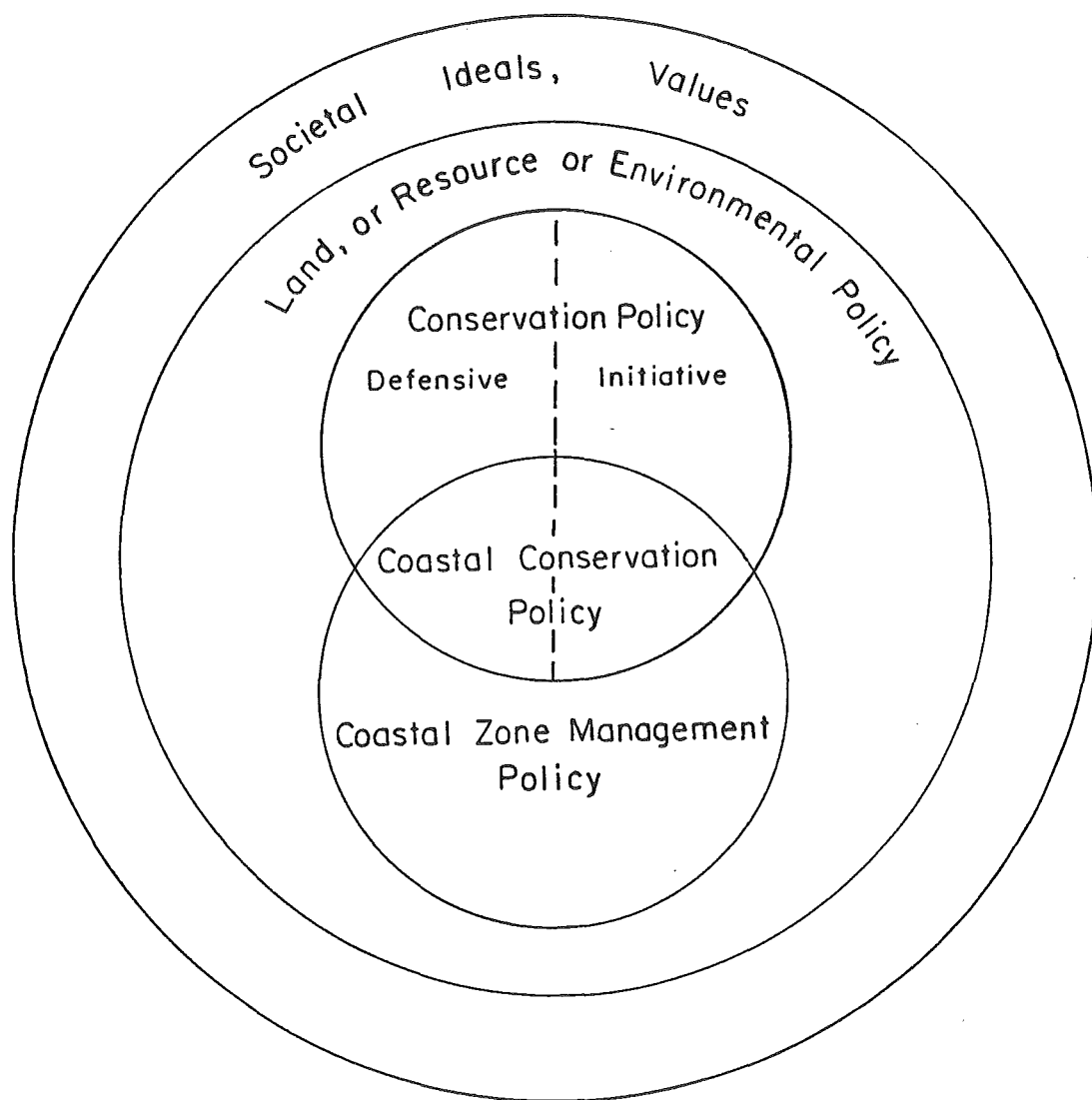


Figure 8.1

THEORETICAL SITUATION OF COASTAL CONSERVATION
POLICY

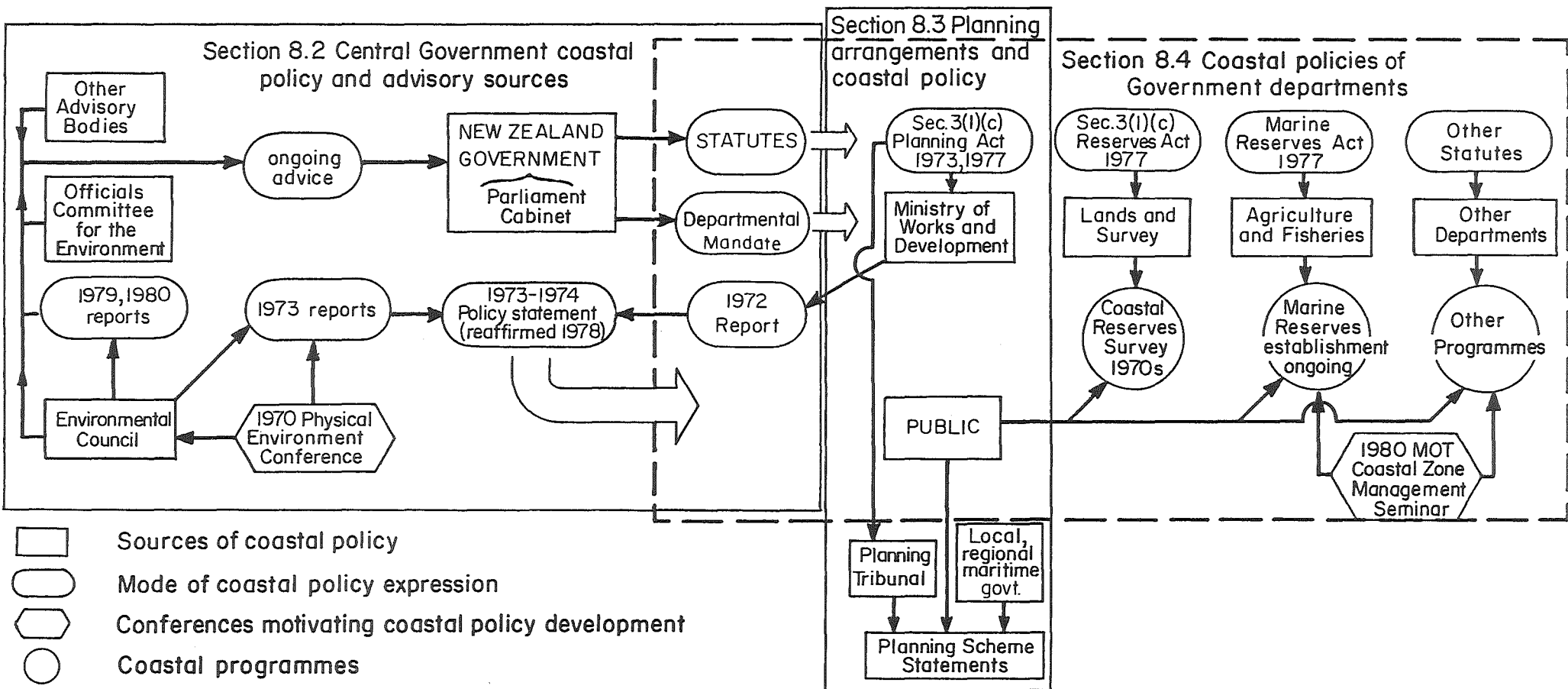


Figure 8.2

COASTAL POLICY IN NEW ZEALAND: SOURCES AND FORMAL MODES OF EXPRESSION

The second section covers comprehensive coastal policies set by central government on the advice of the Ministry of Works and Development (MWD) and the various advisory bodies. These policies influence the Government's definition of agency mandates and its use and development of statutes. The central role of the MWD in coastal policy-making is associated with its planning responsibilities. The implementation of planning, in conjunction with local government, the Planning Tribunal and the public, provides a forum for the interpretation and evolution of coastal policies which is examined in section 8.3. Section 8.4 addresses the coastal policies of individual departments. These are the more detailed extension of the central comprehensive policies, but they do evolve somewhat independently of central government directives. In all of the first four sections, the policies and policy-making roles of various agencies are outlined. Certain national level programmes that stem from and exhibit coastal policies are also reviewed.

An overview and assessment of national policies for coastal conservation is made in section 8.5. The evaluation of policy and its relationship to institutional arrangements must be considered as broad scale and preliminary, like that of section 7.4, because of the lack of a perspective on the performance of policy processes in the context of specific issues. However, the description of policy in this chapter is more qualitative and value oriented than was the description of institutional arrangements in Chapter Seven, so that sections 8.1 to 8.4 do permit a more critical assessment based on the criteria of responsiveness and integration in policy. Once again, the experience of those involved in coastal zone management in New Zealand is drawn upon in the evaluation.

8.1 ENVIRONMENTAL POLICY IN NEW ZEALAND

Ideally, decision-makers design environmental policy "as they seek to interpret what the people wish to be done with [their] country and its resources in the future" (Baumgart and Howitt 1979:67). In New Zealand this interpretive, anticipatory process is subordinate to "ad hoc pragmatism", in which "The natural tendency . . . is to strengthen the action fields and to neglect the conceptual or policy fields" (Roberts 1980:29).

A reluctance on the part of the New Zealand Government to set environmental policy is partially attributable to the individualistic political culture which was discussed in Chapter Three. This culture places a priority on the rights of landowners and attendant limitations on the Government's inclination to intervene in the management of resources. A high priority on economic ideals similarly limits the consideration of environmental interests. The Commissioner for the Environment has observed that the Commission is unpopular with Government interests because it appears to be an adversary of the prevailing economic ideology due to its consideration of "scientific evidence ...[and] the views of those who embrace an environmental ethic" over "economic analysis" (Piddington 1981:8). The Minister of Energy expressed the "development" ideology when he stated that he could not "share the fears which have been expressed by the more extreme environmentalist groups over the consequences of presently planned levels of economic growth" (Birch 1981:8). Governments of the early 1970s would have been more receptive to the environmental priorities than was the Government of a decade later, at least with respect to the coastal environment. In 1972 a statement on coastal policy

included the following:

Current policies should therefore concentrate on safeguarding the qualities the [environmental] crusaders hold most dear. If they do not, these qualities will have been lost by the time the general public comes to appreciate them (Town and Country Planning Division 1972:3).

Formal sources of environmental policy at the central government level in New Zealand are shown in Figure 8.3. While the Government sets its own policy through the political process, it is influenced by the recommendations of advisory bodies which usually report to it through the Ministers of Lands and the Environment. Environmental policy statements or reviews from various sources are listed in Table 8.1. Two comprehensive environmental policy reviews have been undertaken recently, both with the involvement of international organizations. The "New Zealand Conservation Strategy" was produced by the Nature Conservation Council (1981) in conjunction with a global programme initiated by the International Union for the Conservation of Nature and Natural Resources. The review by the Organization for Economic Cooperation and Development (1981) was part of a programme that carried out reviews of national environmental policies for several OECD countries. The background to this review, undertaken by the Commission for the Environment (1980), has become a policy discussion document in its own right. Three policy ideals which the table indicates may have evolved in conjunction with the Commission's mandate for the Environmental Protection and Enhancement Procedures are supposed to summarize overall Government policy on the environment as it has evolved since the late 1960s (Commission for the Environment 1980:15). A 1981 statement by the Commissioner for the Environment at the bottom of Table 8.1

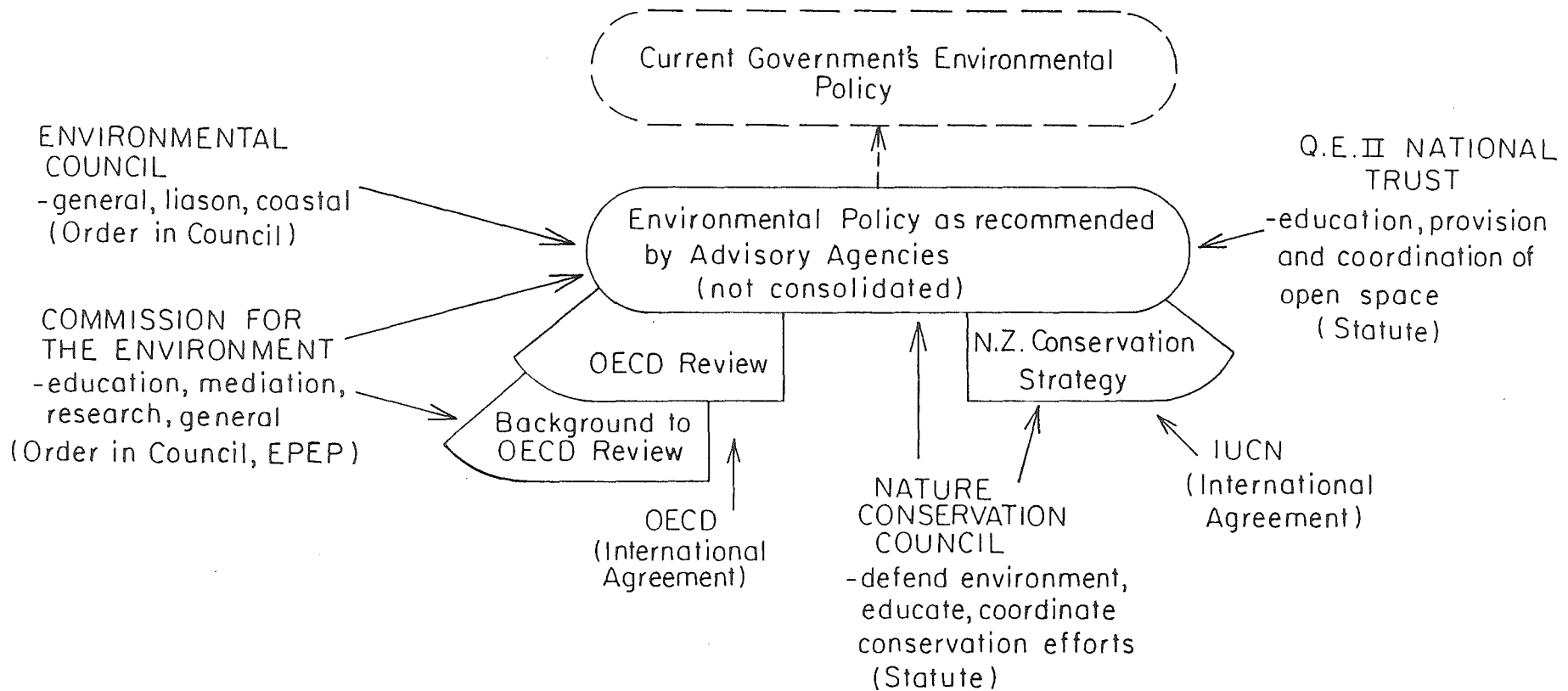


Figure 8.3

ADVISORY SOURCES OF ENVIRONMENTAL POLICY IN NEW ZEALAND

Table 8.1

ENVIRONMENTAL POLICY: SOURCES, STATEMENTS, REVIEWS

Title of Document (Author)	Summary Statement or Contents
Integrating Conservation and Development (Nature Conservation Council 1981)	Objectives of the New Zealand Conservation Strategy: a. to protect ecological processes and life support systems b. to provide for cultural, spiritual and other non-material needs of society c. to preserve genetic diversity d. to ensure the sustainable use of resources e. to ensure that non-renewable resources are depleted at a rate that enables transition to use of more abundant materials and ultimate sustainable use of renewable resources (Executive summary)
Environmental Policy and Management in New Zealand (Commission for the Environment 1980)	"This report broadly examines the institutional background to New Zealand's national environmental policy and management and then provides background statements on five key areas of environmental policy" (Introduction). Five areas: primary production, energy, water, environmental health, town and country planning.
Environmental Policies in New Zealand (OECD 1981)	Reviews, and recommends changes in, environmental policy regarding the institutional framework, town and country planning, agriculture and forestry, water and energy.
Environmental protection and enhancement procedures (possibly New Zealand Government) (since late 1960s)	Cited as Government's overall environmental policy: a. That full consideration be given to environmental matters at all levels of decision-making b. That authoritative information be made available to the public at the earliest possible stage of planning, so that public reaction and views may be taken into account in further planning c. That the mechanisms by which these aims are achieved should be as simple, direct and efficient as possible (Commission for the Environment 1980).

(ctd)

(Table 8.1)

Title of Document
(Author)

Summary Statement or Contents

Statement by the
Commission for the
Environment (1981)

Four principles of environmental management:

1. New Zealand will continue to develop, and development is a good thing for the New Zealand community.
2. The real standard of living in the community in the long term will not increase unless we can move closer to the model of the "Conserver Society".
3. There are many vulnerable zones in the environment which we have to respect much more than in the past.
4. If decisions are to reflect a balance between development, conservation and responsible environmental management, there needs to be adequate scope for public participation.

(Soil and Water, February 1981:11)

demonstrates a less formal set of guidelines.

More specific environmental policies that are not addressed here include criteria developed by the Land Use Advisory Council "on the basis of which the use of land may be determined" (OECD 1981:34). The sectoral government departments also develop policies specific to their areas of responsibility which could be deemed "environmental". (Those that apply in the coastal zone are addressed in section 8.4). As well, the research done by agencies such as the Department of Scientific and Industrial Research, as discussed in Chapter Four, influences government policy by providing the information base for policy formation.

8.2 CENTRAL COASTAL POLICY IN NEW ZEALAND

A limited number of coastal policies can be attributed generally to the central government and its advisory agencies, rather than to individual government departments.

The input of advisory agencies into environmental policy, as illustrated in Figure 8.2, has a significant coastal component. The Nature Conservation Council, for example, is "frequently involved in case studies in the coastal zone [and] it has a particular concern for harbours, estuaries and shallows" (Harris 1980). Coastal protection priorities are reflected in the Council's proposed New Zealand Conservation Strategy (1981:34). The advisory body that has had the most influence on coastal policy is the Environmental Council, which was assigned a coastal policy reporting task at its inception - the Physical Environment Conference of 1970. The Council has

reported to the Minister for the Environment on coastal matters and has published coastal policy critiques. The proposals it has made for radical measures in response to coastal management problems, such as for a moratorium on coastal development, may have lent impetus to Government programmes for coastal conservation and influenced the promulgation of section 3(1)(c) of the Planning Act (Thom pers. comm. 1981). More recent reports from the Council criticise the Government's coastal policy for its informality and discretionary application, and its neglect of coastal waters (1979, 1980).

The sources and contents of major coastal policy statements and reviews are summarized in Table 8.2. Government input is usually channeled through the Ministry of Works and Development (MWD), meaning that policies focus on the terrestrial side of the coastline. Many conferences and seminars besides the Physical Environment Conference have promoted the expression of coastal policy, such as the Coastal Zone Management Seminar of 1980 (see section 4.2.4). Virtually all of the statements in Table 8.2 were made in the 1970s, following increased recognition of the need to prevent over-development of coastal lands (see section 3.2.1). Conservation priorities dominate the policies, also in response to this increased awareness. Notably, the 1973-74 Government policy has a strong conservation emphasis, as demonstrated by part c in the table which is expanded below:

The retention in sufficient quantities of the native coastal flora and fauna in its natural state, as well as the unique and the typical in coastal scenery (Town and Country Planning Division 1979).

At the time it was announced, the 1974 policy was regarded by those involved in coastal zone management as a "great step

Table 8.2

CENTRAL COASTAL POLICY: SOURCES, STATEMENTS, REVIEWS

1970	Physical Environment Conference	<u>Recommendation</u> "The proposed Physical Environment Council should arrange for guidelines to be drafted for the use and management of coastal waters and seabed" (McMahon 1972:87)
1972	Ministry of Works	<u>Coastal Development: policy issue and planning techniques.</u> Identifies "critical issues" on coast: <ol style="list-style-type: none"> 1) obtaining a desirable pattern of rural urban land use, 2) preserving or creating an appropriate character at each settlement, 3) safeguarding the land that will be needed as public reserve in the future (p.VII). Makes "value judgements": <ol style="list-style-type: none"> 1) what happens in our shoreline areas is a matter of national interest 2) usually "the future holidaying public" is the group to be favoured 3) in most coastal areas appearance is important and the natural landscape should be dominant 4) people should be able to experience variety and exercise choice (pp.2-3).
1973	Environmental Council	<u>Recommendations on coastal planning</u> <ol style="list-style-type: none"> 1) Use existing legislative machinery with modifications 2) various general statements proposed as basis for national principles and policies (E.C. 122, April 1973).
	Official's Committee for the Environment	<u>Report on the Management of Coastal Waters and the Sea-bed:</u> Identifies need for "broad policy plans and guidelines on which future management of the total N.Z. coastal water and sea-bed resource can be based" (p.28) and recommends on the nature of the guidelines, stressing conservation.

(ctd)

(Table 8.2)

1973	N.Z. Government	<u>Enactment of S.2B(a) Town and Country Planning Act 1953 (later, S.3(1)(c) of 1967 Act):</u> [Provide for] The preservation of the natural character of the coastal environment and the margins of lakes and rivers and the protection of them from unnecessary development.
1973- 1974	N.Z. Government (Ministry of Works)	<u>Coastal planning and development policy:</u> (a) National importance and fixed quantity of coastal land justifies central Government involvement in use, planning, research and funding. (b) Provision of a wide range of recreational opportunity and experience on the coast. (c) Retention of native coastal flora and fauna and coastal scenery. (d) Definition of land needed for urban uses and land to be excluded from these. (e) Ensuring environmentally sound holiday development. (f) Protection of dune areas to maintain stability of coastal land (Town and Country Planning Division 1979:2).
1977	N.Z. Government	<u>Enactment of S.3(1)(c) Reserves Act 1977:</u> [Act is for] Ensuring, as far as possible, the preservation of access for the public to and along the sea coast, its bays and inlets and offshore islands, lakeshores and riverbanks, and fostering and promoting the preservation of the natural character of the coastal environment and of the margins of lakes and rivers and the protection of them from unnecessary subdivision and development.
1979- 1980	Environmental Council	<u>Reports on coastal planning policy:</u> Review 1974 policy and implementation of S.3(1)(c) of Planning Act 1977 to assess coastal policy and suggest implications for coastal zone management and administration (E.C. 277 1979, Review of Coastal Planning Policy 1980).

forward" (Roberts 1974:151) and the first extensive statement on the Government's view of a national planning issue (Brown 1974:13). In 1975 the Minister of Works and Development stated that the policy would provide:

. . . A series of principles on which the Government's actions can be based when framing legislative changes; when exercising its powers under existing legislation, or when allocating finance (Town and Countryside Summer 1975:22).

The MWD still refers to the 1974 policy in its operations. Overall, much coastal policy is designed by the MWD and expressed through planning arrangements. Accordingly, the relationship between planning and coastal policy is further investigated in section 8.3.

The apparent conservation emphasis in coastal policy statements implies a conservation-oriented approach to coastal zone management in New Zealand which has not dominated in practice. This anomaly could be related to the sources of the coastal policy statements, in that the Government is not generally obliged to adhere to the recommendations of its advisory bodies. The promulgation of sections 3(1)(c) in the Planning Act and the Reserves Act 1977 does indicate a serious governmental commitment to coastal conservation, but these are loose provisions open to a range of interpretations, and they are limited to the jurisdiction of two statutes.

8.3 PLANNING ARRANGEMENTS AND COASTAL POLICY

Since the 1970s, central Government interest in coastal policy-making has dwindled. This coincides with a decrease in subdivision pressure, but it may also be attributed to increased economic pressures diverting Government attention, and to a sense of complacency that coastal policies are now "in place". The introduction to the Planning Act of the requirement to preserve the natural character of the coast, and of maritime planning, might be seen to be adequate coverage of coastal policy matters by later Governments which did not initiate these changes. However, the effectiveness of this statutory expression of coastal policy now depends on the ongoing performance of the planning system.

The main participants or actors in the statutory planning process, shown in Figure 8.2, are local, regional and maritime government bodies, the Planning Tribunal, the MWD and the public. The role of the public is addressed in Part III. The planning policies of the MWD (Town and Country Planning Division) and the roles of planning schemes and the Planning Tribunal are summarized here. District schemes are discussed first, because they are the core of the planning system. They are detailed and comprehensive and they are the longest standing type of planning arrangement.

National policy for coastal land relies heavily on the local planning process for its expression. Land use controls in bylaws associated with district schemes interpret section 3(1)(c) of the Planning Act 1977 as well as other coastal conservation considerations included in the Second Schedule of the Act (see section 7.2). Policies are stated explicitly in the

scheme statement. The MWD oversees planning to ensure that government policies are represented and it has direct input through designations for public works. It also represents the interests of other government departments in the planning process. Once schemes are operating, the Ministry only intervenes in planning issues if matters "of national importance", affecting the Crown or national policy, are involved. It strives to ensure that "good" district schemes are produced, balancing conservation and development, so that disputes and applications for change in the operative plan are minimized (Town, pers. comm. 1981). Prior to 1977, the MWD represented "the public interest" in addition to the interests of the Crown in planning matters. When a broader range of interests were given rights of objection and appeal the Ministry relinquished this role (Edmonds, pers. comm. 1980).

Some observers have suggested that local government officials are politically biased in favour of individual landowners' financial expectations (Fookes 1974:92) and that funding problems lead local bodies to encourage development that will increase rating revenue. However, policies expressed in the planning schemes of several councils with control over coastal lands suggest that local government does recognize the need for coastal conservation. For example, the Thames-Coromandel District Scheme has a coastal zone in which features including headlands, foreshores, prominent ridges, native or exotic bush, rural farmland, wetland areas including mangrove swamps, and areas of geological, archaeological and historic interest" are to be protected (Christie 1977:4). Whangarei County has a "rural scenic protection zone" along its coast (People and Planning 9/1977:3). And the Rodney County

Council has put forward a "rural open space zone" which is intended to:

. . . conserve, protect and enhance those areas which environmentally are of outstanding importance, having a special amenity value (including the preservation of the natural character of the coastal environment . . .) (Digest no.4 p.16).

Theoretically, maritime planning could play a role in coastal planning in marine areas parallel to that of district planning on land, at the same level of detail, and involving the public. The coastal policy-making role of maritime planning has yet to be fully tested in practice because arrangements have not been in place long enough to display their full effects. The potential of maritime planning has been constrained by limited implementation of the arrangement: maritime planning areas have been established only over coastal waters that are experiencing particularly high levels of pressure and use conflict, and overall commitment to maritime planning has been low (Willis, pers. comm. 1981). Thus, a device which holds potential for the comprehensive planning of coastal waters has been applied only as a mechanism for conflict resolution.

Regional planning is another approach to coastal zone management that is not contributing as much as it could to policy formation, due to the manner in which it has been implemented and the relatively short time that it has been in effect. The united councils that have been constituted over most of New Zealand are less politically powerful and less financially independent than are the elected regional councils or authorities which could have formed the basis for regional planning (Willis pers. comm. 1981). Regional government is commonly restricted by constraints similar to those which limit local government's policy-making role, including parochial

attitudes and inadequate funding and policy-making skills (Roberts 1980:31, Environmental Council May 1980:13, OECD 1981:32). Nevertheless, in 1981 the OECD (p.32) stated that:

Despite all of the residual powers of the central government, the regional planning process will enable regions to exert considerable influence on policies. This could prove significant in the field of conservation planning.

Much of the potential of regional planning lies in its ability to integrate national policies with direct administration at the regional and local levels, in its freedom from operational tasks, and in its flexibility: ". . . the nature of regional planning is that it is much more of a process of policy making than a fixed. . . blueprint 'plan'" (Gow 1980:1). A regional council could "operate a vigorous coastal policy in a manner quite beyond the capacity of most existing territorial bodies" (Roberts 1974:151). The extension of planning jurisdiction over coastal waters makes regional bodies one of the few types of agencies that can oversee land and water uses jointly, and some regional schemes have addressed the coastal zone as a geographical unit. Regional agencies can also express coastal concerns by participating in the district planning process; in at least one case the region has advocated more stringent coastal conservation measures in a district scheme (People and Planning 9/1977:7).

The Town and Country Planning Tribunal is not intended to be a policy-making or planning body. In its own words: "it is the function of this Tribunal to test and weigh these opinions and conclusions, and to decide between them" (Tribunal Decision no. c30.82:4). Yet experts have suggested that discretionary powers in the administration of environmental law in New Zealand mean that the courts must assume a policy making role (Baumgart

and Howitt 1979:70). Although the MWD is not bound by decisions made by the Planning Tribunal in the past, it relies on the Tribunal to interpret the Planning Act in legal cases of disagreement over the interpretation of its terms. Some Tribunal opinions on aspects of section 3(1)(c) of the Planning Act are exhibited in Table 8.3. Tribunal decisions generally take a loose interpretation of "natural character" that includes human influence; a narrow interpretation of "coastal environment" emphasizing visual aspects; and a restrictive definition of "unnecessary" as "luxurious" or "unwarranted", which does not automatically include development that could be undertaken away from the coast.

The Tribunal is often called upon to arbitrate between conflicting provisions of the Planning Act. When conservation policies interfere with the rights of private landowners, the Tribunal tends to decide in favour of the private rights. Proposed zones that severely restrict the functioning of current land uses in order to maintain a natural landscape are usually ruled against, consistent with Government policy as expressed by the MWD (Town, pers. comm. 1981). The Tribunal "will not impose upon private land a zoning which results in a de facto reserve . . . if the land is suitable for other purposes" (Digest no. 21:12). Councils are thus obliged to arrange either for the purchase of areas for initiative conservation, or for the making of a formal agreement for conservation with the land owners of such areas. However, under limited circumstances coastal landowners' rights can be restricted through the preclusion of opportunity to change land use in a way that would alter landscape appearance or condition, under section 3(1)(c). According to the Tribunal, the provisions of this section "are

Table 8.3

TOWN AND COUNTRY PLANNING TRIBUNAL INTERPRETATIONS OF TERMS IN SECTION 3(1)(c) OF THE PLANNING ACT 1977

Term	Interpretation
natural character	<p>"a vegetative cover even though controlled by man is nevertheless a natural cover since it would not be there without the forces of nature" (Sheppard part 3.03).</p> <p>"where the forces of nature predominate over the hand of man" (Decision no. C30.82:32).</p>
preservation	<p>not "the preservation and protection of the existing physical state", but rather the protection of "those qualities and conditions in the area which contribute to the pleasantness, harmony and coherence of this environment and its better enjoyment for any permitted use" (Decision no. C30.82:33).</p>
coastal environment	<p>"an environment in which the coast is a significant component or element ... What constitutes the coastal environment varies from place to place and according to the position from which it is viewed" (Environmental Council May 1980:7).</p> <p>"does not extend beyond the visual appearance of land- and sea-based activities to include the bed of the sea" (Sheppard part 3.04).</p>
unnecessary development	<p>"unwarranted" or of a "luxurious character", or to which alternatives are available, or of which the economic advantages are outweighed by the need to preserve the natural character of the coastal environment (Sheppard part 3.06, Decision no. C30.82:35).</p>

not criteria. They are Parliament's expression, in legislative form, of the matters to which this tribunal must have regard..." (Digest no.14:10). In its decisions the Tribunal requires that local bodies also have regard to these matters through zoning in schemes "expressly ... positively and in an appropriate manner" (Environmental Council 5/1980:7).

The Tribunal's support for coastal conservation zones in district schemes depends on the character of a given stretch of coastline and its vulnerability and suitability to potential uses, and the degree to which landowners are disadvantaged. In one case the Tribunal said that some quarrying in the coastal environment is acceptable "because minerals can be won only where they occur", while in another case "The conservation objective equivalent to section 3(1)(c), although not absolute, over-rode the economic advantage to the appellants" (Sheppard, part 3.06). Because the Maori people's ancestral interests in land are, like the "natural character of the coastal environment", a "matter of national importance" under section 3, the Tribunal will often judge in favour of an appeal against conservation zoning of Maori land (eg. Digest no.1:4, People and Planning 9/1977:7).

The Planning Tribunal can also affect coastal conservation policy at the local or regional level through its deliberations and suggestions. Examples of potentially influential comments are as follows:

. . . the board [now Tribunal] concluded that the main requirement for reserves on the Whangarei coast was for a series of comparatively large regional-type reserves (Schedule no.28:8).

. . . a comprehensive survey and evaluation of the natural resources and environment of the Coromandel region would be of great assistance to those

considering other [mining] applications (Digest no.17:9).

The statutory planning system holds considerable potential for the integration of conservation with coastal development, but the conservation measures that may be taken under the Planning Act are defensive in nature. Arrangements with initiative connotations are less likely to attain the necessary approval from the actors in the planning process. Outside the jurisdiction of the Planning Act, in most coastal waters and on the foreshore, there are no comprehensive conservation provisions of either type, so the policies of the sectoral government departments are especially important for the conservation of these areas.

8.4 COASTAL POLICIES OF GOVERNMENT DEPARTMENTS

The policies of government departments with extensive administrative responsibilities or initiative conservation mandates in the coastal zone are reviewed in this section. Programmes for terrestrial coastal reserves and marine reserves are covered in connection with the agencies that administer them.

The Ministry of Transport (MOT), as representative of the Crown, has the broadest policy-making mandate for the marine side of the coastal zone, covering such topics as mining, erosion, pollution, works, reclamation, dredging, recreational boating and marine farming. In performing its role, the Ministry is guided principally by the "public interest", as

required by various sections of the Harbours Act 1950. MOT policy is that the "public interest" is best determined by criteria or procedures specified in planning schemes which include the foreshore and/or coastal waters (Milne, unpub. 31/7/1980). Otherwise an environmental impact report may be required. A specific policy with potentially far-reaching implications is that:

Harbour boards, local authorities, reserve boards etc, are encouraged to take management control under the harbours Act for the foreshore [the tidal area below mean high water mark] in their area and adjacent water (MOT 2/1980).

Harbour boards usually assume such a grant of control, and they also receive additional responsibilities if they become maritime planning authorities. The MOT feels that harbour boards will evolve to fill associated roles (McCombs, pers. comm. 1980), but others fear that harbour board priorities and resources are unsuited to the broader planning function (Tortell, pers. comm. 1981; Walker 1980:12; Willis, unpub. 1981:2). All grant of control authorities "are encouraged to develop the policies by which they will exercise their powers over foreshore and water areas in the form of management plans", but these plans have no statutory basis (Harbours and Foreshores Newsletter 5 1980)

In its elaboration of coastal policy the Ministry has shown an increasing concern for environmental conservation. It takes care in approving even small physical changes to the coast because of its awareness that "there is only a fixed amount of coastline in its natural state" (Milne 1978:5). Enforcement of Harbours Act provisions to protect the coast is a high priority; however, due to difficulties in policing, the Ministry realizes "that we have a responsibility both to educate and persuade people to take more care of the coasts" (Milne 1978:4).

A pervasive role in coastal policy making is performed by the National Water and Soil Conservation Organization (NWASCO) and its subsidiary agencies in the administration of water and soil resources. Catchment authorities have the capacity to set policies across the land-sea interface. Strong regional management of water and soil is encouraged by MWD and NWASCO (Howard 1974), and policies are expressed in district schemes. An emphasis is placed on measures to prevent coastal erosion, through protection works if necessary. Legal water classification by regional water boards has potential for the expression of coastal conservation policy. All coastal waters were to be classified to protect "existing public uses and probable future uses to the degree that this is practicable (Howard 1974); however, since 1976 when a classification was ruled against in court, classification has been limited to areas where there exists a conflict of interests (Planning Consultants Ltd. n.d.:36).

Wildlife Service policy for coastal conservation is apparent in the priority placed on the protection of habitat for seabirds, particularly coastal wetlands. With its limited funds, the Service tries to purchase wetland areas under direct threat from development, or it arranges for their protection through district schemes or by other conservation agencies. The introduction of the wildlife management reserve category reflects the Service's attention to the coast, as the arrangement is intended in part "to meet specifically the inability to reserve areas of seabed under any legislation" (Adams 1982:2).

The Department of Lands and Survey uses management planning as a means of developing and expressing policies for parks and

reserves. Such planning "is primarily concerned with the physical resource and the limited use of that resource by people. . . . The management plan is a policy rather than a design document" (Robertson 1980:2). National goals for parks and reserves are set by the National Parks Authority. General policies specified by the Authority in 1978 encouraged park boards "to seek control of park waters and of the foreshore adjacent to parks, in terms of Section 165 of the Harbours Act".

Lands and Survey Department also has a considerable influence on park and reserve policy through its administrative actions. When individual park boards were abolished, the existence of the unlegislated maritime parks was jeopardized, but administration has supported their survival. Administrative programmes have also demonstrated active concern for coastal conservation matters. Recently, Lands and Survey staff have been examining all terrestrial reserves to determine the possibilities and reasons for extending reserve boundaries seaward. Justifications for such action are likely to be the interdependence of land and sea, the intrinsic values of coastal waters and the need to manage shore-based human activities (Dingwall, pers. comm. 1980). Much of the information required for the above evaluation has been made available by the Department's Coastal Reserves Survey.

The Coastal Reserves Survey is the programme that has most thoroughly investigated coastal conservation needs in New Zealand to date. Its history, with related events, is summarized in Table 8.4. The Survey aimed to investigate the extent of public lands on the coast, to identify additional coastal lands suitable for acquisition for reserves and to determine how the costs of acquisition would be met (Kenworthy

Table 8.4

HISTORY OF THE COASTAL RESERVES SURVEY AND RELATED EVENTS

1960s	Pressure on coast due to development, especially subdivision.
1966	Minister and Director-General of Lands initiate survey.
1969	Physical Environment Committee of the National Development Conference recommends "that government take early action to develop planning and policy solutions to control subdivision in coastal and lake-shore areas" (Chapman 1974:336).
1971	Environmental Council recommends that, failing a moratorium on the sale of coastal land, government should put coastal land in danger of being sold into reserves (E.C. May 1980:1).
1972	Reserve Acquisition Trust Fund established by Government, allowing an average expenditure of \$1 million per year (continued to 1982 in two five year programmes).
1974-78	165 pieces of land, totalling 20,000 ha purchased from \$5.9 million (Thom 1982:4).
1975	New Zealand Walkways Act
1977	Queen Elizabeth the Second National Trust Act
1977	Reserves Act - all provide alternative means to public acquisition of land for establishment of coastal reserves.
1981	Public Works Act - limited the placing of designations on private land so that this technique could no longer be used for protecting coastal areas.
1982	For 72 counties: 35 survey reports approved by Minister for public release; 15 reports being amended prior to final approval; 18 reports at draft state; 4 reports not yet commenced (Coastal Reserves Review Committee agenda July 1982). Survey winding down.

1979:76-77). Early criteria for the identification of potential reserves were essentially "people-oriented", including attractiveness for present and future recreation uses and access from neighbouring centres of population (Thom 1982:5). More recently, a wider range of values has been considered, including historic, archaeological, cultural, biological, and wildlife (Rowan 1978 in appendix to Lello 1980). The Survey reporting process is outlined in Figure 8.4. The predominant method used to protect the areas identified by the Survey was designation in district schemes. While purchase of designated land was often postponed indefinitely, much coastal land was purchased by central government from 1972 to 1982 with a trust fund, as shown in Figure 8.5. Due to the increasing shortage of funds and the loss of the designation option in 1981, acquisition has given way to arrangements for the protection of private land; however,

. . . the Department's experience has been that most landowners who are prepared to negotiate giving up exclusive use still prefer outright sale. . . The covenant option may have had greater application had it been available earlier, when development pressures on the coast were more extensive (Devine 1982:8).

Partly because of the increasing need to interact with landowners, policy on external involvement in the Survey evolved from one in which reports were circulated only to certain government agencies, to one that encouraged the participation of various interests throughout the Survey process. Increased consultation sought to "take advantage of local knowledge and to create an understanding of the purpose of the investigation" (Rowan 1978 in Lello 1980). This change in policy was also a response to adverse reactions in counties where certain sectors of the population - mainly farmers and Maori people - felt their

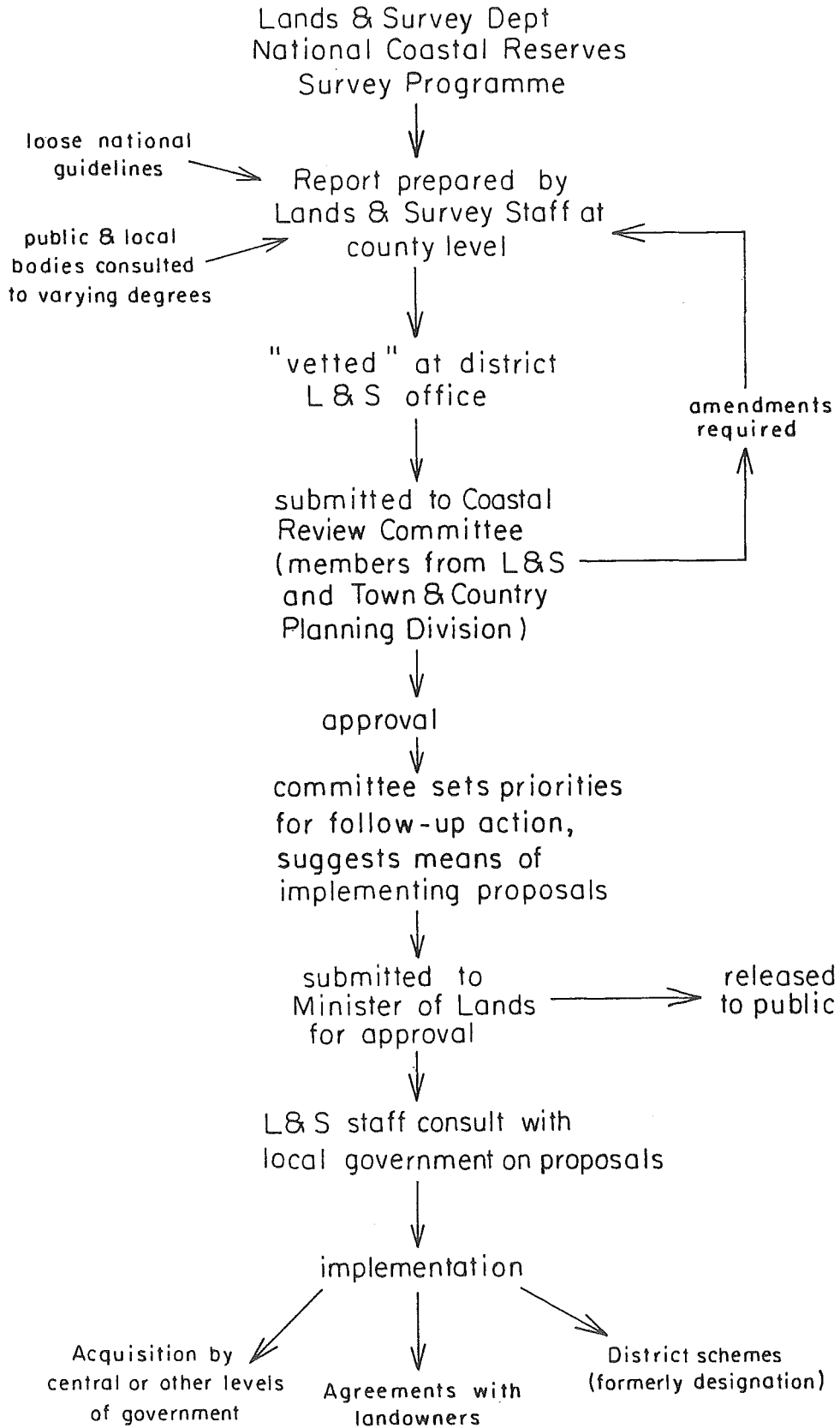


Figure 8.4

COASTAL RESERVES SURVEY PROCEDURES

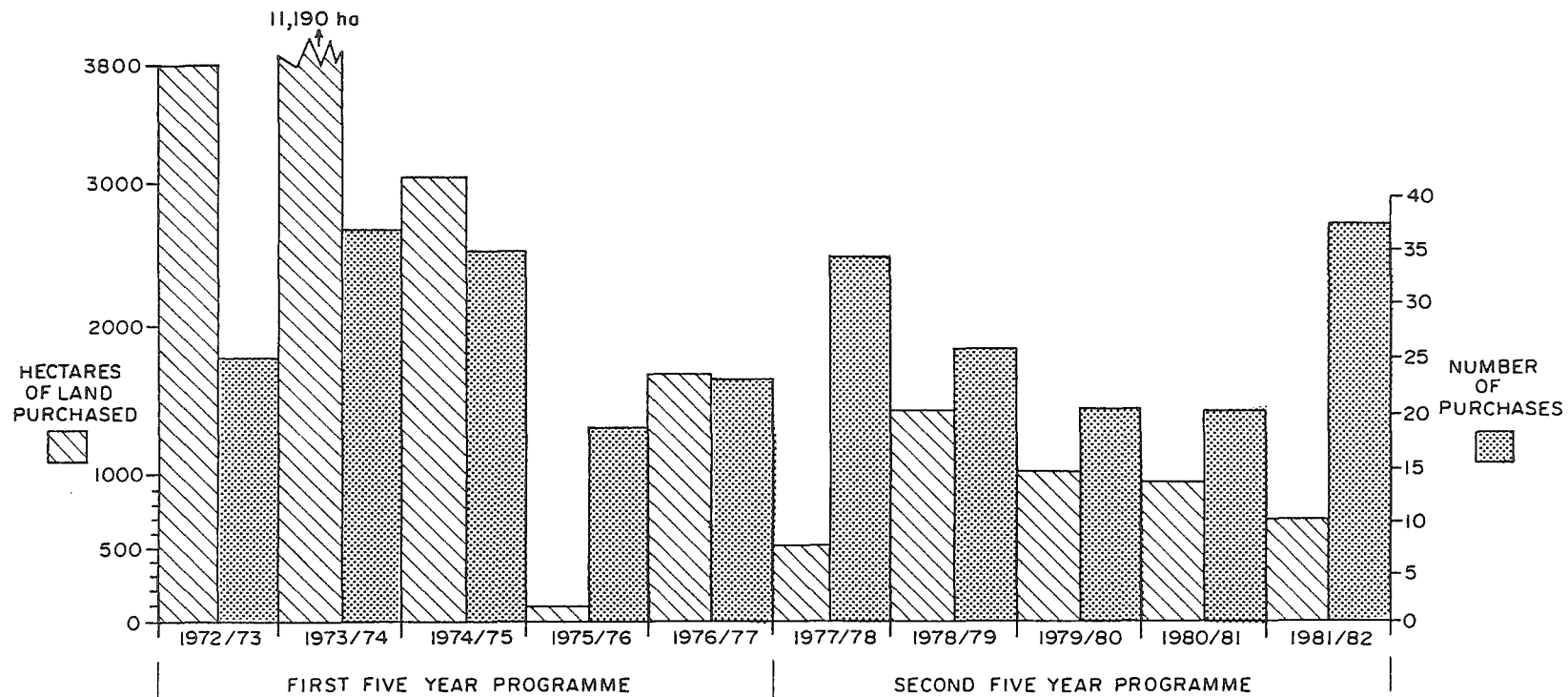


Figure 8.5

LAND ACQUIRED BY RESERVE ACQUISITION TRUST FUND AS A RESULT OF THE COASTAL RESERVES SURVEY

land rights were threatened by Survey proposals. Table 8.4 shows progress on the Survey to 1982. The programme is now being concluded, as programmes such as planning for the conservation of rivers are occupying more staff, and the reserve trust fund is being channeled towards the establishment of a system of protected areas representative of New Zealand's biogeographical regions. The latter move follows the advice of the OECD (1981:43) and the policy of the new National Parks and Reserves Authority. The termination of the Survey is also related to a perceived lessening of development pressures on the coast and growth in conservation awareness of local authorities (McKerchar, pers. comm. 1981; Devine 1982:9).

The Fisheries Management Division of MAF (FMD) develops marine resource conservation and marine reserves policies in connection with fisheries management. Within its overall goal of assisting the growth and development of New Zealand through the fishing industry, the Division aims to protect and improve the fisheries environment, and conserve and enhance opportunities for recreational fishing and the study of marine life (FMD, unpub. 1981:3). It pursues this objective through management approaches which involve devolution of control from central to regional levels and reflect a move away from a focus on individual species towards a more ecologically responsive approach. The Ministry ensures that its policies agree with regional and maritime planning provisions where there is overlap; however, it assumes that fisheries controls override planning provisions (Shallard 1982). Fisheries management areas eventually are to be declared around all of the New Zealand coast; plans for them will be prepared by regional committees (Mace 1982:6). The Fishing Industry Board must be consulted in

the management planning process, so the effectiveness of the conservation measures set out in the plan will be largely dependent on the willingness of the fishing industry to support this system (Handford 1982).

Policy on marine reserves lags behind that for fisheries management, because of the lack of government funding for a marine reserves programme, the lack of a staff commitment to marine reserves within MAF, and negative public reaction to early efforts. No systematic planning for marine reserves was undertaken in the decade following passage of the Marine Reserves Act 1971, despite this statement by the Prime Minister in 1978 (New Zealand Herald 12/6/12 1978):

The long-term objective is a series of protected environments in key areas around our coasts - certainly not the creation of reserves in a haphazard fashion.

Agencies impatient with the lack of progress, including Lands and Survey Department, urged MAF to take action or to forfeit responsibility for marine reserves. MAF reaffirmed its commitment to marine reserves at the Coastal Zone Management seminar in March 1980. Two staff members were assigned to work on marine reserves planning, an evaluation of the Act was begun, and the objective of establishing two marine reserves per year, following identification of suitable areas, was formulated (Catch'80 5/1980:2; Norris, pers. comm. 1981).

In August 1980, the Fisheries Management Division circulated a letter to 240 interested groups, individuals and local bodies inviting suggestions for potential marine parks and marine reserves and changes to the Marine Reserves Act. Then regional MAF offices were requested to investigate the ninety proposals received and to nominate two or three areas to be set

aside as marine reserves in their jurisdictions so that "progress be made and be seen to be made" (Norris, unpub. 18/11/ 1981). The stated aim was a series of reserves representing marine life and habitat of the New Zealand coast, while reconciling the needs of scientific study, conservation, recreational fishing and harvesting of fish stocks. MAF considers the improvised "marine park" arrangement to be an alternative to marine reserve status for some of the multiple use oriented proposals, because it does not require that the area have unique or scientifically valuable characteristics and it allows greater management flexibility. It also facilitates contiguous administration of land and sea by a single agency. The need for the marine park alternative will be diminished with the implementation of a new Marine Reserves Act.

MAF has ensured that suggestions emerging from the consultation process have been written into a new Marine Reserves Bill which was still in the drafting stage at the time of writing. The Bill provides for a range of reserve types which can extend over intertidal areas: marine wilderness, marine scientific, marine conservation and marine historic. Public access is permitted to all types unless specifically restricted. Any interested party can propose a reserve and the public has rights of objection to a proposed reserve or management plan. A special management committee may be appointed for one or more reserves; or an existing agency may be appointed; or management responsibilities could be fulfilled by MAF. The management committee is to perform management planning and to design bylaws for the control of activities within the reserves which must be reviewed every five years, with opportunity for public comment.

8.5 OVERVIEW AND ASSESSMENT OF COASTAL POLICY

While a rigorous evaluation of coastal conservation policy and associated institutional arrangements depends on detailed substantive study as undertaken in Part III, commentary from the national level sources of information used in this chapter permits a preliminary assessment of coastal policy in New Zealand. The subsections which follow centre on the two basic requirements for sound environmental policy defined in chapters Six and Seven - responsiveness and integration. Existing policies, or gaps in policy, are assessed in terms of these criteria and their implications. A concluding section suggests factors which may be constraining policy development, focusing on the role of institutional arrangements.

8.5.1 Policy responsiveness

To function satisfactorily, environmental policy must be responsive to both social and ecological factors - it must adapt to constraints posed by society and the environment while also serving their needs. Over recent years national policy in New Zealand has been based in the assumption that economic growth is of paramount importance to the public, and economic ideals dominate "political will" to the detriment of long-term ecological perspectives.

The lack of Ministerial commitment to progress and innovation in coastal management is the main complaint of planners and others who have . . . been advocating more effective planning and management of the coast and sea (Willis, unpub. 1981)

This lack of commitment is blamed for the slow implementation of regional and maritime planning (Tortell, pers. comm. 1981;

McCombs 1981:15) as well as the inadequacy of initiative coastal conservation efforts. The Government appears to have assumed that any comprehensive policy for environmental management would curtail development to an unacceptable degree. Because it has equated land, resource or environmental policies with overly restrictive conservation policies, it has not encouraged the development of clear, formal, binding policies for the comprehensive management of the coastal zone. Because the major statutory response, in section 3(1)(c) of the Planning Act, is inexplicit, it is open to a legal interpretation by the Planning Tribunal that does not clearly support an ecological perspective.

Coastal policy-making by advisory bodies and the MWD in the 1970s was largely a response to the problem of excessive subdivision of the northern coasts of New Zealand in the 1960s. This problem demonstrated the consequences of the lack of recognition of resource needs in policy:

The rules [statutes] were applied in the absence of policy with a devastating lack of creative imagination and an equal lack of appreciation of the reality of sand and soil conditions and future servicing (Morton et al. 1973:52).

Since the 1960s the pressure of extensive development on the coast has diminished, and a more complacent attitude towards coastal conservation on the part of the Government once again dominates. Yet, as the OECD (1981:17) observes, times of less pressure offer New Zealand the opportunity to develop anticipatory and preventive environmental policies, reinforcing those that are essentially reactive and curative, especially in the marine environment. The OECD (1981:34) identifies the need for a national plan which "rather than being based merely on what is likely to be achieved even in the absence of planning,

is normative in that it identifies . . . targets".

Furthermore, policies such as those set by the MWD in the 1970s should be re-appraised in terms of societal and resource needs which have changed considerably over the past decade. The 1974 policy which is still in use has not been adapted to cope with new coastal development activity such as energy related projects, resort proposals, mining and port expansion (Environmental Council 1979:3).

Resource managers frequently turn to central Government for the development of comprehensive environmental policies, especially in the pursuit of initiative conservation goals which require funds for reserve acquisition (Officials Committee for the Environment n.d.:15, McMillan 1975:15). Lack of progress in initiative conservation is blamed on central Government attitudes, which have been described as follows in a publication of the Department of Scientific and Industrial Research:

Reluctance to accept that a reserve is a valid land USE, for scenery, recreation, education . . . etc., and resistance to the abstract idea that non-use may be the best use. Non-use leaves all options open for the future (Molloy 1980:74).

Even though funds are not required for the acquisition of marine reserve areas, financial and personnel resources are necessary for their establishment and management. Government's reluctance to allocate such resources has been an impediment to the creation of a marine reserve system.

Academic and central Government observers see less potential for improvements in coastal zone management originating at the local level:

. . . [a local] approach is likely to be too fragmented and dominated by local rather than national interests (Knox 1980:1).

[Shortcomings of the present planning and management regime] arise from the need for decisions and choices to be made by central government rather than locally (Tortell 1981:25).

Local and regional governments may tie their policies even more closely to the economic ideology, in their efforts to serve the perceived needs of their constituents. These levels of government suffer more severe economic constraints - united councils have virtually no funds for the establishment of regional reserves. However, fears held by conservation interests that local bodies neglect coastal conservation due to a parochial attitude are not consistently supported in practice. Some observers feel that the withdrawal of the ongoing involvement of MWD district offices (and their representation of the broader public interest) in the district planning process has led to an increased bias towards development options (Town, pers. comm.); yet evidence of local and regional conservation priorities is available (see section 8.3). Local agencies have the potential to be responsive to resource and community needs because of their proximity to the environment and the community which they administer, and they are becoming increasingly aware of the relationship between land and water uses and associated management implications (Christie 1977:4).

Regional planning is assumed to be less susceptible to influence from the vested interests that characterise local politics and to have a perspective more appropriate to the scale of coastal conservation needs. The potential of regional and maritime planning has not been fully tested because of the recency of these arrangements, and because of Government's reluctance to exploit the maritime planning option.

The importance of local experience to responsiveness is

recognized in moves to decentralize administration within certain sectoral government agencies such as NWASCO and MAF. Also, several departments including the MOT rely heavily upon district schemes for the expression of coastal policies, in recognition that broad policies can be interpreted in terms of local circumstance in these schemes.

Over recent years, the policies of departments involved in coastal administration have shown an expanding sensitivity to coastal resource needs. The Coastal Reserves Survey became increasingly resource oriented, and more recent programmes of the Department of Lands and Survey have addressed the marine implications of coastal reserves. The Marine Reserves Bill also takes into account the need for joint land and sea administration of coastal reserves. Despite the neglect of management of coastal waters relative to the evolution of coastal land management systems, land oriented administrators have increasingly demonstrated concern for the implications of their activities on bordering waters.

A fisheries officer with responsibility for marine reserves suggests that:

[The] fundamental goal of coastal environmental management is 'the maintenance of coastal ecosystems in their best condition', which is equivalent to or as near to the natural condition as possible (Ritchie 1976:1).

While many managers with conservation responsibilities would share this ideal, they also set explicit social goals in their policy-making. With regard to reserves, this entails providing access and recreational opportunities. In the broader coastal management milieu, the needs of conservation, development, resources and society, all have to be accommodated. The Official's Committee for the Environment (n.d.:3) suggested that

coastal waters and the seabed are national assets which should be used in pursuit of a combination of the objectives of the national community according to principles of: multiple and sustained use; the complementary use of land, air and water; the opportunity for public representations on use; and the maintenance of traditional and established public rights. This approach would constitute a responsive policy, as would that described by representatives of the Commission for the Environment:

The concepts of sustained yields, adjustable emphasis on different uses, and matching the use of the resource to the needs of the people, provide for the dynamic policies within legal limits which are healthy and challenging ways of managing a national resource (Baumgart and Howitt 1979:67).

In order to develop and maintain a responsive policy, a considerable depth of knowledge of resource and societal needs is required. This depends on communication between policy-makers, receptiveness to the views of the public and continuous monitoring of resource systems. A recommendation from the Physical Environment Conference of 1970 holds true today:

. . . we must acquire a much better understanding of New Zealand society and New Zealand ecology, and translate what we learn into policies which reflect national attitudes and objectives (Fookes 1974:90).

These processes of information gathering, communication and interaction were described in Chapters Five and Six as processes of integration. The next section evaluates integrative processes in the coastal policy system.

8.5.2 Integration in policy processes

A New Zealand planning expert acknowledges the need for integration and identifies three requirements of the integrating process: 1. an objective to which one works

2. a set of actors who know, accept, and shape their actions to achieve the objectives

3. a means of review to modify the objective and/or the actions taken to achieve it (Roberts 1980:27).

If "objective" is replaced by "policy" in these criteria, they closely reflect the concepts of integration put forward in Chapters Five and Six. Integration in policy processes gives direction to programmes and helps to prevent inertia within agencies, lessens the extent of fragmentation in a management field, and reduces social alienation from management by involving the public in policy-making.

Although the integrating processes are continuous and cyclical, a policy statement can be envisaged as a starting point, as in requirement 1, above. While initiative conservation policy for the coastal zone is the central interest here, integration in the processes associated with this policy can be facilitated by policies set in relation to broader fields of management, namely coastal zone management, defensive and initiative conservation, and environmental management (as in Figure 8.1). General policies for these fields were discussed in sections 8.1 to 8.3. Regarding policy for environmental management, many recommendations have been made to central government by advisory bodies, particularly in the early 1980s. However, the Government has not formally set and implemented specific goals or criteria for environmental management, apart from supporting the Environmental Protection and Enhancement Procedures.

Lacking is an overall (coordinating) national strategy to guide the numerous agencies involved in the management of New Zealand's resources, to minimise conflicting, and at times contradictory, functions (Aburn 1979:5).

Similarly, those involved in the conservation field have been frustrated by the fact the "a truly comprehensive statement of national goals of nature conservation does not appear to materialized in any normative form" (O'Connor and Molloy 1979:3). A Government critic feels that this has produced an

. . . administrative inability to put aside sectional interests in favour of a national strategy for landscape conservation, and hence unprofitable fragmentation, gaps in coverage, and duplication of effort, leading to inefficiency and inadequate results (Molloy 1980:74).

This situation is currently improving, as the agencies involved in initiative conservation work towards the mutual goal of establishing an ecologically representative system of protected areas. Much policy-making activity in the 1970s centred on the coastal zone, and comprehensive policies developed by the MWD may have assisted integration in coastal planning. Also, provisions for the consideration of the coastal environment were written into the Reserves Act 1977 and the Planning Act 1977. However, in the opinion of many people involved in coastal zone management, these policies have not been sufficient to achieve integration. The following are typical comments from the late 1970s:

. . . a comprehensive policy for planning coastal land and water needs to be prepared in conjunction with a national land use planning policy (Hutchison 1979:122).

Broadly-based integrated planning policies will also have to be formulated to protect the coast for all New Zealanders (Environmental Defense Society 1979:126).

Although all of the significant actions in coastal waters can be controlled there is a lack of

coordination of the way in which controls are used, and an absence of agreed objectives in the management of the resource (McCombs 1979:133).

Similar concern has been expressed in the 1980s, particularly at conferences convened to aid integrative processes.

While the development of policies for the field of coastal zone management and conservation has been neglected over recent years, sectoral policies such as those described in section 8.4 have been evolving steadily. Agencies are beginning to articulate detailed, explicit policies, or planning processes for the delineation of such policies, for programmes such as fisheries and catchment management and marine reserves establishment. Without overriding field policies, integration of these sectoral policies is dependent upon the efforts of the agencies involved and planning processes. Agencies communicate informally, at conferences, and through statutory provisions for consents and notification, aiding integration across the land-sea interface and throughout the coastal zone.

Statutory planning as discussed in section 8.3 assists administrative integration but is itself hampered by the lack of central guidance. Policies thus emerge "of their own accord out of conflict, dissension and frustration at the local level" (Environmental Council May 1980:5). This ad hoc approach to policy-making places local and regional planners in awkward decision-making positions, forces local bodies to make assumptions about Government policy, and thrusts upon the Planning Tribunal a policy-making role that lies beyond its intended responsibilities. Regional planning is especially constrained by the lack of "a well-articulated [central] land-use policy against which [the central Government] can evaluate proposed regional plans" (OECD 1981:33) and upon which

regional authorities can base their policies (Aburn 1979:8). Yet the function of regional planning is primarily integrative and it has the potential to inject a spatial rationality into the application of sectoral policies as well as to coordinate national and local policies in the coastal zone. Agencies in control of adjacent land and sea reserves could be linked by a regional body, and this body could, itself, establish regional reserves. Regional planning could also ensure the integration of marine conservation measures with other marine uses.

It is possible that the path towards an adequate status for outstanding coastline lies in a closer partnership than we have yet seen between regional planning and national reserves policy, evidenced in the joint working out of policy from the start (Thom 1982:7).

Whether regional government will take responsibility for coastal planning and conservation, whether it will acquire the necessary expertise, and whether the Government will provide adequate financial support remains to be seen.

Integration of agencies with their constituencies is less dependent on the guidance of field policies and can be achieved largely through the initiatives of individual agencies, through open planning and various coordinative mechanisms. The new Marine Reserves Bill and the evolution of the approach to the Coastal Reserves Survey both demonstrate increased opportunities for public involvement in decision-making. Conversely, the new national parks and reserves administrative structure is less open to public input than was the structure based on individual park and reserve boards.

Integration of administration with the public, similarly to inter-agency integration, relies upon statutory planning to a large extent. The value of the involvement of the community in

the statutory planning process is a rationale for the granting of coastal management and conservation responsibilities to local authorities. It is also an argument in support of formal planning mechanisms such as maritime planning rather than informal arrangements such as harbour board plans which do not necessarily encourage public participation. Nevertheless, on the terrestrial side, the emphasis of district planning on the rights of individual property owners competes with the consideration of the broader public interest. Since the Ministry of Works ceased to act formally as a public advocate in planning, this role has fallen to interest groups such as the Environmental Defense Society which do not have the resources to carry out the responsibility satisfactorily.

Given opportunities for involvement, responsive coastal policy-making then depends on the willingness of the public to contribute to the planning process. The effectiveness of section 3(1)(c) of the Planning Act in particular, requires the support of conservation interests, whether organized groups or individuals. The MOT recognizes the need for public education in its administration of the foreshore:

We are engaged in an educative process to change attitudes so that the foreshore is looked on as being what it is, a very special area which can only be developed for a justifiable and acceptable purpose under strict controls and within the framework of an agreed plan (Milne 1978:6).

Similarly, a planner recognizes that education on the biophysical nature of the coast and on threats to coastal ecosystems would complement a more localized educational experience:

If the public conscience is aroused sufficiently, ways and means will be found to combat the insidious erosion of our seashores which by right belong to

future generations (O'Brien 1969:13).

Members of the public who are informed on the nature of the coastal environment can, in turn, inform administration with their local, experience based knowledge. As mentioned earlier, the role of the public, and of mechanisms for the integration of the public in management processes, can only be satisfactorily evaluated on the basis of management unit experience. Chapter Twelve is devoted to this task.

8.5.3 Constraints on responsiveness and integration

Given past efforts in coastal zone policy making, the ongoing evolution of sectoral coastal zone policies, and recurrent recommendations for a comprehensive national coastal policy, the question arises as to why a strong, centrally defined and explicit policy for the coast is not currently in use. The environmental, social and informational constraints discussed in Part I are major factors. However, according to a representative of the Environmental Council, the "daunting fact" of rapid change in society and the unpredictability of the future should motivate rather than deter policy-making efforts (Holdway 1974:45). Research efforts have helped to dispel some of the uncertainty surrounding aspects of coastal ecology since this statement was made. However, the lack of Government responsiveness to the recommendations of environmental advisory bodies and other experts indicates that the societal values to which these agencies or interests are responding are not fully agreed upon. Recognition of this inadequacy in the basis for policy reinforces the need to continue scientific study and to provide the public with information and opportunities for

expression of opinion. It also reaffirms the value of conservation measures as a means of maintaining both options for the future and opportunities for research and education.

A prevalent opinion amongst practitioners and observers of coastal zone management is that the lack of a comprehensive policy is a symptom of Government's unresponsiveness to resource and societal needs, or the lack of political will to change economic assumptions and priorities. The Government's approach to environmental and coastal policy described as ad hoc pragmatism (or disjointed incrementalism) reflects a complacency that may be rationalized implicitly by the existence of section 3(1)(c) of the Planning Act 1977, and a reliance on planning provisions in lieu of definite policies.

Closely connected, but not synonymous, with the lack of Government will to promote coastal or environmental policy are the constraints associated with institutional arrangements. Rather than calling for stronger policies to be implemented through existing arrangements, some experts recommend that the institutional framework be modified so that its implementation is less discretionary and political factors have less of an influence. The Nature Conservation Council suggested, for example, that a national commitment to conservation should be more strongly expressed in legislation, and other recommendations have been made for changes to organization to give conservation a higher priority. The OECD (1981:17) pointed to the need for improved institutional arrangements

. . . to strengthen the capacity of government to develop, to co-ordinate and to implement policies, preventive as well as curative, by which to deal with issues both of environmental pollution and resource conservation.

Some institutional limitations on coastal conservation policies relating both to laws and organizational structures can be summarized as follows: the limited range of statutes available has meant that marine reserves have been capable of serving only a narrow range of purposes, there is no single mechanism for protecting adjacent areas of land and sea, and there are no specified administrative arrangements for maritime parks in general. Defensive conservation provisions such as section 3(1)(c) are not explicit enough to guarantee the consideration of environmental priorities.

Departmental mandates in some cases also mitigate against conservation measures. The agencies involved in coastal water management are primarily oriented towards resource development, so that new conservation responsibilities such as marine reserves may not be accommodated easily in the administrative structure. The MWD and the Department of Lands and Survey both hold development and conservation responsibilities which may compete for agency resources. No single department has a mandate which is wholly or even predominantly based in a conservation responsibility or a responsibility to represent the public interest in the environment. Although agencies like the Wildlife Service or the Soil and Water Division are devoted to environmental objectives, they are located within bureaucracies holding ideologies that may constrict the achievement of such objectives. At an even broader level than that of Government departments, the hierarchy of Ministerial portfolios also tends to prejudice the allocation of Government resources against the development of conservation policies and programmes.

A partial solution to the above institutional constraints would be the granting of more power to the environmental

advisory bodies, so that their recommendations would be more binding on Government policies. O'Riordan (in Aburn 1979:5) observed at the inception of the Environmental Council that "it is difficult to see how it will create sufficient impact to shift public policy towards sound environmental management". The Commission for the Environment derives influential status from its role in implementing the Environmental Protection and Enhancement Procedures, but this status can vary: In 1980 the Government threatened to limit the Commission's role when social and economic criteria were applied in the assessment of a national development project (The Press 12/12/1980). Conversely, the lack of a strong legal mandate allows the Commission flexibility in its operations, and its approach has been free to evolve from a reactive, problem-oriented one to one that focuses on initiating fundamental changes in environmental management. Although the Nature Conservation Council and the Q.E.II National Trust have their own Acts of Parliament, their influence on environmental policy is no stronger than that of the other two advisory bodies. Nevertheless, the Nature Conservation Council does draw authority and independence from its statutory foundation, notable from its power to "hold inquiries on nature conservation matters" (Nature Conservation Council Act 1977 sections 13(c), 14) and to publish any of its recommendations, reports or observations (Nature Conservation Council 1975:9). In the context of increasing the power of environmental agencies, a cautionary comment by Sir Guy Powles at the Physical Environment Conference of 1970 is worth noting:

. . . the existing hierarchical administrative structure of government agencies with environmental responsibilities does not offer sufficient opportunity for the average citizen to participate in the

decision-making process . . . `with this proliferation of these appointed, semi-bureaucratic authorities, the citizen may, in effect, be losing his control of his environment by means of the machinery designed to effect its control' (O'Riordan 1971:207).

Although institutional arrangements are blamed for many of the problems of responsiveness and integration in coastal conservation policy, improved arrangements cannot be viewed as a panacea to coastal management problems. For example, new marine reserves legislation will not resolve all the issues contributing to the lack of progress in establishing marine reserves, and the Director of Fisheries accepts that solutions to conflicts will have to be dealt with by other means (Norris, pers. comm. 1981). More generally, the passage of legislation to enable the expression of policy is dependent on a prior awareness of the nature of that policy. Baumgart and Howitt (1979:70) made the following observations on the requirements of environmental law in New Zealand:

. . . while the law can be of assistance in implementing the conservation of resources, it must have basis in sound policy and genuine dedication . . .
 . . . The law should only reflect the wishes, enthusiasms, and activities of the people, and environmental management should be based on what a well-informed public really wants.
 Nevertheless, institutional remedies to coastal policy

problems are worth pursuing, for at least two reasons. First, institutional arrangements are more and more often identified as a basic impediment to satisfactory and sustainable interaction of people with the coastal environment. The New Zealand experience is comparable to the Canadian situation in which:

. . . shore areas are becoming a focus of environmental and resource-use problems for many reasons. The most fundamental concerns current institutional arrangements (Day and Parkes 1978:111).

Second, relative to the types of constraints delineated in Part I, institutional limitations are more easily remedied because

institutional arrangements are more readily manipulated than are societal and environmental characteristics, in both ethical and practical terms. Therefore, when responsive and integrative policies are no longer seen to be emerging from existing organizational structures, analysis of those structures with a view to adopting them to evolving needs is likely to be a worthwhile pursuit.

PART III MANAGEMENT UNIT EXPERIENCE OF INITIATIVE
CONSERVATION IN THE COASTAL ZONE:
RESPONSIVENESS AND INTEGRATION

A more detailed level of analysis is adopted in Part III. The focus moves away from the national coastal zone, or "field" scale, to the individual conservation area or "management unit". Within the management unit analysis the emphasis is on the policies expressed by the agencies holding initiative conservation responsibilities. While the New Zealand study of Parts I and II is a broad-scale case study of coastal conservation in itself, in-depth study of the areas introduced in Chapter Nine constitutes a more rigorous form of case study analysis (as discussed in section 1.3).

Case study of specific places is particularly suited to the investigation of the premises introduced in Parts I and II, because of the emphasis placed on the need for policies to relate to the special social or environmental circumstances or constraints of the areas in which they are applied. O'Riordan (1982:137) states that the key to the identification of "the relevant factors . . . leading to a particular policy . . . is to be aware of the basic principles . . . and to look carefully at case studies". The experience of policy-people-environment interaction over time in each case demonstrates possibilities more directly than could the national level study. When various experiences in the five areas are compared, hypothesized principles may be demonstrated, expanded upon, or disproved. Just as important, ways of approaching problems or goals to assist in the development of suitable solutions or policies can be identified at the case study level.

The objectives of Part III can be reiterated in terms of their relationship to Parts I and II of the thesis. Overall, chapters Nine to Twelve set out to clarify the effects on coastal conservation of constraints postulated in Part I, namely: the degradation of coastal resources, uncertainty of changing social and ecological characteristics, an individualistic political culture, and the lack of societal consensus on priorities. More systematically, theories introduced and investigated at the national level in Part II will be tested against experience at the level of the management unit. This analysis focuses on the effects of institutional arrangements on the policy criteria of responsiveness and integration, as did sections 7.4 and 8.5. Responsiveness is the theme of Chapter Ten, and integration is the theme of the remaining two chapters.

Chapter Nine sets the context for the analysis of the three following chapters by describing aspects of the policy-making environment for each of the five case studies. The topics covered in this description are shaded on the outline of the policy model from section 5.3 in Figure III.1. The management unit resource and its uses are described, and aspects of the surrounding biophysical environment, its uses and value to the community are mentioned where relevant to a particular case study. The institutional arrangements for the conservation area are also set out, with some related information on management operations such as planning. Regional planning, political culture and institutional arrangements are outlined in appropriate cases. The description as a whole alligns with the resource and institutional quadrants of the policy model. Technological aspects of resource management are less relevant

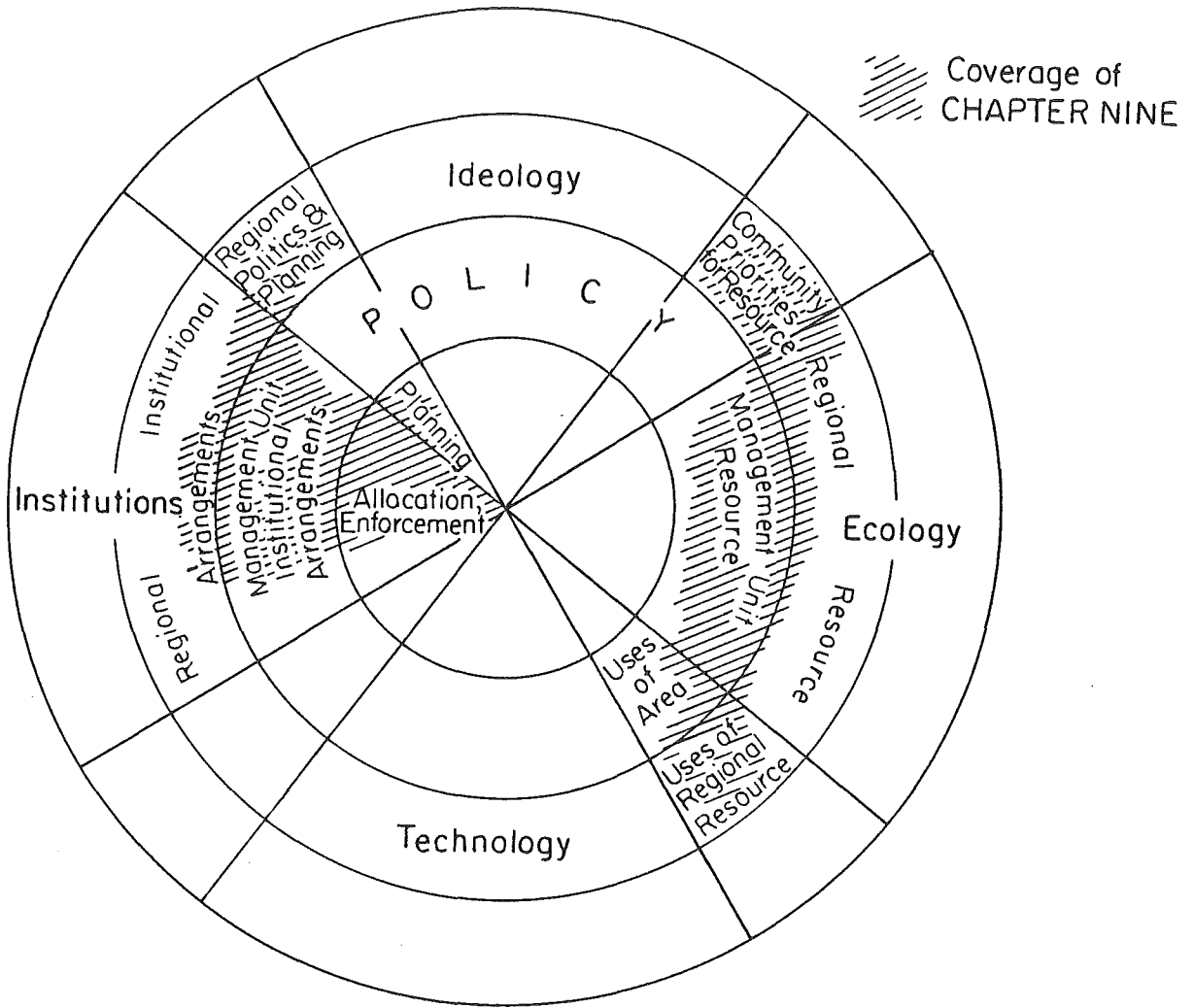


Figure III.1

SITUATION IN POLICY MODEL OF CHAPTER NINE (PART III): DESCRIPTION OF MANAGEMENT UNIT ARRANGEMENTS AND RESOURCES

to the present analysis, and ideological factors are not easily approached in a direct, descriptive manner. These latter factors, which include policy ideals and help to determine policy goals and mandate, are the substance of the remainder of Part III.

Figure III.2 shows the area of the policy model that is the topic of analysis in chapters Ten, Eleven and Twelve, centring on agency policy at the level of the management unit. The boundaries of the shaded areas showing the coverage of the chapters is indefinite because the analysis is not strictly limited to the shaded sectors. For example, Chapter Eleven bears the most direct relationship to policy mandate and institutional arrangements as it investigates the integration of various agencies in their policy-making activities; yet it also helps to elucidate aspects of policy related to ideology and ecology. The analyses of chapters Ten and Twelve also contribute to the understanding of institutional factors in policy processes. Chapter Twelve parallels Chapter Eleven in its analysis of administrative integration with the community; in terms of the model, it focuses on policy ideals. In Chapter Ten, policy responsiveness to resource and societal needs is evaluated. This analysis mainly enhances the understanding of the goals sector of policy, but it also clarifies the need for responsiveness.

The constraining influence of institutional and other factors on coastal conservation policy, analysed in chapters Ten to Twelve, is evaluated in Chapter Thirteen. Consideration of alternatives to present arrangements is also reserved for the concluding chapter of the thesis.

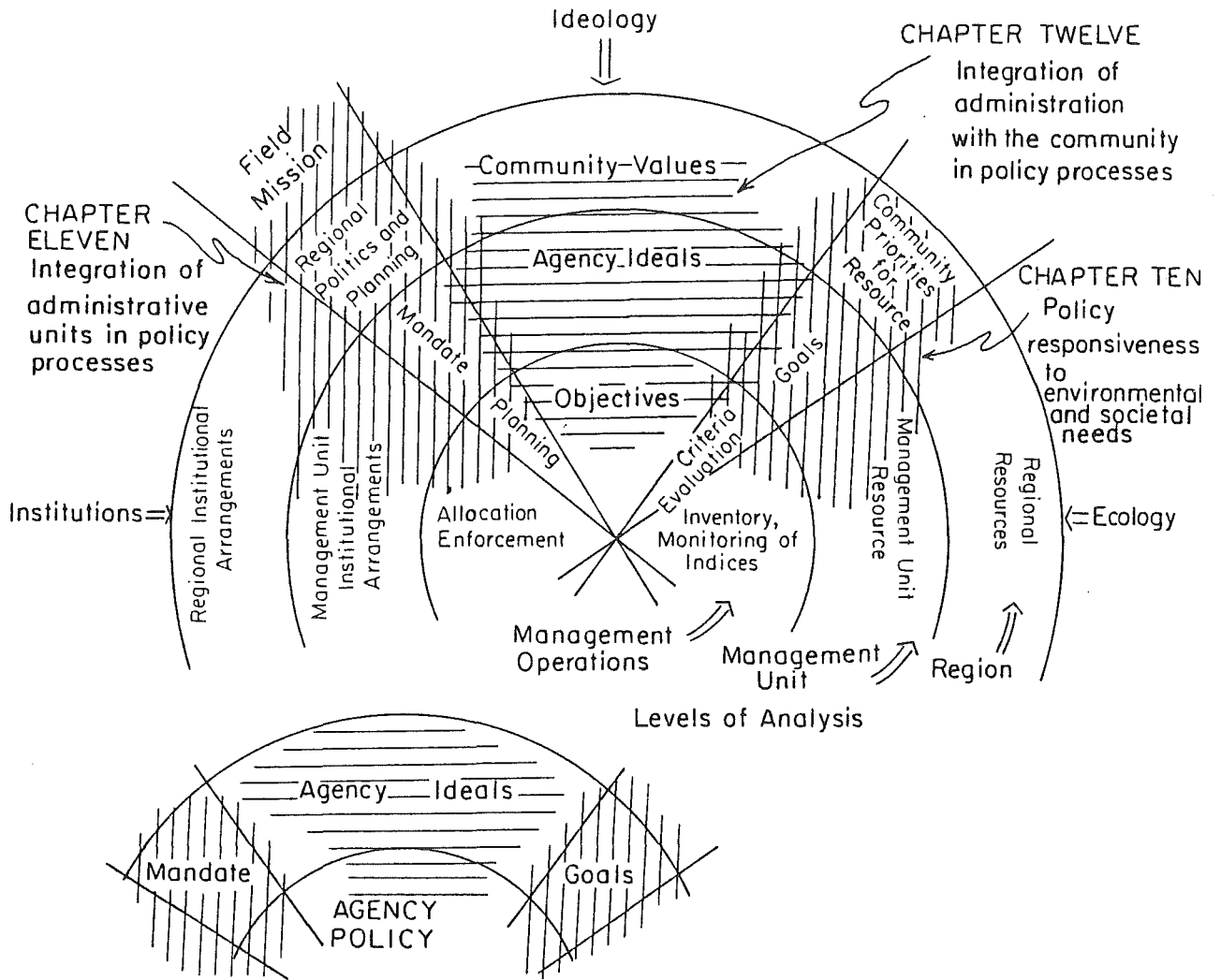


Figure III.2

SITUATION IN POLICY MODEL OF CHAPTERS TEN, ELEVEN AND TWELVE (PART III): MANAGEMENT UNIT ANALYSIS OF POLICY AND INSTITUTIONAL RESPONSIVENESS AND INTEGRATION

CHAPTER NINE

A SAMPLE OF NEW ZEALAND COASTAL CONSERVATIONAREAS AND ISSUES

This chapter provides the background for chapters Ten to Twelve by explaining the analytical approach and describing the five case study settings and associated issues. The issue analysis approach described in the first section is essentially a detailed application of the case study methodology outlined in Chapter One. The descriptions of section 9.2 are brief; details are provided later, where relevant to the discussion of chapters Ten to Twelve. The present discussion provides a rationale for the selection of the five areas and expresses their general character.

9.1 APPROACH

The case study approach is appropriate to policy analysis because it provides the opportunity for the observation of many elements and processes that relate to policy evolution. Inputs to policy and the character of applied policy can be determined through the analysis of decisions made by administrators on various issues. In Part II, only very broad issues surrounding the need for coastal conservation were considered; in Part III, detailed issue analysis is utilized in a more purposeful and process-oriented approach to the examination of policy systems.

O'Riordan (1976:41) characterizes the policy-making process as the interaction of three variables: "the cognitive

structures of key actors, the nature of the institutional environment, and the characteristics of the issues under consideration". Muir and Paddison (1981:77) advocate study by geographers of the dynamic relationship between actors, policy (or decision) and environment, or of "actors, goals and information as variables operating in the context of a particular empirical problem and a specific geographical environment". Issues, here, are combinations of circumstances, usually perceived as a problem, that call for decisions or solutions that can only be arrived at with difficulty. This is similar to Muir and Paddison's (1981:116) understanding: "a situation becomes transformed into an issue when by common consent the situation is bad and should be improved." "Common consent" assumes the existence of a collection of people or "actors" with interests in the situation.

For analytical purposes, the foundation for policy goals can be found in the motivations, priorities, values, ideals and objectives of policy-makers, demonstrated in response to issues. To develop a perception of a goal, an actor must be aware of a problem or opportunity, its relationship to herself or himself (or the agency) and the outcome of that relationship which appears most desirable from her or his point of view (Muir and Paddison 1981:66). Goals are reflected in maps, plans and other documents, as well as in decisions made on specific issues. Issue analysis thus elucidates policies which are implied in an agency's perception of, and action in response to the issue - policies which may not be explicitly stated (Aucoin in Mitchell 1979:295). Similarly, unprecedented, ad hoc responses to issues may reflect an absence of policy; issues which are ignored may indicate a policy of non-action; and issues which are subverted

may point to relative priorities amongst policies or an inability to act on a policy.

Response to issues on the part of non-government actors illustrates their priorities and values as well. Identification of these priorities assists in the delineation of community values, which can then be compared to agency ideals for the evaluation of policy regarding its responsiveness to community needs and values. The nature of issue development and resolution will itself indicate the character and degree of interaction between the agency and its constituency; and implications of this inter-action for the resources involved in the issues will become apparent. Thus, not only the character of policy, but the nature of policy processes and the degree of integration can be studied through issue analysis. Issues can be seen as the catalysts for social learning and as topics of dialogue between policy-makers and other interests. As such, they have the potential to reveal modes of communication, types of information used, opportunities for involvement in decision-making, and evolution of policy as an experimental process. They also reveal, in opposition to integration, processes of conflict resolution based in power struggles and other political processes.

The emphasis of the issue analysis which follows in Chapters Ten to Twelve falls on the influence of institutional arrangements upon the integration of social environmental concerns in policy. This emphasis is recognized as a valid line of inquiry for geographers by Gale (1982:69), who looks for research that explicitly accounts for the operation of rules and institutions and their effects on transactions in specific contexts.

9.2 THE CASE STUDIES

In order to explore the potential of institutional arrangements for initiative coastal conservation in New Zealand, five case study locations have been chosen that include the types of arrangements discussed in section 7.3 for Crown land, local government land, private land, foreshore areas, and marine areas. Defensive conservation arrangements (section 7.2) and arrangements for the initiative conservation of particular resources are included where they overlap or complement those that apply generally to areas of land, foreshore or sea. The five areas also represent a range of bio-physical and socio-cultural characteristics, so that the responsiveness and integration of conservation policy can be evaluated under varying conditions or constraints. The variety of circumstances represented in the case studies should, through comparative issue analysis, facilitate the explanation of variance in policy response through its relation to variance in institutional and other factors. The location of the five areas was shown in Figure 1.1. They are:

Abel Tasman National Park
Marlborough Sounds Maritime Park
Poor Knights Islands Marine Reserve
Ahuriri Estuary Wildlife Refuge and Estuarine Park
Mimiwhangata Peninsula (proposed) Marine Park

The following description addresses the biophysical, social and institutional context of the management units and their regions at a general level. It also introduces the issues that are analysed in chapters Ten to Twelve.

9.2.1 Abel Tasman National Park

Abel Tasman National Park is the largest of the case study areas, covering 22,139 ha of land with a 58 km coastline (Figure 9.1). Of the management units, Abel Tasman has the longest-standing conservation measures, associated with its national park status.

The eroded granite coast is characterized by sandy golden beaches and rocky headlands interspersed with six estuaries. The vegetation of the Park is in various stages of regeneration following clearing by settlers last century. Introduced browsing animals have also extensively modified the indigenous flora and fauna. Nevertheless, stands of native trees growing down hillsides and ravines to the shore, seals and dolphins frequenting the waters, and a variety of sea birds including blue penguins add to the physical attraction of the Park's coast.

A coastal track with closely-spaced huts is the most popular route for land-based users of the Park. Most recreationists approach the Park by sea, with bays and sheltered roadsteads providing popular locations for water-based recreation. Several enclaves of private ownership on the coast within the Park boundaries are the locations of old holiday homes.

The Park was established under the National Parks Act in 1942. In 1943 the Abel Tasman National Park Board was appointed, to be replaced in 1981 by the Nelson District National Park and Reserves Board. Seaward boundaries lie 2.4 km off the shore of the Park to include islands within that zone. The foreshore and bordering seas are not under Park Board jurisdiction although proposals to reverse this situation have

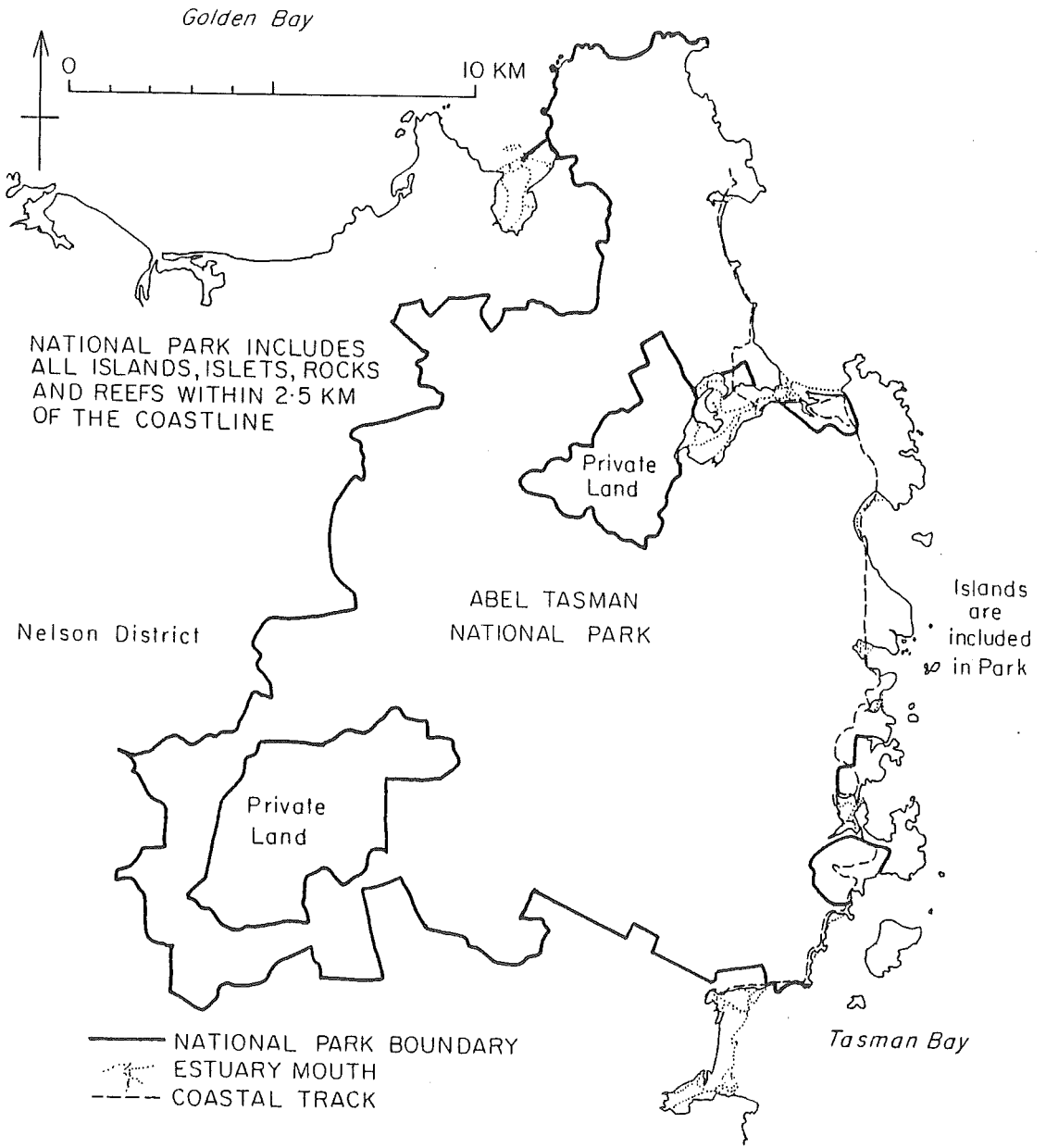


Figure 9.1

ABEL TASMAN NATIONAL PARK

been pursued over the past ten years. Park Board control over coastal and foreshore waters is the main issue for analysis arising from the Abel Tasman case study. It is an institutional issue which is important for the insights it offers into integrative processes acting within and between Government departments. The issue of conserving the marine environment bordering the Park demonstrates policy goals responding to resource needs. It subsumes several resource management issues at the regional and management unit levels involving marine farming proposals, over-fishing, water quality concerns, and the impacts of shore-based recreation. One further issue used for analysis is concerned with administrative decisions regarding the pockets of private land within the Park, as an illustration of responsiveness to resource needs.

9.2.2 Marlborough Sounds Maritime Park

The reserves comprising the Marlborough Sounds Maritime Park are scattered through the Marlborough Sounds (Figure 9.2). Because of this discontinuous configuration, the character of the Park is encompassed in the character of the Sounds environment as a whole, which is heavily modified and intensively used in places. This integration of the Park with the region is typical of maritime parks in New Zealand.

The rounded peninsulas of the Sounds rise steeply from the shore to summits between 450 and 600 m. Their convoluted coastline, 1448 km long, is about fifteen percent of New Zealand's coast. The land-seascape of the area presents a pleasant mosaic of farmland, remnant native forests, successional vegetation and sheltered sounds and inlets.

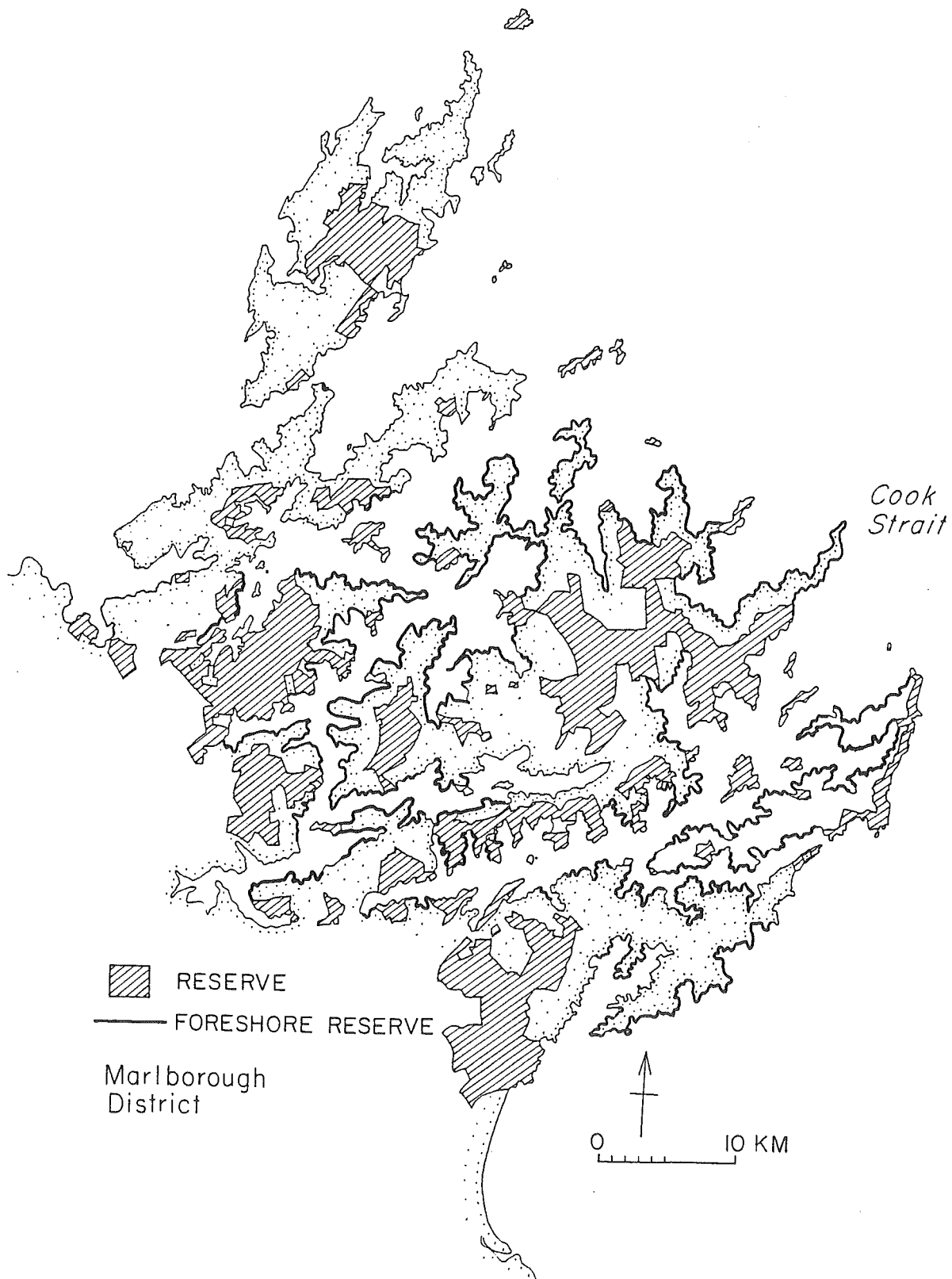


Figure 9.2

MARLBOROUGH SOUNDS MARITIME PARK

Approximately 500 persons live in the Sounds proper, in small service settlements and on farms. Two larger towns are located nearby. The region has been used for fishing, farming, forestry, marine farming and recreation, with mussel farming the current "boom" industry. Statutory planning applies over both land and sea. The resource-based economy has been declining over the last three decades and residents have been leaving land-holdings in the Sounds. Those remaining take pride in their way of life and in the Sounds environment.

The Marlborough Sounds Maritime Park is comprised of some 119 publicly-owned coastal reserves which are designated under the Reserves Act 1977, and a 20 m wide Sounds Foreshore Reserve around most of the coastline defined by the Reserves and Other Lands Disposal Act 1955. The reserves generally do not extend below mean low water mark. The composition of the Park is defined by the limits of the Marlborough Sounds Maritime Park Board's jurisdiction, set by Gazette notice on the recommendation of the Minister of Lands and Survey. There is no special legislation or government policy for the Park, nor for maritime parks in general. The Park Board is not obliged to prepare a management plan for the Park as a whole although it must prepare reserve plans.

Recreational use of the Park is both land and sea based, because the sheltered inlets are popular for fishing, diving and boating expeditions, and the reserves are frequented by campers, picnickers, and people who walk the interconnecting tracks (trails). Sealed and unsealed roads provide access to many of the reserves.

As at Abel Tasman, park management in the Sounds has had to cope with the issue of existing settlement within the

conservation area. The policies and institutional arrangements that have been applied in response to user and community needs are studied in relation to this issue.

9.2.3 Poor Knights Islands Marine Reserve

"The Knights" comprise two islands of 129 ha and 66 ha with numerous surrounding islets, stacks and rocks lying on the edge of New Zealand's continental shelf. The Poor Knights Islands Marine Reserve covers the marine environment surrounding the Islands to a distance of 800 m from shore (Figure 9.3). As a case study, the Poor Knights exemplify the problems associated with the establishment of marine reserves in New Zealand.

Convoluting shores drop as cliffs from the plateau tops of the Islands at 240 m to depths of 50 to 100 m below sea level. A wide range of marine habitats is enhanced by the presence of a warm ocean current, permitting the establishment of tropical and sub-tropical faunas. The Islands themselves have regained their natural vegetation cover since the last Maori inhabitants left them in the early 19th century, declaring them tapu, or prohibited to human contact. Terrestrial species rare or absent on the New Zealand mainland have found refuge on the Islands, and rare marine species frequent the waters. Several petrel species are known to nest only on the Knights.

The seas surrounding the Knights have long been used for recreational fishing, diving, big game fishing and commercial fishing. Residents of the closest mainland centres in Northland (Whangarei and Tutukaka) are the dominant users of the area, and their economy is partially dependent on tourists attracted by the above activities. Politically, Northlanders have shown

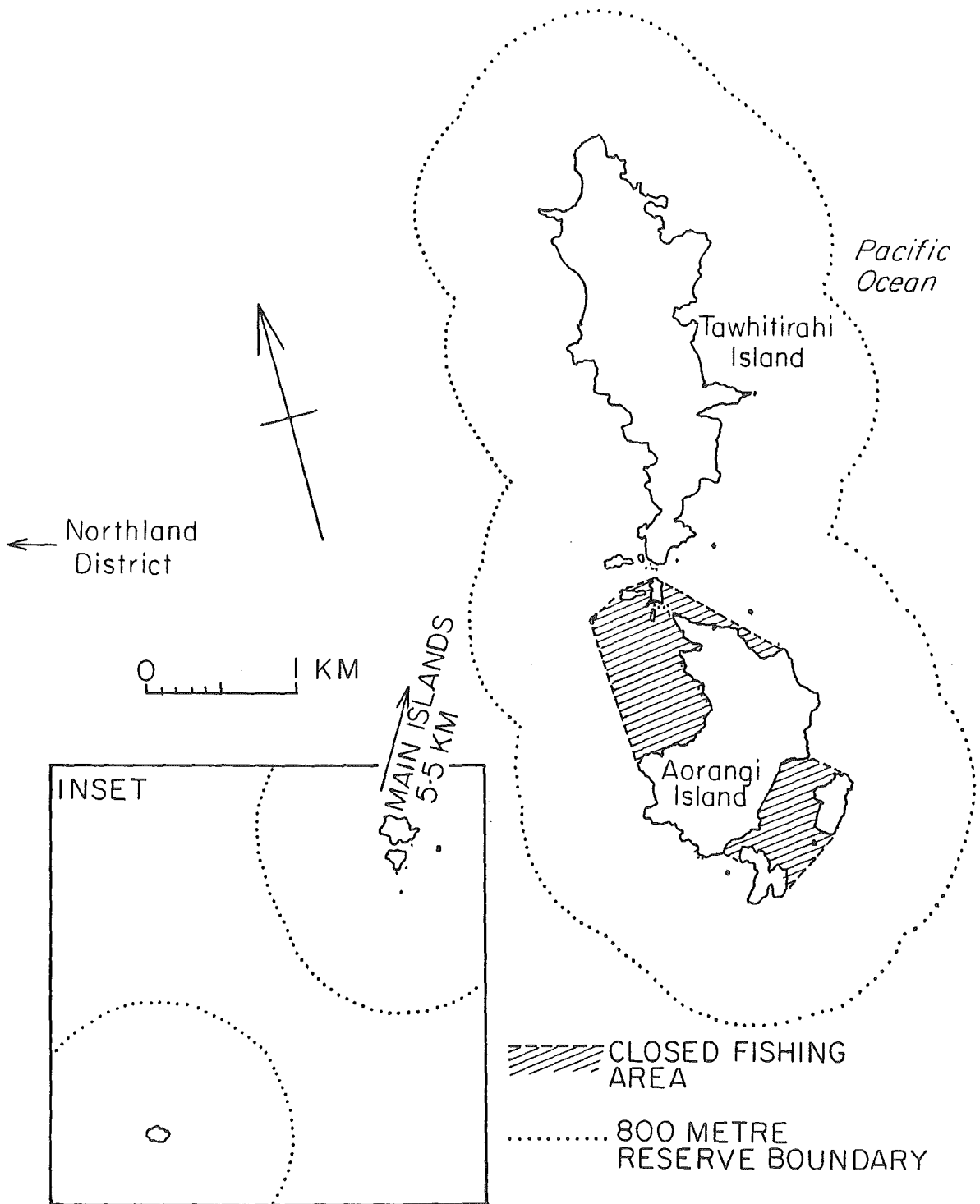


Figure 9.3

POOR KNIGHTS ISLANDS MARINE RESERVE

resentment towards central Government and its administration in Auckland as they feel their interests tend to be neglected in favour of southern values.

The Crown-owned Islands are designated a nature reserve under the Reserves Act 1977 and a wildlife sanctuary under the Wildlife Act 1953. In recognition of their special ecological values, access is by permit for scientific purposes only. The Knights are part of the Hauraki Gulf Maritime Park and are administered by its Board. The Marine Reserve was established after prolonged controversy in 1981, under the Marine Reserves Act 1971.

The issues addressed in the analysis are mainly associated with the struggle to create the Marine Reserve. They involve the effect of the Reserve on the recreational, tourist, and fishing activities of the area, as anticipated by local interests. They also involve the need for contiguous protection of the coastal ecotone, as perceived by some of the policy-makers involved.

9.2.4 Ahuriri Wildlife Refuge and Estuarine Park

The institutional and biophysical settings of the Ahuriri Estuary make this Refuge and Estuarine Park amongst the most complex of the case studies (Figure 9.4). It is also distinctive as the only study in which defensive conservation arrangements play a major role, and in which initiative conservation measures were initiated by the public rather than an agency.

An earthquake in 1931 reduced the Estuary from 3840 ha to 1200 ha. Reclamation for Lands and Survey Department and

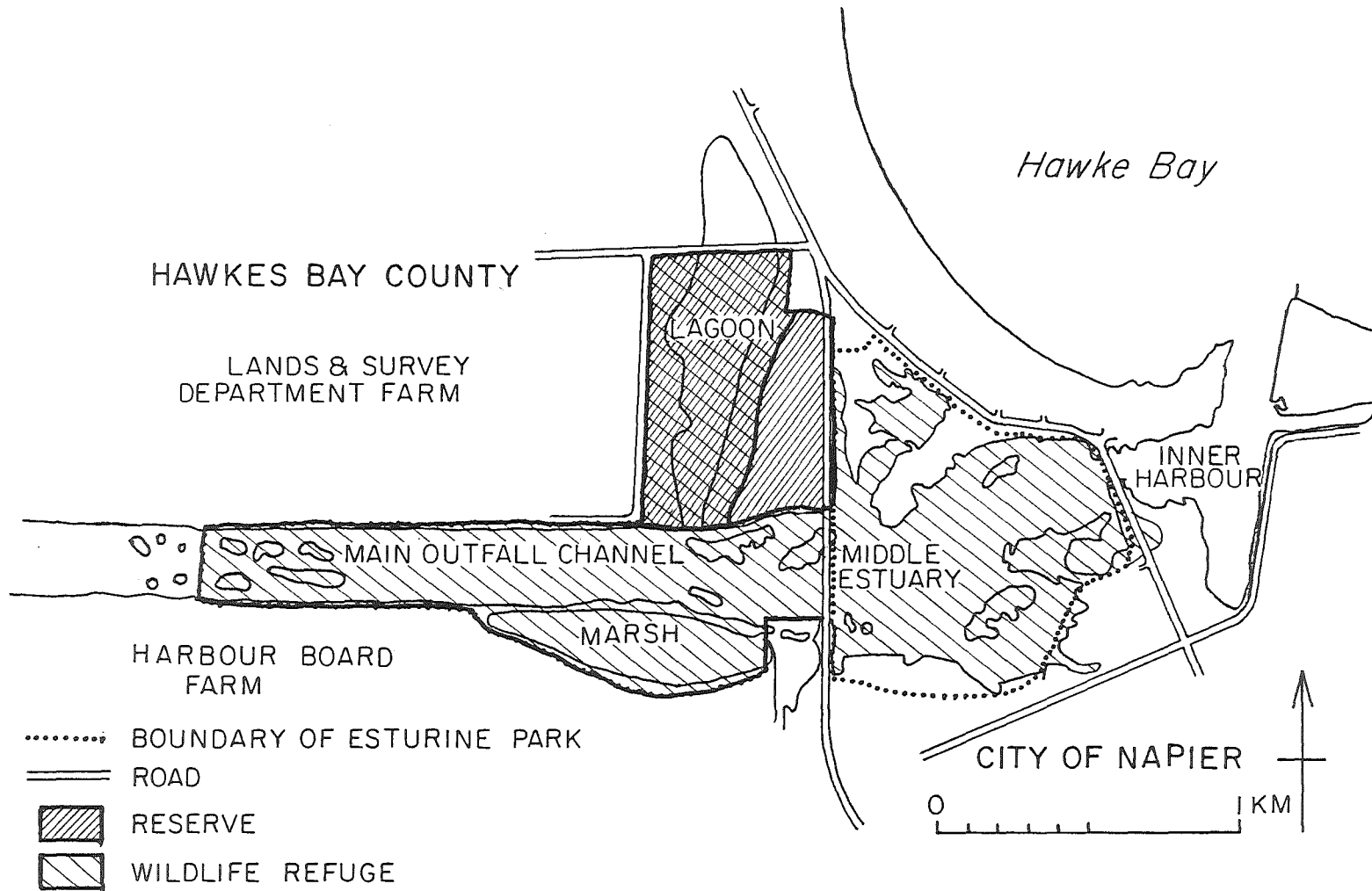


Figure 9.4
 AHURIRI WILDLIFE REFUGE AND ESTUARINE PARK

Hawke's Bay Harbour Board farms further reduced the area to 450 ha. The Harbour Board owns most of the present estuary bed. Bridges crossing the Estuary on transport routes to the neighbouring city of Napier divide it into three sections. The "inner harbour", nearest the sea, has been greatly altered from its natural state to provide berthage for boats and small fishing vessels. It is surrounded by Napier urban and industrial development and is intensively used for water recreation. The broader middle portion consists of mudflats, islands and channels in a less developed area at the edge of the city. This section is popular for passive forms of recreation such as birdwatching and walking. Above it, the narrow, stop-banked outfall channel extends around the periphery of the pre-1931 estuarine area, still exhibiting tidal characteristics while draining the surrounding hinterland. The outfall is less used by recreationists because permission is required for access to both of the reclaimed farms bordering it. Half of the lower reaches of the channel lie within city boundaries and the remainder of the Estuary is included in the Hawke's Bay County planning area.

Dozens of species of birds are attracted to the Estuary's less modified middle and upper sections. The presence of rare and endangered migratory birds, as well as the sheer abundance of water birds, gives the Ahuriri habitat a national significance for ornithology. Regionally, the Estuary is an important nursery for several species of fish, some of which have commercial value.

A 1958 proclamation assigned wildlife refuge status to the lower reaches of the main outfall (including a bordering marsh and lagoon), and the middle section of the Estuary, under the

Wildlife Act 1953. A small part of the refuge is also protected as a reserve under the Reserves Act 1977. This latter is Crown land leased to the Hawke's Bay Wildlife Trust through the Napier City Council for management. In 1981 the City Council took the additional measure of creating an "estuarine sub-district" and making the middle section of the Estuary an "Estuarine Park" in its District Scheme Review.

The struggle for legal protection of the Estuary, undertaken by individuals, public interest groups, and some government actors, is the issue that stands to contribute the most insight into the conservation policies of the agencies involved. The institutional response to this movement, in the form of ad hoc planning attempts, constitutes an issue that demonstrates processes of regional administrative integration. Issues that prompted the movement, related to dredging by the Harbour Board, development of the reserve, recreational conflicts, Maori rights to the area, and other debates over the "best use" of the Estuary, illustrate community priorities and biophysical aspects of the estuarine resource to which the local and regional administrators respond.

9.2.5 Mimiwhangata Peninsula (proposed) Marine Park

Mimiwhangata Peninsula has the same regional environment as the Poor Knights Islands. For analytical purposes the proximity of the two areas is coincidental; however, the shared political-cultural circumstances of the two enhances the opportunity for gaining insights into the role of societal factors in initiative conservation policy.

The area of Mimiwhangata Peninsula and its offshore islands

is 800 ha (Figure 9.5). An 18 km coastline is characterised by protected sandy beaches, a few dunes and swamps, rocky headlands, intertidal platforms and reefs. Patches of native bush or scrub grow along the shore which is mainly backed by pastoral lands. The varied topography of the Peninsula extends below water, providing a diversity of habitats resulting in a mosaic pattern of marine biota. The seas around the Peninsula are a traditional location for Northlanders' recreational activities and some commercial fishing.

Efforts to conserve the Peninsula are recent, and have not yet been finalized at the time of writing. A company, Lion Breweries Limited, owns and farms the Peninsula. It planned to encourage recreational, educational and research usage, and it established a Charitable Trust to administer the area as a farm park. Consultants warned of potential for serious degradation of the marine environment from increased use if the Peninsula was opened to the public. Accordingly, the Trust decided to protect coastal seas with a marine park arrangement, through grant of control under the Harbours Act 1950 and restrictions imposed under the Fisheries Act (then) 1908. Because the Trust, stemming from a commercial interest, could not initiate this arrangement, it invited the Hauraki Gulf Maritime Park Board to share the administration of a 40 m coastal strip designated as protected private land under the Reserves Act 1977. The Park Board agreed to management of the strip as a recreation reserve. When the Board applied to the Ministry of Transport for grant of control over the foreshore and coastal waters to 1000 m off the Peninsula, considerable local opposition was expressed. Objections were based on perceived infringement upon traditional rights of use, including commercial and recreational fishing and

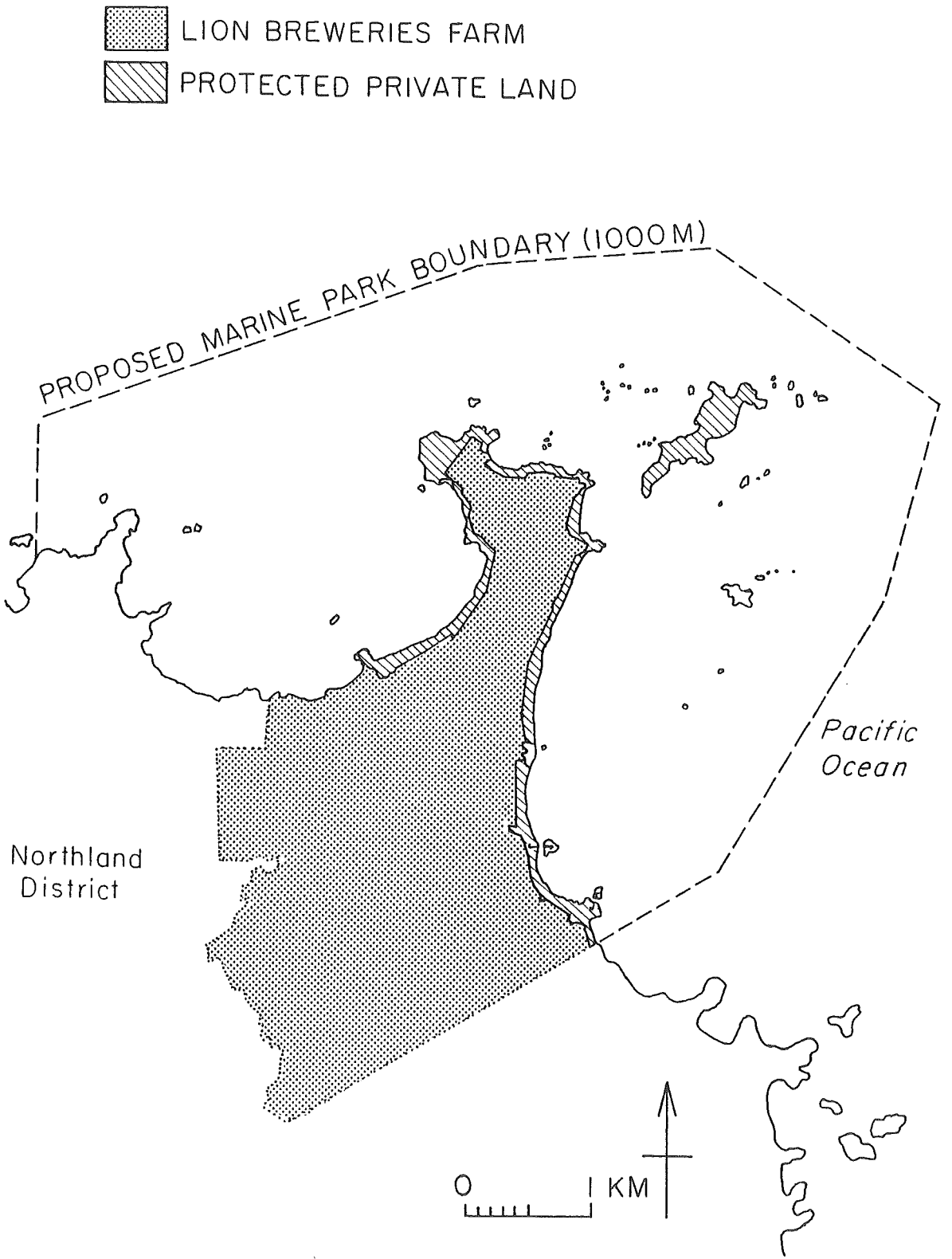


Figure 9.5

PROPOSED MIMIWHANGATA PENINSULA MARINE PARK

boating.

Issue analysis in the Mimiwhangata case relates to the problems encountered in the attempt to establish the marine park. These problems demonstrate difficulties in policy responsiveness and integration at the regional level which are closely associated with institutional limitations.

9.3 SUMMARY

The five study areas selected show great institutional diversity, from the most traditional to the newest mechanisms for initiative coastal conservation. These mechanisms are summarized in Table 9.1, where each is described in terms of: the type of protected area or "designation", the management body that administers the area and its Government department, the statutes under which the area is designated - the "enabling legislation", the tenure of the portions of land and sea involved, and provisions for management planning. All of these institutional statistics are relevant at various points in the issue analysis of chapters Ten to Twelve.

Table 9.2 summarizes the issue coverage of the following three chapters. Three issues are analysed for each case study in relation to criteria for the assessment of policy. The five criteria are subdivisions of the two general criteria - responsiveness and integration. The theory or derivation of each criterion is reviewed in the introduction to the relevant chapter or section.

The discussion of section 9.2 indicated considerable

Table 9.1 INSTITUTIONAL ARRANGEMENTS FOR COASTAL CONSERVATION IN FIVE NEW ZEALAND CASE STUDY AREAS

Institutional Case Study Area	Arrangements	Designation (date established)	Management Body Government Department	Enabling Legislation	Tenure	Management Planning
Marlborough Sounds	Land	Maritime Park (1972) Sounds Foreshore Reserve (1955) Reserves, mainly scenic (19th century to present)	Marlborough Sounds Maritime Park Board Lands and Survey Department	No legislation for Park Board Reserves and Other Lands Disposal Act (1955) Reserves Act (1977)	Crown (Public)	Individual Reserve Plans in Progress
Poor Knights Islands	Land	Nature Reserve (1922)	Hauraki Gulf Maritime Park Board Lands and Survey	Reserves Act (1977) Hauraki Gulf Maritime Park Act (1967)	Crown	Plan required
	Foreshore and Water	Marine Reserve (1981)	Poor Knights Islands Marine Reserve Management Committee Ministry of Agriculture and Fisheries	Marine Reserves Act (1971)	Crown	Plan required Impact report and Audit complete
Mimiwhangata Peninsula	Land	"Farm Park" (1975) Protected Private Land/Recreation Reserve (1979)	Mimiwhangata Farm Park Trust Joint Management Committee (Trust and Park Board, below)	No legislation for farm park Reserves Act (1977)	Private	Plans prepared by consultants to Trust
	Foreshore and Water	Marine Park (proposed)	Hauraki Gulf Maritime Park Board or Bay of Islands Maritime and Historic Park Board Lands and Survey Ministry of Transport Agriculture and Fisheries	Hauraki Gulf Maritime Park Act (1967) No legislation for BIMHPB Harbours Act (1950) Fisheries Act (1908)	Crown	Plan proposed Impact report and Audit complete
Ahuriri Estuary	Foreshore and Water	"Estuarine Park" (1981)	Napier City Council	Zoning Provisions of Town and Country Planning Act (1977)	Mainly Hawke's Bay Harbour Board (Estuary Bed) Some public	Plan proposed
		Wildlife Refuge (1958)	Wildlife Service Department of Internal Affairs	Wildlife Act (1953)		
		Reserve (pre-1958)	Hawke's Bay Wildlife Trust Lands and Survey	Reserves Act (1977)		
Abel Tasman National Park	Land	National Park (1942) (1942)	Nelson District National Park and Reserves Board (formerly Abel Tasman National Park Board) Lands and Survey	National Parks Act (1981)	Crown	Plan proposed by former Park Board
	Foreshore and Water	Marine Park (proposed)	Nelson District National Park and Reserves Board Lands and Survey Ministry of Transport Agriculture and Fisheries	Harbours Act (1950) Fisheries Act (1908)	Crown	No information

Table 9.2

TOPICS OF ISSUE ANALYSIS IN CHAPTERS ELEVEN AND TWELVE

Criteria for Assessment (section number)	Case Study Area	Poor Knights Islands	Abel Tasman National Park	Mimiwhangata Peninsula Marine Park	Ahuriri Estuary Wildlife Refuge and Estuarine Park	Marlborough Sounds Maritime Park
CHAPTER TEN POLICY RESPONSIVENESS TO ENVIRONMENTAL AND SOCIETAL NEEDS						
Policy responsiveness to resource needs (10.1)		Protection of trevally to protect land-sea ecological links	Protection of foreshore and nearshore environment of ATNP	Proposal to amend regulations regularly according to changes in marine environment		
Policy responsiveness to societal needs (10.2)		Provisions for continued recreational fishing	Phasing out of baches within Park boundaries		Competition amongst various interests in Estuary	Phasing out of private structures on Park foreshore; Management planning
CHAPTER ELEVEN INTEGRATION OF ADMINISTRATIVE AGENCIES IN POLICY PROCESSES						
Regional administrative integration (11.1)				Conflict over administrative arrangements	Planning and conservation of Estuary	Planning for marine farming
Departmental administrative integration (11.2)			Control over foreshore and nearshore waters			Selection of conservation category for nearshore
CHAPTER TWELVE INTEGRATION OF ADMINISTRATION WITH THE COMMUNITY IN POLICY PROCESSES						
(12)		Interest group opposition to conservation measures		Uncertainty of administrative intentions and conservation arrangements	Public initiatives to conserve Estuary	

variation in issue types from one case to the next: some cases offer more potential for the observation of regional-level influences on policy while others exhibit policy responses to problems internal to the management unit. National, or field-level factors are often involved as well. In some cases issues tend to revolve around institutional arrangements while in others resources provide the focus. However, common themes do arise. Some of these are the role of the administrators responsible for conservation areas in regional resource management and planning, the difficulties involved in establishing a coastal conservation area or extending an existing one, the problems of coping with traditional or intensified public use of the areas, and the interaction of conservation unit resource systems with adjoining environments.

In the following three chapters, these themes and others will be elaborated as policy responsiveness and integration are assessed according to the criteria for judgement established earlier. Comparisons of policy processes amongst the case studies will be made, while taking into account the differences and similarities between the biophysical and social settings of the five areas. This analysis enables an evaluation of the roles played by the range of mechanisms illustrated in Table 9.1, and the re-assessment of the principles and criteria developed in Parts I and II, in Chapter Thirteen.

CHAPTER TEN
POLICY RESPONSIVENESS TO ENVIRONMENTAL
AND SOCIETAL NEEDS

In this chapter, case study experience is evaluated according to the first of the two general criteria for judging policy - that of responsiveness to environmental and societal needs. The second criterion - integration of policy process - is tested in chapters Eleven and Twelve. In section 10.1, responsiveness to environmental needs is assessed, and section 10.2 evaluates responsiveness to societal needs. The last section of the chapter summarizes policy responsiveness and constraints on responsiveness according to the issue analysis of the first two sections. Before entering into the analysis, the theory of responsiveness, as developed in chapters Five and Six, will be reviewed.

In Figure III.2, the analysis of Chapter Ten was shown to centre on the goals component of policy, rather than mandate or ideals. This focus is appropriate to the study of policy responsiveness because goals interpret the character of the resource to be managed in conjunction with community priorities for that resource and the broader ideals of the policy-making agency. In doing so, they set the contextual values or norms for the guidance of management. They are often expressed as criteria against which changes in the management unit can be evaluated, and they are essential to the social learning process, as the basis of behaviour-analysing behaviour (see section 5.4). Social learning theory, together with the societal and ecological requirements of coastal conservation discussed in Part I, points to the criterion that appropriate policy for coastal conservation must be responsive to the needs

of society and the needs of the coastal resource. This requirement can be explained as follows: to promote the sustainance of healthy coastal ecosystems, policy must respond by minimizing the pressures of human use while taking into consideration the complexities of land-sea interaction, and by adapting to change in the resources involved; to reduce social alienation and to promote consensus and support for coastal conservation, policy must respond by minimizing sudden or radical change in existing resource uses while accommodating various potential interests, and by demonstating clarity and consistency.

While responsiveness to societal and environmental needs is most directly reflected in policy goals, policy ideals may also respond via their interpretation of broader community values which are partially related to the resources involved. Ideals, in turn, affect goals. Policy response through mandate is less direct, because change in the mandate is constrained by institutional arrangements, and a direct policy response to environmental and societal concerns is removed from considerations centring on the internal organizarion of the agency. Thus the mandate, which is relatively static, might restrict responsiveness if it dominates other policy components (see section 6.4 for a fuller explanation).

The mandate and associated institutional arrangements can also restrict policy responsiveness by limiting the capacity of management operations to implement policy. This happens when the mandate constrains active, intervention-type operations such as allocation, enforcement, inventory and monitoring, upon which the execution of initiative (or symbolic) operations depends. If initiative operations involving the design of plans,

objectives and criteria are not supported by intervention operations, then policy responsiveness is compromised (see section 5.3 for the theory of management operations).

10.1 POLICY RESPONSIVENESS TO ENVIRONMENTAL NEEDS

Initiative conservation is distinguished in part by its objective of maintaining relatively unmodified environments and opportunities dependent upon them. In Chapter Two, the need for initiative conservation of the coastal environment and its resources was identified at the national level. Awareness of this need was first associated with coastal lands, in connection with subdivision pressure, but it has spread seaward to the less visible marine environment and the coastal ecotone as a whole. The conservation task requires the control of human activities to minimize modifying influences. A principle expressed in Part I was that ecological considerations must be considered as prerequisite to the consideration of societal needs in order to achieve initiative conservation objectives. As a New Zealand marine biologist states, planning "starts with the real world [the biophysical environment] which exists quite independently of our needs. The nature of the world has got to take some precedence" (Ballantine 1980:38). Goals of initiative conservation policy should reflect this principle.

In the coastal zone, policy goals can further respond to environmental needs by taking into account the ecological interaction of land and sea and the impacts of uses across the interface. Goals must also be capable of responding to

variation in the coastal environment over space or time and to increasing knowledge of the resource. This requires that policy goals be formulated with a long term view of possible future needs, and that they accommodate flexibility in management operations while maintaining consistency in reflecting conservation ideals. At the management unit level, the development and expression of policies in assessments or plans can facilitate the adoption of a long term view and the maintenance of standards or criteria for management.

Some case study experience that illustrates aspects of policy responsiveness to resource needs is related here, drawing upon issues from the Poor Knights Islands, Abel Tasman National Park, and Mimiwhangata Peninsula.

10.1.1 Poor Knights Islands

At the Poor Knights, conservation of the terrestrial environment involves severe restrictions on use, with access permitted for scientific work only. The Wildlife Service's goal of total protection reflected in this measure is a response to the unique and fragile character of the Islands' biota. While exclusion of people from the Islands themselves has long been accepted, controversy over the degree of protection necessary for the surrounding marine environment has been considerable.

Early proponents of a marine reserve at the Knights, including the Wildlife Service, viewed a protected zone of water as complementary to the protection of the Islands and their underwater rock faces, whether the zone acted as a buffer against impinging impacts or as an ecological extension of the Island environment (Bell, unpub. 27/3/1972; Ballantine in

Northern Advocate 2/6/1979). The boundary of the marine reserve was proposed at a distance of a "half mile" (later 800 m) from the shores of the Islands by a meeting of interested parties in 1972 (Muers 28/6/1972). For almost a decade, that proposal was debated between groups such as the Nature Conservation Council and the Bay of Islands Maritime Park Board all of which wanted a zone of up to 5 km, and other interests including commercial fishers who wanted as little as no reserve at all. The most active proponent of a wider zone was a fisheries officer, Mr. Lew Ritchie, who emphasized the need to protect the schooling fish of the area, especially the trevally, as an essential element of the Islands' ecosystem and as an outstanding feature of New Zealand sea life.

Ritchie and others maintained that the trevally are essential to the thriving bird life of the Knights because, as they feed, they force plankton to the water surface making it accessible to the birds. When schools of up to one hundred tonnes of trevally engage in a "feeding frenzy", large flocks of petrels and other sea birds also gather to feed. These birds return to roost at the Islands where they deposit guano, the main nutrient basis for the terrestrial ecosystem (Ritchie et al. 1979:7-9). The slow-growing trevally are susceptible to overfishing in Northland waters, especially by the purse seine method. After one purse seiner took 48 per cent of the standing crop in January 1977 (Ritchie 1978:8), Ritchie and others urged the head office of Fisheries Management Division "to halt the taking of school fish both in the immediate area of the proposed reserve and in the waters surrounding the reserve in order to protect the ecology of the area..." (Arnott, unpub. 6/11/1977). Eighteen months later, policies proposed by MAF

representatives in an environmental impact report on the marine reserve included the protection of all marine life from commercial fishing for a distance to 5.5 km from the Islands (Ritchie et al. 1979:33). The Commission for the Environment (1979:24) supported this proposal in its audit of the report, but only on the grounds that the trevally warranted protection in their own right. It concluded that "The relationship between the birds breeding on the PKI and schools of trevally around the Islands does not seem critical for the birds". Early in 1981 the Poor Knights Islands Marine Reserve was established within the 800 m boundary and the management committee began procedures to obtain restrictions on commercial fishing to the 5.5 km limit.

In the case of the Poor Knights Islands, various proponents of initiative conservation, especially local fisheries officers, formed goals that clearly reflect responsiveness to perceived environmental needs. A lack of consensus on the nature of those needs complicated the selection of policy and institutional responses to them. Whether or not a "critical" ecological link exists between the trevally and the sea birds of the Knights, a continuum of conservation over land and sea will be achieved. A variety of interesting marine resources will be protected and the potential benefit of a protected ecotone may be fulfilled.

10.1.2 Abel Tasman National Park

Many activities have been proposed or undertaken in the waters surrounding Abel Tasman National Park, holding various implications for the coastal resource, and eliciting various policy responses from the Park Board. As long ago as 1965, the Board recognized a need to control recreationists in the nearshore and foreshore area of the Park (Robinson, unpub. 11/5/1965). Although concern was largely a response to the comfort and safety needs of Park users (regarding issues such as navigation aids and waterskiing lanes), resource considerations were also prevalent. The Board has sought control over the foreshore in order to prevent negative impacts from dogs, fires, trail bikes, litter and shooting. In 1969 it wrote to the Marine Department of its fear that "the uncontrolled collecting of shellfish . . . could in time alter the ecological balance of shore life, leading to impoverishment" (Tisdall, unpub. 22/8/1969). Several estuaries which are unprotected even though bordered by Park land have been of particular concern to management.

In nearshore waters the Board would like to be able to regulate waste disposal by pleasure boats and yachts at anchor in Park waters. Park rangers feel that refuse and sewage from moored boats can reach unacceptable levels over holiday periods when as many as one hundred boats may occupy a single bay (Rennison pers. comm. 1981). The Park Board has considered seeking a classification of coastal waters under the Water and Soil Conservation Act 1967 to maintain water quality (Doogue, pers. comm. 1981). At the same time, the Board fully supports the controlled use of coastal waters by recreational boaters, recognizing the strong maritime character of the Park (Thorpe,

pers. comm. 1981).

The Board's desire to have commercial fishing restricted near the Park has been more closely connected to its perception of the needs of recreational fishers than to a response to the needs of the fisheries resource itself (ATNPB, unpub. 19/2/1970, 21/5/1973; Rennison, pers. comm. 1981). MAF representatives in the region maintain that although some fish stocks have been severely depleted, controls are now adequate (Mace and Bull, pers. comm. 1981). Fisheries regulations include the closure of an important "nursery" area at one end of the Park to certain types of commercial fishing (Catch 7/1981:15). The MAF officers feel that the only justification for more extensive conservation measures would be the aesthetic appeal of maintaining a continuous "natural" area of land and sea, and the assurance of plentiful fish resources for amateurs. These agree with the Park Board's goals of protecting its holdings from impacts originating from the sea and maintaining the recreational appeal of the coastal zone. The Park Board has considered extending Park boundaries to include coastal waters because of a concern for the intrinsic value of the marine environment (Rennison 1977); however, its pursuit of a grant of control over the coastal area, together with support for marine reserves and regional planning, is more appropriate to the goals described above.

10.1.3 Mimiwhangata Peninsula

Of the five study areas, Mimiwhangata provides the clearest example of administrative attentiveness to the needs of the coastal environment. Consultants to the Mimiwhangata Trust began a monitoring programme of the marine environment in 1976 which was carried out at quarterly and then yearly intervals. The first two years' results showed an increase in summer usage and associated deterioration of onshore and offshore biota (Grace and Grace 1978:20). Effects of increased recreational use were closely observed during the summer of 1980 when the land area was opened to the public on an experimental basis. Results of this research led to the conclusions that public access to the area could not be dramatically increased without serious impacts on the resource, and that the control of resource use would have to adjust to natural fluctuations in the resource. The consultants proposed that fisheries regulations be adapted to resource needs bianually or annually, based on the findings of monitoring (Dart, pers. comm. 1981), and they felt that "traditional fixed controls are too inflexible to be likely to sustain some marine populations in sufficient sizes and numbers to support the traditional activities" (Turbott 5/1981:2). This view was supported in an impact report on the conservation proposal (Dart et al. 1982:114).

Prior to 1983, the Fisheries Act did not provide a mandate for the degree of responsiveness and flexibility to which Mimiwhangata goals aspired. The 1983 Act, in allowing for the revision of regulations by Gazette notice, should alleviate this constraint. Whether or not a mandate to achieve the goal of flexibility can be applied at Mimiwhangata, the monitoring programme which provides the grounds for flexibility is worthy

of note. As the impact audit observed, "Monitoring and research programmes are an essential element in successful park management" (Commission for the Environment 1982:96). This is especially true for parks in the coastal zone, where knowledge and conditions of the environment are constantly in flux. Monitoring of the Poor Knights' marine and terrestrial ecosystems could have clarified the nature of the conservation needs of the trevally, and a more detailed knowledge of Abel Tasman's marine environment would have assisted the development of suitable initiative conservation goals for coastal waters.

Implicit in the issues of responsiveness to environmental needs in all three of the above cases is the aim of minimising controls or limitations on human uses of the management units. The following goal statement by the Mimiwhangata Trust expresses the tension of the "preservation-use conflict" within conservation areas:

The very diversity of the coastal zone favours its use in education and recreation and will require the strongest conservation measures on the one hand and research and planning for recreational and educational use on the other to ensure that its present quality is undiminished (Mimiwhangata Trust 1980:25).

Hence, general observations on policy responsiveness to resource needs will be reserved for section 10.3, where they can be amalgamated with observations on responsiveness to societal needs.

10.2 POLICY RESPONSIVENESS TO SOCIETAL NEEDS

In seeking to maintain opportunities that depend on less-modified environments without degrading such environments, initiative conservation measures preclude activities that are incompatible with these goals. Yet care must be taken that the policy leading to such restrictions demonstrates a basic respect for human rights and dignity in responding to societal needs. In the practical terms of initiative conservation, such responsiveness should also assist in the lessening of negative public reaction to policy goals and the promotion of consensus in society on the need for initiative conservation. The rationale of the need for this type of responsiveness was developed generally in Chapter Three.

Ways in which policy-makers can consider the traditions and expectations of people who have made customary use of the area to be conserved and its region were discussed in section 3.3. First, sudden or radical change in the uses of an area should be avoided; and second, a clear and consistent expression of policy goals, as they relate to pre-existing uses and to intended future uses should be provided. Both approaches should be applied over the long term as well as at the time conservation measures are first implemented. While accommodating to changes in both environmental and societal needs, goals must maintain a degree of consistency so that the users of the management unit and members of the surrounding community know what to expect of management.

Clarity and consistency in policy is facilitated by the expression of policy in legislation for a conservation designation that applies nation-wide, such as the National parks

Act 1981, or in special legislation such as the provision for "Sounds Foreshore Reserve" that applies in one area only. Plans are also important mechanisms for ensuring rationality in policy. However, the policies which are expressed in, or which interpret, statutes and plans still have scope for variability, and a balance between flexibility and consistency must be carefully maintained.

Issues from four case study areas are analysed below in order to determine the extent to which policy responds to societal or community needs, mainly by avoiding demands for sudden or radical change in use. The importance of clarity and consistency in goals is implicit in this analysis but is more closely connected with processes of responsiveness involving integration of administration with the public. Fuller discussion of these latter is reserved for Chapter Twelve.

10.2.1 Poor Knights Islands

In the case of proposed marine reserves, the Minister of Fisheries is legally bound, when deciding whether to uphold objections, to consider whether the reserve would interfere unduly with: (a) any estate or interest in land in or adjoining the proposed reserve, (b) any existing right of navigation, (c) commercial fishing, or (d) any existing usage of the area for recreational purposes (Marine Reserves Act 1971). Several management options for the proposed Poor Knights Islands marine reserve were considered, to ensure that reserve status would not interfere with existing uses - mainly diving and recreational fishing from private boats and charter boats (Commission for the Environment 1979:109).

Institutional arrangements available at the time of the initial conservation proposal for the marine reserve could not provide the enabling mandate for the proposed policies. Then a 1977 amendment to the Marine Reserves Act 1971 permitted controlled recreational fishing to continue in reserved areas. Under these new provisions an arrangement was adopted which resolved conflicting needs by establishing zones for full protection of marine resources outside of which most recreational fishing could continue. Controls over recreational fishing and other uses can respond to changing needs through periodic revision by Gazette notice or Order in Council, as recommended by the management committee.

Users of the area included in the reserve were generally satisfied in the end that their needs could continue to be met, although objections were lodged calling for expansion of the fishing zones, and some charter boat activities were curtailed (Northern Advocate 27/10/1979, Mahood, pers. comm. 1981). To most interests, the policies developed for the Poor Knights Islands Marine Reserve constitute

. . . a realistic attempt to balance the inherent conflicts between preservation and use in a marine zone with high scientific and recreational values in addition to various commercial components (Coad, unpub. 24/10/1979). Policies for the marine reserve can thus be judged as responsive to community needs.

10.2.2 Ahuriri Estuary

The Ahuriri Estuary has been subject to a wider range of interests and activities than have the other case study areas, because of its mixed tenure and administration and its accessibility on the edge of a small city. No single agency initially took on responsibility for the development of a conservation policy for the Estuary. The interests that have been most heavily involved in the debate surrounding the conservation of the Estuary can be summarized as follows. Local branches of national conservation groups - Ecology Action and the Royal Forest and Bird Protection Society - were among the first to initiate proposals for the protection of the Estuary as a reserve, mainly on the basis of wildlife values. They were supported by the Nature Conservation Council in Wellington. Later a community-based, ad hoc conservation group, the Ahuriri Estuary Protection Society, was formed to lobby for conservation, allowing for "development of the estuary's recreational potential, but in a manner consistent with the maintenance of wildlife values" (Morgan in Daily Telegraph 18/9/1981). The Society supported passive forms of recreation such as birdwatching and picnicking that would not entail physical modification of the Estuary. Power boat interests who supported dredging and development to improve conditions for more active recreational pursuits formed a counter-lobby, the Inner Harbour Recreation Development Committee. The sailing club also wished to see some dredging of the Estuary but was generally opposed to power boating (Thompson, pers. comm. 1981).

Maori interests, particularly the Wai Ora Action Group, supported the early conservation lobby while holding

longer-standing concerns of their own. When a large block of Maori land around the Estuary was sold in 1851 the Maoris believed that they were retaining their rights to the area below MHWM, and they petitioned Parliament for recognition of their rights to land which was reclaimed from the Estuary bed and granted to the Harbour Board (Cottrel, pers. comm. 1981). Since 1952, the Ahuriri Maori Committee has regained title to a small area of land on the Estuary that was traditionally used for landing canoes, living and preparing food (Cotter, pers. comm. 1981). More recently, Maori interests have been represented by the Ahuriri Marae Committee which intends to have a marae (Maori community centre) built on this so-called canoe reserve.

Central and local government agencies have demonstrated varying levels of interest in the conservation of the Estuary. MAF fisheries officers would like to see the rich estuarine ecology protected from threats posed by dredging and industrial pollution, particularly because of its value to the regional commercial fishery. They view "various recreational uses such as yachting, rowing, canoeing, picnic areas and walking" as acceptable uses (Carruthers 5/1981:2). The Wildlife Service recognizes the value of the fifty-five bird species that frequent the Estuary as a national resource and the birds are protected in part of the Estuary designated as a wildlife refuge (Adams 1981). The Hawkes Bay Wildlife Trust, which manages a reserve in part of the refuge, has encountered opposition to its display of introduced species as part of of a proposed education centre (Billing, pers. comm. 1980). The Hawkes Bay Catchment Board ensures that the function of the Estuary as a storage area for runoff is appreciated by those lobbying for other uses

(Simons pers. comm. 1981). The bed of the Estuary and much of the land bordering its upper channel is owned by the Hawkes Bay Harbour Board. Much of the interest in conserving the Estuary arose in reaction to the Harbour Board's dredging for spoil to be used in the development of the Port of Napier, and to maintain access to berthage for small vessels near the mouth of the Estuary. The Board would support some development for increased recreational use, but is less concerned with the overall use-conservation debate than are other interests (Black, pers. comm. 1981). The Napier City Council had an early interest in the development of part of the Estuary as a marina but it abandoned this proposal after encountering extensive opposition.

In the face of this extensive and diverse range of interests, the institutional mechanisms employed for the development and expression of management policy were: an environmental assessment of proposed dredging operations called for by the Commission for the Environment in 1976, a cooperative, ad hoc planning study commissioned by local government agencies in the same year, and the District Scheme review of the Napier City Council. The latter, in 1981, finally provided the opportunity for the setting of conservation goals backed by a mandate. The revised scheme established an "Estuarine Park Zone" within an "Estuary Sub-district". The Park is to be available for passive recreational use while maintaining the existing ecological character of the area. A proposed marae development will be considered for the "canoe reserve" in the Park. Other portions of the "Sub-district" will be open to more extensive modification for uses such as power boating (Napier City Council 1981:16). In devising this scheme,

the Council was aware that the Estuary is a small area in relation to the demands placed upon it, and not all demands can be met (Thompson pers. comm. 1981). The strength of the Council's mandate to zone for conservation purposes may yet be tested under town and country planning procedures by those who feel their needs have not been met, such as the Harbour Board. Nevertheless, the plan for the Estuary demonstrates a serious attempt on the part of policy-makers to accommodate as many needs as possible. The District Scheme provides a clear and consistent expression of goals, while the zoning provisions indicate spatial flexibility.

In both the Marlborough Sounds Maritime Park and Abel Tasman National Park the needs of residents or the occupants of holiday homes in the immediate vicinities of the conservation units have had to be considered.

10.2.3 Abel Tasman National Park

Several holiday homes, or "baches", scattered around Abel Tasman's coast are held through leases or agreements with the Park Board. Agreements entered into upon purchase of land for the Park allowed bach owners to keep their cottages until the death of the owner, or for a period of twenty-five years from the date of purchase. Eight owners whose legal land rights were not recognized when the Park was gazetted were allowed use of their baches at the Board's discretion until 1984 - an arbitrary ten years from the time the policy was approved by the National Park Authority (ATNPB, unpub. 16-17/3/1973). The policy calls for eventual removal of all the baches, and owners are not

permitted to sell or expand their dwellings.

The delineation and implementation of policy on baches has proven difficult. The National Parks Authority pressured the Park Board to act on the issue, while bach owners wished to be left alone. The owners gained the support of the media and the local Member of Parliament (Rowling, who was Prime Minister during part of the controversy) in their campaign to gain rights to the baches for life. The Board maintained its position, with the support of the Authority, on the grounds that lifetime occupancy would lead to proposals to have the baches passed on to successors of the present occupants, and that such privileges for individuals were incompatible with the principle that a national park is available to the general public in its entirety, as expressed in the National Parks Act 1981. In this case the Board risked the displeasure of a small group with a special interest to serve better the needs of the broader society for whom the Park was established.

10.2.4 Marlborough Sounds

The Marlborough Sounds Maritime Park Board has been in a similar situation with respect to the situation of baches on Park land due to historical circumstance. Many holiday residences and other buildings had been erected on the 20 m legal road or "Queen's chain" that became part of the Park. Long before the Park was established in 1973 this coastal strip had been declared public (recreation) reserve subject to the Reserves Act 1953. Because of the private buildings on the reserve, special legislation for the "Sounds Foreshore Reserve" was passed in 1955 to rationalize its administration. The

policy goals behind section 17 of the Reserves and Other Lands Disposal Act 1955 were:

1. To retain for the public the right to use the Sounds Foreshore Reserve for access purposes at all times.
2. To legalize the encroachment on the Sounds Foreshore Reserve by persons who had erected their houses, sheds, boatsheds and other buildings prior to the passing of the legislation, by the issue of licences to occupy
3. To strictly control the erection of new buildings.

Licences are granted to legalize structures, for a term of thirty-three years where the structures are connected with farming uses on adjacent lands, and for up to ten years in other cases. The Park Board has not issued any licences for new residential structures. It intends to have all such structures removed in the long term, and no extensions are permitted. Permission is usually granted for minor landscaping projects carried out by bach owners, and some licences have been granted for boat sheds. The public is guaranteed access to the foreshore around the private dwellings but cannot camp near them.

The Maritime Park Board has had some trouble with unauthorized structures on the foreshore, and the consideration of licencing issues has occupied much of its time. Generally, however, the Board has accepted the baches as being in harmony with the character of the Sounds, and Park users do not seem concerned about the private dwellings in an area that is otherwise highly modified by a range of uses. Owners of the dwellings and farm-related structures also appear to be satisfied with the situation:

The Park Board has, since its inception, established a good image with Sounds residents and this has been

partly due to the responsible attitude it has show in the administration of the foreshore reserve and licences (Director-General of Lands, unpub. 1976).

Largely because of the disjointed nature of the Maritime Park, and because "Marlborough is a fairly close knit community", the consideration of the Park's neighbours has achieved a high priority in Park Board policy (Mitchell 1979:6). Policy responsiveness to the needs of the national community of recreational users, while satisfactorily achieved within this framework, has received less emphasis than it has at Abel Tasman National Park. This is partially due to the circumstances described above, but it is also a function of the more regional image that maritime parks hold in New Zealand: the general public's expectation of accessibility to the relatively recent maritime park conservation area is not as well entrenched as for the more traditional national park. As well, the early establishment of a policy mandate and the consistent application of clearly-defined goals for the Foreshore Reserve have left less room for debate, so that the regulation of the structures has not grown into a major issue that would draw negative publicity.

The formation of clear and consistent policies for the Maritime Park has not been assisted by a park management plan. From the Park Board's inception the production of a plan has been intended, but Lands and Survey head office has never been able to supply the supplementary funds or staffing that the district office would require to achieve this end (Coad, unpub. 17/2/1977). District office planning resources have been absorbed in meeting the requirements of the Reserves Act 1977 in planning for individual reserves.

While plans for reserves are helpful, members of the Park

Board have expressed concern that, "to ensure proper development of the Park, a Management Plan is paramount" (Groube, unpub. 16/9/1976). The Board has experienced difficulty in making decisions on the allocation of funds for management programmes due to the lack of a plan. Also, it has felt that increased public usage has outstripped Park development and planning, and that troubles in assessing public requirements and the balancing of conflicting demands could be avoided with a plan (MSMPB 1981: Introduction). Conversely, the planning officer and the chairman of the Board, who are part of the Lands and Survey district office, are less concerned with delays in management planning. They felt that, with the guidance of legislation, the regular review of policies developed over the years, and the experience gained through management, responsive and consistent policies can be set without a plan (Henderson and Mitchell, pers. comm. 1980, 1981). This approach appears to have been adequate to meet the needs of Park users and the Sounds community.

10.3 OVERVIEW OF POLICY RESPONSIVENESS

Overall, the case study experience demonstrates that policy goals have been responsive to the needs of the resources and the communities which they concern. Inevitably, trade-offs in policy had to be made between responses to resource needs through protection, and responses to societal needs through the provision of access and the opportunity for various activities. The degree to which management operations attempted to shelter

resources from the effects of human use varied according to the priority placed on policy goals for the maintenance of resource quality, relative to the priority on goals for the public enjoyment of the resource. At the Poor Knights Islands, management felt that the terrestrial environment required complete protection from public access, while the marine environment could withstand varying levels of recreational use. Policies at Mimiwhangata attempted to balance recreational use and protection of the environment from the outset, while Abel Tasman administration responded to the needs of the coastal resource as pressures of recreational use were perceived to be worsening.

In some of the case studies, the activities undertaken in and around the area prior to the implementation of conservation policies were compatible with the policies, while in others the policies conflicted with pre-existing activities. Commercial, extractive uses were considered to be incompatible while most recreational uses were compatible. Residential use in the form of holiday homes fell between these extremes. The level or intensity of all types of activities was a major factor in determining compatibility. Various combinations of use conflicts were experienced in the case studies and various policies were developed for dealing with incompatible uses. Some conflicts of interest at the Ahuriri Estuary and Abel Tasman National Park were more attributable to incompatibility of activities than to concerns over impacts on the resource. In other cases, conflicts usually were connected to estimations of the tolerance of the resource to alternative levels of use proposed by management.

The rationalizing of policy goals to suit the various needs

was complicated by an awareness demonstrated in all the case studies of the implications of both ecological and human activity interaction across the coastline. Motivations for considering contiguous land and sea areas in conservation policy included the ecological interdependency of terrestrial and marine environments (for example, Poor Knights Islands), the aesthetic appeal of a continuous natural land-seascape (Abel Tasman), the provision of complementary recreational opportunities across the interface (Mimiwhangata and Abel Tasman), and the need to control uses of an area on one side of the coast to prevent spillover of human impacts into a vulnerable area on the other side. This last motivation was evident in policies to control activities on the foreshore or in nearshore waters. Such policies were developed either before increasing land access to the foreshore (Mimiwhangata) or in response to recreational use pressures on the marine environment which were attributable to the aesthetic attraction of protected terrestrial environments (Abel Tasman).

Policy-makers in the case studies recognized the value of a long-term view in serving resource and societal needs. The future of the resource was considered with regard to: possible errors in management due to lack of information, the desirability of maintaining high standards in the quality of the resource, and an awareness of ecological processes which change over time. Societal needs were satisfied when future intentions of management were clear and there was continuity of expectations for use, as demonstrated in the Marlborough Sounds case.

Flexibility, although somewhat incompatible with consistency, was also recognised as important to goal

responsiveness. Flexible policies could cope with variation in needs over space and time, and could accommodate the trade-offs and compromises mentioned above. They could also allow an evolutionary approach to management based on change in policy with improved information. The policy of adapting controls according to results of the monitoring programme at Mimiwhangata exemplified this evolutionary approach. Zoning at the Poor Knights and the Ahuriri demonstrated spatial rather than temporal flexibility.

A shortage of information on the character of the resources in question and/or on community priorities for the resources constrained policy responsiveness in cases such as Abel Tasman and the Poor Knights. Rigorous research efforts were made at an early stage of policy formation only at Mimiwhangata, and impact assessments were required at Mimiwhangata, the Poor Knights Islands and the Ahuriri Estuary partially to remedy problems of information shortages.

Negative in societal attitudes toward conservation policy were another constraint. The concept of initiative conservation across the coastal zone and in the sea had not yet been widely accepted by the public in the two study areas in Northland, leading to difficulties in meeting the conservation needs of the resources involved. Flexibility and an evolutionary approach showed potential for coping with this constraint.

A range of modes of policy expression was demonstrated amongst the case studies, including ad hoc plans, statutory plans, management deliberations and correspondence, formal policy statements, impact assessments, statutes and regulations. For all of the case study areas plans are either complete or are in the process of formation, and in most cases there is

provision for periodic review of the plans. The importance of the planning process to policy responsiveness is not confirmed by the case study experience: the Marlborough Sounds case, with the least comprehensive planning, demonstrated fair consistency and clarity in policy, while other cases such as Mimiwhangata failed to meet these criteria for responsiveness to societal needs despite comprehensive planning. Conversely, responsiveness to both environmental and societal needs was made possible by statutory planning at the Ahuriri Estuary.

While all of the mechanisms for expressing policy comprise a statement of priorities or intent, some, namely statutory plans, statutes and regulations, form the means by which policy is legally implemented and enforced. Where these institutional mechanisms to support policy were lacking, the policy-making agency was constrained by the lack of a mandate or power to apply its policies. This was a major constraint in the case study experience: in almost every case the power to implement responsive policies through management operations was not available, at least initially. Conservation of marine areas was more problematic than conservation of land areas. In no case were suitable arrangements for the conservation of a continuous area of land and sea readily available to policy-makers. However, adaptations of institutional arrangements eventually provided mandates that were adequately supportive of proposed goals in most cases, whether through amendment as at the Poor Knights, innovative application as at the Ahuriri, or combination, as at Mimiwhangata and Abel Tasman.

Policy ideals - the more general and stable values of managers which lie behind mandate and goals - were not addressed as such in this chapter. The fact that they are rarely stated

directly by a policy-making agency means that they are difficult to identify for an observer. However, the integration of goals and mandate, or the adaptation of mandate to suit goals, as described above, does reflect the existence of more basic priorities. That these are at least partially based in community values is indicated by the involvement of goals which have responded to values related to the management unit resource. An awkward or incomplete integration of goals with mandate, characterized by attempts to extend Park control seaward at Abel Tasman, indicates an uncertainty or lack of consensus on ideals, and a cloudy reflection of societal values in policy. The analysis of integrative processes in Chapter Twelve should contribute to an understanding of policy's relation to the broader values of the communities of the case studies. First, Chapter Eleven elaborates upon the institutional constraint on policy responsiveness by investigating the integration of policy-making amongst agencies involved in coastal conservation.

CHAPTER ELEVEN
INTEGRATION OF ADMINISTRATIVE AGENCIES
IN POLICY PROCESSES

Integration is co-requisite with responsiveness for satisfactory coastal conservation policy. Processes of integration are investigated through issue analysis in this chapter and Chapter Twelve. This chapter focuses on policy integration as a function of interaction between or within administrative agencies. Section 11.1 concentrates on integration between the administration of conservation management units and the agencies that control surrounding or overlapping areas of land and water. In section 11.2, integration within and between sectoral government departments involved in management unit administration is the focus of analysis.

Issues for analysis in both sections have been chosen for their strong institutional component. The area shaded for Chapter Eleven in Figure III.2, in the introduction to Part III, shows a theoretical orientation around policy mandate. The mandate is influenced by institutional arrangements and political-cultural factors such as those reflected in regional planning processes. In comparison with the analysis of Chapter Ten, discussion in this chapter is less concerned with the topics of controversy (environmental and societal needs), and more concerned with the processes behind issue resolution.

While policy responsiveness demonstrates "learning", integration is the mechanism through which learning is achieved. Interaction in the policy-making process is integrative if it involves cooperation and open dialogue for the exchange of

personal (values-oriented) and processed (technical) knowledge (see section 5.4). Forms of interaction involving confrontation and power struggles are inimical to integration. Hierarchical lines of communication, typical of bureaucracies, may also limit integration if they are uni-directional and they constrict lateral communication (see section 6.2).

In the case study analysis which follows, issues are observed in terms of the actions and reactions of the actors involved and the forms of communication which they use. Particular emphasis is placed on the role of institutional and other mechanisms of integration, such as joint planning efforts and the formation of coordinating bodies.

11.1 REGIONAL INTEGRATION OF ADMINISTRATIVE AGENCIES

The management unit and its surrounding region are the setting for the examination of integration processes in this section. The roles of all the agencies involved in each issue are considered, whether these agencies are locally, regionally, or nationally based. The processes of, and the constraints on, administrative integration between the conservation area and its region are investigated for issues at Mimiwhangata Peninsula, the Marlborough Sounds, and the Ahuriri Estuary. The complexity of the issues analysed decreases from Mimiwhangata to the Ahuriri.

11.1.1 Mimiwhangata Peninsula

Severe problems of resistance to initiative conservation arrangements at the regional level were encountered at Mimiwhangata, in response to the efforts of the Mimiwhangata Trust (of Lion Breweries) and the Hauraki Gulf Maritime Park Board (HGMPB) to establish a marine park. In this case, constraints on integration existed at the outset of conservation attempts: there was no background of experience for the close involvement of a private company with a government conservation agency, and the political culture of the Northland region held a prevailing suspicion of central government involvement in regional affairs. Special concern shown by the Trust and the HGMPB for the conservation of the coastal ecotone could not readily be expressed in existing institutional arrangements, at least to the satisfaction of regional bodies and politicians. The events surrounding the development of this issue and the roles of the actors mentioned above are reviewed here.

Conflict first arose over the matter of designation of the Peninsula during the Whangarei County District Scheme Review of 1974-75. Much of the Whangarei coastline, including Maori and other private lands bordering Mimiwhangata, had been designated in the scheme on the recommendation of the Coastal Reserves Survey. The Lion Breweries land was not designated because neither the County nor Lands and Survey would have the necessary funds to acquire the land if they were required to do so. The County Council then objected to its own scheme, because it decided that designation of the Peninsula would be more fair to the bordering owners. Reversing its position once again, the County cross-objected to this objection, on the grounds that Lion Breweries had more financial resources to protect the land

than did the County, and it upheld this cross-objection in the end. The Company had supported this action on the advice of its consultants who maintained that designation in the scheme would not provide adequate protection for the area (Turbott pers. comm. 1981). At this time the Mimiwhangata Farm Park Charitable Trust had just been formed, perhaps in part as a means of demonstrating the sincerity of the Company's conservation intentions which were already doubted by some politicians (Peters, unpub. 18/3/1981).

The second phase of the development of conflict between Mimiwhangata management and the region began with the formation of the Joint Management Committee in 1980. With two members from the Trust and two from the HGMPB the Committee was unique in New Zealand as an institutional mechanism for the integration of a government conservation agency and a commercial land owner. The Minister of Lands at the time stated:

I am hopeful that this marriage of private enterprise and a public body will set a significant example in the preservation of our environment and be the forerunner of similar arrangements whereby our coastal areas are protected from improper exploitation at very little cost to the Crown (Young, unpub. 18/3/1980).

The Company saw various potential benefits in the arrangement: some government funds could be used to subsidize a project that would not be supported by all shareholders (Shellick, pers. comm. 1981); Park Board management expertise would be available; the coastal strip could be afforded legal protection as recreation reserve under section 38 of the Reserves Act 1977; and most importantly, protection could be sought for coastal waters through grant of control to the Park Board and the more stringent application of fisheries regulations by MAF (the establishment of a marine park). The Minister of Fisheries had

offered his support in suggesting that the Trust form the alliance (Young, unpub. 24/7/1980), and MOT policy was compatible in its promotion of grants of control to locally-based bodies.

Figure 11.1 shows the proposed arrangement for administration. The main responsibility falls to the Trust, as representative of Lion Breweries, and the HGMPB, as representative of Lands and Survey Department. These two bodies are linked by legal provisions of the Reserves Act 1977, by cross-membership and by representation on the Joint Management Committee. The MOT and the MAF are involved through their cooperation in providing the foundation of regulations for the marine park arrangement under the statutes which they administer.

The County Council learned of the Joint Management Committee when it was provided with the management plan for the coastal strip and was then asked to consent to transfer its sections of unformed road on the Peninsula to the Crown for addition to the reserve. The Council refused to contribute the unformed road because of implications in the plan that access to the reserve would not be open to all members of the public (Whangarei County Council, unpub. 1/12/1980).

The next phase of controversy was entered into when the MOT advertised the Park Board's application for grant of control over the seabed and waters surrounding the Peninsula. Dozens of objections were received, including that of the Council as adjoining owner of the unformed road which legally prevented the grant of control from being issued. The negative reaction of the Council, supported by other local bodies, largely was attributed to the manner in which the application was lodged.

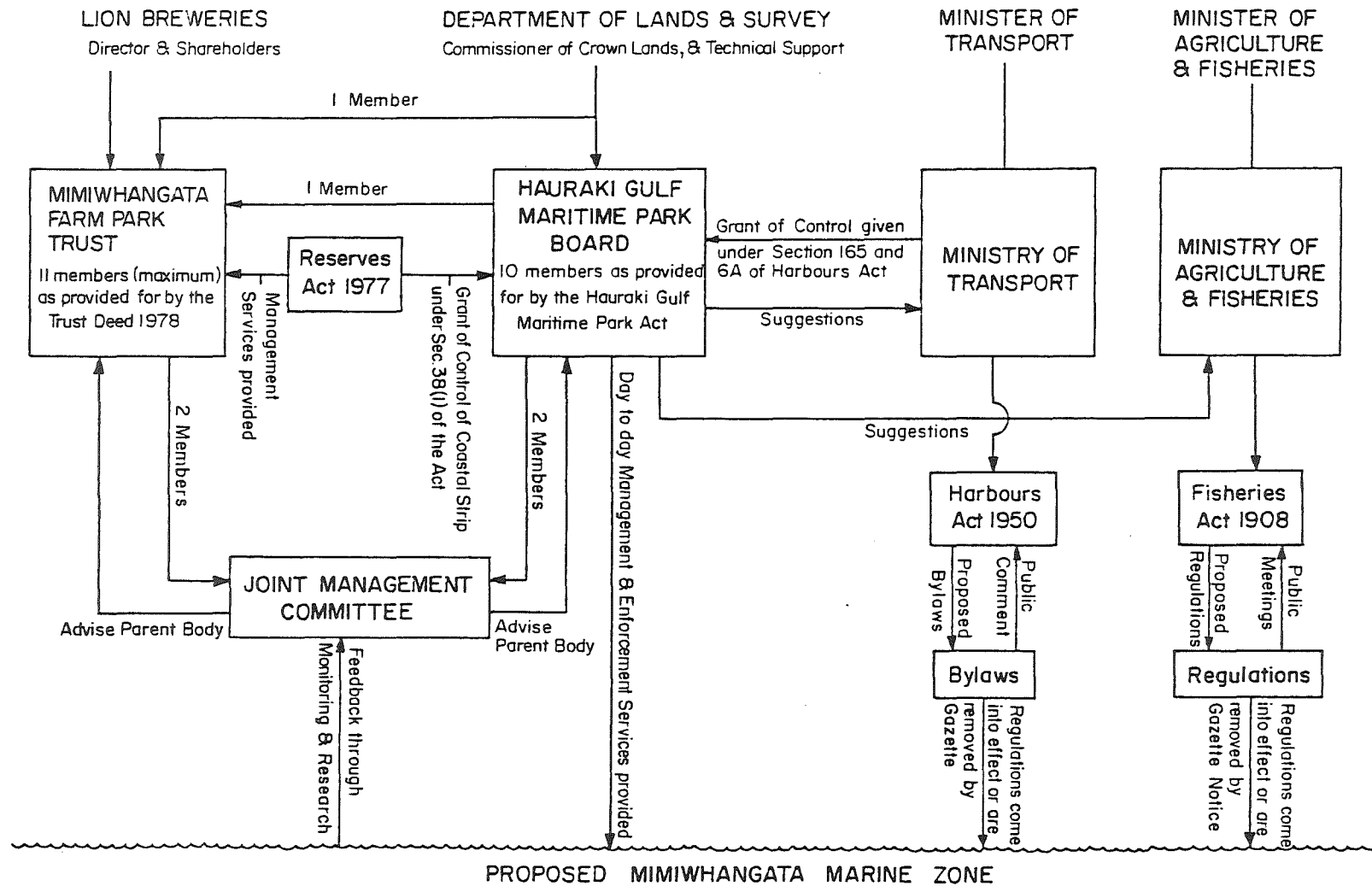


Figure 11.1

LEGAL AND ORGANIZATIONAL FRAMEWORK FOR THE ADMINISTRATION OF THE PROPOSED MIMIWHANGATA PENINSULA MARINE PARK

The Council maintained that it had been assured that no application would be made until the matter of which agency should be involved in Mimiwhangata was settled, and the Minister of Lands admitted that the advertisement of the application had been premature, due to a misunderstanding with the Ministry of Transport (Northern Advocate 16/11/1981). Also, the application nominally had been for an area to 1000 m from shore, and local bodies were alarmed that much more was included where boundaries ran straight from one promontory to the next (McCauley 1981). The leader of the opposition from local bodies, Councillor Lewis, felt that the application constituted a breach of faith and demonstrated a disregard for the views of the local bodies (Northern Advocate 28/7/1981). A letter from the Northland United Council to the Minister of Lands (16/4/1981) supported Lewis:

[Problems with the application have arisen] through local bodies. . . only becoming aware of the application indirectly or at a late stage . . . It has been this general lack of consultation with Northland authorities outside the minimal statutory obligations . . . which has caused much resentment.

This letter expressed the consensus of opinion at a meeting of the County Council, the United Council, the Northland Harbour Board and two Members of Parliament. The meeting was held the day before its participants were to attend an "open day" at Mimiwhangata at the invitation of the Park Board and the Trust.

All the local bodies and other regional interests were represented at the informal seminar and tour of the Peninsula on 4 March 1981. This "open day" was expressly conceived as a means to achieve integration between management and the regional community. The views of those involved in the administration of the Peninsula were presented, and the regional newspaper

reported that the worries of local bodies had been eased as a result of the meeting (Northern Advocate 3/1981). Nevertheless, continued opposition was communicated at a meeting between Joint Management Committee and County Council representatives following the "open day" (HGMPB, unpub. 14/4/1981).

The Commissioner of Crown Lands expressed the sense of frustration felt by those involved in Mimiwhangata administration in mid-1981:

There has been a great deal of publicity given to the whole issue in recent times and much of it, if not most, appears to be based on fairly uninformed comment arising from a form of protective parochialism (Brent, unpub. 8/6/1981).

Both the Trust and the Park Board considered withdrawing from the arrangement altogether if the "acrimony" over the proposal continued (Roberts in Northern Advocate 14/2/1981; HGMPB, unpub. 19/4/1981). At the same time, the Park Board admitted "in retrospect . . . that there has been a lack of . . . consultation with local bodies" (HGMPB, unpub. 18/5/1981). As a result, the Board commissioned an environmental impact assessment for audit by the Commission for the Environment. The aim of the assessment was, in part, to achieve a consensus on the administration of the marine park proposal (Commission for the Environment 12/1982:8). In essence, it was a "last resort" attempt to achieve integration. It intended, among other things

...to outline various control mechanisms and how these could best be integrated with the management of the land adjacent; and to discuss the various institutional options for control (Piddington, unpub. 16/6/1981).

Lewis regarded the assessment as a "smokescreen" that would not adequately address the political issue (pers. comm. 1981). In fact, the recommendations of the report and its audit supported the views of Lewis and other Northlanders in agreeing that the

Bay of Islands Maritime and Historic Park Board, rather than the Hauraki Gulf Maritime Park Board, should be the government participant in the conservation of Mimiwhangata's coastal zone. The Bay Board had not existed at the inception of the original proposal, and the boundary of its jurisdiction would have to be moved southwards to accommodate this alternative.

Throughout the controversy, Northland representation in management had been the principal issue. Northlanders would not accept the Gulf Park Board because its membership was from Auckland; alternatives they proposed were MAF, the County Council, the Harbour Board, the United Council or the Northland-based Bay Park Board (although there were varying degrees of interest in, and rivalry for, the role amongst these bodies). Mimiwhangata management, uncertain of the future of the Bay Board, had considered increasing Northland representation on the Gulf Board or on the Joint Management Committee, neither of which alternatives was acceptable to Northlanders.

Sensitivity to the "intrusion" of central bureaucracy into Northland and the consequent political furore can be attributed largely to the timing of the marine park proposal with regard to the formation of the Northland United Council (Millar, pers. comm. 1981; Mathews, pers. comm. 1981). With the backing of regional government, Northland bodies were becoming more assertive - "We want to see things like Mimiwhangata kept in Northland because of our increasing regional responsibilities" (Spicer, pers. comm. 1981); and "We're starting to grow up in Northland and we want to have some say" (M.P. Elliott in Northern Advocate 14/2/1981).

Integration of coastal planning and reserves planning at

the regional level beyond the Mimiwhangata case had been instigated by both central government and local or regional bodies. Some submissions on the impact report suggested that Mimiwhangata should be part of a planning effort for regional reserves, based in Northland. This alternative may have appeared unlikely at the time in light of: a historical "anti-planning attitude" in Northland (Van Roon and Lello, pers. comm. 1981), extended attempts to remove designations proposed by the Coastal Reserves Survey, and the lack of planning mechanisms for the marine environment outside of harbours. However, this situation was in transition during the Mimiwhangata controversy, with regional boundaries being extended seaward, and the County and the Harbour Board considering grant of control and maritime planning arrangements for foreshore and coastal waters.

The central government participants - chiefly Lands and Survey Department - had considered Mimiwhangata in the context of regional conservation, first in the Coastal Reserves Survey, second, in connection with Crown reserves on the coast near the Peninsula, and third, in the establishment of a Northland Regional Reserves Board. In tune with Northland priorities, central administration was also willing to consider alternatives to Crown ownership of reserves. But to local, regional and national level Northland politicians at the time, virtually any involvement of central government was unacceptable. A local candidate for central government maintained:

There are sufficient numbers of competent men and women involved in local politics in Northland to see that the coastline is adequately protected. And the important point is that they are accountable to local people (Fraser in Northern Advocate 30/7/1981).

Other observers, such as the Environmental Defense Society, would not agree. During its involvement in the early phases of the proposal the Society had supported full government involvement, for fear that an alternative would compromise the level of resource protection provided at Mimiwhangata (Taylor, pers. comm. 7/12/1981).

At Mimiwhangata, mechanisms such as the Joint Management Committee helped to achieve institutional integration of the administration of land, foreshore and sea, and the participants in management appeared to be satisfied with these arrangements. However, integration of the conservation unit administration with bordering or overlapping administrative authorities was inadequate, as shown by the predominantly negative reactions to administrative actions in Table 11.1. Virtually every step taken towards the conservation of the Peninsula was met with opposition from regional or local authorities and politicians.

Causes of the problems of interaction mentioned earlier were the innovative nature of the conservation arrangement, and the growing regional identity of Northland with associated moves towards independence from central government. Other causes of equal importance relate to the nature of the approach taken by the administrative agencies - mainly the Joint Management Committee. At least one episode in the loss of rapport with regional agencies could be attributed to administrative error - the advertisement of grant of control prior to thorough discussion with the County Council. More generally, administrative attempts to achieve integration can be viewed as "too little, too late". The "open day" was essentially the first opportunity for open dialogue. By the time it was held, regional opposition was so entrenched as to be difficult to

Table 11.1

SUMMARY OF REGIONAL AND LOCAL AUTHORITY REACTIONS TO
ADMINISTRATIVE ACTIONS FOR THE CONSERVATION OF MIMIWHANGATA
PENINSULA

Year	Administrative Action	Regional and Local Authority Reaction : Rationale
1974-75	Designation of Peninsula	→ Objection: unfair to other owners Acceptance: no resources for alternative arrangement
1980	Management Plan	→ Disapproval: access to reserve might not be fully open to public
1980	Transference of unformed road from County Council to Crown	→ Refusal: management plan objection, as above
1981	Advertisement of grant of control application	→ Offence: administrative matters were to be settled first
1981	Application for grant of control	→ Offence: larger area than had been implied was included in application, general lack of consultation
1981	Administrative arrangement for grant of control	→ Objection: lack of Northland representation in management
1981	Open day	→ Slight improvement in acceptance: management views better understood Meetings immediately before and after unfavourable to management
1982-83	Environmental Impact Assessment	→ "Smokescreen": mistrust

change, despite the fact that it was largely based on misinformation. The environmental impact assessment permitted a fair expression of the interests of all the actors at Mimiwhangata, but mistrust of administration persisted in some agencies. Perhaps because of the technical difficulties involved in establishing cooperation between the private land interest and the government agencies, administrative initiatives to cooperate with agencies that were not directly involved were neglected. Actions like the holding of the on-site seminar may have been more effective at an earlier stage.

The strengthening of a regional political identity in Northland restricted the implementation of initiative conservation arrangements at Mimiwhangata because of the associated resentment of central government. Nevertheless, a stronger regional government could eventually serve to assist in coastal management or conservation efforts by providing a forum for central-local integration. It could also promote the development of a regional plan for Northland's coastal zone or a system plan for reserves that could include sites like Mimiwhangata and provide a source of funding for them.

A further cause of regional alienation that dominated the Mimiwhangata conservation issue was the lack of local or regional representation on any of the bodies involved in management. The need for such representation, confirmed by the impact assessment, could have been filled at the time of the formation of the Joint Management Committee or earlier, if Lion Breweries or the Department of Lands and Survey had been aware of its importance. Regional representation on administration would expand the mandate for management from that defined within the agencies involved to one that is also supported by the

community of the management unit.

11.1.2 Marlborough Sounds

Issues of regional integration involving the Marlborough Sounds Maritime Park were less contentious than those encountered at Mimiwhangata. Similar to the Bay of Islands Maritime and Historic Park Board in terms of regional representation, the Sounds Park Board was well accepted by other local and regional bodies. This was one aid to fruitful dialogue over management issues; another was a common commitment to various forms of planning by agencies in the Sounds. As at Mimiwhangata, different local agencies sometimes found a common bond in their frustration with government departments. Planning for marine farming will be examined here as an issue that demonstrates processes of regional integration involving a conservation agency.

By 1973 mussel farming from stationary rafts was showing enough of a presence in the Sounds to prompt a joint planning exercise between the Park Board and the Harbour Board. These two boards were accustomed to working together in the administration of the foreshore. This first marine farming plan was simply a map showing areas in which the Harbourmaster and the Park ranger felt farms should not be established, and the two boards agreed that they would object to farm applications in these areas. At the beginning of 1976 a more formal plan identified areas considered suitable for marine farming. This plan was developed by the Harbour Board, Marine Division of MOT (later MAF), the Park Board, the Marlborough County Council, and in consultation, the Fishing Industry Board. It was available

for examination by the public at the Lands and Survey Department regional office. Within a year most of the "suitable" areas had been applied for, although many of the 130 applications had not been processed by MAF. For fear that mussel farms would proliferate in the Sounds, both the Harbour Board and the Park Board resolved to object to all further applications except those lodged by adjacent landowners.

In August 1978 the Park Board wrote to the Minister of Fisheries on various topics related to marine farming with which it was dissatisfied. In the letter the Board: expressed its wish for planning of marine farming to prevent interference with the recreational use of the Sounds; objected to the delays in processing applications and to the granting of leases, which are more exclusive than licences; and expressed frustration at the lack of "feedback" or co-operation from MAF head office in Wellington. It suggested that problems were connected to the need to deal with an "organization which is totally devoid from (sic) the surroundings in which the applications are sought" (Mitchell, unpub. 15/8/1978). The following month, MAF initiated another round of planning for marine farming, seeking the opinion of all local bodies and interested groups on a proposed plan showing areas "biologically suitable" for marine farming (Director-General of MAF, unpub. 15/9/1978). A meeting was held in 1979 with local authorities and government departments in Blenheim, the regional centre of the Sounds. Participants agreed upon a plan which was gazetted under the Marine Farming Act 1971, showing areas in which marine farming would not be acceptable due to conflict with other land and water activities.

By 1981, virtually all acceptable marine farming areas once

again had been applied for, and the newly-formed Marlborough Sounds Maritime Planning Authority initiated a "Marine Farming Planning Study" to deal with the problem. The Park Board, amongst other local and regional bodies, was represented on the Marine Farming Technical Subcommittee. The Subcommittee set out to identify all areas available for marine farming in the Sounds, with emphasis on the outer Sounds not considered in the 1979 plan. Selection criteria of interest to the Park Board eliminated areas adjacent to land or water areas of high recreational, scientific or scenic value (Royle 1982 Appendix II).

Planning for marine farming in the Sounds has proven integration of regional and, usually, central government agencies to be satisfactory. In contrast, administration of the industry has been confusing and conflict-ridden, even though the administration has specific statutory backing. Confusion first became apparent in 1975, when a decision by the Park Board to "defer consideration" of further applications was interpreted as an attempt to halt the granting of further licences (Nelson Evening Mail 4/10/1975). Although objections lodged by the Board may have had this effect, Board members were cognizant that MAF held final decision-making responsibility on all applications. Further confusion arose when the Park Board received word from MAF that the Maritime Planning Authority was responsible for planning aspects of marine farming, because this advice was contrary to the indications of legislation (Press 11/6/1981). The Park Board criticized MAF for prolonged delays in processing applications and for refusing to fully participate in marine farming matters in the Sounds (Press 16/6/1981; Marlborough Express 8/6/1981; Heather, unpub. 11/5/1981).

Those involved in the industry, with the support of the Fishing Industry Board and the Commissioner for the Environment, resented the delays as well, but they blamed the local authorities in addition to MAF. Some of the administrative difficulties were alleviated by: the ad hoc planning programmes, the decision taken eventually by MAF to delegate responsibility for licensing to its district office in Blenheim, and comprehensive maritime planning efforts.

The Marlborough Sounds Maritime Park Board is clearly recognized as a body with sufficient responsibilities and political power to be accorded respect by agencies with bordering or overlapping jurisdictions. This is largely because of the Board's extensive holdings along the coasts of the Sounds, and its locally-based membership. This respect or rapport has given the Board a practical mandate in decision-making outside of its immediate jurisdiction that allows it to exert a conservation influence beyond its own borders and to respond better to resource and community needs within the Park management unit. It has also assured open dialogue and exchange of information between the Board and other agencies.

11.1.3 Ahuriri Estuary

Tenure and administration of the Ahuriri Estuary is especially complex, as was indicated in section 10.2.2. The mixture of controlling interests involved is indicated by the diversity of agencies exercising ownership and control over the land and water, shown in Figure 11.2. The problem of coordinating these interests for the planning, management and

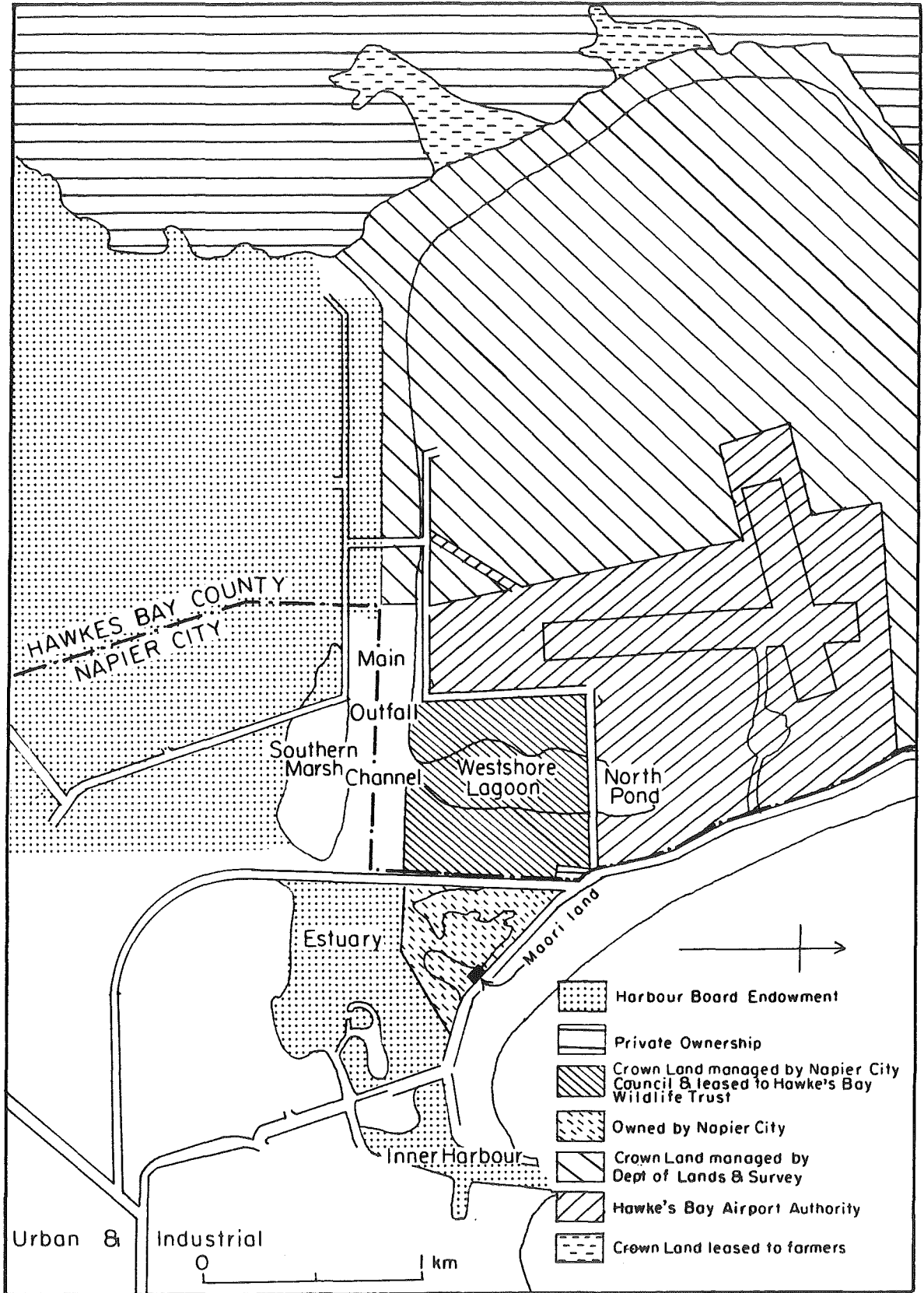


Figure 11.2

AGENCY LAND OWNERSHIP AND CONTROL OF THE AHURIRI ESTUARY

conservation of the Estuary as a unit is the issue to be analysed here. Because no single agency has dominant control over the Estuary as a management unit, integration is especially important to the achievement of cohesive management in this case.

Some interests concerned with the Estuary felt that only ownership and/or administration by a single agency could solve management problems. Early in the development of the conservation issue the Commissioner for the Environment had suggested to the Director-General of Lands that the unification of ownership would be the starting point "for the establishment of a unified management system for the estuary and surrounding land of wildlife and recreational value" (Wendelken, unpub. 17/12/1975). The Commissioner felt there was general support for this proposal amongst government departments and local interests. If there was such support, it was not intense enough to motivate action at the time. Participants such as the County Council were content to wait for the formation of a united council for the region which could coordinate planning of the Estuary. Others, such as the Harbour Board, apparently did not recognize any urgency to settle the management conflicts. Some five years later, the Harbour Board with the City Council considered an arrangement that would make the Council the sole authority for the contentious middle portion of the Estuary (Daily Telegraph 20/5/1980). However, over the years intervening between 1975 and 1980, mechanisms for administrative integration other than changes of tenure were developed successfully.

The most comprehensive approach to integration was initiated by the City Council and the Harbour Board in 1976.

These agencies convened a meeting which established a Steering Committee. One of the Committee's objectives was "to strike a balance between the preservation of the Estuary in its natural state and the national and local interests of the people" (Steering Committee, unpub. 11/6/1976:2). The Committee sought this objective by forming a Technical Committee with members from the Napier City Council, the Hawke's Bay Catchment Board, the Hawke's Bay Harbour Board, the Hawke's Bay County Council, the Wildlife Service, and MAF. The Commissioner of Crown Lands chaired the Technical Committee, and a university zoologist (Professor Knox) was also a member.

One of the Technical Committee's aims was "to recommend what elements of the resource should be protected and what developments in the Estuary may be desirable" (Technical Committee, unpub. 9/9/1976). In pursuing this aim through the production of a report, the Committee would also fulfil a requirement set by the Commission for the Environment for an impact assessment. The assessment was to address the effects of dredging operations proposed by the Harbour Board. The study was commissioned under the supervision of Professor Knox, funded in the main by a grant from the National Water and Soil Conservation Authority through the Catchment Board. The Technical Committee supervised the production of the report over the next four years at a cost of over \$30,000 (Daily Telegraph 7/5/1980). The multi-volume report met the Commission for the Environment's requirement as an environmental assessment, although its content covered a greater range of concerns than dredging.

No action was taken directly on the recommendations of the "Knox Report", yet the report provided a solid information base

for the planning and management of the Estuary, and the City Council based much of its plan for the "Estuarine Sub-district" on priorities expressed in the report. Policies for the initiative conservation of the Estuarine Park within the Estuarine Subdistrict thus can be partially attributed to the efforts of the Steering Committee and the Technical Committee. Although the report was not explicitly implemented, and it was primarily a technical rather than an administrative document, the arrangements for its production drew together the several agencies involved in the administration of the Estuary. While essentially an ad hoc planning exercise, the project acted as a catalyst for dialogue and the exchange of information on goals and priorities as well as technical information. The involvement of academics who were impartial to issues of tenure and control facilitated the consideration of conservation objectives that might otherwise have been neglected, given the absence of an agency with both a conservation mandate and extensive tenure over the area of contention. Voluntary commitment from all of the agencies with responsibilities for the Estuary to a comprehensive research exercise, followed by statutory planning, proved to be an adequate alternative to the unification of tenure over the Estuary or to waiting for the establishment of regional planning.

11.1.4 Overview of regional administrative integration

Various levels of integration between the agencies involved in the management units and agencies controlling surrounding lands and waters were achieved at the three case study locations. The degree of difficulty encountered can be attributed largely to the degree to which decisions concerning the issue of analysis could be taken independently by the management unit's administration. Integration was more likely to be achieved where combined environmental and institutional constraints necessitated cooperation in a pragmatic way. Accordingly, regional integration involving the Marlborough Sounds Maritime Park was encouraged by factors including the complex geography of the Sounds, the extensive nature of the Park Board's jurisdiction, and the Board's legal right to object to marine farming applications. These factors made clear the need for coordination in planning for marine farming to agencies including the Park Board. At the Ahuriri Estuary the need for integration was again readily apparent on resource and institutional grounds. The estuarine ecotone could not be managed satisfactorily under the control of several agencies operating independently from one another. The very mixture and complexity of interests led, in a sense, to an administrative vacuum which was easily filled through cooperative efforts.

In contrast, conservation of the coastal ecotone at Mimiwhangata apparently could be achieved through institutional arrangements available to the central government and private body protagonists without necessarily involving local and regional agencies. These latter were eventually included through the statutory notification of application for grant of control and other legal requirements. Only late in the planning

process did management make serious voluntary efforts to initiate dialogue with agencies holding bordering responsibilities, after these agencies had become alienated from conservation goals. These efforts were necessitated by political-cultural constraints more than institutional or environmental factors, although the complexity of the arrangement for conservation did increase the likelihood of misunderstanding. Societal needs and constraints were better integrated at the Marlborough Sounds, where the Park Board is a part of the local community, and at the Ahuriri Estuary, where the processes leading to the establishment of the Estuarine Park were open and well publicized. Administrative integration with the community is further explored in Chapter Twelve.

Variation amongst the case study experiences can also be explained in terms of integration as the facilitator of social learning, where learning depends upon the open exchange of values (or personal) information and technical (or processed) information through dialogue. An experimental approach to policy formation is also important. The approach to planning for marine farming in the Marlborough Sounds demonstrated the full potential for learning. Cooperative, ad hoc planning efforts permitted the exchange of technical knowledge and information on the priorities of the agencies involved. The evolution of sequential plans meant that the experience gained in one plan could be injected into the next, while adjustments could be made to changing conditions. The implementation of maritime planning would formalize this learning process, with the periodic review of plans. At the Ahuriri Estuary, dialogue was eventually facilitated by the creation of the Steering Committee, and the communication of technical information was

achieved through the production of the Knox report. Again, the application of statutory arrangements would encourage the periodic reevaluation of conservation policies; however, plans in both cases were not explicitly experimental.

In the Mimiwhangata case, Lands and Survey Department viewed the "marriage" of public and private conservation interests as a national level experiment, and the management of the Peninsula was to be based on the experimental implementation of regulations that would change from year to year. Dialogue between those responsible for the administration of the conservation area was adequate to achieve the integration of land, foreshore and marine management, and technical information was made available through the monitoring programme. All these factors meant that the potential for learning by Mimiwhangata management was high, yet learning processes were constrained by the lack of communication of values information to agencies involved in the administration of the regional coastal environment. Management's late discovery of the importance of this type of dialogue meant that communication of values information had to be attained through the impact assessment process. Confrontation may have been avoided if dialogue had been explicitly initiated through a similar process some years earlier.

The role of institutional arrangements in integration can be summarized as follows. A wide range of integrative mechanisms was used in the case studies, including formal and informal meetings and field trips, joint ad hoc research and planning exercises, statutory district planning, joint management committees, the use of statutory rights of objection, and environmental impact reports. Although some form of local

or regional representation in management proved to be an important factor in the achievement of integration, statutory regional planning did not play an important role in any of the case studies. Vestiges of regional integration of coastal conservation policy tended to appear regardless of the functioning of regional government. At Mimiwhangata the United Council helped the local authorities to coordinate their opposition, but it did little to integrate central and local government interests. Whether even a fully established and experienced regional government would prove a useful or necessary arbitrator in the type of issues examined here is open to question, given the established patterns of interaction and the detailed nature of the conservation concerns. Existing local government authorities in Napier and the Marlborough Sounds appear to be willing to interact and to promote conservation arrangements without the direction of a regional authority. However, integration may have been more efficient with such guidance. Also, problems of integration between central government agencies and local bodies may have been alleviated by regional government. These problems, like those encountered between local authorities and the MAF in the Marlborough Sounds, are investigated in the following section.

Overall, statutory and organizational arrangements adequately accommodated integration where management interests were motivated to interact with one another. Conservation mandates appeared to serve conservation goals where opportunities for integration were pursued. Where the administration of the management unit neglected regional integration, political-cultural factors limited the conservation mandate.

11.2 ADMINISTRATIVE INTEGRATION WITHIN AND BETWEEN CENTRAL GOVERNMENT DEPARTMENTS

While integration at the regional level as discussed in section 11.1 did cover the roles of some central government departments, this section directly addresses processes of integration in policy formation involving those departments alone. The emphasis is on integrating processes within particular agencies, with a view to examining the effect of the bureaucratic organizational structure on policy formation. Integration between agencies is investigated as an indicator of the degree to which a field perspective is taken on coastal conservation by departments with coastal responsibilities.

Abel Tasman National Park is the case study primarily addressed here because the issue of extending Park Board control seaward involved a prolonged series of communications between Park management and central offices of two government departments which clearly demonstrate processes of integration. A second issue is addressed from the Marlborough Sounds case, and aspects of the other case study experiences are included for comparison.

11.2.1 Abel Tasman National Park

In its pursuit of a mandate for control over foreshore and coastal waters, the Abel Tasman National Park Board considered a variety of institutional arrangements. Regional or local authority involvement in the deliberations was minimal, while interaction between the Park Board and central government agencies was extensive. Lands and Survey Department, as the

parent body of the Park Board, had the central role, and MAF and MOT were involved as administrators of the foreshore and coastal waters.

Between MAF and MOT, the former department had a less active role in the matter of extending Park Board control. The Board was consulted by MAF for comments on marine farming proposals in the area of the Park and on the potential for marine reserves in coastal waters. Ritchie, the fisheries officer involved in the Poor Knights Reserve, visited Abel Tasman, met with Board members and did a rough survey of coastal waters with local fisheries officers to identify suitable reserve sites. The chief ranger felt that MAF was sympathetic to the needs of the Park, although it had "snubbed" early proposals for extension of Park boundaries in favour of grant of control (Rennison, pers. comm. 1981).

Interaction with the Marine Department (later MOT) probably began in 1969, when the Board invited a Marine Department representative to "discuss park problems" with the Board. At least one Board member was not happy with the Department's attitude at the time and felt there should be more liaison between the two agencies (Nelson Evening Mail 24/10/1969). The Department helped the Board implement the Motor Launch Regulations 1962 in order to establish water ski lanes and near-shore speed limits, and in 1971 the Board expressed satisfaction with the cooperation achieved despite the 1969 opinion: "The Marine Department has always been very cooperative in any problems which face the Board in its administration of its coastline" (ATNPB, unpub. 10/1971).

The first approach to MOT for some form of control over the foreshore and coastal waters was made in 1973, but little action

was taken until 1977, when a representative of MOT visited the Park at the invitation of the Park Board and the Director-General of Lands. The representative, McCombs, was to investigate "the issue of integrated land and sea control of Abel Tasman National Park" (Coad, unpub. 5/10/1977). Following his visit, McCombs recommended that the Board explore the implications of including the foreshore in the Park, under section 10(1)(c) of the National Parks Act 1952 and that the Board consider applying for grant of control over the coastal waters and seabed. He felt that grant of control over the foreshore would contribute little to management of the interface but was willing to support such a proposal (unpub. 15/3/1978). These suggestions partially agreed with those of the chief ranger, who had proposed a three-stage extension of the Park, first over the foreshore, then 100 m seaward, and then to enclose bays (Rennison 1977).

When the Director-General of Lands told the Secretary for Transport that he would initiate action to extend Park boundaries over the foreshore, the Secretary said that instead, "a Grant of Control for foreshores is the appropriate vehicle for management" - both as a general policy and in the case of Abel Tasman. He "apologised for any confusion that existed due to earlier correspondence" and suggested that "a meeting between officers of our Departments is necessary to sort some of these issues out" (Milne, unpub. 19/4/1978). So the Park Board entered into the extended undertaking of drafting a set of bylaws for approval by the MOT and the National Parks Authority that would apply to the park's foreshore under grant of control. For protection of marine areas, it intended to have marine reserves established adjacent to the Park. Then the MOT, after

considering the draft bylaws, recommended that the Board also seek grant of control over foreshore fronting private land on the coast of the Park and over coastal waters. The Commissioner of Crown Lands, who was Chairman of the Park Board, felt that, despite the Board's slow response to these suggestions, it would apply for control to at least 800 m from the shoreline (Rowan, unpub. 25/11/1980).

During the deliberations over grant of control the MOT also sought the Park Board's opinions on "the appropriate role for regional and district planning and whether the need existed for more detailed planning for coastal waters" (Rowan, unpub. 25/11/1980). On a 1980 visit to the Park, McCombs said that the MOT shared the Board's concern for comprehensive planning of the marine resource, and "would be more than sympathetic to the Park Board (sic) becoming the maritime planning authority for the section of the coastline adjoining the Park" (in addition to obtaining grant of control) (Rowan, unpub. 25/11/1980).

Although the Park Board made its own decisions on the coastal control issue, it was guided by the Lands and Survey Department and had to work within the policies set by the National Parks Authority. These policies were communicated to the Board in the form of general statements and circulars, and in directions and decisions specific to Abel Tasman. The former included a 1975 statement on "Control of inland waters and the foreshore and sea fronting national parks" and 1978 statements on "Control of park waters" and "Grants of control under Harbours Act 1950". These usually requested comments on alternative institutional arrangements from the park boards concerned. Sometimes general policy-making procedures would delay action for Abel Tasman, as when the Authority deferred

consideration of the Board's initial proposal for grant of control in 1970 (MacLachlan, unpub. 30/6/1970). In late 1971 the Authority informed the Board that its submissions would be considered following discussions with the Marine Department and further investigation and consideration (National Parks Authority, unpub. 2/11/1971).

By the late 1970's the Authority was specifically dealing with the Abel Tasman issue by discussing alternatives with the MOT (through the Lands and Survey Department) and then recommending to the Park Board on appropriate action or requesting the Board's opinion on the alternatives. The Board generally accepted the Authority's advice, and in 1979 the Authority felt that "the Boards concerned appeared to be making reasonable progress in gaining a Grant of Control" (Coad, unpub. 28/3/1979). In contrast, the following year the Authority expressed impatience at the Board's continuing indecision on the extent of control it would be seeking (National Parks Authority unpub. 15/8/1980, 29/9/1980). The reason for the delay, the Board explained, was the time involved in reaching agreements on the stretches of unformed road held by the two counties covering the Park and on the management of foreshore fronting private enclaves in the Park (Campbell, unpub. 10/7/1981).

The Department of Lands and Survey, in addition to providing liaison between the Park Board, MOT and MAF, played a similar role to the Authority in advising the Board. The roles of the Department and the Authority were coordinated by the Director-General of Lands, as chairman of the Authority. Similarly, at the district level, the Commissioner for Crown Lands was also the Chairman of the Park Board. In his communications with Lands and Survey head office and other

agencies he would represent the Board, the Department, or both. For example, following a meeting with McCombs (for MOT) and a Ministry of Works representative, the Commissioner noted

. . . I was able to provide a general idea of the Park Board's attitude and more specifically the Department's very clear aspirations to obtain effective management of the marine resources adjoining the Abel Tasman National Park (Rowan, unpub. 25/11/1980).

The paths of communication between departments and within the Lands and Survey Department through which the issue of seaward control at Abel Tasman was discussed are displayed in Figure 11.3. In light of this system, the following response is understandable:

The whole subject, as several [Park Board] members said, was most confusing and Government department involvement was quite complex (Press 2/12/1980).

Yet this complexity could not wholly explain the difficulties and delays that characterised the issue, especially if the intensity and openness of communication is taken into account. The five explanations which follow can be attributed only to greater or lesser degrees to bureaucratic complexity.

1. The Park Board was confronted with a range of legal alternatives for pursuing its goal. None of these allowed it simply to extend park boundaries to include coastal waters, and none were thoroughly understood by the Board. The advice it received varied as much within departments as between them and departmental solicitors often had to be consulted. The Board thus caused delays because it needed time to familiarize itself with the options open to it.
2. The size of the policy-making system did prolong the issue to the extent that obtaining approval for various measures or proposals from MOT, the Director-General, or the Authority was a

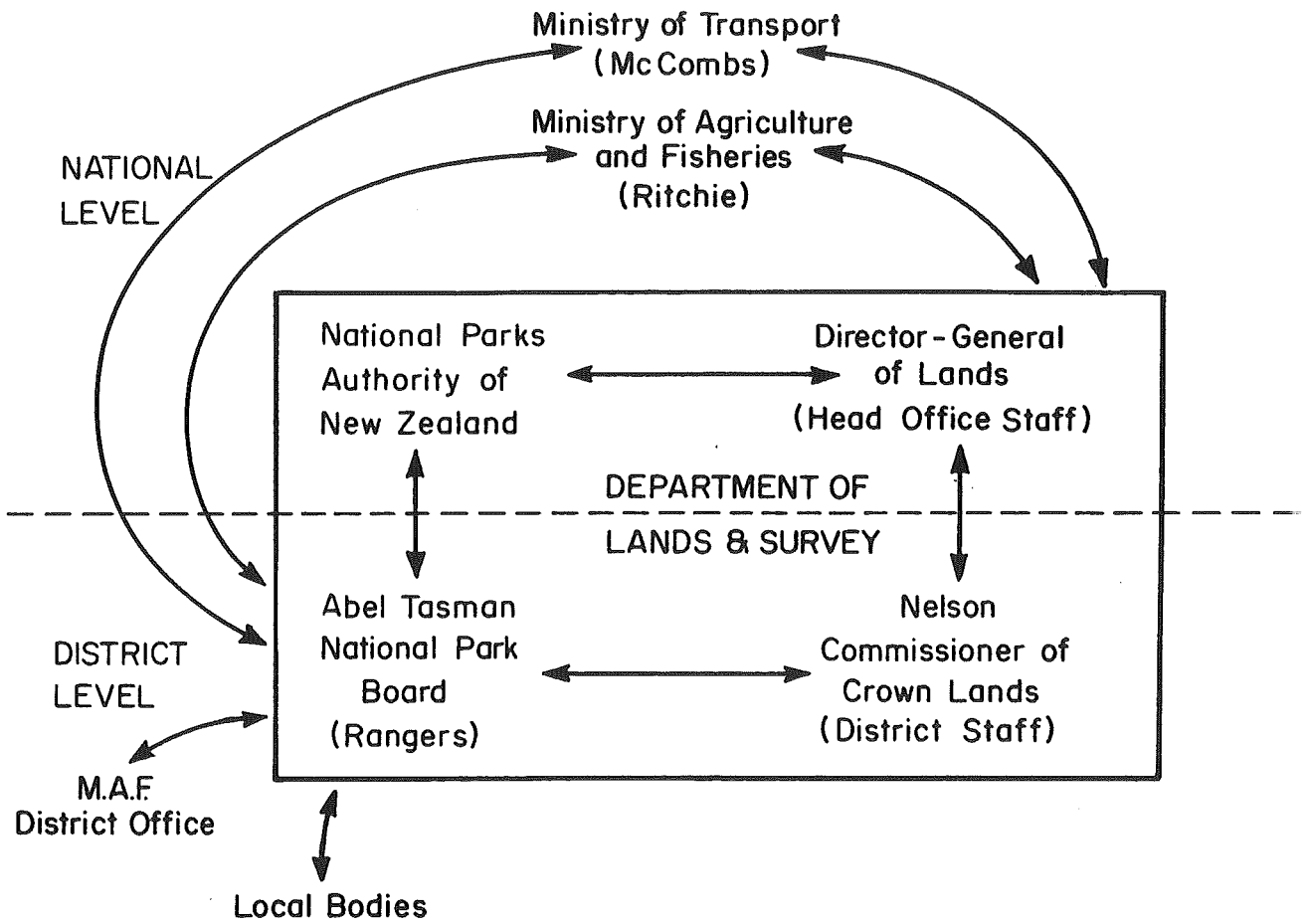


Figure 11.3

DEPARTMENTAL INTEGRATION IN THE ISSUE
OF EXTENDING ABEL TASMAN NATIONAL PARK
BOARD CONTROL SEAWARD

time-consuming process. The lack of established, general policies in the different agencies to enable a quick response to the coastal control issue contributed to the delays caused by the central government agencies.

3. An important constraint in the view of district-level participants was the inexperience of Lands and Survey support staff in drafting bylaws and the lack of precedents for guidance. This constraint is connected to (1) above, but it is also attributable to the inavailability of staff that could devote enough time to the problem while meeting other obligations (Thorpe, pers. comm. 1981; Campbell, pers. comm. 1981).

4. The above problem was compounded by the timing of the issue, in that the Abel Tasman National Park Board was soon to be replaced by a regional board, so its staff was occupied with finishing other business as well (Thorpe, pers. comm. 1981). Moreover, the issue was likely to be accorded an even lower priority upon takeover by the regional board which would also inherit the problems of other parks and reserves. The eligibility of the new board for becoming a grant of control agency could be a further complicating factor (Lucas, pers. comm. 1981).

5. The main reason for delays on the part of the Park Board, mentioned above and connected to the baches issue discussed earlier, was the time involved in gaining the cooperation of local authorities and land owners. The Board was concerned to involve these interests even beyond its legal requirement to do so, in order to maintain healthy public relations. Consequently its approach was "to make haste slowly" (Rowan, unpub. 25/11/1980). This attitude towards the regional community,

while frustrating to other government participants, has helped the Park Board to achieve a satisfactory level of regional integration.

11.2.2 Marlborough Sounds

An issue at the Marlborough Sounds Maritime Park which prompted a series of communications between the local Park administration and the head office of the Department of Lands and Survey was that of classification of the Sounds Foreshore Reserve. Legislation for the administration of the Reserve was set in section 17 of the Reserves and Other Lands Disposal Act (ROLD) 1955, yet the application of section 17 was not straightforward - it became an object of contention between the Commissioner of Crown Lands who was the chairman of the Park Board, and the Director-General of Lands.

Because the provisions of section 17 are unique in that they apply only in the Marlborough Sounds, those who administer them cannot draw on a broader experience based on similar provisions elsewhere. Because the Sounds Foreshore Reserve adjoins reserves of the Maritime Park established under the Reserves Act 1977 (and its predecessor), confusion can arise as to the uses permitted in certain areas. The fact that the ROLD Act takes precedence over the Reserves Act 1955 (except where the former does not cover a topic that is covered in the latter) was, until recently, obscured by the inclusion of the Foreshore Reserve in the scenic, recreational, or other reserves adjacent to it. These problems peaked following the passage of the Reserves Act 1977 which required the planning and reclassification of all reserves.

To rationalize the management of the Park's reserves, the Commissioner of Crown Lands for Marlborough wished to have the entire Foreshore Reserve classified as local purpose (Sounds Foreshore) reserve. However, the Director-General of Lands felt that the existing situation had been satisfactory and that re-classification to local purpose (Sounds Foreshore) would lower the status and protection of the areas concerned in terms of the Reserves Act 1977 (Coad, unpub. 31/10/1980). The Commissioner itemized his reasons for the local purpose classification as follows: such a classification would

(i) Ensure that the special rights and conditions which obtain in respect of reserves subject to section 17 ROLD Act 1955 are respected and upheld, and

(ii) Avoid administrative errors by either the Department or the Marlborough Sounds Maritime Park Board in their day to day dealings with these reserves (Mitchell, unpub. 12/11/1980).

The distinction in classification, the Commissioner felt, would also help to make clear to the public the variation in their use privileges according to reserve types. The Director-General eventually did consent to the local purpose classification, in September 1981. This consent clearly reflects departmental responsiveness to local agency needs, but the policy basis for it has not been clarified.

11.2.3 Other case studies

Government departments generally had a lower profile in the other case studies, where the conservation units were smaller and predominantly oriented towards a local or regional user group rather than a national one. At the Poor Knights Islands, as in the Marlborough Sounds case, district MAF officers spent

considerable effort convincing their head office of the merits of approaches which they felt to be essential to sound management. The Commissioner of Crown Lands in Napier bore an attitude towards the Ahuriri conservation issue similar to that of the Commissioner at Abel Tasman, to the extent that he resisted pressure from head office to press initiatives because of his respect for consideration of regional integrating processes. Issues at both Mimiwhangata and the Marlborough Sounds were complicated by the uncertainty of the future of the maritime parks, and the bodies involved at the regional level were placed in an awkward position as a result of the apparent indecision of their superiors. As at Abel Tasman, MOT and MAF were intended to have key roles in the conservation arrangement for Mimiwhangata; however, in the latter case, these two departments appeared content to let the Lands and Survey Department play the lead role. In the Marlborough Sounds, as mentioned in section 11.1.2, MAF administration of marine farms from head office was poorly integrated with the activities of Sounds agencies, and delegation of this responsibility to the district office was a reasonable measure under the circumstances.

11.2.4 Overview of departmental administrative integration

In most situations, integration within the Department of Lands and Survey for the administration of coastal conservation areas appears to be adequate. In the case studies a reasonable level of dialogue took place between head office and the district offices, each level considering and adapting to information provided by the other level. Carefully formulated

conservation policies based on conservation unit experience at the Poor Knights and the Marlborough Sounds were eventually accepted by central administration which accommodated them by providing a mandate for their expression. However, policy-makers at both levels were at times frustrated in their efforts to initiate policies by a slowness in response to requests for information, approval or action, particularly in the Abel Tasman issue. These delays were largely attributable to logistical difficulties within the offices involved, in terms of staffing and the timing of meetings, and to integration processes occurring between Lands and Survey and other agencies at the same level of administration. The breadth of the present analysis was insufficient to determine the extent to which any lack of responsiveness was due to inattentiveness or to priorities that were unfavorable to the issue at hand, but the case study experience suggests that this was a factor. Additional pre-determined policies at both levels could have enabled a faster response in some instances; the precedent-setting nature of issues such as the conservation of contiguous land and sea areas may have precluded this possibility. Changes in administrative arrangements interfered with the efficiency of integration at Abel Tasman, Mimiwhangata and the Marlborough Sounds.

Integration between Lands and Survey Department, MAF and MOT was generally adequate as well. Dialogue was inevitably less routine, less guided by procedure because of the separate institutional foundations of the departments, yet consultation appeared to be genuine and based in a mutual understanding of coastal conservation needs. Lands and Survey Department, in executing its initiative conservation responsibilities, played a

lead role at both national and local levels. Other agencies involved in the management of coastal areas appeared to respect Lands and Survey's expertise in the conservation field.

As with the intra-departmental interaction described above, inter-departmental communication could be improved if a broader range of policies for coastal management was established within agencies. On-site consultation between the district or field staff of the various departments was a successful means of exchanging information on relevant experience and priorities at Abel Tasman. While some of the most thorough integration of interests occurred at this scale, its results could have been more explicitly employed by higher level administrators. The informality of local-level discussion tended to partially obscure its contribution.

The number of agencies involved, and the intensity of integration in a system such as that shown in Figure 11.3 tended to increase with the breadth of the implications of the issue at stake. Since the arrangements considered for Abel Tasman are innovative and will have implications for other coastal parks and reserves, the head offices of the various departments were concerned that appropriate precedents be set. Because the regional adaptations to the mussel farming issue in the Sounds held few ramifications for general Lands and Survey policies, the Park Board could be left to contribute to decision-making as it saw fit, independent of central guidance.

Altogether, the case study evidence suggests that existing institutional arrangements permit a sufficient degree of integration between and within government departments in the formation of policy for individual coastal conservation areas and adequately provide mandates for these policies.

Considerable dialogue is occurring without the help of any national level "umbrella" coordinating mechanisms. However, agreement on broad but explicit policies for the coastal zone, encompassing the responsibilities of all the agencies involved, would contribute to more efficient processes of integration in the government bureaucracy.

CHAPTER TWELVE
INTEGRATION OF ADMINISTRATION WITH THE COMMUNITY
IN POLICY PROCESSES

While the complexities and logistics of administrative integration can frustrate those involved in coastal conservation and impede the development and implementation of responsive policies, constraints on the integration of administration with the public potentially have equally serious consequences for conservation. Societal needs can only be met if they are understood by policy-makers, and policies can only be implemented if they are acceptable to, and understood by, society. Positive attitudes towards conservation policy on the part of the public mean that associated regulations are more easily implemented with less need for surveillance. General societal support for conservation ideals would eventually lessen the need for regulations and conservation areas. As explained in Chapter Three, public experience of conservation areas assists the gathering of support. This experience can be enhanced by education on conservation values.

The shaded area for Chapter Eleven in Figure III.2 indicates a focus on policy ideals in the consideration of the community's role in policy-making. While community perceptions, attitudes and values should be directly reflected in policy ideals, they are also interpreted in policy goals via community priorities for the resource, and in policy mandate via regional politics and planning. As well, the definition of mandate and goals should be tempered by ideals, providing another route for the integration of community values into all policy components. The possibility that this ideological influence on policy may be

limited by institutional arrangements through mandate is explored in the case study analysis.

As with administrative integration in policy processes, agency integration with the public can be facilitated by institutional mechanisms for communication. Again, technical and values information must be exchanged through dialogue. Public participation mechanisms, predominantly associated with planning procedures, are the usual means of promoting dialogue between administration and the public.

Issues from the Ahuriri Estuary, Mimiwhangata Peninsula, and the Poor Knights Islands will be examined here. These issues have been selected for their potential to demonstrate a range of integrative processes or mechanisms operating between public interests and conservation unit administration. The two remaining case studies are briefly addressed for the additional insights they can offer. An overview of the case study experience of administrative integration with the public is provided in the last section of the chapter.

12.1 AHURIRI ESTUARY

The range of interests and agencies associated with the Ahuriri Estuary was briefly reviewed in section 10.2.2. The role played by groups and individuals from the Napier community in the Estuary conservation issue is examined here.

Non-government actors in this issue included pre-existing environmental groups, Maori groups, the Hawke's Bay Community College, and special interest groups formed in response to the

issue. The agencies most directly involved were the Napier City Council and the Hawke's Bay Harbour Board.

Conservation priorities for the Ahuriri originated in the community rather than in the policies of the agencies involved in the management of the Estuary. Until the release of the proposed Napier District Scheme, public interest groups and the community at large were rarely consulted by policy-makers regarding their interests in the Estuary. The research and impact reporting process which culminated in the "Knox Report" did not involve requests for submissions from the public and no audit was required. The Harbour Board did realize that the impact report on its dredging proposal would be completed more quickly with the cooperation of "environmentalists", and its chief executive officer solicited the support of the local branch of the Royal Forest and Bird Protection Society in a letter:

I trust that your organization will support the Board with its application so that the work can be commenced at an early date (de V. Lawrence, unpub. 9/6/1975).

The Napier City Council appeared to give even less credit to public opinion, rarely initiating any interaction. Although the Council's first proposal for development of the Estuary (the marina) was abandoned partially as a result of public opposition (Ryan, unpub. 7/8/1975), it generally had not been faced with negative reactions from its constituents over the years because Napier was basically a politically conservative community (Francis and Sullivan-Mead, pers. comm. 1980). A conservation group's sense of encountering an "administrative vacuum" when lobbying for the Estuary was not unfounded, given the Council's policy of "positive inaction". The latter policy entailed stopping development and taking few steps towards a plan for the

Estuary in order to allow time for the more vocal public interests to educate the broader community (Thompson, pers. comm. 1981), and for research to be completed.

In addition to interest groups, individuals had an important role to play. A number of people acting individually helped to alert others to conservation concerns through numerous letters to the local newspapers, although a few letters expressed opposition to conservation on the grounds that the Estuary was an "eyesore". In reaction to the marina proposal, hundreds of community members signed a petition for maintaining the Estuary in its natural state.

One individual, F.A.Mace, took measures to stop development on his own initiative. Mace was perhaps the most adamant of all participants on the need to preserve the natural character of the Estuary as a fish and bird habitat. Acting on this concern, he objected to the dredging of a sand bank by the Harbour Board on the grounds that an important bird roost would be lost. Although the proposed excavation had been supported by the "Knox Report" and approved by the MOT and the City Council, Mace forced an appeal hearing under a provision of the Town and Country Planning Act 1977 - the Harbour Board had not complied with a regulation requiring it to give notice of its acceptance of the City's decision. While some observers felt Mace was acting on a petty technicality, Mace couched his appeal in broader terms:

When it comes to an appeal we the public, are always on the wrong foot. . . i.e. on the defence. We cannot move on the assumption that something will be done. We are not even informed when something is being done. We see that something is being done and then react. That becomes confrontation (1981:3).

Mace pressed for a management plan which would form the basis

for communication through discussion. The appeal was lost on the grounds that the dredging would be desirable for its economic, social and environmental effects, and that the part of the Estuary affected "has been so modified by man that there is little natural character left" (Turner 1981:3).

Mace and several other individuals later supported the conservation cause through official planning channels in a more routine manner by submitting objections or cross-objections on the proposed Napier District Scheme. In particular they ensured that a countervailing opinion was offered to the Harbour Board's objection to restrictions on its activities in the Estuary.

The public interest groups employed a wide range of techniques to convince the agencies involved and the wider public of their views. The Maori community-based Wai Ora Action Group Incorporated and Ecology Action (Hawkes Bay) Incorporated were the first groups to begin lobbying, and they tended to combine their efforts. The Napier Branch of the Royal Forest and Bird Protection Society of New Zealand worked separately but with the support of its National Conservation Officer, Collingwood, from the Society's head office. Sometimes Collingwood would communicate consensus proposals of the three groups to the agencies concerned, including the Director-General of Lands and the Commissioner for the Environment. He also proposed, on behalf of the Society at the national level, that the Estuary be established as a "Wetlands of International Importance" under the International Wetlands Convention (letter 5/9/1978). Most submissions from the groups were made to the Napier City Council.

Ecology Action and Wai Ora, having been unsuccessful in winning an interview with the Council, submitted management

proposals for the Estuary in writing. The submission was in part a reaction to the Council's opinion "that no constructive suggestions have emanated from the [interest] groups regarding the future of the Westshore Refuge and Reserve" (Ecology Action and Wai Ora Action, unpub. 8/8/1975). It included a proposal for a "national Estuarine Park", under the control of Lands and Survey Department. All three groups pursued this proposal further by organizing a forum so that "the eminent men" who had supported the concept could make their views public (Collingwood, unpub. 10/1975). At the forum, the following motion was passed by a vote of 148 to 23:

That the Ahuriri Estuary between the two bridges [and various other parts] becomes a national protected area in the form of a National Park or Reserve (Holland, unpub. 18/10/1975).

Agency representatives attended the meeting, some of whom expressed support for the motion. A plan of the proposed reserve was submitted to the Commissioner for the Environment. The three conservation groups committed themselves to undertake "a full scientific research (sic) to enable accurate delineation of the boundaries and requirements of the future area to be established as reserve", with the assistance of "acknowledged experts" (Collingwood, unpub. 9/3/1976). This proposal likely provided some impetus for the impact report on dredging which was called for by the Commission for the Environment.

At the outset of the Napier District Scheme Review process, Ecology Action and Wai Ora, jointly, and Napier Forest and Bird, made submissions to the City Council on their areas of concern and priorities for the Estuary, with suggestions for future management. Both proposals were based in the information and recommendations of the Knox Report but were more explicit in

their recommendations for conservation. Forest and Bird suggested that the views of interest groups be sought before the release of a proposed scheme. City planners did not take this approach (Napier Branch Forest and Bird Society, 1980).

The Wai Ora Action Group also represented Maori and conservation interests without the partnership of Ecology Action. In particular, it lobbied the City Council, the Nature Conservation Council, the Minister for the Environment and the Secretary for Transport for the removal of an illegal stopbank. The stopbank, built by the Council at the time of the marina proposal, blocked the ebb and flow of the tide to the portion of the Estuary fronting the Maori "canoe reserve". Although once breached and subsequently repaired, the requisite approvals for construction of the bank under the Harbours Act had never been obtained. The MOT notified the Council that its work was illegal but the Council still did not act to remedy the situation. The Mayor maintained that the Council did not have designs on the Maori land, as Wai Ora had feared, but that, since the Technical Committee had initiated the study of the Estuary, the Council had "adopted an attitude of status quo" (or "positive inaction", as described earlier) (Daily Telegraph 15/4/1977). The Secretary for Transport replied to Wai Ora, in essence, that it too was willing to wait for the Technical Committee's report (Milne, unpub. 10/5/1977).

Groups other than Wai Ora also injected Maori views into the Estuary controversy: The Ahuriri Maori Executive pressed various agencies to support the inclusion of a Maori representative on the Steering Committee or the Technical Committee (to no avail); and the Ahuriri Maori Marae Committee organized a public meeting at the canoe reserve where the marae

proposal was discussed. As well, the Marae Committee objected to provisions in the proposed scheme that would not permit the construction of a traditional marae building. The scheme was modified accordingly.

In May 1981 a seminar with sixty participants and speakers from all the relevant groups and agencies was held at the Hawke's Bay Community College. The seminar was intended "to provide both public and private sectors of the community with the background information necessary for carefully considered objections" on scheme proposals for the Estuary (Hawkes Bay Community College 1981). Interest aroused at the meeting led to the formation of the "Friends of the Ahuriri". The inaugural meeting of the new group was attended by some 140 people who were addressed by a national expert on wetlands (Professor Morton). Initially the "Friends", which later became the Ahuriri Estuary Protection society, felt it could do little but wait for the scheme to be released because of the problem of "red-tape" and "noone wanting to take responsibility" (MacDonald, pers. comm. 1981). Yet, because it had a base from a wider range of interests than that of other groups and had no "obstructionist" image, the Society was in a good position to achieve its goal of promoting public recognition of the Estuary. To this end, it produced a pamphlet on the biology and conservation values of the Estuary. The Society also supported Mace in his appeal against the dredging programme.

As noted earlier, the Committee for the Recreational Development of the Ahuriri Estuary (or the Inner Harbour Recreational Development Committee) represented active recreational interests in contrast to the Protection Society's passive interest. Although it had formed to oppose Society

proposals, it had at least one aim in common with the Society, which was "to attack a general apathy that many Hawke's Bay people feel about the Estuary" (Daily Telegraph 19/6/1982). While the Society was more satisfied with the Scheme that was eventually released than was the Development Committee, the latter was not overly dissatisfied with the plan for the Estuary. In the end, the common objective of the two groups can be said to have been achieved - numerous members of the public were motivated to comment formally on the scheme. The two groups themselves made more submissions than any of the other interest groups. Although these submissions often ran counter to one another, the points at issue were relatively minor. The plan came as close as possible to representing public consensus on the use of the Estuary, largely because the City Council, as well as the general public, had been kept informed on the values and priorities held by various sectors of the community.

The conservation issue at the Ahuriri is remarkable for the extensive public initiatives demonstrated in favour of initiative conservation measures. The various techniques used by the different interests to express their views and achieve integration are summarized in Table 12.1. Cumulatively, the measures taken by individuals and interest groups must be recognized as having had a strong impact on conservation policy, even though their contribution was rarely openly acknowledged, much less sought, by administration.

Table 12.1

METHODS USED BY PUBLIC INTERESTS TO ACHIEVE INTEGRATION
WITH ADMINISTRATION AT THE AHURIRI ESTUARY

Interest	Methods
<u>Individuals</u>	<ul style="list-style-type: none"> - letters to the editor of local newspapers - statutory submissions - petition signatures - objections to statutory infringements
<u>Groups</u>	
1. Pre-existing Environmental Interest Groups	
Wai Ora Action) Ecology Action) Royal Forest and Bird (Napier) Royal Forest and Bird (Central)	<ul style="list-style-type: none"> - letters to central and local government - management plan proposals - forum with expert speakers - research
2. Maori Groups	
Wai Ora Action Ahuriri Maori Executive Ahuriri Maori Marae Committee	<ul style="list-style-type: none"> - objections to statutory infringement - letters to central and local government - seeking representation in planning - public field day
3. Hawkes Bay Community College	<ul style="list-style-type: none"> - seminar for all interests, with expert speakers
4. Specially-formed Interest Groups	
Friends of the Ahuriri/ Ahuriri Estuary Protection Society Committee for the Recreational Development of the Ahuriri Estuary	<ul style="list-style-type: none"> - public meeting with expert speaker - publication of pamphlet - statutory submissions - general public meetings

12.2 MIMIWHANAGATA PENINSULA

The Mimiwhangata case study of section 11.1 demonstrated poor administrative integration with Northland agencies, as indicated by the negative response of local and regional body representatives to conservation proposals. Administrative integration with the public also could have been more thorough. Factors demonstrating the inadequacy of dialogue between the Mimiwhangata Trust Board and the local community are investigated here.

Early in its development of proposals for the Peninsula the Mimiwhangata Trust Board produced a document called Planning Objectives "as an aid to planning and clarification" of goals and objectives for the management of the estate (1977:4), but this document was not released to the public. Ongoing consultant research and interaction with the HGMPB on the issue of conserving the Peninsula led the Trust toward the development of more detailed policies for the Peninsula; however, the policies and related documentation still were not made available to the public. Some consultants were frustrated that their scientific reports were not released (Doak, pers. comm. 1981), while others persuaded the Trust that the publicity would make the Peninsula vulnerable to increased access and use that could not be controlled adequately at that time (Turbott, pers. comm. 1981; Shellick, pers. comm. 1981). Parts of reports and proposals were released, but without adequate explanation these tended to be confusing and misleading to the public - they appeared to be contradictory and too much could be "read between the lines" (Shelton, pers. comm. 1981; Fowler, pers. comm. 1981). The local community became further confused and

suspicious because of: a lack of understanding of the grant of control arrangement that was sought for the marine park (Milne and Spackman, pers. comm. 7 December 1981); mistaken information in a pamphlet on the taking of sea life which initially exceeded legal restrictions (Northern Advocate 8/2/1981); and generally careless wording of management's explanations of intent (Gardiner, pers. comm. May 1981).

Late in the planning process for Mimiwhangata, visitor and user surveys were undertaken as part of the assessment of management needs. These demonstrated that the recreational users of the Peninsula were more satisfied with the situation than the political representatives of the community suggested (Dart et al. 1982). Nevertheless, there were fears in the regional community that access to the Peninsula would be severely curtailed by the marine park arrangement. Although these fears were largely unfounded in terms of management goals, reassurance to this effect from management bodies was not provided until late in the planning process. At considerable expense, the Trust had collected and organized information into reports which clearly expressed administrative priorities and technical or scientific justifications for these priorities, yet these reports were not used as a means of initiating dialogue with the public. Nor was the public consulted by management until many administrative decisions had been made.

The above limitations on integration with the community at Mimiwhangata appear to be predominantly a function of carelessness or a lack of motivation on the part of management; they cannot be attributed in the main to institutional constraints. However, as in the issue of agency integration discussed earlier, the effort required to develop innovative

administrative arrangements may have discouraged the agencies involved from entering into more intensive communication with the regional community. Also, the complexity of these arrangements meant that they were difficult to explain to the public. One important institutional variation - the selection of a management body more representative of Northland residents - could have assisted integration. This measure was recommended in the impact assessment and audit, in recognition that:

The successful management of the marine park will be largely dependent upon the degree of sympathy and support for the proposal from the inhabitants of the district and from the user groups. Conversely, a climate of indifference or hostility towards its aims is likely to prove a major obstacle (Dart et al. 1982:125-26).

The report went on to suggest "that users become part of the decision-making process in the design of policy" (p.126). These recommendations reflect a thorough awareness of the importance of integration of administrative and public interests in conservation policy. If those involved in the administration of Mimiwhangata had possessed such an awareness from the outset of attempts to conserve the Peninsula, the proposed administrative arrangements may have met with a greater degree of community acceptance.

12.3 POOR KNIGHTS ISLANDS

The Poor Knights Islands are located near to Mimiwhangata Peninsula and they share the same regional community. The Poor Knights marine reserve proposal, like the Mimiwhangata marine park proposal, was not readily accepted by the regional community, but a more satisfactory level of integration between administrative policy-makers and the public emerged in connection with the Poor Knights case. The history of the development of policies for the marine reserve at the Knights illustrates factors to which the greater integration may be attributed.

Increasing use of the waters around the Knights, and increasing knowledge of their biological qualities, led to recognition of conservation needs as early as the late 1960s.

However, the users of the waters there represented such a broad spectrum of interests that for a long time no coherent plan for a workable reserve proved possible (Ritchie et al. 1979:4).

For over a decade, the only protection afforded to the marine environment was that set by a resolution of the New Zealand Underwater Association in 1971:

All NZUA members will refrain from the taking of any marine life in any form . . . from the Poor Knights Islands . . . with the exception of the pelagic fish listed below . . . (Ritchie et al. 1979:29).

Recreational divers, most of whom are affiliated with the NZUA, adhered to this resolution voluntarily. Moves to apply statutory conservation measures to the waters around the Knights were initiated in 1972, in the form of an application by the national Environmental Defense Society for the declaration of a marine reserve. This application was supported by several experienced divers and scientists. It was later withdrawn in

favour of an application by the HGMPB.

An important meeting in the history of the Poor Knights reserve was convened at the head office of the then Marine Department in 1972. Most interest groups and agencies involved were represented at this meeting which reached a consensus on the establishment of a marine reserve, dependent on modification of the legal requirements for such reserves. Participants included members of the Whangarei Deep Sea Anglers, the Environmental Defense Society, the NZUA, Auckland and Northland Yachting Associations and the Northland Tourist Association. Still, little action was taken until 1977, when conservation moves intensified considerably. Three meetings were convened that year: two by the HGMPB and one by Northland Travel Promotion Incorporated. Two of these were held in Northland. Participants at the meetings basically confirmed the attitudes expressed at the 1972 meeting, that the establishment of a marine reserve, with relaxed controls on recreational fishing, was desirable. At this time, fears were expressed by the boating, fishing and diving associations that stringent controls on access, anchoring and diving would limit their activities to an unacceptable degree (Ritchie et al. 1979:6).

Following from the 1977 meetings, an amendment to the Marine Reserves Act 1971 was proposed which included arrangements for more flexible controls on fishing and an increase of the membership on the management committee from five to seven. Nine recreational and commercial organizations including those involved in the meetings discussed above, made a submission to Parliament on the Marine Reserves Amendment Bill, suggesting minor changes, some of which were incorporated into the Bill. The submission also stated that:

Everyone concerned wants to see the Poor Knights Islands become a marine reserve All would still support the resolutions passed at the meeting in . . . 1972. Throughout, there has been close co-operation with the Hauraki Gulf Maritime Park Board, in research and consultation (Voss and Thorne, unpub. 1977:4).

The amendment was passed into law early in 1978, with the general support of Northlanders (Northern Advocate 3/9/1977). Shortly thereafter, the Park Board advertised its application for a marine reserve.

MAF received several submissions on the application, including two objections, one of which was from the nine organizations that commented on the Amendment Bill. The grounds for objections were that:

- the continuation of fishing was in doubt
- the continuation of diving was in doubt
- there would be undue interference with existing usage of the area
- there would be adverse effects on the economic well-being of established service industries (Ritchie et al. 1979:27, Voss and Thorne, unpub. 1978).

Although all submissions supported the general concept of a marine reserve at the Poor Knights, MAF sought the cooperation of the Commission for the Environment in auditing an environmental impact report on the proposed reserve. The impact report, as the first such report on a conservation proposal, was intended to "allow further public comments" and provide "a working document for the various interests concerned" (Ritchie et al. 1979:6).

Amongst twenty-five submissions on the impact report was a joint submission, over fifty pages in length, from twelve Northland interest groups, as follows:

The Whangarei Deep Sea Anglers Club Incorporated
 The Tutukaka Coast Charter Boat Association
 The Tutukaka Coast Ratepayers' and Businessmen's Association

The Outboard Boating Club of Northland Incorporated
 The Northland Yachting Association
 The Whangarei Line and Light Rod Club
 The New Zealand Underwater Association Incorporated
 The Whangarei Underwater Club Incorporated
 Northland Travel Promotion Incorporated
 Whangarei Commercial Fishermans Association
 Whangarei Heads Anti-Pollution Committee
 Friends of the Earth Whangarei (Voss and Mahood,
 unpub. 1979).

The proposals included Northland representation on the management committee, a reduction in size of the "no fishing zones", ensurance of anchoring rights in the reserve, and removal of a clause suggesting an eventual ban on all fishing. The Commission for the Environment Audit Team, which met most of the groups, supported most of these recommendations, in particular suggesting that "there should be a majority of local representation" on the management committee. The grounds for this view were that "the impact of creating a reserve is greatest on the local community" and "this local majority has the added advantage of being available at short notice if any management problems arise" (Commission for the Environment 1979:20).

Despite the conclusions of the Audit Team, the Minister of Fisheries designated only one position on the Poor Knights Islands Marine Reserve Management Committee to represent "recreational fishing and boating organizations". The Northland United Council and the Tai Tokerau District Maori Council were also included, but Northland members formed a minority. Negative reactions from most Northland agencies and organizations, supported by the Member of Parliament for the area and by the local newspapers, failed to prompt a change in the composition of the Committee. The Minister was quoted as replying that "Previous use of the waters was not necessarily a

consideration, in the same way that forestry companies do not have a role in administering over forest parks and reserves" (MacIntyre in Northern Advocate 23/9/1980).

Even though the composition of the Management Committee was considered to be less than satisfactory by the Poor Knights user groups, diving and charter boat organizations volunteered support for management through the nomination of honorary rangers. The Committee envisaged the role of these rangers as one of education rather than prosecution; with few fisheries officers to police the reserve, administrators realized that they would be largely dependent on regular users for enforcement of regulations (Poor Knights Islands Marine Reserve Management Committee, unpub. 9/4/1981, 11/6/1981).

The importance of public acceptance of the Marine Reserve was well recognized in the impact report and audit. The audit stipulated the importance of minimal restrictions on access "since it is only by visiting the area and experiencing it at first hand that the public can appreciate the aims of the proposed marine reserve" (Commission for the Environment 1979:16). The need to educate the public as to the value of initiative conservation measures for marine areas was reflected in a submission to the Audit team and in the impact report itself:

[MAF should] . . . take a more active role in the education of people in the benefits of non-exploitative enjoyment of our coastal seas, when declaring the marine reserve and during all aspects of managing and policing it (Commission for the Environment 1979:8).

Wider public relations are needed to gain acceptance of the concept that a rich and diverse environment should not simply be exploited because it is wealthy. In fact this wealth should be seen as a reason why a virgin environment like that adjacent to the Poor

Knights needs protection (Ritchie et al. 1979:3).

Although the struggle to establish a marine reserve at the Poor Knights was lengthy, delays could be attributed less easily to poor "public relations" than to the lack of institutional arrangements to accomodate the preferred management structure. Due to the general coherence and organization of public interests, and to consistent integrative efforts initiated by management, the policies which evolved represent a fair consensus of community and administration opinions. The restriction on regional representation on the Management Committee is the only serious remaining constraint on satisfactory administrative integration with the public.

12.4 ABEL TASMAN NATIONAL PARK AND THE MARLBOROUGH SOUNDS

At Abel Tasman National Park and the Marlborough Sounds Maritime Park, the regional community was included in the policy-making process through the membership of local residents on the park boards. The low levels of confrontation between public and administration could be largely attributed to this management structure. Representation became less direct in the case of Abel Tasman when the Park Board was replaced by the Regional National Park and Reserve Board in 1981. Whether the same change would take place for the Maritime Park had not been decided at that time. The existing Board was twice reappointed past its term of office as the Government delayed on the issue of the future of maritime park boards, leading to some "instability" in the Board. Throughout this period "a large

amount of interest and comment" was expressed by the public (MSMPB 1980:n.p.).

The Marlborough Sounds Maritime Park Board demonstrated the depth of its concern for the interests of Sounds residents during the formation of the Maritime Planning Committee (the planning committee of the Maritime Planning Authority). When membership of the Planning Committee did not include a representative of the residents, a Park Board member proposed that the Board representative (the planning officer) be replaced by a Board member who was also a Sounds resident. Although the proposal was not accepted by the Board as a whole, the Board did support moves to have one or two Sounds residents appointed to the Committee (MSMP, unpub. 22/10/1981).

The Maritime Park had no nature interpretation programme or visitor headquarters. At Abel Tasman, as in all national parks, these facilities play an important role in educating the public on the conservation policies of park management.

Overall, both community and policy-makers appeared to be satisfied with the degree of integration achieved in these latter two examples.

12.5 OVERVIEW OF ADMINISTRATIVE INTEGRATION WITH THE COMMUNITY

The degree of integration achieved between the administrators of the management unit and the regional community of each area varied widely. A factor to which the variation largely can be attributed is the timing of the initial involvement of the public in the process of conservation policy

formation. At the Poor Knights, where interest groups were consulted from an early stage of the policy-making process, dialogue was continuous and integration was relatively thorough. Conversely, at Mimiwhangata, involvement of the public was initiated after policies were formed, and interaction tended towards confrontation.

Another factor explaining the variation in case study experience is the number and nature of the conservation protagonists, and the existence of public interest groups. In the Ahuriri example a wide range of organized public interests ensured the consideration of their opinions, promoting an acceptable level of integration even without administrative initiatives. At the Poor Knights, mutual interests in conservation between certain preexisting public groups and government agencies provided a solid foundation for dialogue and the formation of consensus. The coordination of the interest groups themselves in their interaction with administration also aided integration. Mimiwhangata again contrasts with this more positive experience in that the conservation initiative was taken solely by the administrators of the Peninsula, and the public perceived disadvantages more easily than benefits in the proposal for the marine park. Opportunities for interaction with Northland interest groups were not exploited early enough in the policy-making process.

Institutional arrangements in the form of mechanisms or mandates for integration appeared to play a significant role in the integration of administration and the public. In the longer established conservation areas, direct and routine access to management through representation on committees greatly assisted integration. At the Poor Knights the community was most

dissatisfied with the level of representation that it was allocated, and the main topic of dissention at Mimiwhangata as well was the lack of representation in management. Public representation was, in a sense, integral to the administration of the Ahuriri Estuary because the bodies involved were elected by the community. However, perhaps because of the breadth of responsibilities of these agencies, they were slow to consider the public interest in the Estuary. Public representation on the Estuary Steering Committee would have instigated more open and responsive dialogue. Mechanisms designed for administrative integration, such as the Steering Committee or the Mimiwhangata Joint Management Committee, could efficiently assist integration with the public as well, if they were so applied.

Legal provisions for statutory planning aided integration at the Ahuriri, and provisions for public notifications of management actions facilitated public involvement at both the Ahuriri and Mimiwhangata. The provision of the Marine Reserves Act 1971 that proposed reserves must not unduly interfere with the existing uses of the area (see section 10.2.1) may have motivated government proponents of the Poor Knights reserve to meet with public interest groups.

Environmental impact assessment provided an efficient mechanism for integration in the Northland cases. While the assessment process was voluntarily initiated by administrators rather than imposed by the Commission for the Environment, it was nevertheless based in a clearly defined legal arrangement. The use of impact assessments to investigate initiative conservation problems in these two cases was innovative for New Zealand. The case study experience suggests that if this mechanism had been applied sooner, conflicts based in

misunderstanding may have been avoided. The assessment process would have encouraged a higher level of integration between administration and the public in the Ahuriri case than was achieved through the less formal impact reporting process which does not call for public involvement. Both types of process play an important role in the collection and exchange of technical information whether or not public consultation is required, and both show potential as aids to the consideration of conservation area management options.

The "positive inaction" approach of the Napier City Council, while responsible for considerable interest group frustration, was useful in the sense that it provided the opportunity and the incentive for concerns to be voiced, for interests to coalesce, for the general public to be educated on the values at stake, and for a degree of consensus to form in the community. This approach reflects the view of some planners that conflict and confrontation are necessary catalysts for the expression of interest and participation. In contrast, the Poor Knights experience shows that integrative mechanisms can be employed to resolve management issues before serious levels of confrontation are reached. The image of interest groups in the Ahuriri case as "obstructionists" seeking confrontation derived in the main from the nature of the communication channels open to the groups: their efforts to converse with management had not been welcomed so they were forced to use statutory mechanisms which cast them in the role of (sometimes uninformed) objectors. The Ahuriri experience is nevertheless notable as a case in which the public instigated initiative conservation arrangements through the use of institutional arrangements for defensive conservation.

In most cases, dialogue between administration and the public occasionally followed vertical channels of communication, involving head offices of interest groups, Members of Parliament and government departments. However, lateral integration at the local or regional level was more intense, better informed and therefore more productive. This observation supports the suggestion made in section 11.2.4, that potential for local level integration of administrative participants in coastal conservation could be more fully exploited.

In the Northland and Ahuriri case studies, the political culture of regional or local communities had a considerable influence on public involvement. In Northland, where an independent regional identity is clearly evident, the public is quick to react to perceived infringement on their rights by non-Northland agencies. And in Napier, a growing activist contingent in a conservative community is intensifying the need for opportunities for public participation.

The special, long-standing interests of Maori people were recognized to varying degrees in both the Poor Knights and the Ahuriri examples. In the former, the Maori group with an ancestral heritage connected to the Islands was consulted during policy formation and granted representation on the management committee. In the Ahuriri case, Maori proposals for the use of their land were eventually recognized in zoning provisions; however, broader claims to the Estuary were ignored, and there was no place provided on the Steering Committee for a Maori representative.

Recognition of the value of public education on the need for initiative conservation was demonstrated in some cases. At the Ahuriri, interest groups played a major role in

disseminating information on the estuarine environment. One of the main goals of the Mimiwhangata Trust was to provide educational opportunities for the public through the conservation of the coastal ecotone. Unlike the Ahuriri interests, the Trust did not recognize the utility of initiating education prior to the designation of the conservation unit, as a means of establishing the value of conservation measures.

In conclusion, opportunities for the interpretation of community values in policy ideals existed in every case, whether these were an integral part of the policy-making process from the outset, or they evolved over the course of development of an issue, or they were implemented as a last attempt to resolve conflicts. Although there were conflicting public interests in all cases, dialogue through meetings, planning procedures, newspapers or impact assessments largely overcame confrontation by making the participants aware of one another's legitimate priorities and common interests. Institutional arrangements and policy mandate played a stronger role in administrative integration with the public than they did in processes of integration amongst agencies concerned with policy-making in the various case studies (examined in Chapter Eleven). Legal provisions did not constrain integrating processes, but they sometimes obliged agencies to provide information to the public or initiate dialogue when motivation for such action appeared to be lacking.

CHAPTER THIRTEEN

CONCLUSION: PROBLEMS AND POTENTIAL
FOR INITIATIVE COASTAL CONSERVATION

In this thesis the policy-making system for coastal conservation has been explored, drawing upon New Zealand experience in the field of coastal zone management. The underlying aim was the evaluation of institutional arrangements with respect to their ability to support policies that fulfill the objectives of initiative coastal conservation. The delineation of the role of initiative conservation and constraints upon its achievement provided the basis for a normative theory on policy and institutional responses to these constraints. A model was developed which encompasses hypotheses reflecting that theory. The theory was applied and the hypotheses tested, first at the national level, and then at the management unit level.

In this chapter, the results of the analysis will be amalgamated and their operational and theoretical implications will be outlined. Findings of the analysis of parts II and III are summarized, combining the national and management unit experiences of coastal conservation and drawing operational implications for New Zealand. Further implications are drawn from these results for the general theory applied in the thesis and for the policy model developed in Part II.

13.1 SUMMARY EVALUATION OF COASTAL CONSERVATION IN NEW ZEALAND

The theories, principles, criteria, and propositions developed and applied in this thesis are all generally couched in terms of human ecology, social learning theory, and policy and institutional arrangements. The working hypothesis was that in order to achieve the objectives of initiative coastal conservation, institutional arrangements must facilitate: 1) the development of policy that is responsive to the needs of the environment and society, and 2) integration, or the harmonious interaction and coordination of actors in policy processes. Social learning, based in the processes of integration, is also hypothesized as a facilitator of appropriate conservation policies. The substantive New Zealand experience is evaluated against these hypotheses or criteria for judgement in this section, and suggestions are made for improving the policy-making system.

13.1.1 Policy responsiveness

At the national level, analysis showed that Government policy for initiative coastal conservation is inadequate on the basis of the responsiveness criteria. No general policies for the coast have been developed at this level recently and such policies from the 1970s have not been adapted to changing conditions. Instead, the Government has adopted a management approach which is best described as ad hoc pragmatism (or disjointed incrementalism). This approach follows in part from the constraint of the individualistic political culture, and in part from the assumption that economic priorities should not be

stifled by environmental considerations. However, despite the Government's lack of recognition of the need for a coastal policy, individual government departments have demonstrated policy-making that is increasingly responsive to the ecological needs of the coastal zone and to societal needs for less modified coastal environments.

At the management unit level, responsiveness to societal and environmental needs was adequate in most of the cases selected for study and it did not appear to be affected by the lack of central policies. In each of the study areas, the special management needs of the land-sea interface were recognized for various use- or resource-oriented reasons. Policies were more anticipatory and longer-term than at the national level; nevertheless, they were still largely ad hoc or reactive in character. Flexibility was demonstrated over both space and time in the management unit examples, allowing for adaptation of policy to changing needs and constraints.

While policy was more likely to be responsive to environmental needs in the conservation areas, it was also more likely to encounter the need for compromise between meeting environmental and societal needs. Trade-offs were determined by the policy-maker's perception of environmental needs and the pressures of use. When compromises on the meeting of community priorities were made in favour of ecological goals, then clarity, consistency, and evolutionary implementation of policies aided public acceptance of the policies. Negative community attitudes towards coastal conservation, especially in the nearshore area, were nevertheless a constraint on initiative conservation policy. These were partially the result of confused policies and poor communication. Negative attitudes

were also reflected at the level of the national community, in which a large sector of the population supports a laissez-faire approach to the management of the foreshore and coastal waters, in keeping with New Zealand's individualistic political culture.

Policy-makers and managers involved in the coastal zone recognized shortages of information on coastal resources and community priorities for them as a serious constraint on policy responsiveness at both levels, but limitations caused by institutional arrangements were considered to be even more pervasive. Nationally, institutional arrangements for coastal zone management reflect the Government policies described above. Amongst the statutes applying to the coast, those providing for initiative conservation are scarce, and often subordinate to development oriented laws. The agencies with conservation missions are generally low in the departmental hierarchy. These factors have lead to a rearguard approach to coastal conservation and a dependency on defensive arrangements. Few initiative conservation areas therefore have been established in the coastal zone relative to other environments.

The narrow range of institutional arrangements available nationally for initiative coastal conservation showed clearly as a constraint in the management unit experience. While a variety of arrangements was applied, many arrangements had to be adopted or combined to meet initiative conservation objectives. Traditional arrangements for terrestrial conservation areas do not always fit the requirements of the coastal environment and alternatives were not readily available. National park status is inappropriate to more modified coastal environments, yet some coastal areas are worthy of conservation measures of similar strength, even though they have been altered by human use. The

maritime park arrangement deserves statutory backing in recognition of the role it plays as an appropriate coastal variation of the national park. Marine resources span a range of ecological types, yet the initiative conservation arrangements for them accommodate a narrow range of goals, hindering the protection of marine environments. New legislation should alleviate this constraint. While few alternatives exist for the conservation of marine areas, even fewer are available for the initiative conservation of contiguous land, foreshore and sea, spanning the coastal ecotone.

In some situations existing arrangements would be more suitable if they could be applied in a more flexible manner. Evolutionary or adaptive policies were not easily accommodated by existing arrangements which tended to be difficult to amend once implemented. Some coastal legislation has been amended recently to remedy this drawback. Despite the above institutional shortcomings, arrangements invariably were found to meet initiative conservation objectives, even if statutes had to be amended by Parliament. The adaptation of arrangements to provide an appropriate mandate for policy reflected a responsiveness to basic ideals. Implicit ideals rationalized the alteration of the mandate to correspond to goals, and not the reverse. In terms of the hypothesis, then, institutional arrangements initially constrained policy through mandate, but this constraint was alleviated by modification of the mandate.

Amendments and supplements to the existing array of statutory mechanisms for initiative coastal conservation, and an increase in the flexibility of these arrangements, could better anticipate the ways in which mandates have to accommodate

conservation goals. The process of establishing initiative conservation areas on the coast could then be simplified, and confusion stemming from the manipulation of existing institutional arrangements to achieve purposes for which they were not designed could be avoided.

13.1.2 Integration in policy processes

Responsiveness to societal or community needs in the case studies was closely linked to the adequacy of integration processes, involving dialogue between administrative and public interests. The degree of interaction with the public encouraged by administration varied between departments at the national level and between policy-makers in the management units. At both scales there was evidence of initial neglect of interaction with the public which led to problems that were then remedied by a more open approach to policy-making. The management unit experience especially indicated that processes of dialogue, initiated early and maintained throughout the policy-making process, aid the evolution of consensus on conservation objectives and help avoid confrontation. In cases where the public interest in conservation was strong enough to be represented by well-organized interest groups, integration was most thorough. This finding supports the principle recognized by agencies at both levels of analysis that public education on conservation values is important for its generation of support for conservation arrangements.

The national level analysis showed that legal provisions for public participation in most statutes place the conservation-minded public in the role of objector, although

broader provisions for public participation have been legislated recently. Case study experience confirmed that legal routes for the positive communication of community priorities on conservation to policy-makers were less common than defensive mechanisms. Despite the lack of statutory support for positive and open dialogue, informal mechanisms were successfully devised in cases where agencies were motivated to seek integration. Motivation, however, was not always present, and in these cases the legal provisions for defensive representations of the public interest proved to be important to initiating integration.

The most effective institutional means of achieving integration between community and management proved to be public representation on management committees. This approach could be applied more extensively. District planning procedures assured opportunities for public scrutiny of local environmental policies. However, elected bodies responsible for planning were slow to enter into dialogue with the public on conservation priorities, and community-based conservation interests could not always afford to present their views effectively. No government agency is assigned to represent the public interest in conservation at the local level, to supplement interest group and individual efforts. Private interests in land use thus tend to dominate the planning process. Government assistance to conservation interests, whether financial, or in the form of expertise and information, would help ensure more even consideration of the broader public interest in the natural coastal environment. In addition, extension of statutory planning provisions over marine areas would provide the basic, defensive opportunities for public input into the development of policies for these areas that is now available on land.

Local bodies sought involvement in conservation issues more quickly when they wished to contest initiative conservation measures proposed by government departments. This pattern confirmed the importance of integration between conservation policy-makers and local or regional bodies in the area of the management unit. Neglect of this type of integration delayed the achievement of initiative conservation objectives; conversely, the pursuit of integration helped to lessen confrontation amongst agencies.

Administrative integration at the regional level was facilitated by various informal arrangements such as cooperative research projects and meetings. Statutory planning procedures provided another vehicle for integration, but the achievement of satisfactory dialogue at the regional level did not appear to depend upon the presence of formal regional planning arrangements. Regional planning nevertheless has the potential to make integration more efficient and more routine, especially across the land-sea interface, and to promote dialogue between government departments and local bodies. Strengthening of the regional planning framework thus could prove advantageous. Overall, satisfactory regional integration was attainable within existing institutional arrangements, and motivation to initiate integrating processes was the more limiting factor.

At the national level, administrative integration amongst government departments was considered to be inadequate by those involved in coastal zone management. No central policy for the coastal zone exists to coordinate the sectoral policies which evolve from the complex of legal and administrative structures that apply there. Such a policy, or the institutional arrangements for its development (such as a national coastal

committee), often has been called for by observers of coastal zone management problems.

The experience of the case study areas in the integration of policy processes involving government departments was more positive. Dialogue between departments with interests or responsibilities in the initiative conservation issues was generally adequate even without the assistance of a central policy. It was, however, characterized by some inefficiency. Delays and frustrations in processes of integration were also encountered in dialogue within government departments, although integration at this scale was again adequate. The delays could be attributed in part to bureaucratic procedures, but the hierarchical organization of government departments did not preclude dialogue, either vertically between central and district offices, or horizontally between members of different departments at either level. The receptiveness of central offices to information and advice from lower levels of the bureaucracy was evidenced by the adaptation of institutional arrangements to accommodate goals expressed by district level policy-makers. Increasing decentralization in some government departments will reduce the need for vertical integration within an agency.

Experience of integration in general indicated that the development of policies to meet initiative conservation goals does depend on the exchange of information through dialogue between agencies involved in conservation area management, local government bodies and the community. Where integration was encouraged, conservation mandates were found that could support policy goals; where integration was neglected, political-cultural factors limited the evolution of initiative

conservation mandates. However, the importance of institutional arrangements to the operation of integrating processes was not consistently supported by the case study findings. Much integration was achieved where formal arrangements for it were lacking, and such voluntary efforts were not seriously constrained by laws or bureaucracy. Where arrangements were available, they were not always used by agencies in the pursuit of integration.

The suggestion of some experts on coastal zone management that existing arrangements for coordination are not being used to their full potential is valid. More thorough application of integrating mechanisms in policy-making for coastal conservation could be encouraged by making the implementation of optional mechanisms more routine and by strengthening the status of provisions for initiative conservation in the legislative hierarchy. Alternatively, the delineation of a central policy for coastal conservation, or for the broader fields of management encompassing coastal conservation, would provide an ideological basis to motivate the development of integrated policy for the coast. While the need for a central coastal policy was not confirmed by the case study findings, this need would almost certainly become apparent if national level problems and experiences of coastal conservation were more extensively explored. Nationwide programmes for coastal conservation, such as system planning for initiative conservation areas, would be accommodated by a central policy for the coast.

13.1.3 Learning in policy-making

Although the time frame of the case study analysis precluded the investigation of long term learning processes, evidence of the criteria for social learning patterns in policy-making was found in the management unit experience. Flexibility and an evolutionary approach in responsive policy-making, together with integration processes, gave some of the policy-making systems a high potential for learning.

Dialogue, cooperation, and the adaptation of institutional arrangements to provide mandates for the expression of conservation goals illustrated behaviour-organizing behaviour in policy-making. The adoption of more responsive policy goals demonstrated behaviour-changing behaviour. Some experimentation with institutional arrangements showed that the approach of evolutionary experimentation has been attempted. Further study of management operations and the nature of the associated behaviour-analysing behaviour might provide more evidence of an experimental approach. Otherwise, a key requirement of social learning theory was commonly not identified in the issue analysis of Part III, namely: a purposeful testing of policy in practice with a view to its eventual replacement by a policy that better reflects agency and societal ideals. Instead, policies often were designed and implemented with an air of finality and the implication of an optimum, static control system rather than an evolutionary one. Responsiveness and integration in policy processes were as much compelled by societal, ecological and institutional constraints as they were voluntarily attempted in an initiative manner.

A purposeful approach to experimentation in policy-making could speed the development and implementation of policies that

more closely reflect societal and environmental needs while serving the objectives of initiative coastal conservation. The case study experience showed that responsiveness aided the development of consensus in community priorities for coastal conservation. Responsiveness reflected the injection of technical (processed knowledge) and experience-based information (personal knowledge) into the policy-making process. Integration facilitated the exchange of both types of information amongst administrative agencies and aided the development of a "field language" on coastal conservation. This field language can be envisaged as the institutional parallel to societal consensus on priorities for the coastal environment

Only vestiges of these two extensions of learning and integration - the development of consensus and a field language - were identified in the New Zealand study. The encouragement of further development of a field language through the delineation of its terms in a central coastal policy would assist integration and learning in policy-making amongst agencies with responsibilities in the coastal zone. Further decentralization of the bureaucracies of government departments would assist lateral communication amongst managers and policy makers in the coastal field at lower levels of management. Finally, laws and organizational adaptations to reorient institutional arrangements around geographical or resource themes rather than functional responsibilities could also aid the potential for learning in policy-making, with the use of a field language.

13.2 GENERAL THEORETICAL IMPLICATIONS OF THE NEW ZEALAND STUDY

Operational implications of the analysis for coastal conservation in New Zealand were drawn in the above discussion. More general implications for the theory and practise of environmental management are outlined in this section.

Most of the operational implications described in section 13.1 for the New Zealand situation would apply more generally to the theory and practice of environmental management and conservation in other countries with a similar political culture. The findings of the New Zealand study also provide the grounds for observations on the theories that were applied in the analysis in connection with the nature of the policy-making system and social learning processes.

The theoretical distinction between initiative and defensive approaches to conservation is useful in terms of both the practice and the study of conservation policy. While defensive arrangements are more extensively applied, they cannot fully meet the conservation needs of the coastal zone because they do not explicitly address the reasons for which less modified coastal environments may be valued. They cannot give ecological concerns top priority because they are applied under the assumption that exploitation and development will take place. Their emphasis on the prohibition or restriction of activities rather than on the provision or maintenance of opportunities gives them a negative character that does not readily engender societal support. Nevertheless, they provide a back-up to initiative conservation arrangements that helps to reduce environmental degradation in the greater part of the coastal zone which is not subject to initiative conservation

arrangements.

Initiative conservation is distinguished by its positive and explicit recognition of the benefits to be gained through conservation measures. This recognition gives initiative conservation its potential to promote an awareness of environmental needs in society and an acceptance of measures to satisfy these needs. This attribute is important in light of the finding that societal constraints on coastal conservation are more serious than either informational or environmental constraints. In the clear definition of the aims of, and rationale for, the conservation of less modified environments, and in the demonstration of the benefits derived from such measures in practice, initiative conservation has the potential to form the nucleus of a societal consensus on environmental priorities. Initiative coastal conservation policy is a subset of coastal zone management policy, conservation policy and environmental policy, so that several of the principles that apply to policy-making for initiative coastal conservation apply to the broader fields as well. The remainder of the present discussion is couched in the more general terms of these fields.

In addition to the lack of societal consensus on environmental priorities (stemming from the political-cultural constraint), a lack of motivation or political will to develop policy or initiate integration can be a serious constraint on policy evolution. Institutional arrangements, in their two-dimensional character, cannot force the evolution of policy. Over-emphasis on the development and enforcement of progressively more detailed institutional arrangements (including regulations, programmes and organizational structures) reflects a coercive approach to environmental

management which is unacceptable in societies with individualistic political cultures. Such an emphasis tends to draw administrators' attention towards the internal workings of the bureaucracy, and away from the development of policies to suit the needs of society and the environment.

If a policy-making system is to have a capacity to learn, the role of institutional arrangements must be to provide mechanisms for the expression of policy and organizational arrangements for the development and administration of policy. Experimental evolution takes place as these arrangements are applied, evaluated, adapted and reapplied. The process of experimental evolution in environmental policy-making is illustrated in Figure 13.1. The various connections between elements of the policy-making system in the learning process are explained below.

The application of institutional arrangements, such as those provided for in an agency's mandate, is in the service of pre-determined ideals which form the core of policy for a management unit. Implementation relies heavily on the use of management operations and "processed" knowledge. The adequacy of the operations is judged in terms of whether or not their effect on the management unit resource satisfies goals. Goals are based not only in ideals, but in community priorities for the resources concerned, and in the ecological needs of the resources and their surrounding environment. Goals thus provide a conceptual link between the agency and its environment, facilitating integration. Various plans, programmes and other operations are tested for their ability to satisfy goals, and are amended on the basis of this experience (connection (1) in Figure 13.1). The mandate may have to be adapted to accommodate

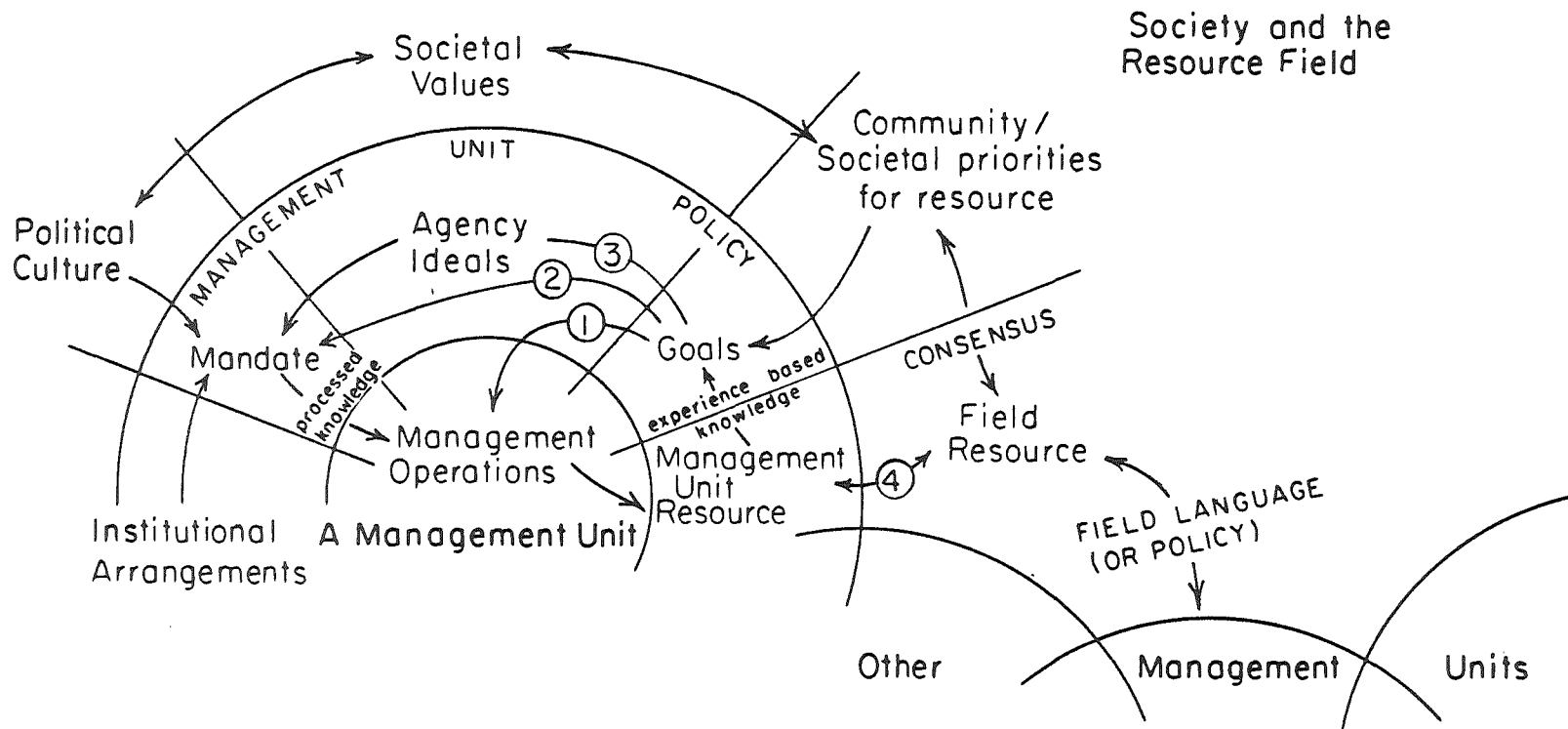


Figure 13.1

PROCESSES OF EXPERIMENTAL EVOLUTION IN POLICY-MAKING

new operations from time to time, through variation in institutional arrangements (connection (2)). The political culture should permit the adaptation of the mandate if policy goals and ideals are founded in community or societal priorities.

As this process of experimental evolution proceeds, ideally, policy-makers acquire experience-based, or "personal" knowledge of the policy-making system. This knowledge is integrated with processed knowledge in the continuing experimental process. When the adaptation and reapplication of operations and mandate repeatedly prove ineffectual in the achievement of ideals, experience may suggest that the ideals themselves have to be questioned (connection (3)). The agency then combines its management experience with its perception of the policy-making environment to develop new, or modified, ideals and goals. This is the culmination of the learning process in policy-making at the level of the management unit.

Because the agency interacts with its environment in the learning process, it will affect that environment. Goals, as the criteria against which progress towards ideals is measured, are a key element in the integration of policy processes at the management unit level with the wider field and society. Adaptation of goals through learning indicates a response to change in the agency environment. However, the adoption of revised goals and ideals also means a change in agency behaviour that will, in turn, affect the field of which it is a part (connection (4)). If the various agencies holding responsibilities in a field were to integrate their learning experiences through dialogue, then the shared experience-based and technical information could provide the foundation for a

field language. Like agency ideals, this language could adapt to changing conditions and new information in a learning process at a broader, societal scale. As the process evolved, so would agreement amongst agencies on the overriding priorities for that field of management. Similarly, if the priorities and values of the communities concerned with the management units comprising the field were well integrated into the learning process, then the combined experience of the various policy-making systems could assist the development of societal consensus on priorities for that field. In other words, through experimental evolution and an integrated, learning approach to policy-making, goals can be expanded, amalgamated, or used as indicators for the development of an overriding principle, doctrine or ethic to guide environmental management.

The direction of the process described above - the evolution of broad environmental policies out of the combined experiences of individual management units - runs in opposition to the traditional bureaucratic process of goal reduction. In a human-environment system constrained by a lack of societal consensus and high levels of uncertainty regarding ecological processes and human impacts, policy-making through goal-reduction becomes increasingly dependant on extensive controls on human behaviour and the use of coercive power. Policy-making through learning processes under the same societal and environmental conditions promotes increasing knowledge of, and responsiveness to, the needs of society and the environment with the use of normative power. Goal reduction relies on centrally-defined institutional arrangements as guides to behaviour; learning employs institutional arrangements as tools for the expression of policy guidelines which derive from the

integration of agency and community interests at various levels of analysis.

In their role as facilitators in social learning, institutional arrangements are mainly required to be adaptable and responsive to the needs of evolving policies regarding their expression and implementation. As well, they can provide the organizational mechanisms that encourage dialogue and integration. Suggestions made in section 13.1 for changes to institutional arrangements to better facilitate responsiveness, integration and learning are representative of the range of adjustments that can be made generally. At least as important to the facilitation of learning in policy systems is the initial approximation of goals and ideals as a focus for experimentation. The problem of lack of motivation of those responsible for policy-making to develop this policy core therefore must be addressed. It could be alleviated by the open acknowledgement of goals and ideals as evolutionary guides to action, rather than as static optimums which all management operations must address, precluding the pursuit of unanticipated opportunities in the future.

13.3 IMPLICATIONS OF THE NEW ZEALAND ANALYSIS FOR THE POLICY MODEL

This final section of the thesis concentrates on the implications of the national and case study analysis for the policy model that was developed in Chapter Five.

The model in Figure 5.3, showing agency policy and its

situation within the policy-making environment, contributed to the present thesis in three ways. First, it provided a visual conceptualization and summary of the theories developed in chapters Two to Six and applied in chapters Seven to Twelve. Second, it established a means of framing research questions and illustrating hypotheses simply, while overtly recognizing the complexity of the system of human-environment interactions surrounding the primary components of these questions and hypotheses. Third, it provided a tool for organizing the analysis and structuring the thesis.

In serving all of the above purposes, the most salient feature of the model is its illustration of the holistic, human ecological perspective on the relationship between humans and their environment. A normative focus on policy determinants with the aim of understanding and evaluating policy itself, rather than the outputs of policy, demands this holistic perspective. The formation of criteria for judging policy outside the terms of the policy or its originators requires the consideration of the broader community and environmental interests which the policy is supposed to serve.

The model's illustration of the range of environmental factors connected with policy-making suggests possible lines of research. Further study of the relation of community needs and societal ideals to policy would be fruitful, given the indication of the analysis that societal constraints on responsive environmental policy can be severe. Alternatively, researchers or analysts could focus on the ecological or technological policy environment, as the present study concentrated on the institutional sector. Other institutions than government, such as the economy or the education system,

could have been singled out for the examination of their role in policy-making. The consistent utility of the model, regardless of the sector or component of central interest, is that it reminds both analyst and practitioner of the broader environment encompassing their interest. As Darling and Eichorn (1967:15) discovered in their human ecological study of national parks,

A national park exists in an intricate complex of political, social, legal and sentimental factors
. . . . However biological our initial approach may have wished to be, as ecologist and geographer we have faced the larger field, knowing our limitations, and aware that our report must be concerned with policy making more than with biological detail.

Thus, while experts can focus on their area of interest within the policy-making system, the model facilitates the formation of an overview on the problem at hand in relation to the broader system. This is an analytical task which is rarely confronted; more purposefull attention to it could prove beneficial to policy research.

Adaptation was a strong theme in the analysis, and investigations of responsiveness, integration and learning processes proved the consistent utility of this concept as a way of understanding policy-making. The model accommodates the adaptation theme through its nesting of systems or levels of analysis and its allignment of elements adjacent to one another. This configuration represents continuous interaction and the interconnectedness of the elements of the policy milieu, without the directional limitations on flows and processes associated with arrows. For specific analytical purposes, portions of the model can be reformulated with the use of arrows to draw attention to particular connections, as in Figures 6.2 and 13.1.

The nesting of systems of analysis is particularly useful to structuring the analysis. For the researcher as well as the

policy-maker, detailed knowledge of systems is easier to acquire at the levels of analysis toward the centre of the model. However, the accumulation of information from a range of examples at any level of analysis leads to a greater understanding of the next broader, encompassing level. In the present study, the examination of policies and institutional arrangements for coastal conservation could be approached at the national level only in a broad and descriptive manner; but the study of the same factors in more detail at several locations within the coastal conservation field contributed to a deeper understanding of that field.

The present content and configuration of the model is tailored to focus on policy-making at the management unit level. This focus was chosen on the basis of the assumptions that policy must address the characteristics of the area in which it is applied in order to meet the responsiveness criterion, and that the most rigorous forms of case study and issue analysis can be performed at that scale. With slight modification, the same model can be used to study various types of management in the coastal zone, including conservation and development, to produce a broader analysis of policy for coastal zone management. At an even more general level, the model could be adapted to the study of interacting fields of environmental management, including the coastal one, for the analysis of national environmental policy. In any of these pursuits, the model could be used to guide analysis on the same topics in different countries, facilitating an international perspective and the exchange of experiences between countries.

In its present design, the model expresses normative principles for conservation policy which were supported by the

results of analysis of coastal conservation in New Zealand. Accordingly, concepts could be drawn from the model in its existing form and prescribed for application in the policy-making system for coastal conservation. However, the implementation of practices based in these concepts could lead to experiences and the accumulation of knowledge that would begin to shed doubt on the concepts themselves. The concepts, and the model which encompasses them, would then have to be questioned, and changes would be made to suit the new information and the changing human-environment system. The model would then serve its analytical purposes in the best way possible - as a learning device.

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- ATNPB : Abel Tasman National Park Board
 HGMPB : Hauraki Gulf Maritime Park Board
 MSMPB : Marlborough Sounds Maritime Park Board
 NZUA : New Zealand Underwater Association.

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