A FRAMEWORK FOR MARINE PROTECTION IN NEW ZEALAND

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ABSTRACT

Increased recognition of the need to protect New Zealand's marine environment for its ecological, social-cultural and economic values has occurred over the last decade. Knowledge of the Marine Reserves Act 1971 as a tool for marine protection has become widespread in recent years, partly as a result of the Department of Conservation's public education campaign. However, there is a lack of awareness of alternative statutory mechanisms available to protect New Zealand's marine environment in response to different requirements.

This thesis identifies and analyses selected statutory mechanisms for protecting New Zealand's marine environment in order to develop a process of use to various groups to protect marine areas. Guidelines are developed to assist users in the application of this process, particularly the selection of the most appropriate mechanism for protection.

Methods used in the development of this process included the conduct of interviews with staff in central and local government, analysis of statutes, review of government reports, and site visits to areas proposed for protection. The process was then tested in relation to two recent cases, Pollen Island and the Whanganui Inlet.

A key contribution of this thesis is that it draws together a range of previously uncoordinated statutory mechanisms for marine protection and presents a process to assist groups in selecting the most appropriate means of marine protection. An important element of the process is its degree of flexibility in that it can be readily adapted to accommodate different requirements of marine protection and the mechanisms involved. In this respect, the thesis has contributed to the dissemination of knowledge about statutory mechanisms and their application for marine protection in New Zealand.

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CHAPTER ONE

INTRODUCTION

Marine protection of New Zealand's coastal environment is increasingly recognised as important not only for conservation purposes, but also for recreation, education, scientific, cultural and historical-geological reasons (Handford, 1986, 4-6). This change in public attitude has occurred in response to a greater awareness and education about the natural environment as promoted by conservation groups and organisations. A practical appreciation of marine protected areas in operation (for example, the Leigh Marine Reserve) has also enhanced the image of marine protection for the general public. "After a decade of operation the [Leigh] reserve has very solid, indeed, almost total support" (Ballantine, 1991, 57).

As the demand for protected marine areas has grown, focus has shifted toward the application of statutory and non-statutory mechanisms (or defined units of protection such as marine reserves and wildlife sanctuaries) to achieve this aim. Protection of the marine environment is administered by different government agencies through a range of statutes. The influence exerted by these agencies differs depending on their functions. Currently, protection of specific marine areas is generally attempted using the Marine Reserves Act 1971, sometimes to the exclusion of other potential mechanisms. One example is the application to gazette Pollen Island in Auckland's Waitemata harbour as a marine reserve. While some consideration was given to using other mechanisms, no detailed process of consultation took place between the Royal Forest and Bird Protection Society (the applicant) and the Department of Conservation, the government department responsible for managing a range of protection mechanisms (Department of Conservation staff member, pers. comm., 1994).

This thesis develops a planning process for the purpose of assessing the most appropriate mechanism to protect specified marine areas. Issues considered important in implementing statutory protection to any area are assessed in the planning process. These include the purpose of protection, values (scientific, economic, social, cultural) in need of protection and the potential for mechanisms to protect these values, the level of protection required and the level of protection potentially afforded by the mechanism; the degree of support for protection of the area; and the consent required from different

organisations. Also included in the process is consideration of the degree of enforcement necessary to adequately protect the area and the ability of different mechanisms to provide this support. Generally the process sets out a procedure to identify the most appropriate mechanism for protection of a specified area of the marine environment. A broader planning process which includes the basic components of protection, from goal identification to selection of the area requiring protection, is presented to illustrate where and how the proposed process operates in the real-world.

1.1 HISTORICAL NEED FOR MARINE PROTECTION

Recognition of the need for marine protection has become more widespread in the last decade. Previously, this was usually perceived by scientists and others working directly in the field. Increasing reduction in the number of fish available and of other marine organisms in the sea is becoming more obvious to the layperson.

> At the grass roots level, the popularity of environmentalism has produced a growth in non-governmental advocacy for protection of natural resources. With respect to marine reserves, this advocacy was initially performed by marine scientists, especially those connected to Leigh Laboratory. In recent years, the increase in popularity of environmental organisations has helped broaden support (McAuley, 1993, 136).

The first areas chosen for protection tended to be representative of locations displaying values of interest to those advocates of protection. Generally, areas protected contained high ecological values recognised by those in a position to advocate protection mechanisms. A combination of difficulties in obtaining protection status along with the limited support from the general public and political sector (Ballantine, 1991) delayed widespread implementation of protected areas using statutory mechanisms for many years.

The need for a protected area for study of marine biology was first advocated in 1965, resulting in the passing of the Marine Reserves Act in 1971, six years after the first query (Ballantine, 1979, 68), signifying the antipathy from government toward the idea of marine reserves during that time. This legislation was created specifically for the purpose of providing a natural, undisturbed area for scientific study where protection is also deemed to be in the public interest. The first marine reserve was gazetted in

November 1975 using the Marine Reserves Act 1971, twelve years after the first recognition of the need.

By November 1989, only two marine reserves and three marine parks had been created, including the Sugar Loaf Islands Marine Park created by special legislation designed specifically for the purpose (Ballantine, 1990, 25). As the popularity of marine reserves has grown, so have the number of reserves. To date (1 January 1995), 11 marine reserves have been gazetted (Tables of New Zealand Acts and Ordinances and Statutory Regulations in Force, 1995), with many still in the process of approval. The Wildlife Act 1953, unlike those Acts previously mentioned, has been used occasionally since its implementation. In 1966, 1974, and 1994 wildlife sanctuaries were created within the coastal marine area and in 1973 two wildlife refuge orders were created for the Buller River Mouth and Hart's Creek. While these mechanisms and others referred to in later chapters are available for use, marine reserves are still considered, by many members of the general public, to be the most appropriate form of protection available to protect specific areas of New Zealand's marine environment. This has led to the Department of Conservation being inundated with marine reserve proposals. Often these areas are identified by the public, and conservation groups. The Department of Conservation also initiates proposals.

Increased interest in protecting marine areas has created a need to identify those areas most requiring protection. Assessment of different areas suggested for protection by both need and purpose is beginning to occur in New Zealand through application of criteria developed for such a purpose. Ray attempted the first classification of marine environments for conservation purposes in 1975 (Salm, 1984, 210). Modification of criteria for classification of areas and determination of their need for protection has continually occurred since then.

The Department of Conservation has developed a set of criteria for identification of areas most requiring protection in New Zealand. "The significance of the natural values present is the most important criterion" (*Draft Conservation Management Strategy for Wellington*, 1994(d), 152). Many of the Draft Conservation Management Strategies contain criteria or values found in areas of the marine environment which the Department is in support of protecting. For example, both the *Revised Draft Conservation Management Strategy for Auckland* and *Draft Conservation Management Strategy for Hawkes Bay Conservancy* contain criteria for identifying marine areas for protection.

The Department of Conservation is working towards achieving a representative set of marine protected areas which display all values identified by the Department as being important for protection.

> The Department of Conservation is developing a long-term strategy for marine reserves. The intention is to establish and manage a network of marine reserves around the New Zealand coastline to ensure as far as possible the preservation of representative examples of all types of natural marine ecosystems and features of underwater scenery of distinctive quality, beauty, or uniqueness (*Draft Conservation Management Strategy for Wellington*, 1994(d), 151).

Criteria developed by the Department of Conservation for marine protection will, for all intent and purposes, represent the Department's mission which is "to conserve the natural and historic heritage of New Zealand for the benefit of present and future generations" (*Draft Conservation Management Strategy for Auckland*, 1993(c), 6). As criteria developed by the Department of Conservation may be more heavily biased toward conservation purposes than economic or social-cultural reasons, criteria from other sources are included within the planning process developed in this thesis. This is to ensure all potential values contained within any area specified for protection and those indicated in the legislation can be compared and assessed.

1.2 RESEARCH RATIONALE

Public awareness, and subsequently demand of the need for marine protected areas has increased dramatically since the late nineteen eighties. Contributing to this rise has been the formation of the Department of Conservation in 1987. Promotion of marine reserves by the Department may be partly in response to the mechanisms usefulness and specific guidelines provided within the Act. However, use of the Marine Reserves Act 1971 is restricted in relation to the purpose for which it was designed.

> - There is a strong legal mandate for creating marine reserves, but the wording of the Marine Reserves Act is clumsy and overly restrictive (McAuley, 1993, 140).

A large number of Acts can potentially be used to protect New Zealand marine areas. Those drawn on for the proposed process in this thesis are the most appropriate in terms

of their potential application to areas proposed for protection. Mechanisms which are very specific and whose purpose does not include conservation are excluded from this thesis. Also excluded is legislation developed specifically for protection of one area such as the Sugar Loaf Islands Marine Protection Act 1991.

Protection of any specified marine area is not only determined by need for that protection but is also affected by the availability of legislative mechanisms to protect such an area. Implementation of protection may be defined as a two stage process, the first being identification of areas requiring protection, followed by the second stage of identifying appropriate mechanisms to protect areas in need of protection. Marine reserves have generally been proposed as the most suitable mechanism for protection, possibly as this is the most widely known form of protection. Reasons for the extensive use of the Marine Reserves Act 1971 may include an ignorance of alternative mechanisms, the perceived difficulty of implementing other, less publicised mechanisms, and the role model set by the success rate of implementation of marine reserves in recent years. The purpose and level of protection required also has a major impact on the legislation chosen for protection. The Marine Reserves Act 1971 provides for a range of protection, from a complete "no take" zone, to provisions for fishing specified species within a marine reserve. At present the Department of Conservation is promoting use of the Act for total protection to reduce confusion on this issue which is in line with the Department's mission (previously stated).

Historically, the Marine Reserves Act 1971 has been used disproportionately to provide protection for the majority of marine areas proposed for protection. The Marine Reserves Act 1971 is narrow in scope, not being designed to protect a wide variety of areas for different purposes. In cases where protection of any particular location of New Zealand's marine environment does not fit the purpose of the Marine Reserves Act 1971, a need to consider other potential statutory mechanisms is realised.

Other Acts containing mechanisms for protection of the foreshore and in some instances the sea include the Conservation Act 1987, Fisheries Act 1983, Marine Mammals Protection Act 1978, National Parks Act 1980, Reserves Act 1977, and Wildlife Act 1953 to name but a few. Although presentation and discussion of the content and use of different Acts and mechanisms managed by different organisations has occurred (Jeffs, 1993), there is currently no framework available to identify appropriate mechanisms for protection of a specified location.

The aim of this thesis is to develop an appropriate process incorporated within an overall framework to address this deficiency. A process for the analysis of different mechanisms in relation to their suitability to protect different areas is addressed within this thesis. This is undertaken with the proposed planning process presented in this chapter, which provides a method by which different statutory mechanisms available for the protection of New Zealand's marine environment can be compared and assessed in relation to an area for which protection is being sought.

1.3 RESEARCH AIM, OBJECTIVES, AND RESEARCH QUESTIONS:

The overall aim of this thesis is:

> To develop a planning process to determine the most appropriate statutory mechanism for protection of a specified marine area.

This aim is developed by use of the strategic planning approach, adapted to incorporate the requirements contained within various legislative mechanisms utilised within the proposed process. The overall framework within which this process operates is also presented, to afford a fuller understanding of the process. The mechanisms contained in the proposed process are limited to include those with the greatest potential for use. To test the validity of the proposed process, two case studies are presented in the thesis. Both areas chosen were proposed for protection, one by a local conservation group and the other by the Department of Conservation.

Objectives, necessary to achieve the overall aim are:

Objective One:

To identify and subsequently analyse mechanisms available for protection of specific areas of New Zealand's coastal and marine environment.

Research questions:

-What area does the coastal and marine environment cover?

-What mechanisms potentially provide protection of New Zealand's coastal and marine environment?

-What New Zealand mechanisms are used in the process developed in this study and why?

Objective two:

To analyse selected mechanisms in relation to their ability to provide for different requirements and levels of protection.

Research questions:

-What values are considered important to justify protection?
-What other factors relate to implementation of statutory protection of a specified area (for example, the level of protection required, support of organisations etc)?
-To what extent do the mechanisms contained within the proposed process cover the various values
-What impediments to protection are afforded by the mechanisms thereby affecting their implementation?
-What are the roles of government organisations in the implementation of protection, and more particularly, how do their guidelines and policies affect use of the proposed process.
-How is the appropriateness of any particular mechanism to an area defined?

Objective three:

To develop a proposed process to determine the suitability of various mechanisms to protect specified areas of New Zealand's coastal and marine environment.

Research questions:

-Who are the potential users of the planning process?
-What planning processes may be appropriate for comparing potential mechanisms?
-How can available statutory mechanisms potentially providing protection best be compared to areas requiring protection?

Objective four:

To test the proposed process's applicability in a real life situation by using two case studies, each representing an area proposed for protection.

Research questions:

-What sites are used for case studies and why?
-Does application of the proposed process distinguish suitable mechanisms for protection

of the area?

-How suitable is the process for identifying where more than one mechanism could be employed to gain the maximum advantages for protection?

-What are the strengths and weaknesses of the proposed process?

1.4 METHODOLOGICAL APPROACH:

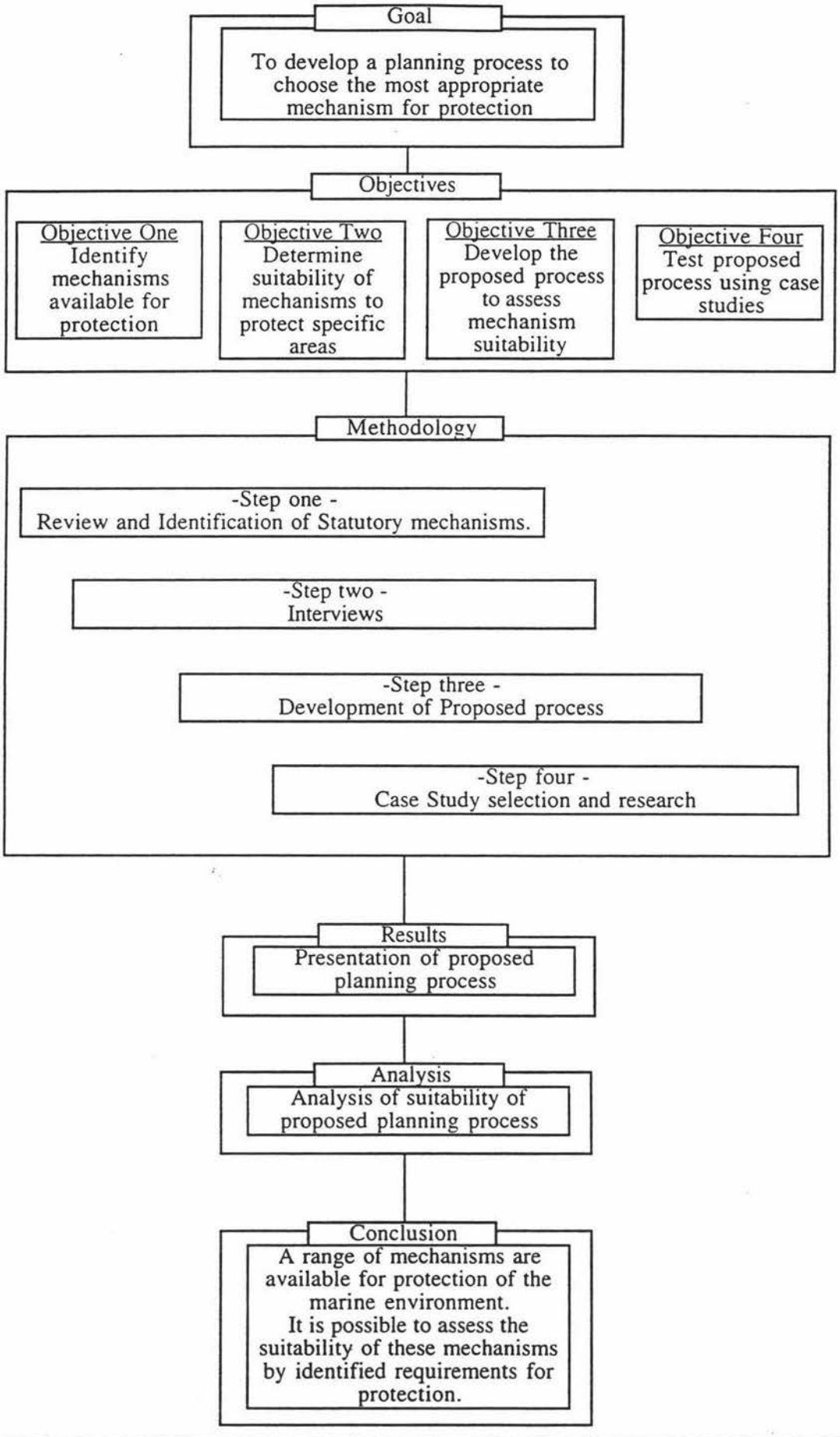
The approach to the research undertaken consisted of four steps, each comprising one or more substeps. Figure 1 provides an outline of the research design for this thesis. It is the intent of this section to explain, in greater detail, the approach and method of research for this thesis.

1.4.1 LITERATURE REVIEW - REVIEW AND IDENTIFICATION OF STATUTORY MECHANISMS

First, a literature review was undertaken to discover the reasons for protection of any specified area. This led to the gathering of criteria developed by different individuals and organisations which comprised potential reasons for protection of an area. The literature review identified mechanisms applicable to protection of the marine environment which were most likely to be used and therefore included in the proposed process. A review of literature describing problems with implementation of statutory forms of protection assisted in developing a list of factors requiring consideration prior to implementation. This enabled analysis of the potential for mechanisms to cover all values within the marine environment which may require protection.

Examples of factors assessed for each legislative mechanism include: the purpose for which protection was to be provided; any criterion for identification of the type of areas to be protected by that mechanism; the level of protection afforded and the degree of enforcement available for the mechanism. Also determined was the consent required prior to implementation and the likelihood of success at implementation of each mechanism. The purpose of each mechanism was studied in detail and compared with potential reasons an area might be protected. The purpose of each statutory mechanism analysed was considered to be the most important factor identified. This determined the overriding applicability of any statutory mechanism for protection of any specified location. If the purpose of protection as specified in the statutory mechanism is not compatible with values contained within the area proposed, then the mechanism would not be suitable.

Figure 1 - Research Design



1.4.2 INTERVIEWS

Interviews were undertaken during two periods of development of the thesis. First, while analysing mechanisms available for protection, staff from the Department of Conservation (Paul Irving), Auckland Regional Council (Louise Gobby), and Ministry of Agriculture and Fisheries (Bob Drey, Richard Farnselow) were interviewed. This assisted in obtaining an understanding of the various mechanisms for which they were responsible. Interviews also provided an understanding of the role of various organisations in relation to the implementation of protection mechanisms. Interviews were also useful in obtaining insights on how staff within an organisation perceived the purpose of other organisations in implementing marine protection.

The interviews were informal in nature. Questions were specifically designed for each interview. In addition, staff members from various other organisations (eg. Royal Forest and Bird Protection Society) were interviewed by telephone to seek relevant information required whilst selecting and analysing the mechanisms.

The second set of interviews undertaken concerned those involved with the case studies. Staff from organisations involved with the process of implementation of statutory mechanisms proposed for the two field areas were interviewed to obtain an understanding of the process that occurred. In relation to Pollen Island, representatives from the following organisations were interviewed. The Royal Forest and Bird Protection Society (Peter Maddison), Department of Conservation (Paul Irving), Ministry of Agriculture and Fisheries (Bob Drey), Auckland Regional Council (Chris Randall), and Ports of Auckland Ltd (Geoff Higgins). Interviewees for the case study centred on the Whanganui Inlet included: Department of Conservation (Nelson - Rob Davidson, Takaka - Kaye Starke), Ministry of Agriculture and Fisheries (Gerry Rushton), Tasman District Council (Neil Jackson), Golden Bay residential advisory committee (Ken King (co-ordinator), Bob Butts (commercial fishermen), Andy Clark (environmentalists), Bill Climo (recreational fishers), Jock Lill (chairman of the Collingwood Community Board with an interest in tourism), Alan Lowen (farmers), Joyce Henderson (to act as a neutral), and John Mitchell (representing Maori interests). An objector to the marine reserve and wildlife management reserve, B. Ferguson was also interviewed. These interviews provided an in-depth understanding of the issues involved in relation to the area proposed for protection, the process undertaken, how the mechanisms were chosen, and the perceived acceptability of both the process undertaken and the outcome.

1.4.3 DEVELOPMENT OF THE PROPOSED PROCESS

The third stage of the thesis involved development of a proposed process to provide a framework for the protection of areas of the marine environment. The proposed process consists of four main stages, goal identification, area selection, mechanism selection, and implementation. Of these fundamental stages, only area selection and mechanism selection are presented in detail. This conforms with the intent of the thesis, that of identifying appropriate mechanisms to protect selected areas. In certain situations, only one of the two stages, area selection and mechanism selection will be required. In these situations, it is possible to use only that stage which is required. Instances where this could occur include: where a location has been recognised as being in need of protection and all that remains is to isolate those mechanisms of potential use. Another example includes a situation where a particular mechanism has been decided on and all that remains is to select an appropriate area. The proposed process is designed to be used only as a guideline, not to provide a hard and fast solution to the implementation of protection. Often more information will need to be sought than that required within the proposed process.

This proposed framework was developed after the comparison of planning theories. The broad framework incorporating the proposed process is strategic in approach. Rational comprehensive planning is used within individual stages of the overall framework, those being area selection and mechanism selection.

1.4.4 CASE STUDY SELECTION AND RESEARCH

Two case studies were used to test the applicability of the proposed process developed in the main body of the thesis to a real life situation. This comprises the fourth and final section of the thesis.

The foreshore of Pollen Island, proposed and soon to be gazetted marine reserve within Auckland's Waitemata Harbour was chosen as one of the case studies. This area was chosen because it contains high wildlife values within a densely populated region. The area is also occasionally used for fishing and is adjacent to a potential port development site on Pollen Island. The application for a marine reserve, lodged with the Department of Conservation in 1989 has just been concluded with the approval by the Minister of Conservation in July 1995. The Department of Conservation is currently (October, 1995) working toward implementation of notice in the *Gazette*. The time delay was largely due to the complexity of the issues involved contributing toward a lack of the required consent from other affected agencies. No consultation occurred between the Royal Forest

and Bird Protection Society and the Department of Conservation to examine other potentially useful mechanisms for protection, although the Royal Forest and Bird Protection Society considered alternative options (Peter Maddison, pers. comm., 1995). It is the intent of this study to identify whether other mechanisms may have been useful in this situation.

The second case study, Whanganui Inlet, an estuary on the North-West of New Zealand's South Island, was gazetted a marine reserve and wildlife management refuge in 1994. Like Pollen Island, the area was chosen for the range of values within the area. High ecological values were identified as needing protection (Davidson, 1990; Eldon and Ward, 1991). However, the area was also a traditional site of recreational fishing. Unlike Pollen Island, the applications for a marine reserve and wildlife management reserve occurred after an extensive consultation phase between the Department of Conservation (the proponent) and local groups. The Department of Conservation also undertook extensive research into the viability of many mechanisms (including those managed by other government departments) to assess the most suitable mechanism for protection of the area. Two mechanisms were considered appropriate, the combination providing a compromise accepted by all parties thereby minimising opposition to the applications.

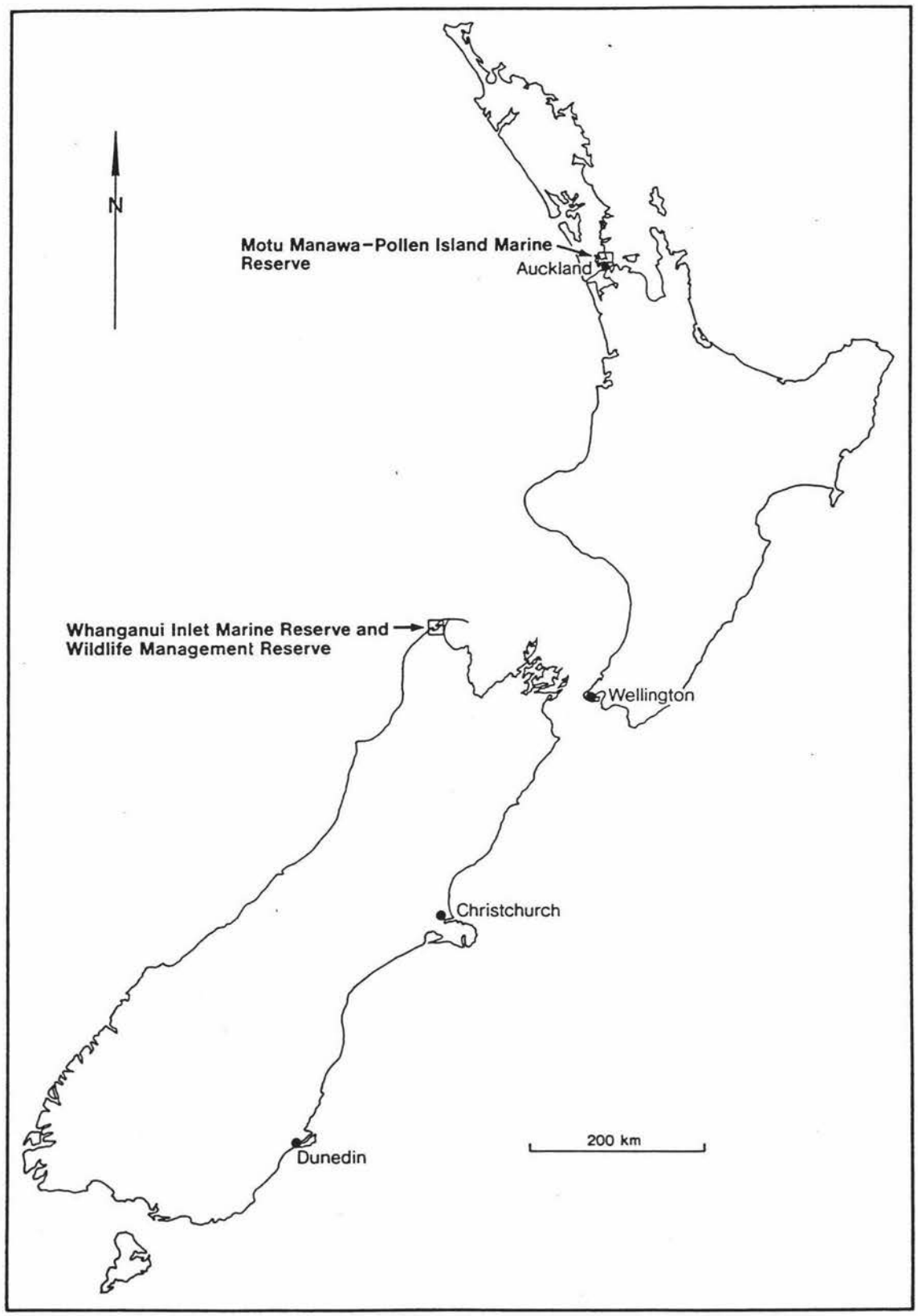
The two case studies were chosen for their range of values and issues which could then be compared to the purpose and criteria contained within each statutory mechanism. Both areas lie within the coastal marine area, one is an estuary while the other lies between high and low water mark within a large harbour. Each area was proposed for protection, both were considered as potential marine reserves, and one was also considered as a potential wildlife management reserve.

1.5 THESIS OUTLINE:

Chapter One provides the context of the study, affording a rationale for the research carried out in the course of this thesis. Aims and objectives are presented along with the methodological approach to the study and an outline of the chapters.

Chapter Two presents an analysis of selected mechanisms available to protect New Zealand's marine environment. Firstly, an outline of mechanisms selected for analysis is provided, along with a description of the organisations responsible for such mechanisms. This precedes the presentation of guidelines, developed to assess the requirements of any area proposed for protection. These are then used to analyse

Figure 2 - Location Map of case study sites



selected mechanisms, in relation to their suitability to provide protection in different circumstances. Guidelines include the legislative boundary the mechanism provides protection to, the purpose and criteria provided by the mechanism, the level of protection potentially afforded, organisation(s) responsible for the mechanism, consent required prior to implementation of the mechanism, and the degree of enforcement provided by the mechanism. An outline of criteria, or values developed to indicate requirements of marine protection is provided and used to assess the ability of legislative mechanisms to protect areas identified as being important for those values identified by people working in the field.

A planning process designed specifically to assess the most appropriate mechanism(s) for protection of a proposed marine protected area is developed in Chapter Three. The wider context within which this process lies is also presented, namely the identification of areas in need of protection and factors influencing the outcome of areas needing protection such as community and political involvement and support. Identification of areas which may require protection and the assessment of the need for specific areas to be protected is not the aim of this thesis and is therefore kept to a minimum. Presentation of the framework places the process for the identification of statutory mechanisms in context. The complete process is based on a strategic model, incorporating integrative planning for the detailed section on identification of appropriate mechanisms.

Chapters Four and Five present the two case studies, of Pollen Island and the Whanganui Inlet proposed for protection. This is designed to 'test' the applicability of the process developed in Chapter Three to determine its suitability in a practical situation. Potential defects of the process may come to light with its application to practical examples.

Major findings of the thesis are drawn together in Chapter Six. Aims and objectives are revisited with an outline of benefits of the proposed planning process along with limitations on its use as demonstrated from the two case studies. Suggestions are made for potential use of the proposed process in particular situations. The applicability of the proposed process for governmental and non-governmental groups is also considered in light of requirements to successfully use the process. Limitations of the process developed are acknowledged with guidelines on how these may be minimised. The chapter concludes with comments on the potential adaptation and application of the process.

CHAPTER TWO

ANALYSIS OF STATUTORY MECHANISMS

Chapter Two provides an analysis of statutory mechanisms available to protect New Zealand's marine environment. Mechanisms are analysed for their potential use to protect areas with different requirements. To achieve this, a set of guidelines are developed in this chapter which are used to analyse the selected mechanisms. These guidelines represent the range of issues important to any area requiring protection. Guidelines include the ability of a mechanism to protect any specified locality by area, the ability to provide for different criteria identified as contributing to the need for protection of an area; the varying levels of protection provided by the different mechanisms; the degree of consent required; and the ease of implementation as determined by historical success and any other factors specified in the legislation. The chapter concludes with an assessment of the potential of different mechanisms to provide for various requirements of protection.

2.1 SELECTION OF STATUTORY MECHANISMS AVAILABLE FOR PROTECTION

Identification and selection of statutory mechanisms for analysis was approached through consideration of their potential use. Criteria to identify statutory mechanisms for analysis included: the area each covered, the user friendly nature of the mechanism, historical use of the mechanism, popularity of the mechanism (whether the mechanism is currently in favour with the public and politicians), and those which include provisions to protect a reasonably wide range of values.

In relation to the first criterion, area, mechanisms were selected on the basis of their providing protection below mean high water springs (MHWS). This boundary includes those mechanisms covering the foreshore, territorial sea, and/or exclusive economic zone or part thereof.

The second measure, that of user-friendliness, was used to select mechanisms containing reasonably straightforward processes, which can be interpreted and followed by the user with minimum difficulty. Organisations are open to being lobbied for use of statutory

mechanisms and so mechanisms administered by organisations were not eliminated.

Mechanisms which have not been used in the past and are unlikely to be used in the future for various reasons were, however eliminated in the selection process. One example is the use of Fisheries Management Plans as a mechanism for protection. Although this is a mechanism contained within the Fisheries Act 1983 and theoretically available for protection, the process of implementing these plans has been fraught with difficulty. An example is the Proposed Auckland Fishery Management Plan, 1989, which, although produced to this stage was never implemented. A major reason for this is the incompatibility of Fishery Management Plans with the Quota Management System, introduced in 1986 through an amendment to the Fisheries Act 1983. The Fisheries Bill, currently before parliament will remove Fishery Management Plans from the statutes.

Mechanisms whose use is feasible, but which have not been used recently have not been excluded through the selection procedure. An example being s8, s22, and s27 regulations, provided for within the Territorial Sea and Exclusive Economic Zone Act 1977. Although these mechanisms have not been used to provide marine protection recently, the option is still available and so the mechanisms are included.

The ability of each statutory mechanism to provide for criteria, or values in an area which are the primary reasons for protection comprise the fourth criterion for mechanism selection. Those statutory mechanisms designed to protect only a specific value or individual area, which in effect restricts use of the mechanism to general areas were excluded. An example of this is the Sugar Loaf Islands Marine Protected Area Act 1991, designed to protect the Sugar Loaf Islands.

2.2 MECHANISMS SELECTED FOR ANALYSIS

The mechanisms selected for analysis are presented in Table 1. Each mechanism is presented in conjunction with the Act in which it is contained along with the organisation responsible for its administration.

TABLE 1: ACTS AND MECHANISMS COVERED IN THIS THESIS AND THE ORGANISATION RESPONSIBLE FOR THEIR ADMINISTRATION

Act and Mechanisms	Organisation Responsible
Marine Reserves Act 1971	Department of Conservation
Fisheries Act 1983 -Taiapure -Mataitai reserves -Closed seasons (s85) -Quota management system -Total allowable catch -Regulations (s89) -Controlled fisheries	Ministry of Agriculture and Fisheries (now Ministry of Fisheries)
Territorial Sea and Exclusive Economic Zone Act 1977 -s8 Regulations -s22 Regulations -s27 Regulations	Ministry of External Relations and Trade
Resource Management Act 1991 -NZ Coastal Policy Statement -Regional Coastal Plan	Department of Conservation Regional Council
Wildlife Act 1953 -Wildlife Refuge -Wildlife Sanctuary -Wildlife Management reserve	Department of Conservation
Marine Mammals Protection Act 1978 -Marine Mammal Sanctuary	Department of Conservation
Historic Places Act 1993 -Historic Places Register -Heritage Covenant	NZ Historic Places Trust
Reserves Act 1977 -Recreation reserve -Historic reserve -Scenic reserve -Nature reserve -Scientific reserve -Government purpose reserve -Local purpose reserve -NZ (National) reserve	Department of Conservation
Conservation Act 1987 -Conservation Area -Conservation Park -Wilderness Area -Ecological Area -Sanctuary Area	Department of Conservation

Act and Mechanisms	Organisation Responsible
National Parks Act 1980 -National Park -Specially Protected Area -Wilderness Area -Amenity Area	Department of Conservation

*Mechanisms are indented after the Act's title.

2.3 INSTITUTIONAL ARRANGEMENTS

Organisations, such as the Ministry of Fisheries, Department of Conservation and regional councils, are primarily responsible for the administration of statutory mechanisms providing protection of New Zealand's marine environment. Gardner identified an institutional arrangement as; a jurisdictional, organisational, or administrative system which exists to accommodate the policy process, producing policies. These policies reflect the institution's stated functions and its mandate, and consider those affected by implementation of the policy, both actually and potentially (Gardner, 1984, in McAuley, 1993, 43). Both the administrative structure and legal provisions comprising the institutional arrangement are equally important. "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 Gardner, 1984, 127). Interpretation and therefore use for a specific purpose of any single mechanism will reflect the ideology and mandate of the organisation.

> Although the mission of an agency as defined by the legislature will dominate the mandate portion of policy, most authorising statutes are too general to provide "clear and unequivocal mandates (Wengert, 1971, 445, in Gardner, 1984, 126).

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, in Gardner, 1984, 126).

Organisations responsible for the management and implementation of any specific mechanism included in the proposed process are described here to provide a basis for consideration of their impact on the potential use of any particular mechanism. Those

organisations which play a major role in protection, management and use of the coastal environment around New Zealand include the Department of Conservation, Ministry of Agriculture and Fisheries (now Ministry of Fisheries) and local government. The Department of Conservation has a specific conservation focus, while the Ministry of Fisheries responsibility lies with fisheries management. Desired outcomes of the Ministry of Fisheries (ex. Ministry of Agriculture and Fisheries) include:

> A productive and sustainable use of the fisheries resource, which preserves the quality of the marine environment and provides non-commercial access for all New Zealanders. ... A confident and profitable fishing industry [and] enforcement to ensure improved compliance with fisheries legislation ... Implementation of the Crown's obligations to the Maori as defined by the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (Ministry of Agriculture and Fisheries, 1994).

Local governments have a more regulatory function of preventing adverse effects on the environment. The Ministry for the Environment, while not primarily responsible for any mechanism selected for analysis in this thesis, has an oversight for administering the Resource Management Act 1991 and advising central government on environmental policy. The roles of different organisations as specified above are quite distinct, requiring clear definitions of the boundaries of each to minimise conflict.

The public has a major role through input at the policy formation stage under various statutory requirements of these agencies. The policies derived from these institutions reflect their purpose and hence goals and objectives. Interaction between the organisations who have overlapping jurisdiction, particularly at a pre-statutory phase can help to clarify positions and minimise conflict.

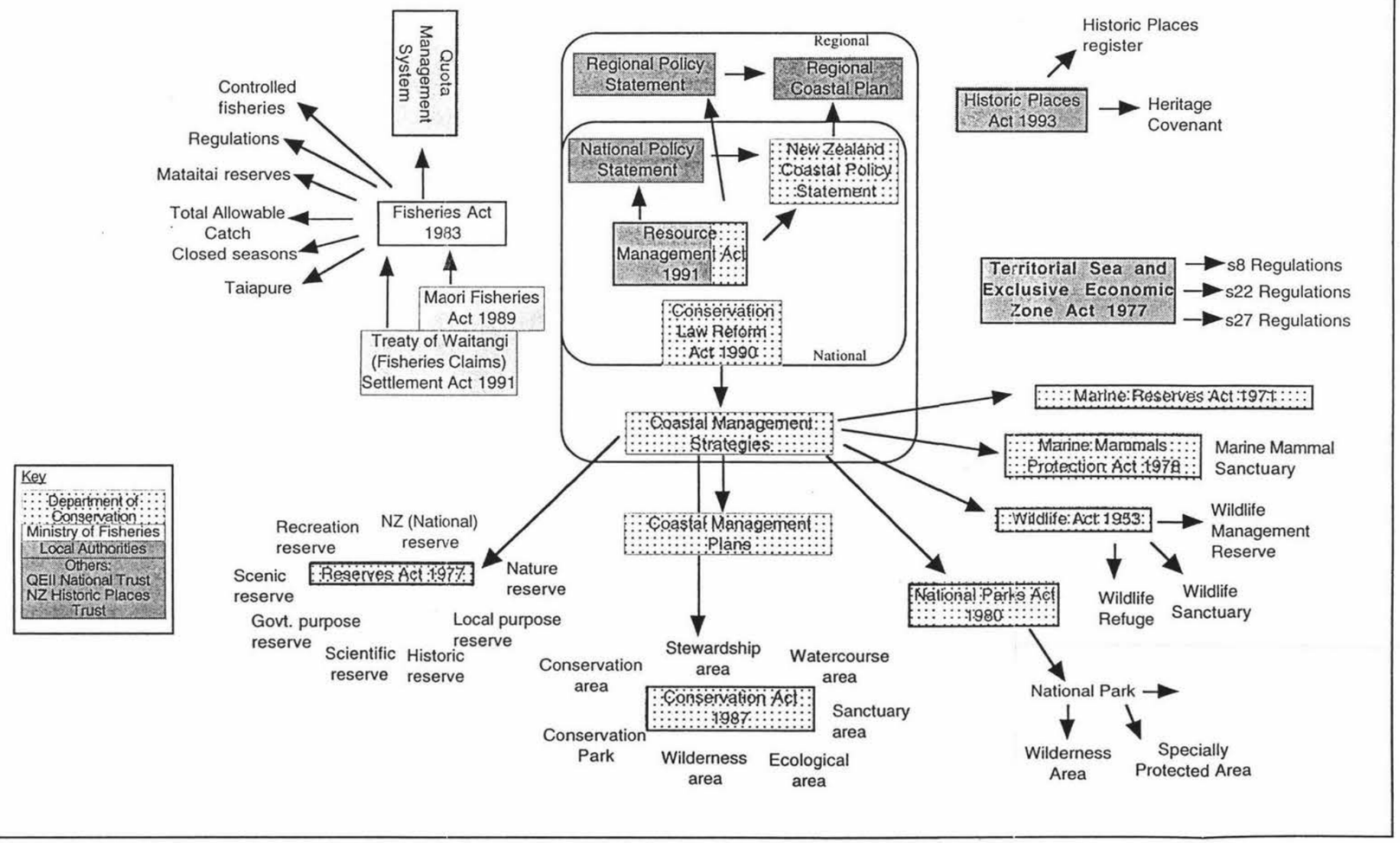
The context within which the mechanisms operate also affects their use. Context includes different perspectives (social, biophysical, economic, political, legal, institutional and technological), temporal scales (past, present and future) and spatial levels (local, regional, national, international) (Mitchell, 1989). Policies, interactions and level of integration (both formal and informal), the political environment, the interests of the public, and the specific process requirements contained within any Act all influence a mechanism's potential to provide protection in any given situation. Information on these factors is applied within the proposed process presented in Chapter Three to determine suitable mechanisms.

The relationship between different statutory mechanisms within various legislation is analysed in this section. This is approached by first examining the level at which the mechanism operates, i.e., national, regional or on a local case by case basis. Following this, an attempt is made to examine how and if these various mechanisms are related. Relationships may include Acts from which the mechanism operates, organisations responsible for the mechanisms, and instances where classification of protection status may be transferred from one mechanism to another. An example is provisions to protect previously defined conservation areas as reserves through the Reserves Act 1977. Due to the complexity of these issues only a general examination is provided, sufficient for enhanced use of the proposed planning process presented in Chapter Three.

Figure 3 illustrates the relationship between those mechanisms included in the proposed process. The spatial level at which protection is provided (national, regional, local) by the mechanism is depicted by its closeness to the centre of the circle. Those providing protection on a national scale are located near the centre, while those providing localised protection are located further toward the periphery. Also shown is the relationship between those mechanisms for which different organisations are responsible. Each organisation (e.g., Ministry of Agriculture and Fisheries (now Ministry of Fisheries), Department of Conservation, etc.) is represented by a shade and the mechanism is coloured in the shade of the organisation responsible for it. Some Acts contain mechanisms which are administered by more than one organisation. In these instances, all relevant shades are located at the site on the diagram. An example of this is the Resource Management Act 1991, shaded both for the Department of Conservation and regional councils. Related mechanisms are attached by arrows. Coastal management strategies are intended to provide for the management of mechanisms for which the Department of Conservation is responsible, as represented by arrows. Mechanisms contained within an Act are shown to be related by thick lines. An example is the Fisheries Act 1983 which contains numerous mechanisms available for protection.

The overlap between the organisations often relates to implementation of a mechanism which will have an impact on another organisation. For example, the Marine Reserves Act 1971, which is the responsibility of the Department of Conservation, involves the control of fishing. However, this impinges on the role of the Ministry of Fisheries and so consent from that Ministry is required prior to implementation of any marine reserve.

Figure 3 - Relationship between selected statutory mechanisms and Acts available to protect New Zealand's marine environment



2.4 GUIDELINES FOR ANALYSIS OF STATUTORY MECHANISMS

Implementation of any statutory mechanism to protect New Zealand's marine environment requires first analysing those mechanisms available to ascertain its compatibility with the requirements for protection. Mechanisms selected earlier in this chapter are analysed here in relation to specifications or guidelines identified as contributing to the likely success for implementation of any statutory mechanism for a specific location. Choosing between available mechanisms to protect any designated area of New Zealand's marine environment requires first an analysis of those available in relation to criteria or guidelines identified as being the major components of protection. Such guidelines include the area able to be protected by the mechanism, the purpose and values of the area to be protected, the level of protection required, and enforcement needed to support such protection. These are all internal issues affecting the relevance of a proposed mechanism. External issues affecting usefulness of a mechanism include the perceived need for protection, organisational policies, organisations involved, degree of support (local, political, organisational) involved with each case and their relationship to use of the mechanism on the proposed area. Guidelines considered important are presented below with reasons for their identification.

2.4.1 AREA

Different mechanisms cover different areas of New Zealand's marine environment. Ascertaining statutory mechanisms in relation to the area they cover is important to provide the decision maker with a range of suitable mechanisms.

2.4.2 PURPOSE AND CRITERIA

Different locations will be selected for protection for various reasons. Likewise the values within these areas will vary. Analysis of the mechanisms in relation to which values may be protected by use of different mechanisms in the various areas is an important step to identifying those most applicable in various situations.

2.4.3 LEVEL OF PROTECTION

The level of protection provided by statutory mechanisms may vary, both in the range available within a mechanism and in relation to differences between individual mechanisms. Assessment of mechanisms to isolate the various levels of protection available is a necessary step to finding that most appropriate to protect values contained within an area isolated for protection.

2.4.4 CONSENT REQUIRED

The level of support provided to a proposal for protection is an important component of successful implementation. In particular, the statutory requirements for support contained within the selected mechanism could alter the overall success or failure of implementation. Although general public support or opposition may have a major influence on the implementation of protection, it is the statutory requirements that ultimately determine the success or failure of implementation of any individual mechanism. Identification of those individuals and groups from whom consent is required prior to implementation of a mechanism will assist in determining its suitability in any given situation.

2.4.5 POTENTIAL EFFECTIVENESS OF IMPLEMENTATION

The effectiveness of any statutory mechanism at protecting any values will be affected in part by the degree of enforcement provided by that mechanism. Different levels of enforcement will be required in different situations, but often limited provisions of enforcement will lead to a disregard of any rules or regulations.

2.4.6 LIKELIHOOD OF SUCCESS

Ease of implementation involves factors influencing the likely success or otherwise of the mechanisms. These factors may be inherent within the legislation or associated with the mechanism. Mechanisms which have in the past proven 'blockage' points prior to implementation need to be considered carefully before selection. If any of the 'blockages' can be avoided by reason of the area selected or the purpose of the area, the mechanism may be successfully used. Analysis of the mechanisms selected for any potential 'blockages' limits major potential problems.

Each of the above guidelines are used to analyse the selected mechanisms in the next section. The range of provisions potentially provided for by the mechanisms will be assessed in relation to each guideline presented above. This information will provide a basis on which to choose appropriate mechanisms for protection of any selected area within a proposed process developed in Chapter Three.

2.5 ANALYSIS OF MECHANISMS WITH RESPECT TO GUIDELINES

2.5.1 MECHANISMS COVERAGE BY AREA

Figure 4 displays the mechanisms covered in the proposed process presented in Chapter Three. The mechanisms are presented to enable easy identification of those covering any

specified location. As displayed in Figure 4, many more mechanisms are available to protect the foreshore than the territorial sea (mean low water mark - 12 miles seaward) and even fewer are available to protect the exclusive economic zone (12 - 200 miles seaward). Mechanisms providing for protection of the marine environment range in focus and coverage. Those available for protection of the exclusive economic zone are limited to those contained within several Acts, two of which are administered by the Ministry of Agriculture and Fisheries (now Ministry of Fisheries), and the other two which are administered by the Department of Conservation. This reduces the likelihood of successful implementation for protection applied for by individuals or small organisations.

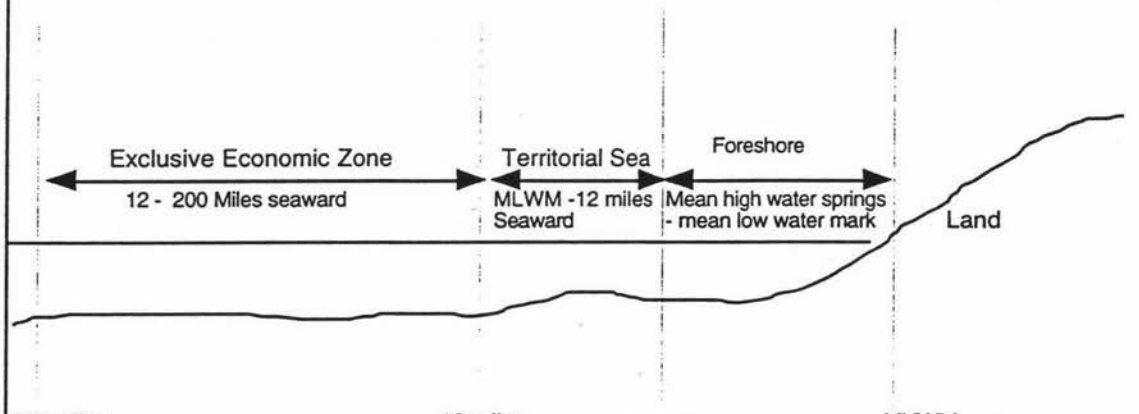
The marine environment is divided into three areas for the purpose of this study. These are: the exclusive economic zone, territorial sea and foreshore (see glossary for a definition of these terms).

The exclusive economic zone may be protected by use of s22 and s27 of the Territorial Sea and Exclusive Economic Zone Act 1977. The Act is administered by the Ministry of Agriculture and Fisheries (now Ministry of Fisheries) and is generally used to regulate fishing, although "s27 provides for general regulations in the zone, including measures for the protection and preservation of the marine environment." This section could be an appropriate mechanism for protecting sea-birds and fish populations threatened by fishing and other activities at sea and off shore areas, from 12 to 200 miles offshore although it has not as yet been used for this purpose" (Royal Forest and Bird Protection Society of New Zealand, 1992, 101). Mechanisms in the Fisheries Act 1983 with the potential to provide protection in this area are mataitai reserves, s89 regulations, closed seasons, controlled fisheries, the quota management system and a total allowable catch.[1] The Marine Mammals Protection Act 1978 also provides for protection through marine mammal sanctuaries which may extend to the outer limits of the exclusive economic zone as does the Marine Reserves Act 1971. Also available to protect New Zealand's sea are mechanisms contained in the Wildlife Act, notably wildlife sanctuary, wildlife refuge, and wildlife management reserve.

1

Mataitai reserves, while representing a mechanism to provide protection cannot yet be created until policy development is completed by the Ministry of Agriculture and Fisheries. This mechanism has been continued into the current Fisheries Bill (1995).

Figure 4 - Statutory mechanisms covering the coastal environment



RMA 1991 - NZCPS
RMA 1991 -RCP

Territorial Sea and Exclusive Economic Zone Act 1977
s22 Regulations
s27 Regulations

Territorial Sea and EEZ Act 1977
s8 Regulations

Fisheries Act 1983
Taiapure

Conservation Act 1987
-Conservation Area
-Conservation Park
-Wilderness Area
-Ecological Area
-Sanctuary Area
-Watercourse Area
-Stewardship Area

Reserves Act 1977
-Recreation Reserve
-Historic Reserve
-Scenic Reserve
-Nature Reserve
-Scientific Reserve
-Govt. Purpose Reserve
-Local Purpose Reserve
-NZ (National) Reserve

National Parks Act 1980 - National Park
-Specially Protected Area
-Wilderness Area
-Amenity Area

Marine Reserves Act 1971

200 Miles Seaward - Internal Waters

Fisheries Act 1983 - Mataitai Reserves
Fisheries Act 1983 - s89 Regulations
Fisheries Act 1983 - Controlled fisheries
Fisheries Act 1983 - Quota management system
Fisheries Act 1983 - s85 Closed Seasons
Fisheries Act 1983 - Total allowable catch

Historic Places Act 1993 - Historic Places Register
- Heritage Covenant

Marine Mammals Protection Act 1978 - Marine Mammal Sancturary

Wildlife Act 1953 -Wildlife Refuge
- Wildlife Sanctuary
- Wildlife Management Reserve

The territorial sea (mean low water mark - 12 miles seaward) is protected by a greater number and range of mechanisms. These include the Regional Coastal Plan and New Zealand Coastal Policy Statement which are mandatory plans prepared under the Resource Management Act 1991. Specific mechanisms designed for protection include s8 regulations within the Territorial Sea and Exclusive Economic Zone Act, marine reserves by use of the Marine Reserves Act 1971, taiapure and all mechanisms specified above which are contained within the Fisheries Act 1983, wildlife refuges, wildlife sanctuaries and wildlife management reserves contained within the Wildlife Act 1953, Marine mammal sanctuaries contained in the Marine Mammals Protection Act 1978, and historic places and the historic register, provided in the Historic Places Act 1993. These mechanisms represent a range of methods to protect New Zealand's territorial sea which are included in the proposed process presented in Chapter Three.

The foreshore may be protected by a large number of mechanisms. These include those displayed in Figure 3, which includes the Conservation Act 1987, Fisheries Act 1983, Historic Places Act 1993, Marine Mammals Protection Act 1978, Marine Reserves Act 1971, National Parks Act 1980, Reserves Act 1977, Resource Management Act 1991, and Wildlife Act 1953. In specific instances where land has been encroached upon by the sea, protection may be conferred by use of open space covenants contained within the Queen Elizabeth the Second Trust Act 1977. Reclaimed land from the coastal marine area, included in any district may be protected by way of heritage orders, a provision to give effect to a requirement made by a heritage protection authority within a district plan prepared under the Resource Management Act 1991. Open space covenants and heritage orders are not analysed further in this thesis due to their restricted coverage of the marine environment.

2.5.2 ABILITY OF MECHANISMS TO PROTECT VARIOUS VALUES

Protection of any specified area relies on the use of an appropriate mechanism to provide for the purpose and values for which protection is being sought. To examine the ability of the selected mechanisms to provide protection of values contained within any area specified for protection, it is first necessary to identify generally for what reasons protection is being sought. Although it is impossible to specifically define all values contributing to the need for protection, most may be grouped into three broad classes. These comprise the ecological, social-cultural, and economic based classes. These classes are very general, some criteria fitting into more than one class. An example of this is the criterion of national importance. The subject may be of national importance for ecological, social-cultural, and/or economic reasons. Also, criterion within these classes will often be inter-related, for example a nationally important habitat of

ecological importance replenishing the stock which is also of economic significance. This section first identifies the criteria developed by those working in the field of marine protection to identify likely causes for protection. The mechanisms are then analysed in relation to these criteria. Tables and graphs display the number of mechanisms providing protection for different criteria within different boundaries of New Zealand's coastal environment. The range of criteria able to be protected by use of the statutory mechanisms chosen may be determined from analysis of these tables.

A range of criteria have been developed by people working in the field (including organisations promoting protection) to assess areas in relation to their 'typology' and importance for protection. The criteria for identification of the need to protect any area often reflect where they were developed. Those developed by staff in organisations reflect the purpose and goals of the organisation.

> Criteria for identifying and selecting Marine Protected Areas (MPA's) depend principally on the objectives of the conservation program, and on each area's attributes (Grange, 1990, 9).

Criteria presented below represent a mix of those identified by a range of authors. This thesis is not intended to identify areas to suit the requirements of any organisational policies and so a range of criteria are provided. Also included with the criteria developed to potentially identify an area in need of protection (presented in the tables below) are criteria contained within statutory mechanisms but not included in the literature. Many of the criteria contained within New Zealand statutory mechanisms are expressed using general terminology which may be interpreted in a variety of ways. An example of a broad term contained within a statutory mechanism is the term "marine environment", specified in the Territorial Sea and Exclusive Economic Zone Act 1977. "Marine environment" may in practice include theoretical criteria of ecological importance, in particular ecosystem processes, ecological habitat integrity, productivity, species maintenance, genetic diversity and preservation, ecologically important species, resilience/vulnerability, and stock replenishment. Broad terms contained within mechanisms provide the case for organisations to develop and use their own criteria to represent their policies.

Criteria presented in the tables below are grouped into ecological, social-cultural and economic classes. These classes represent the broader purpose for which protection might be provided, and hence criteria contained within each class may be used to identify an area for protection as being within that class. Ecological criteria incorporate

factors in the biophysical environment, social-cultural criteria include those having an impact on people and economic criteria relate to economic impacts of protection. Emphasis placed on the importance of each individual criteria from whatever group is determined by the institution utilising them to provide protection for a specific mechanism. Their use by organisations with differing objectives will reflect the varying importance of the different criteria in relation to the purpose of the organisation and the legislative requirements being fulfilled. The list is not exclusive, nor does it indicate the relative importance of the differing criteria, but it is generally comprehensive and covers most aspects which could and should be considered when first assessing an area. Tables 2, 3, and 4 present criteria developed by those working in the field of marine protection to identify sites containing values of importance to protect. Also included in the tables are criteria specified in statutory mechanisms providing marine protection.

TABLE 2: ECOLOGICAL CRITERIA

1. Distinctive and Unusual Landform
2. Unique Area
3. Area significance
4. Representative Area
5. Typicalness
6. Character
7. Marine Environment
8. Ecosystem processes, structure and habit features
9. Ecological habitat integrity
10. Productivity
11. Sustainability
12. Species maintenance
13. Genetic diversity preservation
14. Rarity
15. Ecologically important species
16. Indigenous Flora and Fauna
17. Wildlife
18. Uniqueness (Species and Species associations)
19. Diversity
20. Dependency
21. Naturalness
22. Resilience / Vulnerability
23. Natural features
24. Corridor potentiality
25. Size
26. Stock Replenishment
27. International Interest
28. National Interest

Refer to Appendix One for further explanation of criteria.

TABLE 3: SOCIAL-CULTURAL CRITERIA

1. Social acceptance
2. Community interest
3. Special interest
4. Other Interest
5. Locality
6. Level of use
7. Need of area for activities
8. Potential activity impacts
9. Adjacent land use
10. Recreation
11. Traditional use and users
12. Traditional Maori Food gathering
13. Traditional Recreational Fishing
14. Culture
15. Maori interest
16. Spiritual values
17. Education.
18. Safety
19. Amenities
20. Aesthetics (Scenic, visual)
21. Beautiful Species
22. Intrinsic value
23. Archaeological - Historical/Heritage
24. Public relations and extension
25. Defence Areas
26. Conflicts of Interest
27. Enjoyment/Inspiration

TABLE 4: ECONOMIC CRITERIA

1. Shipping
2. Commercial Fishery resources.
3. Importance to fisheries:
4. Biological productivity
5. Area importance to species
6. Research opportunity
7. Nature/Degree of threats
8. Suitability for activities
   - Potential value /Alternative use
9. Economic benefits
10. Ecodevelopment
11. Tourism

Criteria used in this chapter are derived from a range of sources including IUCN (International Union for the Conservation of Nature) 1982; Jebson, 1987, Ray, 1976 (as adopted by Concom 1985); and Salm, 1984. In particular, Jebson (1987) drew on a wide range of literature to identify areas in need of marine protection.

Historical protection by use of statutory mechanisms

Creation of legislative mechanisms to protect the marine environment occurs in response to recognised needs. These may be classified as being ecological, social-cultural or economic in origin. Initially, mechanisms available to protect New Zealand's marine environment were designed to provide for values centring around the economic value of fisheries and the scenic value of the foreshore. The Marine Reserves Act 1971, was an exception at that period in time with its focus on preserving areas for scientific purposes. Recently, greater emphasis has been placed on the ecological value of this environment with recognition of the tie between ecological, economic, and sociological values. A change in attitude toward the marine environment and its use and enjoyment has also contributed to an increasing demand for further protection and hence legislation able to provide for the values promoted by these groups.

The question of whether available legislative mechanisms provide for protection of the values important to all of the forementioned groups can be answered by comparing that available within the current legislation to those values presently specified by planners and managers as being important.

The impact of historical protection motives can be clearly seen in the Marine Reserves Act 1971 where "Special purpose scientific reserves were the only kind envisaged" (Ballantine, 1991). "The Marine Reserves Act was written to permit special cases, not compel general action" (Ballantine, 1990). Another example is the Reserves Act 1977, which was designed for protection of aesthetically pleasing areas for the public's enjoyment. Whilst some criteria may be reinterpreted to include other factors (especially in cases where the legislation is very broad), considerable legislation concerning the coastal environment surrounding New Zealand is outdated, particularly with recent and proposed changes (e.g., Resource Management Act 1991, Fisheries Bill 1995 and moves to update the Marine Reserves Act 1971) rectifying the situation.

Often criteria specified in earlier Acts is very broad. More detailed information and less reliance on user interpretation has occurred with the passage of time. This has decreased uncertainty regarding implementation of mechanisms in particular situations, but mechanisms may be less flexible and therefore become outdated more easily. For the purposes of this thesis, older legislation is often more easily applied to protection of specified areas but it is difficult to formally align any specific mechanism with criteria proposed by planners and managers. A similar situation exists in Australia with regard to the broad nature of criteria specified within the legislation.

> Unfortunately the aims or objectives as set out in relevant legislation are usually imprecise so considerable scope is permitted to administering authorities to determine more precise objectives (Tisdell and Broadus, 1988, 13).

However, Smitheram, 1986 notes that "it is unrealistic to expect that sufficient detail can or should be provided in legislation to determine appropriate management in every situation." Palmer notes that, in general:

> the more detail that is included, the more opportunity for dispute exists. The attempt to deal with all problems in advance is often self defeating because not every eventuality can be anticipated (Palmer, 1987, 152).

Older pieces of New Zealand legislation often contain clear aims and objectives, but detailed provision for consideration of criteria (values) is generally lacking. A change has occurred with more recent legislation providing clearer guidelines on objectives and criteria. For example, with respect to providing additional protection through the New Zealand Coastal Policy Statement, objectives provided within the Resource Management Act 1991 gave specific directives for policy formulation.

Planning for protection of any specified marine area is affected then by the degree of detail contained within the statutory mechanism assigned for use. Mechanisms with detailed purposes and criteria may have a decreased capacity to protect a wide range of values, but those containing a wide range of criteria may provide support for protection of a wider range of areas.

Potential of selected mechanisms to protect values identified as being important

New Zealand legislation for protection centres around three focal points, conservation, management and control of effects. Most legislation is predominantly biased toward one of these, associated with the purpose and criteria of each. The criteria contained within each differs, for example criteria to choose whether an area is suitable for a marine reserve (for conservation) differs to that for protection via taiapure (for "better provision for the recognition of Rangatiratanga and of the rights secured in relation to fisheries by Article II of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992" (s54A Fisheries Act 1983). This basically provides for management of the selected area. The Conservation Act 1987, was designed to "promote the conservation of New Zealand's natural and historic resources, and for that purpose to establish a Department of

Conservation. Conservation of fisheries is provided for within the Fisheries Act 1983, which was passed "to consolidate and reform the law relating to the management and conservation of fisheries and fishery resources within New Zealand and New Zealand fishery resources" (Fisheries Act 1983). Each of these legislative provisions deals with "conservation", but each has a different focus. Public input can result in further perspectives on "conservation."

Requirements of other user-groups interests in the proposed area are often considered during the application stage. Thus, the lack of social-cultural criteria within statutory mechanisms will not preclude their consideration as they are often catered for within the application stage (if not before) by way of submissions and objections.

Appendix Two summarises the purpose and criteria contained within each mechanism along with other information including the level of protection provided, legal boundaries of the statutory mechanism, the organisation(s) responsible for implementation and management of the mechanism, groups consent is required from and other relevant information. For this reason the criteria contained within individual mechanisms are not outlined here. A comparison of what issues are covered within the various pieces of legislation and what has been specified in the literature (as presented in Tables 2, 3 and 4) is presented in the following tables.

Tables 5, 6 and 7 contain in the left hand column criteria identified by planners and managers. Each successive row represents a legislative mechanism available for protection. Mechanisms containing criteria identified as contributing to the need for protection are represented by a tick in the appropriate cell. A star represents criteria not specified within the legislation, but which could be interpreted as being related to the specified purpose or a more general aspect of other criteria contained within the mechanism. For example, the term marine environment may include ecological factors. The table provides a useful guide for comparison of the theoretical values contained within the mechanisms, particularly values protection is designed to meet by use of statutory mechanisms. The degree of bias toward any set of values or criteria is also easily seen by analysis of the tables, most mechanisms will have been implemented to provide protection for either ecological, social-cultural or economic reasons. Some mechanisms include a range of criteria in recognition of the relationship between the criteria. An example is the importance of ecological values to the economic impact of a fishery.

Table 5 - Ecological Criteria contained in selected statutory mechanisms

Ecological Criteria	Reserves Act 1977 NZ (National) Reserve	Reserves Act 1977 Local Purpose Reserve	Reserves Act 1977 Government Purpose Reserve	Reserves Act 1977 Scientific Reserve	Reserves Act 1977 Nature Reserve	Reserves Act 1977 Scenic Reserve	Reserves Act 1977 Historic Reserve	Reserves Act 1977 Recreation Reserve	Conservation Act 1987 Sanctuary Area	Conservation Act 1987 Ecological Area	Conservation Act 1987 Wilderness Area	Conservation Act 1987 Conservation Park	Conservation Act 1987 Conservation Area	National Parks Act 1980 Amenity Area	National Parks Act 1980 Wilderness Area	National Parks Act 1980 Specially Protected Area	National Parks Act 1980 National Park	Resource Management Act 1991 Regional Coastal Plan	Resource Management Act 1991 NZ Coastal Policy Statement	Historic Places Act 1993 Heritage Covenant	Historic Places Act 1993 Historic Places Register	Wildlife Act 1953 Wildlife Management Reserve	Wildlife Act 1953 Wildlife Refuge	Wildlife Act 1953 Wildlife Sanctuary	Marine Mammals Protection Act 1978 Marine Mammal Sanctuary	Territorial Sea and EEZ Act 1977 s8 Regulations	Fisheries Act 1983 Taipure (s54A)	Territorial Sea and EEZ Act 1977 s27 Regulations	Territorial Sea and EEZ Act 1977 s22 Regulations	Fisheries Act 1983 Closed Seasons	Fisheries Act 1983 Quota management system	Fisheries Act 1983 Total allowable catch	Fisheries Act 1983 s89 Regulations (except Mataitai reserves)	Fisheries Act 1983 Controlled Fisheries	Fisheries Act 1983 Mataitai Reserves	Marine Reserves Act 1971
	For specified local purposes		Government purposes							Value for which it is held	Ecological purpose	For conservation purposes														Min. of cons. discretion										
Distinctive/Unusual Landform				✓	✪	✓											✪																			✪
Unique Area					✓									✓	✓	✓	✓																			✓
Area Significance																																					✪
Representative Area																																					✪
Typicalness																																					✓
Character																		✓	✓	✓																	
Marine Environment																		✪	✪	✪									✓								✪
Ecosystem processes, structure and habitat features										✓				✓	✓	✓	✓	✪	✪	✪																	✪
Ecological habitat integrity										✓				✪	✪	✪	✪	✪	✪	✪			✪	✪	✪	✪			✪								✪
Productivity																																					
Sustainability					✪									✓	✓			✓/✖			✪	✪	✓	✓													
Species maintenance	✪		✪	✓	✓	✓	✓							✪	✪	✪	✪	✪	✪	✪			✪	✪	✪	✪			✪								✪
Genetic diversity preservation	✪		✪											✪																							
Rarity	✪													✪																							
Ecologically important species	✪													✪																							
Indigenous flora and fauna	✪													✓	✓	✓	✓	✓	✓			✓	✪	✓	✪	✪	✪	✓	✓	✪							
Wildlife										✓	✓	✓											✪														
Unique Species Associations	✓															✓	✓	✓	✓				✪														
Diversity																							✪														
Dependency																							✪														
Naturalness	✓													✓	✓	✪	✪	✪	✪				✪														
Resilience/Vulnerability																							✪														
Natural features	✓													✓	✓	✓	✓	✓	✓	✓/✖	✓	✓	✪		✪	✓	✓	✓	✪								
Coridoor potentiality							✓																✪														
Size																							✪														
Stock replenishment			✪																				✪														
International interest														✓									✪														✓
National interest	✓													✓		✓	✓	✓	✓				✪														✓

Every stewardship area shall be managed so that its natural and historic resources are protected

Regulating fishing and shellfish protection.

Min. may specify

Key

✓ Criteria contributes toward the purpose of the mechanism

✪ Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.

Table 5

Table 6 - Social - Cultural criteria contained within selected statuory mechanisms

Social - Cultural criteria	Reserves Act 1977 NZ (National) Reserve	Reserves Act 1977 Local Purpose Reserve	Reserves Act 1977 Government Purpose Reserve	Reserves Act 1977 Scientific Reserve	Reserves Act 1977 Nature Reserve	Reserves Act 1977 Scenic Reserve	Reserves Act 1977 Historic Reserve	Reserves Act 1977 Recreation Reserve	Conservation Act 1987 Sanctuary Area	Conservation Act 1987 Ecological Area	Conservation Act 1987 Wilderness Area	Conservation Act 1987 Conservation Park	Conservation Act 1987 Conservation Area	National Parks Act 1980 Amenity Area	National Parks Act 1980 Wilderness Area	National Parks Act 1980 Specially Protected Area	National Parks Act 1980 National Park	Resource Management Act 1991 Regional Coastal Plan	Resource Management Act 1991 NZ Coastal Policy Statement	Historic Places Act 1993 Heritage Covenant	Historic Places Act 1993 Historic Places Register	Wildlife Act 1953 Wildlife Management Reserve	Wildlife Act 1953 Wildlife Refuge	Wildlife Act 1953 Wildlife Sanctuary	Marine Mammals Protection Act 1978 Marine Mammal Sanctuary	Territorial Sea and EEZ Act 1977 s8 Regulations	Fisheries Act 1983 Taipure (s54A)	Territorial Sea and EEZ Act 1977 s27 Regulations	Territorial Sea and EEZ Act 1977 s22 Regulations	Fisheries Act 1983 Closed Seasons	Fisheries Act 1983 Quota management system	Fisheries Act 1983 Total allowable catch	Fisheries Act 1983 s89 Regulations (except Mataitai reserves)	Fisheries Act 1983 Controlled Fisheries	Fisheries Act 1983 Mataitai Reserves	Marine Reserves Act 1971
Social acceptance						✪		✪						✪				✪		✪									✪							✪	
Community interest					✓	✓	↘	✪ (Access)						✪				✪			✓								✪							✓
Special interest						✪	↘	✪ (Access)						✪ (Access)				✪ (Access)																		
Other interest							✪ (Access)	✓																					✪					▲		
Locality						✪	✪	✪						✪				✪		✓	✓								✪					▲		✪
Level of use								✓					✪ / ✓	✓			✓			✓	(Access)								✪					▲		
Need of area for activities								✓				✓																	✪							
Potential activity impacts																				✪															
Adjacent land use																																			
Recreation																	✓												✪					▲		
Traditional use and users																													✪					▲		✓
Traditional maori food gathering																													✪					▲		✓
Traditional recreational fishing																													✪					▲		
Culture																					✓	✓	✓	✓					✪					▲		✓
Maori interest																					✓	✓	✓	✓					✪					▲		✓
Spiritual values																					✓	✓	✓	✓					✪					▲		✓
Education	✪																				✓		✪						✪							
Safety																																				
Amenities																							✓	✓					✪							
Aesthetices scenic, visual	✓																				✓								✓							
Species -beautiful -of interest	✓																												✪							
Intrinsic value																																				
Archaeological -Historic/Heritage																					✓	✓	✓	✓	✪	✪	✪	✪		✓						
Public relations and extension																					✪								✪							
Defence areas																																				
Conflicts of interest																													✪							
Enjoyment/Inspiration	✓	✓																												✓						

Also: representative and rare historic places

Maintain where present

Key

- ✓ Criteria contributes toward the purpose of the mechanism
- ✪ Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.

Table 6

Table 7 - Economic criteria contained in selected statutory mechanisms

Economic Criteria	Shipping	Commercial fishery resources	Importance to fisheries	Biological Productivity	Area importance to species	Research opportunity	Nature/Degree of threats	Suitability for activities, Potential value, alternative use	Economic benefits	Ecodevelopment	Tourism
Marine Reserves Act 1971						✓					
Fisheries Act 1983 Mataitai Reserves											
Fisheries Act 1983 Controlled Fisheries		●	●		●				●		
Fisheries Act 1983 s89 Regulations (except Mataitai reserves)		✓	●				●	●	●		
Fisheries Act 1983 Total allowable catch									●		
Fisheries Act 1983 Quota management system											
Fisheries Act 1983 Closed Seasons											
Territorial Sea and EEZ Act 1977 s22 Regulations		✓	●						●		
Territorial Sea and EEZ Act 1977 s27 Regulations						●			✓		
Fisheries Act 1983 Taipure (s54A)		✓	✓								
Territorial Sea and EEZ Act 1977 s8 Regulations						●			✓		
Marine Mammals Protection Act 1978 Marine Mammal Sanctuary											
Wildlife Act 1953 Wildlife Sanctuary											
Wildlife Act 1953 Wildlife Refuge											
Wildlife Act 1953 Wildlife Management Reserve											
Historic Places Act 1993 Historic Places Register						●					
Historic Places Act 1993 Heritage Covenant						●					
Resource Management Act 1991 NZ Coastal Policy Statement								●	●		
Resource Management Act 1991 Regional Coastal Plan									●		
National Parks Act 1980 National Park						✓		Other benefits			
National Parks Act 1980 Specially Protected Area						✓					
National Parks Act 1980 Wilderness Area						✓					
National Parks Act 1980 Amenity Area						✓				●	
Conservation Act 1987 Conservation Area											
Conservation Act 1987 Conservation Park											
Conservation Act 1987 Wilderness Area						●					
Conservation Act 1987 Ecological Area											
Conservation Act 1987 Sanctuary Area						✓			Other purposes		
Reserves Act 1977 Recreation Reserve											
Reserves Act 1977 Historic Reserve											
Reserves Act 1977 Scenic Reserve											
Reserves Act 1977 Nature Reserve						✓					
Reserves Act 1977 Scientific Reserve						✓					
Reserves Act 1977 Government Purpose Reserve											
Reserves Act 1977 Local Purpose Reserve											
Reserves Act 1977 NZ (National) Reserve											

Key

✓ Criteria contributing toward the purpose of the mechanism

● Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.

Table 7

Mechanisms providing for protection of values-by area

Bar-graphs presented below indicate the number of mechanisms containing a reference to criteria identified in Tables 2, 3 and 4. Mechanisms are divided into those whose boundaries include the exclusive economic zone, territorial sea and foreshore. Each graph depicts one class of criteria, Graph 1 contains criteria from Table 2, Graph 2, criteria from Table 3; and Graph 3 covers criteria from Table 4. As Table 3 displayed the mechanisms containing criteria noted as being in the literature, so the number of mechanisms referring to each criteria can be recorded for each area. Appendix Three contains a list of the number of mechanisms referring to each criteria. These were determined through counting the number of ticks from various mechanisms providing protection of each area (exclusive economic zone, territorial sea, and foreshore). Those indirectly referred to and noted by a star in Table 5 are counted separately to those directly referred to and represented by a tick. This information provided the data for the three graphs presented below. It is the intent of this section to analyse the potential of mechanisms covering the three areas, (exclusive economic zone, territorial sea, and foreshore) to provide protection for each value specified by those working in the field as being of importance to protect.

Analysis of graphs and tables

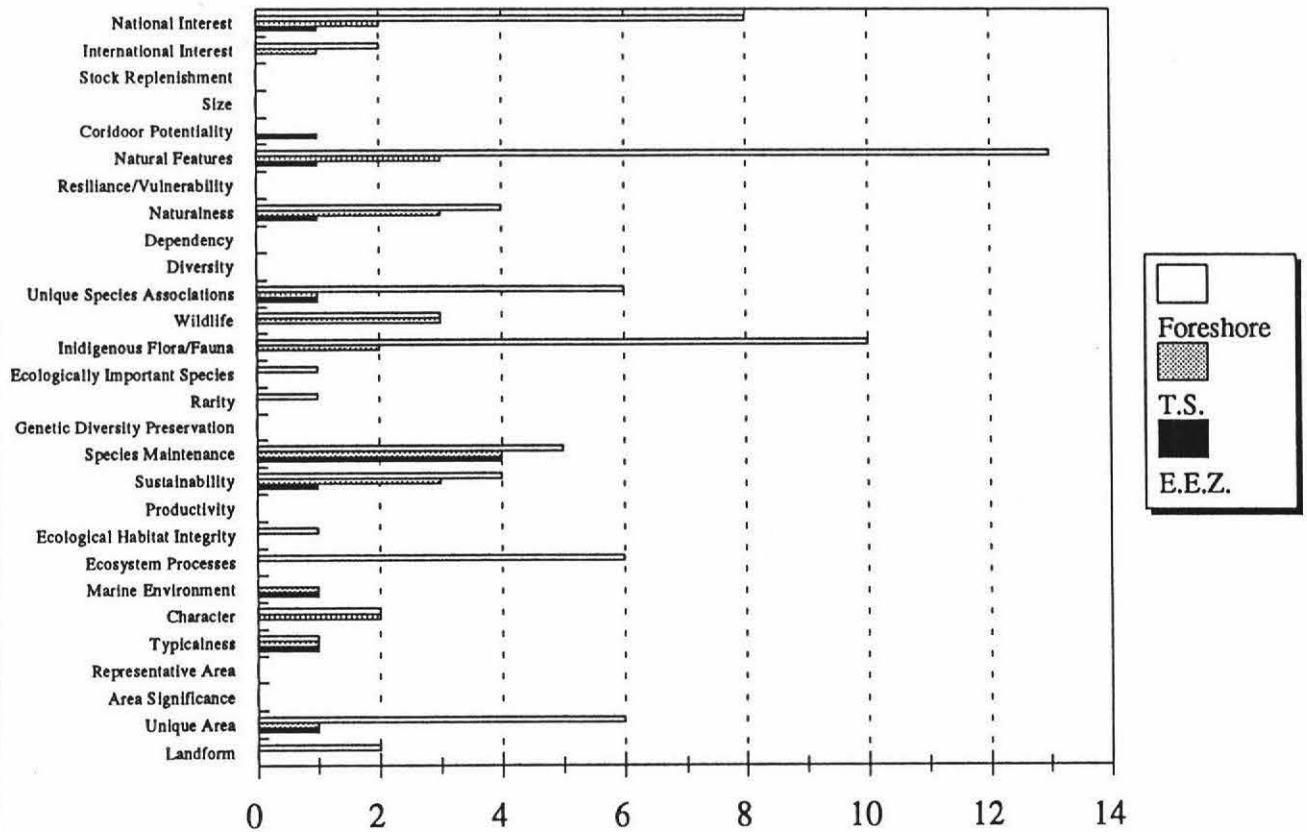
This section provides an analysis of statutory mechanisms in relation to their potential to protect values identified as contributing toward the need for marine protection. Mechanisms designed to provide for specific values or criteria are analysed in accordance with their coverage of the exclusive economic zone, territorial sea, and foreshore.

Social-cultural and ecological criteria selected as being important to identify an area for protection are represented in a large proportion (75%) of the statutory mechanisms analysed. The other 25% of the criteria (identified in the literature as indicating values which contribute to an area's value for protection) are not directly referred to within the purpose of any mechanism contained within the proposed process. This may indicate a lack of available mechanisms to protect certain values. A larger number of statutory mechanisms containing the criteria isolated in Tables 2, 3, and 4 cover the foreshore.

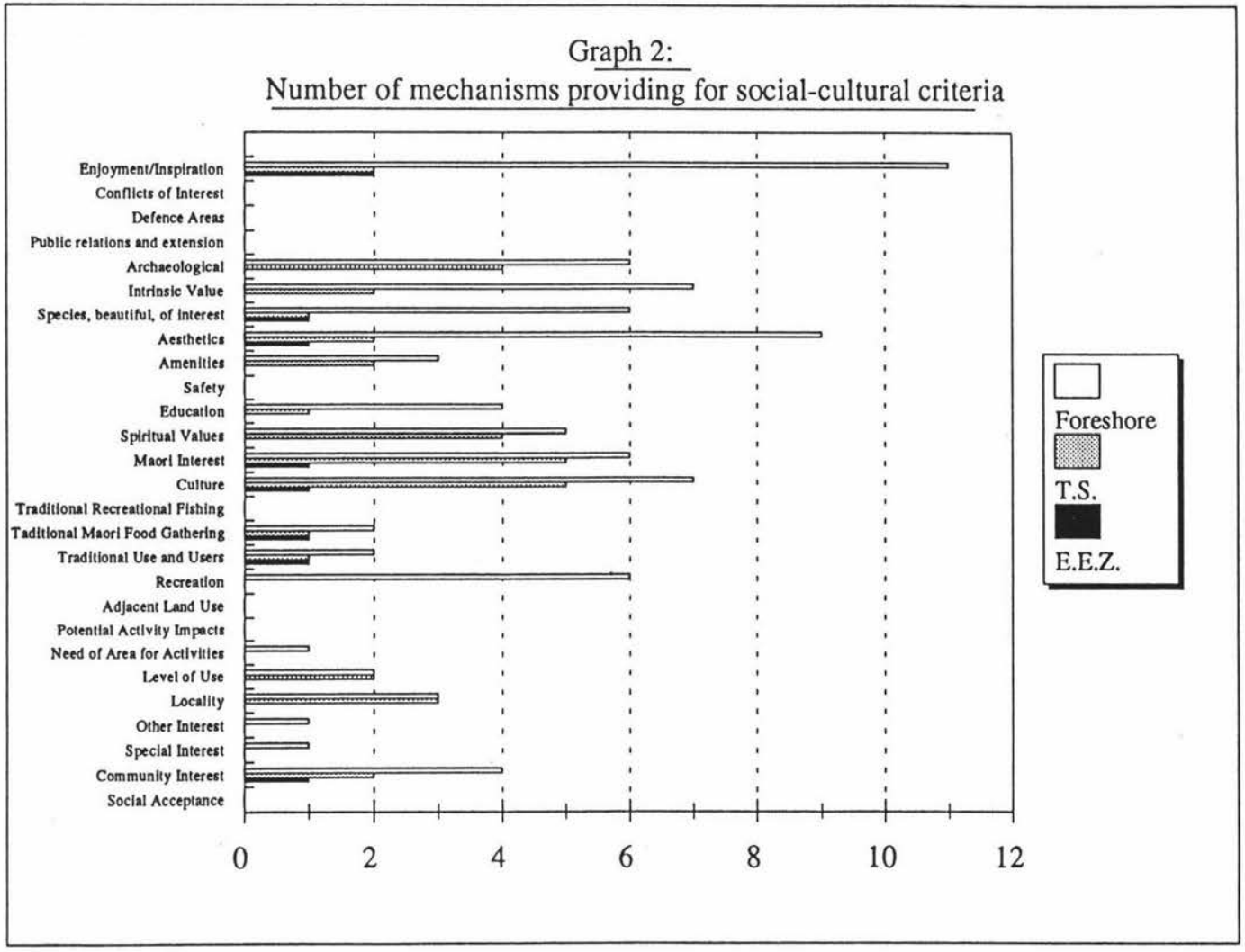
Mechanisms available to protect the exclusive economic zone provide for the least number of criteria; ecological criteria being restricted to: Unique Area, Typicalness, Marine Environment, Sustainability, Species Maintenance, Unique Species Associations, Naturalness, Natural Features, Corridor Potentiality and those areas of National Interest. Mechanisms covering the Territorial Sea provide for all values except corridor

Graph 1:

Number of mechanisms providing for ecological criteria

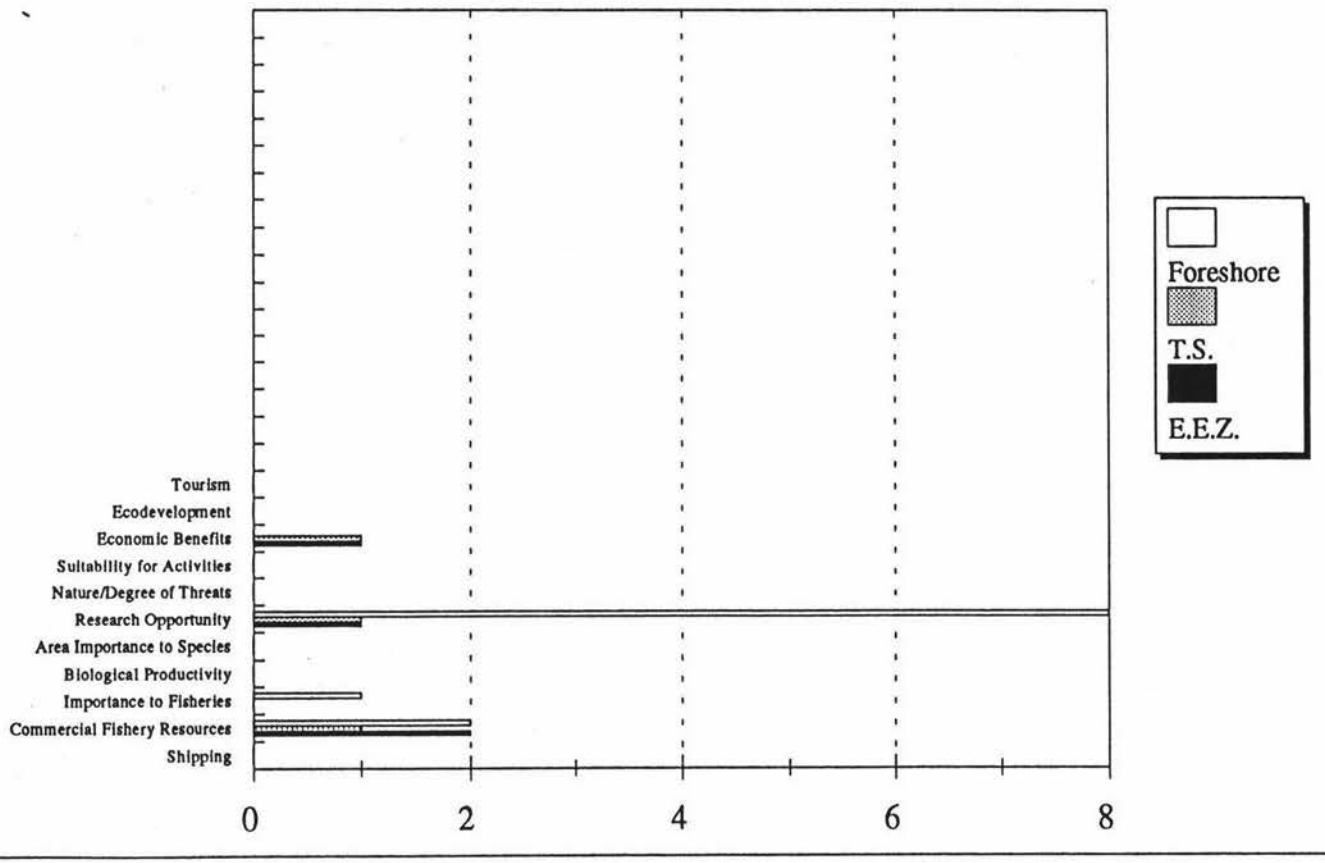


Graph 2:
Number of mechanisms providing for social-cultural criteria



Graph 3:

Number of mechanisms providing for economic criteria



potentiality (provided for by s27 and s8 Regulations in the Territorial Sea and Exclusive Economic Zone Act 1977) are specified in the purpose of mechanisms covering the Exclusive Economic Zone along with the additional values of: Character, Indigenous Flora and Fauna, Wildlife and International interest. All ecological values (within the 75% covered) excluding Marine Environment are provided for by mechanisms covering the foreshore.

The ecological criteria: Landform, Ecosystem Processes, Ecological Habitat Integrity, Rarity, and Ecologically Important Species are only included in the primary purpose of mechanisms covering the foreshore. Mechanisms providing protection to the exclusive economic zone and territorial sea do not provide for the criteria noted above as their primary purpose of providing protection. However, the criteria may be provided within some mechanisms as being indirectly supportive of the primary purpose of protection. The presence of such criteria within a mechanism does not provide sufficient cause for the mechanism to be used solely for the purpose of protecting that value. A example is the criteria Rarity, which is not included as the primary purpose of protecting any mechanism covering the exclusive economic zone or foreshore. However, Rarity is noted within the Marine Reserves Act 1971 as contributing to the need to protect an area for scientific study (protection for scientific study representing the purpose of the Act). Criteria indirectly included within statutory mechanisms covering the exclusive economic zone and territorial sea are: Stock replenishment (covered in all areas), Size (over the foreshore), Resilience/Vulnerability (foreshore), Diversity (foreshore), Genetic diversity preservation (all areas), Representative Area (all areas), and Area significance (all areas). Ecological criteria not directly or indirectly referred to within any mechanism are: Dependency and Productivity.

Approximately 75% of social-cultural criteria identified in the literature as being requirements for marine protection (listed in Table 3) are referred to by the selected mechanisms. Those criteria not directly referred to are: Conflicts of interest, Defence areas, Public relations and extension, Safety, Adjacent land use, Potential activity impacts and social acceptance. Of those, Adjacent land use, Safety and Defence areas are not indirectly referred to in any mechanisms covering the marine environment. Potential activity impacts is indirectly referred to in the Resource Management Act 1991 through the Act's effects based focus. The Act's jurisdiction extends from land to the outer limits of the territorial sea. Traditional recreational fishing is indirectly referred to in the mechanism taiapure, as a consideration prior to protection. Interpretation may include other mechanisms within these categories. For example, traditional use and users is a factor to be considered prior to implementation of any marine reserve. Prior to

giving his consent, the Minister of Fisheries ensures the proposed reserve will not preclude the rights of any traditional fishing that occurred in the area, either recreational or commercial. Both criteria, Public relations and extension and conflicts of interest are indirectly covered by mechanisms covering the foreshore and territorial sea and foreshore respectively.

Commercial Fishery Resources, Research Opportunity and Enjoyment/Inspiration are covered by one or more mechanisms in each of the three boundaries. The Territorial Sea and Exclusive Economic Zone Act 1977 includes the criteria Economic Benefits as a contributing factor in implementing section 8 and section 27 Regulations. Mechanisms contained in the Fisheries Act 1983 and Resource Management Act 1991 indirectly note Economic Benefits as contributing to the need for implementation of those mechanisms. Taiapure, a mechanism included in the Fisheries Act 1983, indirectly refers to the Criteria Importance to Fisheries (prior to establishing taiapure consideration needs to be had of this criteria). Mechanisms contained within the Fisheries Act 1983 and the Territorial Sea and Exclusive Economic Zone Act 1977 indirectly refer to the criteria Importance to Fisheries. The criteria Tourism, and Ecodevelopment are not referred to in any mechanism with the exception of Amenity Areas created by use of the National Parks Act 1980. An indirect reference to Ecodevelopment may be interpreted as being included within the mechanism amenity area, contained in the Conservation Act 1987. Shipping is also not referred to by any mechanism contained in the proposed process. Biological productivity, while not being directly or indirectly referred to in any mechanism contained in the proposed process, may be interpreted as being relevant when implementing mechanisms under the Fisheries Act 1983, an example of the vagueness surrounding some mechanisms available for protection of the marine environment. Nature/degree of threats and Suitability for activities, Potential value, Alternative use are also indirectly referred to by mechanisms within the Fisheries Act 1983 and Resource Management Act 1991 respectively. Interpretation of the mechanisms may differ leading to differences in opinion regarding the suitability of various mechanisms to provide protection. This recognition will ease use of the proposed process in relation to the selection of mechanisms providing protection for specific values located within an area proposed for protection.

Conclusions derived from the above analysis of statutory mechanisms indicate that most ecological and social-cultural criteria are either directly or indirectly referred to in one or more mechanisms covering each part of the marine environment. The number of mechanisms covering each value may be low, and the value may be obscured by other, more important criteria to be considered prior to implementation of any specific

mechanism. Often, only one mechanism may refer to a criteria of importance to protect. The organisations responsible for implementing protection may also play a major role in the interpretation of the purpose and criteria specified for protection within the mechanism. Economic criteria are not highly represented in mechanisms available for protection. Many economic - based criteria present within statutory mechanisms are contained in the Territorial Sea and Exclusive Economic Zone Act 1977. "To date this Act has only been used to regulate fishing by foreign countries in New Zealand waters but to extend its practical jurisdiction simply requires a good case for protection and sufficient public support" (Royal Forest and Bird Protection Society of New Zealand, 1992, 101). Incoming fisheries legislation will put a greater emphasis on economic values in the management of resources.

A significant finding from the above analysis is the increased number of criteria provided for by mechanisms available to protect the foreshore as compared to those providing protection to the territorial sea and exclusive economic zone. Possible reasons for this may include the increased number of mechanisms available to protect this area and the 'visible' nature of the foreshore, leading to a realisation of the need for its protection. Spill over effects from protection of the land may also have caused the greater number of mechanisms and criteria referred to within the mechanisms. The difference in the physical environment of land and sea affects the criteria to aid in evaluating areas in need of protection. This difference in criteria of importance over land and sea may be reflected in the applicability of mechanisms designed to protect the land which may also be used to protect the foreshore. Some mechanisms designed for protection of the land but which extend to mean low water mark may place a greater emphasis on land-based criteria and not represent significant values found within the sea. This may cause disproportionate protection of the foreshore for specific values contained within mechanisms originally developed to protect land areas.

Most, although not all, of the criteria identified as contributing to the need for protection are covered in some form by the various pieces of legislation considered. In theory, this would then cover all factors requiring protection in one form or another. For example, legislation administered by the Department of Conservation is biased toward ecological and social-cultural criteria, while legislation administered by the Ministry of Agriculture and Fisheries (now Ministry of Fisheries) has more reliance on economic (and to some extent social-cultural) criteria. Protection via legislation (with the exception of a few non-statutory protected areas), represents the requirements and specifications contained within the legislation. Legislation, having derived from societal needs may not represent the broad spectrum of issues important in consideration of more suitable areas for

protection. As the environmental demand for marine protected areas is increasing with greater public support, ecological criteria are more likely to be incorporated into legislation along with other values perceived to be important for protection.

2.5.3 LEVEL OF PROTECTION AFFORDED BY DIFFERENT MECHANISMS

Different mechanisms provide for different levels of protection, often in relation to their purpose. It is the purpose of this section to determine categories of protection which may be provided with respect to the definition of a high, moderate and low level of protection. The selected mechanisms are then grouped into these categories in relation to the level of protection afforded by each. Often a mechanism may provide for a range of levels, in these instances the mechanism may be placed within one or more categories. The need to isolate mechanisms in relation to the statutory boundaries covered is important to provide potential proposers of protection with the knowledge of the different levels of protection available within a specified location. Different areas will have different purposes of protection. Often the purpose of protection and the values located within the area proposed require a specified level of protection.

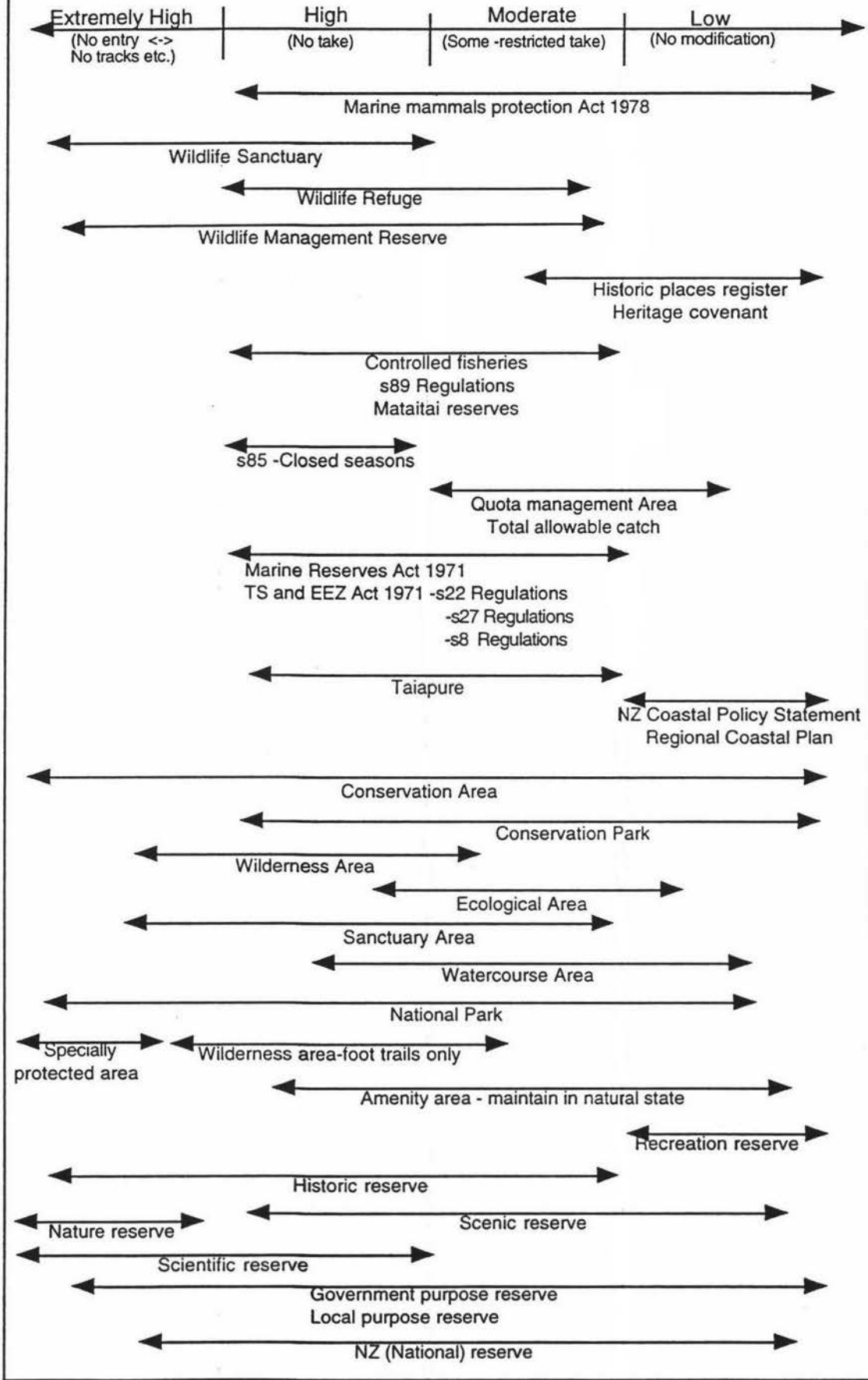
The following classes are used to provide guidelines on what a high, moderate, and low level of protection are:

TABLE 8: LEVELS OF PROTECTION PROVIDED WITHIN CATEGORIES

Extremely High	High
No entrance, No trails, scientific study, No take.	No take
Moderate	**Low**
Some take, non-modification, protection of resources.	Maintenance. Using and protecting the area. (Amenities, recreational purposes).

Figure 5 illustrates those mechanisms available to provide various levels of protection. Analysis of the diagram indicates that the majority of mechanisms provide a high to moderate level of protection. A few provide a very high level of protection, for which all (excluding the wildlife sanctuary and wildlife management reserve) are limited in application to the foreshore. A wildlife sanctuary may be used to exclude entry, however this was designed primarily for land and it is unlikely this level of protection is necessary in the sea environment, with such vastly different ecosystem processes. The Marine Reserves Act 1971 provides for a high level of protection in relation to no-take. A range of protection is provided for within the Marine Reserves Act 1971, but the

Figure 5
levels of protection afforded by statutory mechanisms



current policy by the Department of Conservation is to use the legislation for a high level of protection (i.e., no take). This level of no take is generally considered in the literature as being sufficient to provide a high standard of protection. Access by individuals to the area, unless it is coastal and highly populated is not considered a major problem for protection purposes. In relation to this, a high level of protection may be provided by many of the mechanisms included in the analysis. A lower level of protection, or that of no modification, may be provided through use of the *New Zealand Coastal Policy Statement* and Regional Coastal Plan.

2.5.4 CONSENT REQUIRED

Different requirements for consent are required by various mechanisms. Consent is often required in mechanisms whose implementation will converge onto the responsibilities of another organisation. An example is the need for consent from the Ministry of Fisheries prior to implementation of a marine reserve. Fisheries management is affected by the presence of marine reserves. Any decision made by the Minister of Fisheries will have had consideration of any future impact of the potential reserve on fisheries management. In some situations, consent may be required by an organisation in relation to a specified function. A conflict of interest may arise in instances where an organisation has functions imposed by different pieces of legislation which are not complementary. An example is the role of the Auckland Regional Council as a provider of consents for implementing marine reserves on the foreshore of Pollen Island. The Council had this responsibility passed on by the ex. Harbour Board. However, a conflict of interest may arise with other responsibilities of the Auckland Regional Council.

Consent legally required prior to implementation of statutory mechanisms is presented in Tables 9(a) and 9(b). Analysis of Table 9(a) indicates that the majority of mechanisms being analysed are implemented by either the Governor-General or Minister of Conservation. A few mechanisms may be implemented by the Minister or Director-General of Agriculture and Fisheries. Consent required for each mechanism varies, many requiring the consent of the local authority or Minister responsible for any foreshore. Consideration of objections and submissions also is stated as a prelude to protection in many of the mechanisms. The Treaty of Waitangi Fisheries Commission, Fishing Industry Board, and Minister of Transport are also required to provide their consent prior to implementation of some mechanisms. Various other agencies and groups are also specified in various pieces of legislation, requirement generally being scattered throughout these for different mechanisms. There is no uniform agency or group from whom consent must be obtained for the range of mechanisms. This indicates the

Table 9(a) Organisations responsible for Implementation and/or Recomendations

Statutory mechanisms	Governor-General	Minister of Agriculture and Fisheries	Director General of Fisheries	Minister of Conservation	Conservation Authority	NZ Historic Places Trust	Regional Council	Minister of Local Authority	Commissioner	Minister responsible for any land or foreshore/ department of state in charge	Minister of Transport
Marine mammals protection Act 1977	✔										
Wildlife sanctuary	✔			✔						✔	✔
Wildlife refuge	✔			✔						✔	✔
Wildlife management reserve	✔			✔						✔	✔
Historic places register						✔					
Heritage covenant						✔					
controlled fisheries	✔										
s89 Fisheries Act regulations	✔										
Mataitai reserves		✔									
Closed seasons			✔								
Quota management system		✔	✔								
Total allowable catch		✔									
Marine reserves Act	✔			✔							
s22 Territorial sea and EEZ regulations	✔										
s27 Territorial sea and EEZ regulations	✔										
Taiapure	✔	✔	✔								
s8 Territorial sea and EEZ regulations	✔										
NZ coastal policy statement				✔							
Regional coastal plan							✔				
Conservation area				✔						✔	
Conservation park				✔							
Wilderness area				✔							
Ecological area				✔							
Sanctuary area				✔							
Watercourse area				✔			If vested in local authoority.				
National park	✔			✔	✔						
Specially protected area	✔			✔	✔						
Wilderness area				✔	✔						
Amenity area				✔	✔		✔	✔	✔		
Recreation reserve				✔			✔	✔	✔		
Historic reserve				✔			✔	✔	✔		
Scenic reserve				✔			✔	✔	✔		
Nature reserve				✔			✔	✔	✔		
Scientific reserve				✔			✔	✔	✔		
Government purpose reserve				✔			✔	✔	✔		
Local purpose reserve				✔			✔	✔	✔		
NZ (National) reserve	✔			✔							

Table 9(b) Consent required prior to Implementation of statutory mechanisms

	Minister of Conservation	Director-General of Conservation	Minister of Agriculture and Fisheries	Minister of Transport	Consider public submissions/ objections	Owner /lessor/ lessee/ occupier	Minister in control of crown owned landf/ foreshore/ seabed
Marine mammals protection Act 1977					✓		
Wildlife refuge						✓	
Wildlife management reserve						✓	
Historic places register					✓		
Heritage covenant							
controlled fisheries	✓						
s89 Fisheries Act regulations							
Mataitai reserves			✓				
Closed seasons		✓					
Quota management system							
Total allowable catch							
Marine reserves Act			✓	✓	✓		
s22 Territorial sea and EEZ regulations							
s27 Territorial sea and EEZ regulations							
Taiapure					✓		
s8 Territorial sea and EEZ regulations							
NZ coastal policy statement					✓		
Regional coastal plan	✓				✓		
Conservation area					✓		
Conservation park					✓		
Wilderness area					✓		
Ecological area					✓		
Sanctuary area					✓		
Watercourse area					✓		
National park	✓			✓	✓		
Specially protected area					✓		
Wilderness area					✓		
Amenity area					✓		
Recreation reserve					✓		
Historic reserve					✓		
Scenic reserve					✓		
Nature reserve					✓		
Scientific reserve					✓		
Government purpose reserve					✓		
Local purpose reserve					✓		
NZ (National) reserve					✓		

	Regional Council	Iwi Authorities	Harbour board -> Regional Council	Local Community	Tangata Whenua	Commission	Fishing Industry Board	Secretary for the Environment	Secreatary for Transport	Director General of Agriculture and Fisheries	Minister of Department of state having control of land	NZ Historic Places Trust (where responsible for area proposed)
Marine mammals protection Act 1977												
Wildlife refuge												
Wildlife management reserve												
Historic places register												
Heritage covenant												
controlled fisheries												
s89 Fisheries Act regulations												
Mataitai reserves												
Closed seasons												
Quota management system												
Total allowable catch												
Marine reserves Act												
s22 Territorial sea and EEZ regulations												
s27 Territorial sea and EEZ regulations												
Taiapure												
s8 Territorial sea and EEZ regulations												
NZ coastal policy statement												
Regional coastal plan												
Conservation area												
Conservation park												
Wilderness area												
Ecological area												
Sanctuary area												
Watercourse area												
National park												
Specially protected area												
Wilderness area												
Amenity area												
Recreation reserve												
Historic reserve												
Scenic reserve												
Nature reserve												
Scientific reserve												
Government purpose reserve												
Local purpose reserve												
NZ (National) reserve												

potential to use alternative mechanisms in instances where proposed use of one mechanism encounters difficulty regarding consent approval.

The level of support provided to an area proposed for protection is an important component of successful implementation. In particular, the statutory requirements for support contained within the selected mechanism could alter the overall success or failure of implementation. Although general public support or opposition may have a major influence on the implementation of protection, it is the statutory requirements that ultimately determine the success or failure of implementation of any individual mechanism. Identification of the requirements of different mechanisms in relation to from whom consent is required is an important step in identifying the appropriate mechanism(s).

2.5.5 POTENTIAL EFFECTIVENESS OF IMPLEMENTATION

Protection of any specified location by a mechanism usually relies on the need for penalties of sufficient strength to influence public attitudes and action. Various penalties may be required to ensure adequate protection. The level of enforcement required to adequately protect an area will differ in relation to variable factors including the value of the resource being 'locked up' (economic and otherwise), and the level of public support for implementation of protection. It is the intent of this section to analyse the mechanisms selected in relation to penalties provided by each.

Table 10 classifies penalties potentially imposed on offenders of regulations as afforded by the various mechanisms. In general, the majority of mechanisms analysed provide for maximum fines of between $1,000 and $20,0000 plus per day costs. Of those mechanisms analysed for which fines are lower than $1,000 (namely those within the Reserves Act 1977), prison may be used as an additional penalty. It is notable from analysis of Table 10 that the more recent mechanisms provide much stiffer penalties from those developed earlier. The quota management system, total allowable catch, and taiapure, all developed in the late 1980's provide fines of up to $250,000 plus per day costs. Penalties are currently being altered, as specified within the Fisheries Bill. The maximum fine for instances where no other penalty is stated will be $250,000 plus per day costs. Where penalties are stated, and do not exceed $5,000 or do not exceed $10,000 on the second offence, the court may impose a community based sentence. Penalties included in the Wildlife Act 1953 and Marine Reserves Act 1971 are to be increased by way of amendment from the current Fisheries Bill.

Table 10 - Penalties afforded by statutory mechanisms

Statutory mechanisms	Prison >3 months	Prison for 3 months or less	Fine >200,000 plus per day costs	Fine 100,001 - 200,000 plus per day costs	Fine 20,001 - 100,000 plus per day costs	Fine 9,001 - 20,000 plus per day costs	Fine 1,000 - 9,000 plus per day costs	Fine <1,000 plus per day costs	Corporation fine >50,000 plus per day costs	Corporation fine 9,000 - 50,000 plus per day costs	Corporation fine up to 9,000 plus per day costs
Marine mammals protection Act 1977							✔				
Wildlife sanctuary							✔				
Wildlife refuge							✔				
Wildlife management reserve							✔				
Historic places register	✔					✔					
Heritage covenant						✔			✔		
controlled fisheries						✔					
s89 Fisheries Act regulations						✔					
Mataitai reserves						✔					
Closed seasons							✔				
Quota management system			✔								
Total allowable catch			✔								
Marine reserves Act		✔						✔			
s22 Territorial sea and EEZ regulations						✔					
s27 Territorial sea and EEZ regulations						✔					
Taiapure			✔								
s8 Territorial sea and EEZ regulations						✔					
NZ coastal policy statement	✔			✔							
Regional coastal plan				✔							
Conservation area	✔					✔			✔		
Conservation park	✔					✔			✔		
Wilderness area	✔					✔			✔		
Ecological area	✔					✔			✔		
Sanctuary area	✔					✔			✔		
Watercourse area	✔					✔			✔		
National park		✔					✔			✔	
Specially protected area		✔					✔			✔	
Wilderness area		✔					✔			✔	
Amenity area		✔					✔			✔	
Recreation reserve		✔						✔			✔
Historic reserve		✔						✔			✔
Scenic reserve		✔						✔			✔
Nature reserve		✔						✔			✔
Scientific reserve		✔						✔			✔
Government purpose reserve		✔						✔			✔
Local purpose reserve		✔						✔			✔
NZ (National) reserve		✔						✔			✔

2.5.6 LIKELIHOOD OF SUCCESS

Analysis of the mechanisms selected in relation to likelihood of success includes consideration of the historical use of the mechanism, support (political, public, from other organisations who have involvement with the proposed area), and support from within the organisation responsible for implementation. It is the intent of this section to consider potential blockage points of the mechanisms selected that would limit or prevent that mechanisms use to provide protection to a specified marine area. Also of relevance is consideration of the mechanisms user-friendliness and whether any is more currently favoured by any particular organisations.

The Marine Reserves Act 1971 has been used extensively in recent years to provide protection to New Zealand's marine environment. The Department of Conservation is currently promoting the use of the Marine Reserves Act 1971 to provide protection for the marine environment. This is successful, with the number of gazetted marine reserves increasing from two in 1984 (Francis, 1984, 5) to 11 in January 1995 (Wolfenden, 1995, 13). Contributing to this success is the popularity of marine protection from the general public. The Department of Conservation has set up a section at head office solely responsible for the implementation of marine reserves. For these reasons this is the most predominant form of marine protection in New Zealand at the current time.

Other mechanisms available for protection may in some instances be limited in range. Using a combination of two or more statutory mechanisms to protect an area may provide protection for a wider area (spanning legislative boundaries). However, drawbacks include the increased time and effort involved. Often, the use of mechanisms may be limited by a lack of public knowledge, or the perceived ease or difficulty of implementation. It is in these instances that the agencies responsible for implementation need to take over the role of promoting mechanisms considered suitable for specific areas.

It is also necessary to assess any other factors relevant to the potential use of the mechanism. For example, closed seasons, while providing a high level of protection may be perceived to be limited in use as the statutory mechanism is intended for the recovery of fish stock. It is possible to renew protection of the specified area every three years which is the limit for which protection may be imposed. However, this means the area undergoes assessment on a regular basis, a proposition which may not appeal to potential activators of protection.

Whilst mataitai reserves is a statutory mechanism theoretically available for protection, its use is halted until the process for implementation of such reserves is developed by the Ministry of Fisheries. As the Fisheries Act 1983 is currently under review, with the Fisheries Bill presently (October 1995) before the select committee, this may take some time. The Ministry of Agriculture and Fisheries (now Fisheries) developed a process for the introduction of taiapure. The first taiapure commenced on the 14 July 1995 at Palliser Bay (Hodder J. and Pepperell P, 1995, 11).

The relative degree of complication to implement statutory mechanisms is another factor affecting likely use of a particular mechanism. For instance, the process required prior to implementation of a national park is long and time consuming. Also, although it is theoretically possible to create a national park over the foreshore, it is highly unlikely that this mechanism would be used in instances where the surrounding land is not protected by the same mechanism for reasons of scale and effort involved. This could put the use of other available mechanisms in a more favourable light.

The Territorial Sea and Exclusive Economic Zone Act 1977, administered by the Ministry of External Relations and Trade has also not yet been used to implement protection over the marine environment in relation to s22, s27 or s8 of the Act. Although use of the mechanism may be theoretically possible, such protection may be difficult to use as these mechanisms operate within the requirement for protection only to be implemented "where no other provision is for the time being made by any other enactment for any such purposes" (s8, Territorial Sea and Exclusive Economic Zone Act 1977). As all New Zealand waters are divided into quota management areas, these may be interpreted as having been provided for. However, use of these mechanisms may be possible with agreement between the Minister of Fisheries and Minister of External Relations and Trade.

To date only one wildlife management reserve has been created in the coastal marine area, that being the Whanganui Inlet in 1994. However, this may provide an example of the potential use of this mechanism. Wildlife sanctuaries have been used to protect areas of the foreshore, namely the Tairoa Head Foreshore wildlife refuge 1979 and White Rocks, Duffers Reef, and Sentinel Rock wildlife sanctuary 1966 as well as for many Island locations such as the Alderman Islands 1980, Karewa Islands 1965, and Mokahinau Islands 1965. Wildlife refuges have been created at the Buller River Mouth 1973, and Hart's Creek 1973 (1994 Tables of New Zealand Acts and Ordinances and Statutory Regulations in Force, 1995). These all illustrate the potential use of such mechanisms provided within the Wildlife Act 1953.

The other mechanisms selected for analysis are all of potential use to provide statutory marine protection of the foreshore, territorial sea, and/or exclusive economic zone. The appropriateness of any particular mechanism will in part depend on factors specific to a proposed area.

2.6 CHANGING MECHANISMS - THE IMPACT ON PROTECTION

At present there are many flaws regarding the content of legislation available to protect the marine environment. Associated with the demand for greater protection of this environment has arisen a need for a modification to the legislation available to implement statutory protection. The Fisheries Bill, introduced to Parliament in late 1994 and currently before the select committee contains amendments to various mechanisms included in this study including the Marine Reserves Act 1971. A review of the marine reserves legislation is currently underway, with the Department of Conservation having "provided, ... policy advice to the Minister, including policy work necessary as a basis for the forthcoming review of the Marine Reserves Act" (Department of Conservation, 1994(b), 11). This review will ideally provide for a broader purpose and range of criteria for implementation of protection than is currently provided.

Derivation of a ranking system of criteria contained within statutory mechanisms providing protection will assist any proposers of protection to identify those mechanisms suitable to protect any specified area (in relation to criteria contained in the area requiring protection). For example, in relation to the Marine Reserves Act 1971 which aims to "To preserve, protect, and manage natural aesthetic values of marine and estuarine areas, and historical and cultural sites for present and future generations;" those criteria will rank very highly for protection. However, the primary purpose of this thesis is the consideration of potential mechanisms available to protect an area identified as being in need of protection. This thesis uses the objectives and criteria contained within legislation available to protect the marine environment, but does not place a 'weighting' on the importance of criteria provided for within various mechanisms. Criteria used for the identification of areas in need of protection are not ranked in order of importance for protection (e.g. rarity might be construed to be a more important criteria than representativeness) in this thesis.

2.7 CONCLUSION

Protection of New Zealand's marine environment is possible through a number of mechanisms. Selected mechanisms were analysed in this chapter to assess their appropriateness for providing protection for specific requirements, identified and grouped into guidelines relating to the needs for protection of an area. Analysis of mechanisms selected revealed that most requirements of protection are provided for in at least one mechanism covering the marine environment. All mechanisms are biased toward their purpose or objective; each is ideally suited to protection of specific values relating to the mechanism's purpose. Enough mechanisms with varying purposes are available to protect most values identified as contributing to the need for protection of an area. However, in certain instances the number of mechanisms covering these criteria may be limited. In particular, protection of the exclusive economic zone is less likely to have the number of mechanisms available to protect the various criteria as compared to the foreshore which covers more requirements of protection, and has a greater number of mechanisms covering these requirements.

Various levels of protection are afforded by different mechanisms selected for analysis. However, the reduced number of mechanisms providing protection to the exclusive economic zone results in a reduced number of mechanisms providing protection to this area. Penalties provided by the selected mechanism vary greatly; generally greater penalties being associated with newer mechanisms. Some mechanisms are due to be updated with the incoming Fisheries legislation. Of the mechanisms for which the lowest penalties are provided, namely those contained within the Reserves Act 1977, a short term of imprisonment is also applicable if needed. Consent required prior to implementation of any specified mechanism varies greatly, dependent of the mechanism, opening the possibility for using alternative mechanisms if a potential problem should arise with any specific mechanism. However, the requirement for consideration of public submissions and objections is also contained within the majority of mechanisms. This provides an outlet by any group involved to express their views. In conclusion, of the mechanisms selected for analysis most contain a purpose of sufficiently wide range (within the policy boundaries of the organisation administering such legislation). Also the level of protection afforded varies widely within individual mechanisms, while varying consents are required by different statutory mechanisms. Sufficient penalties (subjectively) are in place as deterrents to violation of any regulations. These selected mechanisms therefore provide an adequate basis to protect various areas of the marine environment with different requirements. Chapter Three develops and presents a proposed process suitable to isolate the most suitable mechanism in relation to such requirements of an area proposed for protection.

Appendix Two presents an analysis of those selected mechanisms presented in Table 1 of this chapter and which will be included in the proposed process. Legislative Acts are displayed to illustrate organisations responsible for their management. Statutory mechanisms are then considered within the general Act from where they derive to provide an understanding of the general context and overall purpose of their operation. Each mechanism available for protection is considered in terms of purpose, criteria, level of protection afforded, organisation responsible, enforcement potential and likelihood of success of implementation.

The proposed process, presented in Chapter Three draws on the content of mechanisms available to protect the marine environment to assess their relative suitability to any specified area. The potential use of a mechanism may not be a direct reflection of its existence in law, but of the compatibility of that mechanism with other mechanisms, policies, and general rules relating to protection. Also, the time and cost necessary prior to implementation can have an impact on their suitability.

CHAPTER THREE

PROPOSED PLANNING PROCESS FOR SELECTION OF SUITABLE PROTECTION MECHANISMS

Chapter Two presented an analysis of selected statutory mechanisms available to protect New Zealand's marine environment. This chapter incorporates those statutory mechanisms into a planning process which is designed primarily for the identification and selection of appropriate mechanisms to protect any specified location. Guidelines, developed for the identification of the requirements of protection, are used as the basis to determine the different potential of selected statutory mechanisms. These are then drawn on for the assessment of selected statutory mechanisms in relation to their suitability to protect any specified area.

The chapter is structured into four main parts. The first provides a rationale for the proposed process, the reasons underlying its development. The second part consists of the development of the proposed process. This involves an outline on the process structure, providing a brief outline of the planning theory used in its development. Thirdly, the proposed process is presented diagrammatically with each of the stages of the process discussed in detail. Finally, an outline of the potential uses of the process is presented along with its limitations.

3.1 RATIONALE FOR THE PROPOSED PROCESS

The proposed process was developed in response to a realisation of the need to consider alternative statutory mechanisms in situations where the Marine Reserves Act 1971 is not appropriate.

> The general feeling amongst those involved (government departments and non-government organisations and individuals), was that the Marine Reserves Act was not the appropriate legislative mechanism to create a large number of marine reserves around the Country. It was considered that the legislation was too scientific in its aims (Walls, In Battershill et al., 1993, 57).

As previously stated in Chapter One, problems encountered with using the Marine Reserves Act 1971 have resulted in the Department of Conservation working toward

alterations to the Marine Reserves Act 1971. This will take two forms. Initially, proposed changes will be introduced via an amendment through the Fisheries Bill. "Any other changes to the Marine Reserves Act will be included in a separate Marine Reserves Bill as originally planned. A Marine Reserves Bill has been included in the Government's legislative programme. However, no legislative timetable has yet been set for the Bill" (Department of Conservation, File No. MPA 0042, 1994(a)). The Department of Conservation is currently working to settle any outstanding policy issues prior to the preparation of a draft Bill. In the process of completing this task, the Department has sent copies of proposed amendments to the Marine Reserves Act 1971 to various groups involved with use of the marine environment (Department of Conservation, File No. MPA 0042, 1994(b)). A greater number of proposed marine reserves have been applied for in recent years, disproportionate to the number of other protection mechanisms. Often the Marine Reserves Act 1971 is suited to protection, but in some instances where resistance to protection by use of the Marine Reserves Act is predominant, this may have been minimised or eliminated through the use of alternative mechanisms. Dependent upon the situation, the values being sought for protection may be protected as well through the use of such alternative statutory mechanisms.

Inclusion of the statutory mechanisms analysed into a proposed process is intended to provide a comprehensive, easy to use method to assess that most appropriate to protect any specified location by a user who may not be familiar with different statutory provisions. Limited material has been published on the use of different statutory mechanisms available to protect New Zealand's marine environment. It is the intent of the proposed process to provide a clear, easy to understand method of comparing different mechanisms in relation to their potential in any given situation.

3.2 DEVELOPMENT OF THE PROPOSED PLANNING PROCESS

The proposed process developed in this chapter, while primarily designed to provide a process for the selection of an appropriate mechanism to protect a specified area, also provides an overall framework for the protection of the marine environment. Prior to realisation of this goal of marine protection lies three major stages, that of the selection of areas in need of protection and the selection of appropriate mechanisms adequate to provide protection. The final major stage involves implementation of the mechanism selected to protect the area proposed. It is realised that each of these stages are inter-related, the area selected affecting the statutory mechanism chosen, and in some cases available mechanisms affecting the boundary of the area. Also, the importance of the

user is realised, in relation to the potential impact of any mandates of the organisation or group using the process.

Development of the proposed process relied on the use of different planning theories to incorporate the various pre-requisites of the process. These pre-requisites included the number of potential groups using the process, the provision for public interaction and other necessary steps to achieve the desired outcome. The proposed process is designed with a specific goal in mind, that of providing for protection of the coastal marine area. Specific stages or objectives which contribute toward the attainment of this goal are contained within the process. The approach taken to develop the process was to keep all stages as open as possible, to provide for potential use at or for any stage. This necessitated ensuring that the process could be used as was required by the user.

Selection of areas requiring protection is done, to a large extent, by those organisations with a role in management and protection of the coastal environment i.e., Ministry of Fisheries, Department of Conservation, local authorities and through public and political pressure. The process is intended to be used by any organisation or group interested in the selection and decision of suitable mechanisms for implementation.

Different policies and mandates of the user will affect the requirements and needs of the proposed process. For example, an organisation may have pre-specified guidelines on particular mechanisms, or values to be protected and this will affect the process to select the mechanism and area respectively. The process will therefore need to be open to insertion of any requirements as may be required by any user.

The process aims toward flexibility, in relation to both potential user groups and statutory mechanisms incorporated. Also, the process is designed such that part of it may be used to fit the user's requirements. This may involve use of the process solely for area selection, selection of mechanisms, or both. Inherent within both of these stages of the process are factors common to both. These factors include criteria within the area, public and political support for protection.

A combination of strategic and integrated planning has been drawn on to develop the proposed process. The concept of strategic planning is used in relation to the requirement to identify the aims and objectives sought to be met by the user. The structure in relation to the formulation and subsequent evaluation of strategies to reach a desired end point which may then be modified is also strategic in approach. However, the process also incorporates needs and requirements of other affected parties,

introducing the need for integrated planning. Three main features of integrated planning outlined by Lang follow:

> ...it is strategic, it is interactive, and it adopts multiple perspectives, beyond technical rationality to encompass perspectives that are organisational, political, and personal (Lang, 1986, 3).

The planning process presented in this chapter strives to provide a link between the needs and requirements of groups with an interest in any particular area, other values of the area (including ecological and economic), and the mechanisms available to meet these requirements. The use of alternative mechanisms in different situations is designed to provide for these differing needs, providing a degree of specificity.

Use of the term "planning" implies an organised process oriented action, striving to reach goals which may or may not be defined at the outset. Planning can be broadly defined as a process incorporating the realisation of goals, action toward those specified goals, followed by monitoring and further modification of the 'end product' resulting in a constantly changing phenomena as the external environment modifies the ideal outcome. Any planning process needs to ensure that the approach is well understood, and that policies, objectives, and targets are clearly documented. In relation to the coastal marine area, the relationship between the coastal marine area and planning for other areas needs to be clearly understood. The scale of the plan must not be too large, it needs to take into account items of significance from the international and national level, but not unnecessarily waste too much time. A commitment to public involvement is required from the beginning (Lang, 1986, 7).

The planning process developed in this thesis is designed to provide a process that can be used by a wide range of people. In many instances, complete comprehension will not be possible by a number of user groups.

> Batty (1979) states: planning processes which meet the challenge of infinite complexity promote open systems which are adaptive ie. they acknowledge total comprehension of the problem is not possible, they accept the political, financial, and structural limitations of the plan ... Planning theory has moved away from centralised action, or control, to decentralised action; and an increasing amount of political involvement and less technical involvement (Bills, 1990).

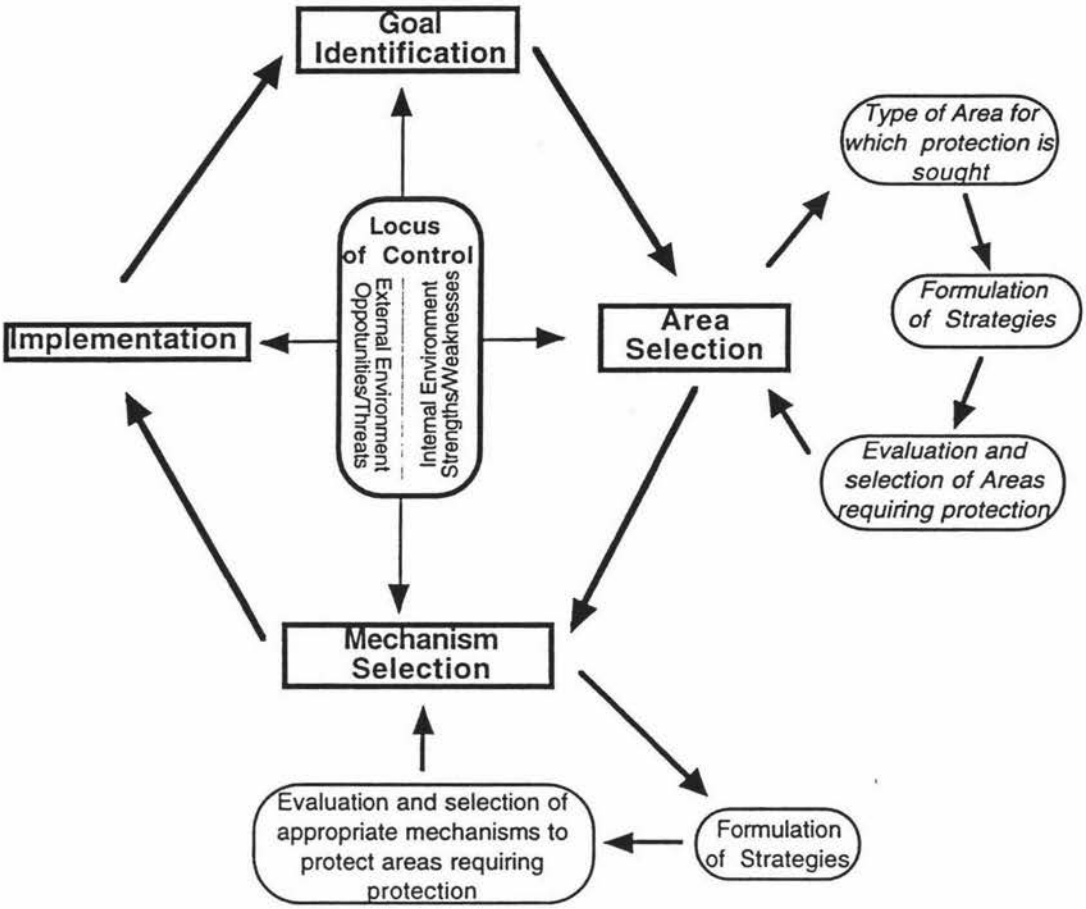
Strategic planning, typified by its open, flexible, goal-oriented approach toward planning is now being introduced into the public sector from the private sector for which it was developed. Limitations of change are its orientation toward use by one 'organisation' or 'key-group' approach to goal realisation and achievement. This 'self-oriented' approach limits the potential to develop plans to be used by a multitude of groups which may approach planning toward a common resource with different values, mandates, and internal environments. Strategic planning is best suited for an organisation to realise and then achieve specific goals, which enhances the 'organisation.' It represents a large step forward to reaching the needs of those groups but needs to be combined with other forms of planning before elements of it can be successfully used by a wide range of people in the instance proposed. Decision making needs to be an open, flexible process to incorporate all involved with the area. This will ideally reduce impediments to protection at a later stage of the process.

Interactive planning is used in the proposed process as selection of appropriate mechanisms relies not only on the content of the legislative mechanism involved but also public input, the political situation and other perspectives necessary to ensure success in implementation. The proposed planning process for selection of mechanisms incorporates steps to maximise community involvement and to elicit community support for protection as well as incorporating the required consideration of potential political and organisational support for implementation of any specified mechanism. However, the broader framework within which the proposed process is placed is strategic in approach with interactive planning being used in part of the main stages of the proposed process.

The process of implementation of the selected mechanism(s) is not detailed, as is specified by individual mechanisms. Application of the strategic planning process is used as a basis for the process, but is rational-comprehensive for the selection of mechanism suitability in that common factors of interest have been drawn from the statutory mechanisms and these are analysed in relation to the proposed location in a rational manner.

Figure 6 provides an overall picture of the proposed process. Each of the main stages of the process are presented diagrammatically in association with steps necessary for the successful completion of each stage. Figure 6(a) and 6(b) provide a more detailed outline of the steps involved within stage two and three respectively. Figure 6, 6(a), and 6(b) enables a clearer understanding of how each stage relates to the overall process.

FIGURE 6 - PROPOSED PLANNING PROCESS FOR PROTECTION OF NEW ZEALAND'S MARINE ENVIRONMENT



(Adapted from Ng M.K., 1993, 290)

Figure 6(a) - Stage Two - Identification of Areas requiring protection

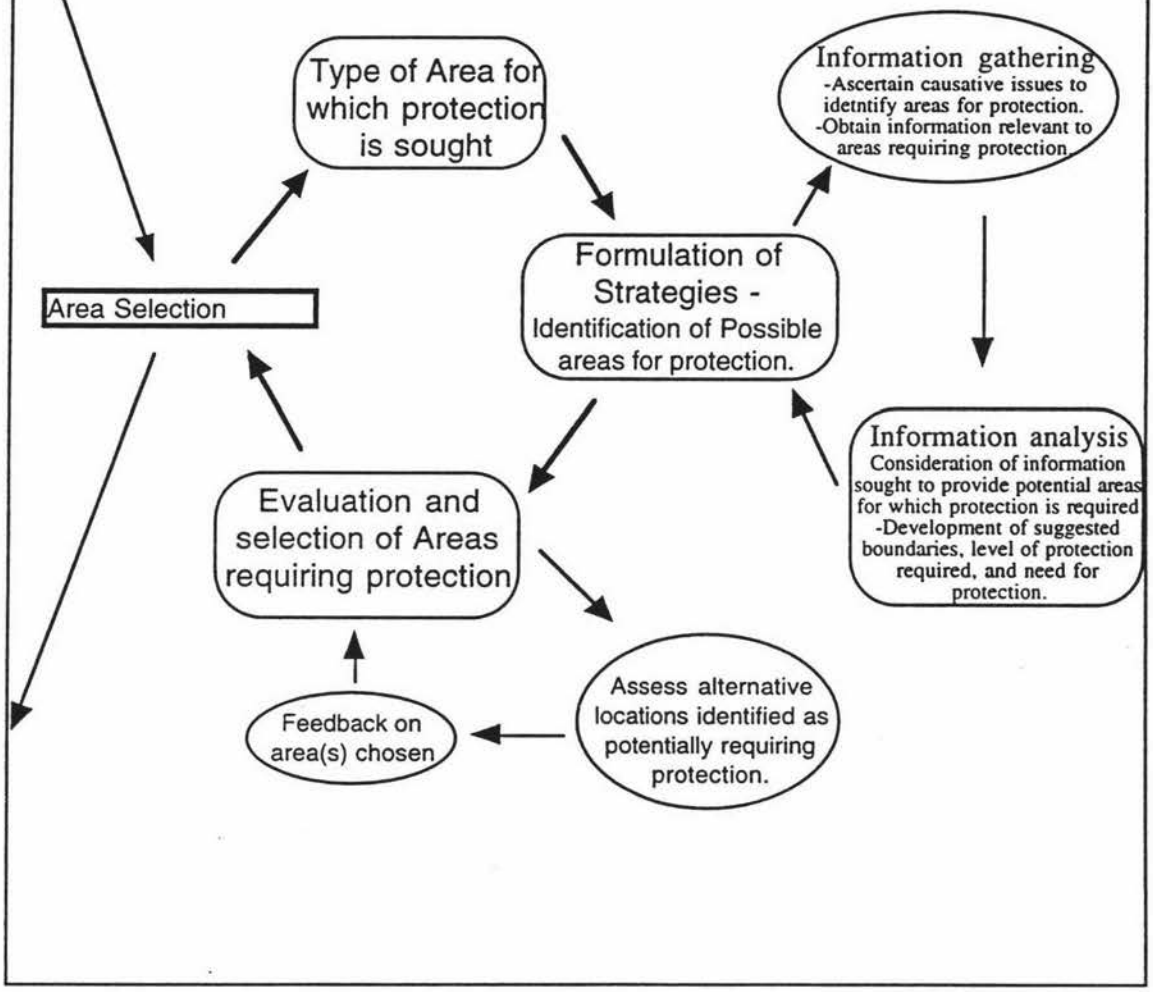
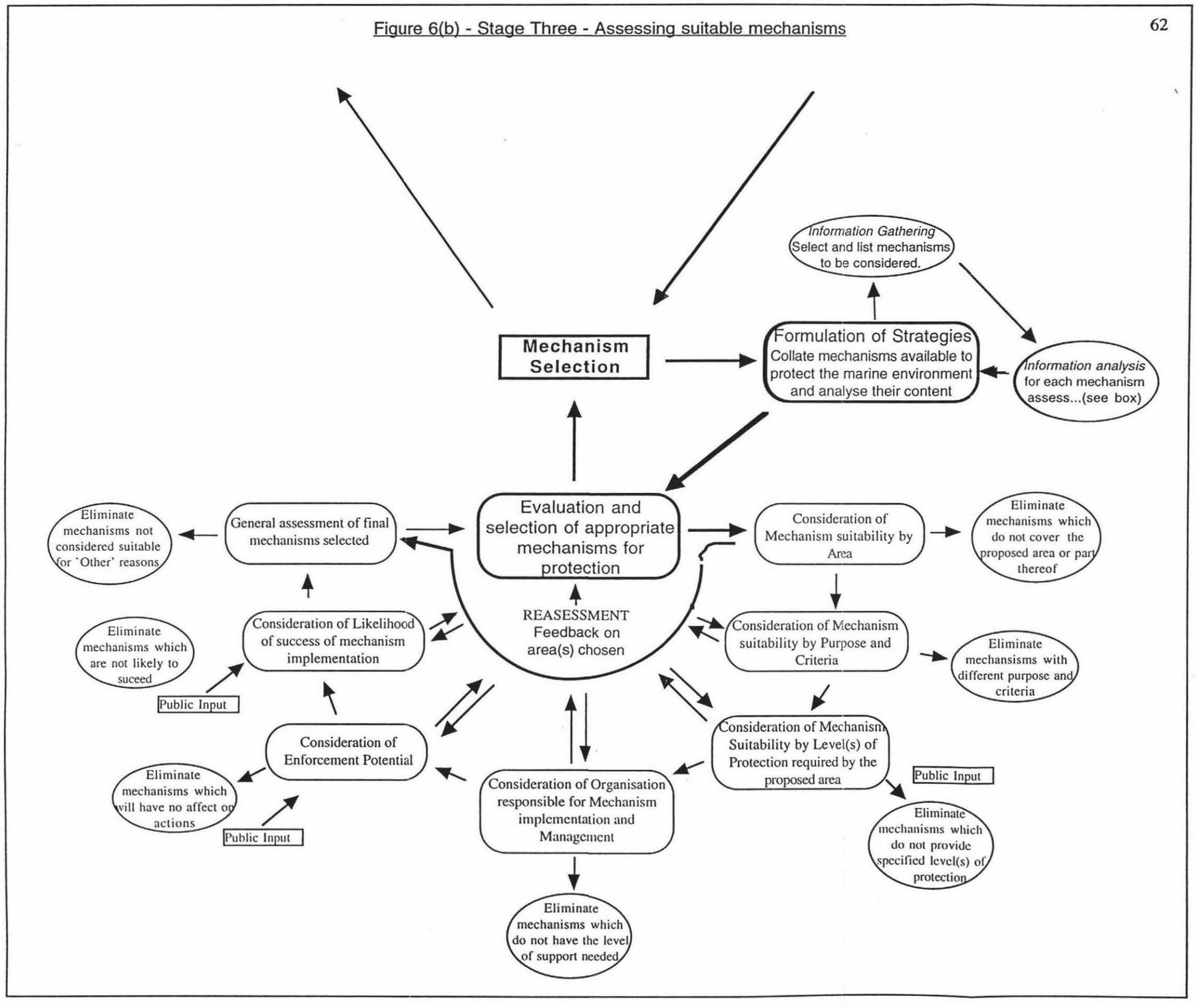


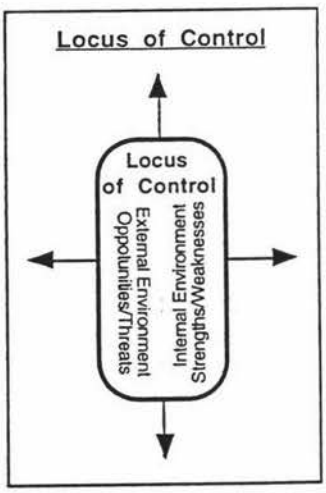
Figure 6(b) - Stage Three - Assessing suitable mechanisms



3.3 DISCUSSION OF PROPOSED PROCESS

The proposed process developed in this chapter comprises several main stages, these being goal identification, area selection (area(s) requiring protection), mechanism selection, implementation of protection and finally locus of control. Locus of control is designed primarily to provide for the user of the process. The user of the process will significantly affect how it is used. Reflected differences of users include the overall purpose of using the process, including the users needs and requirements. The proposed process is designed such that within the overall process, that part of concern to the user group can be used in detail without going through the process in its entirety. This relates primarily to area selection and mechanism selection. Of the two stages, mechanism selection is provided in greater detail within the proposed process. Area selection, mechanism selection, and implementation of protection may be perceived as objectives within the overall goal of providing for marine protection. This section provides a more detailed explanation of each of the stages and steps within the process starting at the point locus of control, then moving to goal identification, area selection, mechanism selection and finally implementation. Each of these stages are inter-related and are not necessarily for use in any particular order with the possible exception of goal identification, and locus of control which primarily affect the other stages. A brief description of each stage and the associated steps is provided below.

3.3.1 LOCUS OF CONTROL



Central to the overall process is stage five, that of locus of control. Locus of control may be defined as the point from which the process is controlled. The controlling agent may be any group or organisation which is using the process. Probably the most major influence on the potential use of the proposed process is used is that caused by the organisation or group using the process. Factors such as the user's overall purpose and responsibilities will affect how the process is used and to what degree stress is placed on different stages of the process. Also affected by the user are external decrees or mandatory policies and regulations of the organisation responsible. Some organisations may have a particular preference for using particular mechanisms for which that organisation is responsible. This will affect the outcome of using the process.

Users of the proposed process may be identified as belonging to two broad groups. Both of these have a different perspective on implementation of protection and are discussed below to provide an understanding of the different approaches taken to reach solutions.

1. The first group identified includes those public groups (including local community groups), environmental groups (including the Royal Forest and Bird Protection Society), universities, and other non-governmental organisations who identify areas in need of protection. These groups are generally non-profit oriented, with most reasons for proposing protection being ecological or occasionally social-cultural in origin. Locations identified for protection may have been actively sought, to fulfil the broad need for protection generally, or experiential and/or scientific knowledge of an area may have led the group to propose protection to maintain or restore the areas values. The proposed planning process is primarily focused toward the identification of mechanisms appropriate to protect areas identified by the latter means. However, this does not exclude use of the process to assess mechanisms available to protect areas identified through alternative methods.

2. Secondly, a need for protection is identified through planning and management strategies of government organisations. Implementation of protection will rely heavily on the needs of the department involved, and be affected by the legislation that department is responsible for administering. Conservation management strategies, for example are designed to "implement general policies and establish objectives for the integrated management of natural and historic resources, including any species managed by the department under [various Acts administered by the Department of Conservation]" (s17D Conservation Act 1987). Included within conservation management strategies may be areas in need of protection as well as areas potentially in need of protection at some stage in the future. The mechanisms to protect such identified areas are often predetermined by the organisation, but the proposed process may at some stage be useful for assessment of the suitability of the mechanism selected. A bias will therefore exist toward legislation the department is responsible for administering. Use of the proposed process will be adjusted to suit this bias by the elimination of mechanisms not administered by that organisation, or through the preference for mechanisms administered by that organisation during the final steps of that stage.

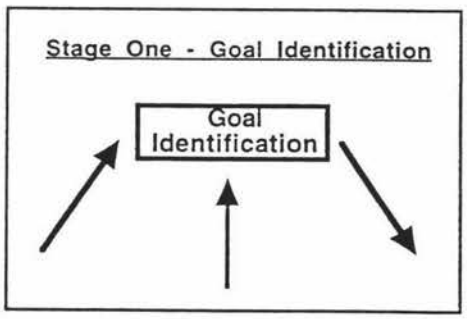
The process has been designed primarily to assist non-governmental groups with little knowledge of statutory mechanisms in the selection of potential mechanisms to protect areas in the coastal environment. Also to be considered throughout the proposed process

are other user groups of the areas proposed for protection. Consideration of these groups at an earlier stage will minimise conflict at a later date.

Acknowledgement of the internal and external environment surrounding use of the process by the user is an important task for the user of the process. The internal environment may be identified to include such factors as the purpose of the organisation, the legislation it administers, the overall needs and actions of the organisation. The external environment comprises factors outside the control of the organisation or group using the process. Such factors will include the public, other groups interested in management and using the area, and such other factors affecting the organisation or the area(s) and mechanism(s) being selected for protection. The process and its outcome will be affected by the local political, cultural, and institutional traditions, and each province, region, community, organisation and culture has its own internal logic (Lang, 1986, 8).

Following an analysis of the internal and external environment by the user, and the decision to use the process, progression is made to the first stage, that of goal identification.

3.3.2 STAGE ONE - MISSION/PURPOSE/GOAL IDENTIFICATION



Realisation of goals comprises the most significant component of any planning process in relation to reaching a desired outcome. "Strategic goals are broadly defined targets or future end results set by top management" (Bartol and Martin, 1994, 141).

It is during this first stage of the process that the user identifies the main reasons for using the proposed process. Use of the process has been identified as that of providing for protection of the marine environment. Of the main stages identified in Figure 6, selection of areas in need of protection and selection of appropriate mechanisms adequate to provide protection comprise two objectives within the overall goal of providing protection for the marine environment. When the user of the process identifies the purpose for which they are using the process, there is a need to identify the importance of each objective to the user. Some users will have identified an area requiring protection, and therefore do not need to go through stage two and may progress directly through to stage three. Although the process has no set order through

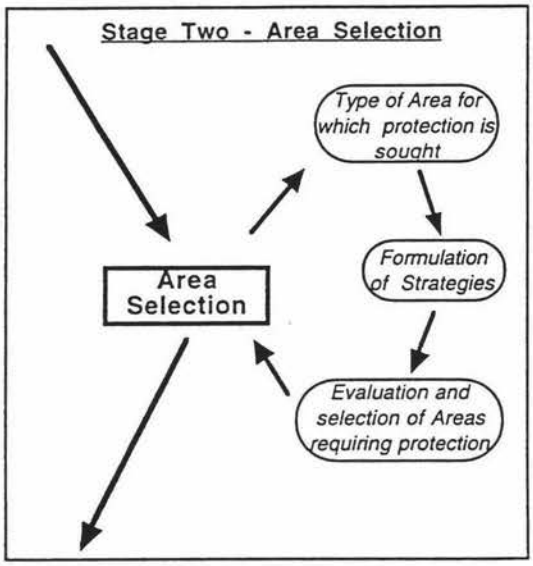
which stages should progress, identification of the overall goal and purpose of using the process will provide the user with a clarified vision of the end result sought. Goals need constant monitoring and redefinition throughout any planning process as needs and requirements are modified. Although any identified goal may be altered as the user progresses through the process, it provides a target which can be strived toward in the interim, and also allows the user to assess exactly what needs to be done at any point in time.

Situations giving rise to the use of reduced stages could include instances where a group has prior knowledge of an area to be protected but is unsure of the appropriate mechanism to provide the type and level of protection required. Another example could be where specific mechanism(s) are being sought to be used by a particular group or organisation, but area(s) have not been identified for such a purpose. Area(s) may be selected to suit the mechanism(s) requirements for protection. Stages identified as being required for use by the user will in part be affected by the users internal and external environment. Factors affecting any requirements will include the user's knowledge, mandates and requirements.

As noted previously there are two major groups associated with the promotion of protection, those consisting primarily of non-governmental organisations, public groups, environmental groups and universities, and those from within organisations responsible for the implementation of protection. This process is designed primarily for use by those in the former group, those being of non-governmental origin which in general have no predetermined mechanism for the implementation of protection. The second group, comprising governmental organisations, responsible for the implementation of specific mechanisms for which their responsibility lies usually aim toward the use of those mechanisms for which they are responsible. For this reason, the process is not as ideally suited to such organisations. Exceptions include instances of comparison between different mechanisms administered by the same organisation, or in cases where the organisation is open to consideration of implementing protection by alternative mechanisms. This may include instances where the policy of the organisation is to provide protection, and use particular mechanisms are preferred. Reasons for limiting the range of mechanisms include a preference for mechanisms for which the organisation is responsible, or in relation to those mechanisms which may be identified with the organisation seeking statutory protection. As an example, protection promoted by the Department of Conservation would primarily represent the overall purpose of the organisation. Another instance of considering alternative mechanisms relates to instances in which there is a statutory requirement to consider alternative methods. An example

being where a regional council may wish to protect a part of the coastal marine area. Section 32 of the Resource Management Act 1991 requires, "Duties to consider alternatives, assess benefits and costs, etc." However, in most cases plans and regulations will be developed in a manner specified by the legislation to fulfil obligations required therein. The proposed process presented is intended as a base to fuller, more detailed research once the number of potential statutory mechanisms to protect a specified area has been narrowed down.

3.3.3 STAGE TWO - IDENTIFICATION OF AREAS REQUIRING PROTECTION



Stage two of the process comprises the identification of area(s) requiring protection. Use of this stage is not mandatory to the overall process but provides information required for the selection of suitable mechanisms to protect the proposed area. Also, incorporation of this stage into the process provides the overall framework of necessary steps towards implementing protection.

Identification of areas in need of protection comprises the first of the two major objectives toward reaching the goal of the proposed process. Two tasks identified for reaching this objective are the formulation of strategies (areas to be protected) and evaluation and selection of area(s) requiring protection. Both of these tasks are described in greater detail below.

(A) Type of area for which protection is sought

Identification of areas requiring protection will reflect the ideology, goals, and objectives of the organisations and groups involved in proposing an area for protection. Areas selected will therefore represent values of that organisation or group proposing protection. In relation to the selection of areas for which the method of protection has been predetermined, constraints imposed by the statutory mechanism will often reflect the suitability of different areas. The degree of support required, and level of protection afforded will also be known to the user. The process is designed for use in instances where the area is not being selected for protection by a predetermined mechanism. Selection of areas requiring protection will need sound reasons for their need or

requirement to be protected. A number of factors contributing to the selection of any particular location for protection include: values of the area; i.e., the purpose and criteria for which protection is being sought and the inclusion of these values and to what extent they are represented within the various areas; any other technical input as provided its relevance to the area; public favour or disfavour of one particular area over another; consent with policies or other mandates of various organisations. Objections from other sectors with different values also need to be incorporated within the planning process to ensure minimal conflict at the time of implementation. Mediation and co-operative action are an important consideration in any planning process.

(B) Formulation of strategies

Formulation of strategies is designed to provide a selection of potential areas for future protection. Identification of these areas is achieved through the gathering and subsequent analysis of information. Areas selected for protection will fit with the goals, mandates and policies of the group or organisation promoting protection. Steps to gather and subsequently analyse required information are identified below to assist the user of the process. Information to be gathered is primarily covered by the steps below, but additional information may need to be gathered dependent on the needs and requirements of the user and individual circumstances.

An adequate planning process needs to incorporate all relevant information of undertaking the process as opposed to inaction and its consequences. This includes the institutional framework, the political system, ecological, social, cultural and other considerations.

Information gathering

Information gathering is designed to obtain information relevant to areas potentially requiring protection. Areas containing values for which protection is being sought need to be identified. Values may include such factors as rare species, uniqueness and other criteria identified in Chapter Two. In some cases selection of an area for protection may consist of selecting location boundaries from a range of identified areas.

Information sought to identify potential areas requiring protection will also include other factors including likely benefits to people for protecting different areas, the degree of public and political support to protect different areas. Also required is information regarding the organisations with an interest in the various areas being identified, whether they are naturally supportive of protection of the area or not. What level of protection is needed and wanted for the area is also important as is the likely support and

subsequent success of implementation. This information will then provide a basis for the analysis of information to select potential areas for protection. Presented in Box 1 below is a summary of general information required to identify areas requiring protection.

Box 1: Steps for the gathering of general information required to identify areas requiring protection

Determine need for protection, whether any significant advantages would be obtained from the level of protection proposed and likely disadvantages.

1- Determine what areas provide for the purpose of protection.
2- Determine criteria/values considered important to protect.
   What areas contain these values.
3- Consider User groups of the area and their needs.
4- Assess public and political support for protection, in what areas, to what level.
5- Specify groups/organisations involved with the area(s) being considered.
6- Consider other factors of importance to potential areas of protection.
   May include policies, mandates of the user.

Many of these issues will have been determined prior to proposing an area for protection. General points to consider during the collation and analysis of information include experiential knowledge about the area from which information is being gathered. Assumptions made due to a lack of knowledge or uncertainty need to be stated, and recognition of political, public, and organisational differences in opinion on day to day management and long term vision is important. Other factors to consider include time and money constraints, and potential impacts of the do nothing option.

Information gathered may be identified as primarily coming from two sources, technical and experiential. Also, use is made of a consultative and co-ordinative process (i.e., to provide for the views of affected interests and to achieve necessary collaboration of those affected (Lang, 1986, 1). Whilst the method of choosing an area may differ it is not the major concern of this thesis to analyse that issue in detail. The end result should ultimately be the isolation of one or more areas which need protection and an assessment of their importance for protection (as determined through the process), the reasons for their proposed protection, the level of public and political support, and finally the level of protection desired. The accuracy and detail of information gathered has an impact on the values placed on various issues by the user and therefore affects the decisions subsequently made. Other factors influencing the outcome and which need recognition include a lack of information (which should not negate the importance of the need to protect any specific area) and the attitude and focus of the user and his or her influence on the outcome of the process. It is important to recognise the need for

an adequate information base, as it reflects decisions made in subsequence.

Information analysis

Analysis of information gathered is designed to assist the user in determining potential areas requiring protection. Various steps to analyse information are presented below in Box 2.

Box 2: Steps to aid in the analysis of information gathered regarding potential areas requiring protection.

1- Develop suggested boundaries from the information sought. (Need for consultation between planners and local individuals/groups. e.g., Where is the highest use, the greatest need for protection). Could two levels of protection be imposed? What are the alternative ways of protecting the area.
2- Determine the level of protection required to protect the values contained within the proposed area(s). Place a suggested level of protection on the proposed area(s).
3- Define the need for protection of the area(s) suggested.
4- Consider how the area fits into any requirements (statutory or otherwise) of the organisation/group proposing protection.

This section involves decision making on the reasons for protecting any area. An assessment needs to be made about areas which fit the goals, mandates, and policies of the group or organisation using the process. One or several areas may be identified as fitting the need and requirements of potential protection. Assessment of the preferred levels of protection acceptable for each area is also included in this stage. Formulation of strategies is based on information gathered, and provides a base from which evaluation and selection may occur.

(C) Evaluation and selection of areas proposed for protection

Evaluation and selection of strategies involves the assessment of alternative locations previously identified as potentially requiring protection. The object of this task is to select area(s) from those previously identified to choose those for which protection needs to be sought.

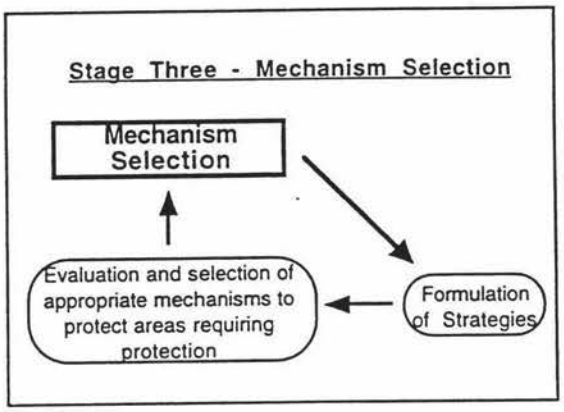
(D) Stage two reassessment/feedback

Feedback and reassessment at this stage of the process is designed to provide information to the user as to whether the approach being used is working or if there are potential problems not yet realised. Contributors to this information include the public, local community groups, organisations interested, and those who may only have become aware of the issues after notification of some form of protection for the proposed area.

Public consultation may comprise an important step in this stage and may involve querying whether the area selected for protection represents that preferred by various public groups. In certain instances, more information may need to be gathered regarding the area proposed for protection. Alternatively, minor shifts in the 'ideal' purpose of protection may also have occurred. This may alter the importance of protecting certain areas, place more weighting toward current users or toward protection and affect the level of protection required.

Stage two, while identifying areas most in need of protection provides much needed background information on the area selected for protection which is required in stage three. Stage three is designed to provide a process by which different mechanisms may be compared to assess those most suitable to protect a specified location. Stage three may be used either in conjunction with the overall framework provided or in isolation to determine appropriate mechanisms available for protection.

3.3.4 STAGE THREE - ASSESSING SUITABLE MECHANISMS



Assessment of suitable statutory mechanisms to protect New Zealand's marine environment may be achieved through a two task process, similar in outline to that specified for stage two. First, formulation of strategies involving a gathering of information regarding potential mechanisms for protection occurs. Second is the evaluation and selection of strategies which comprises comparison of the area proposed for protection with the statutory mechanisms available for protection.

(A) Formulation of strategies

Formulation of strategies comprises the identification and analysis of statutory mechanisms available to protect areas identified as requiring protection. Statutory mechanisms are analysed in relation to guidelines developed in Chapter Two to assess each mechanism's potential use in particular situations. Guidelines include boundaries the individual mechanism covers, the mechanism's purpose and criteria, the level(s) of protection afforded by the mechanism, consent required prior to implementation and the degree of enforcement provided by the mechanism. Relevant information from the selected mechanisms is presented in flow chart format to allow ease in comparison

between the statutory mechanisms and requirements of the area selected for protection. Statutory mechanisms contained in the flow chart may be added or deleted in relation to circumstance or need. Box 3 presents information required from statutory mechanisms selected for comparison with an area proposed for protection.

Box 3: Information to be obtained from statutory mechanisms to be included in the process.

List mechanisms. For each mechanism assess:

1- Legislative boundary covered.
2- Purpose and criteria of the mechanism.
3- Level(s) of protection provided by the mechanism.
4- Organisation responsible for implementation of the mechanism and from which organisation(s) consent is required.
5- Degree of enforcement provided by the mechanism.

A supporting flow chart is presented which lists all statutory mechanisms included in the proposed process and briefly identifies the major components in each in a systematic style (See Figure 7). This is provided to aid in visually scanning those mechanisms most appropriate to provide protection of a given area. It is intended the flow chart be used to aid the user in following those most appropriate at each step to the next step and so on, with the number of available mechanisms being reduced at each step. Reversion to earlier stages may occur at any step in instances where goals are redefined, further information is gained, or in instances lacking in certain criteria for a step occurs.[2]

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2 The flow chart is designed to be used in conjunction with information gained about the area and the following written text. The chart is very brief, with marginal content and is useful only as a guide. It is designed to 'point the user' in the right direction in their quest for identifying potential statutory mechanisms for use. As legislation is modified, the individual mechanisms contained within it will go out of date. For this reason it is necessary that the user ensure the process is up to date. An example being mechanisms contained in the Fisheries Act, which is being revised - a bill currently being before the Select Committee. This bill will also affect mechanisms contained within the Wildlife Act 1953 and Marine Reserves Act 1971.

Figure 7 - Provisions of selected statutory mechanisms available to protect New Zealand's marine environment.

1	Marine Mammals Protection Act 1978 Marine mammal sanctuary	Wildlife Act 1953 Wildlife Sanctuary	Wildlife Act 1953 Wildlife Refuge	Wildlife Act 1953 Wildlife Management Reserve
2	Any place (Place includes any building (not being a dwelling house), any land and any fisheries waters	Crown land, Private land, Foreshore, Areas of Harbour, Waters of Sea	Crown land, Private land, Foreshore, Areas of Harbour, Waters of Sea	Crown land, Private land, Foreshore, Areas of Harbour, Waters of Sea
3	-To protect, conserve, manage marine mammals -Protection of mammal habitats	-Protection of wild animals, birds, and their habitats	-Protection of wild animals, birds, and their habitats	-Protection of wild animals, birds, and their habitats
4	Variable level of protection Permitted activities and restrictions specified by Minister of Conservation Use to protect other species only if primary purpose is protection of marine mammals and their habitat	High-Varied level of protection May exclude entry May specify prohibitions/restrictions of eg. hunting, burning fires, vehicles, pollution etc. May be used to provide additional protection to conservation areas Prohibition on bringing any plant material into the reserve.	Varied High-Moderate Prohibitions/Restrictions on hunting, pollution, boat use, firearms etc. Lower level of protection than in wildlife sanctuary	High-Varied level of protection May exclude entry May specify prohibitions/restrictions of eg. hunting, burning fires, vehicles, pollution etc. May be used to provide additional protection to conservation areas
5	Minister of Conservation by notice in the Gazette after considering any submissions received within 28 days of notification in the gazette. -Consent of any Minister with control of any crown owned land, foreshore, seabed or waters of the sea to be declared a MMS or forms part of one Consultation with Director General of Ag and Fish, Secretary for Transport and Secretary for the Environment prior to making statements of policy for implementation of the Act	Proclamation issued by Governor-General, for: Crown land-Joint recommendation of Min. of Conservation and Min. charged with administration of the Department of State having control of the land Waters of the Sea/Harbour -Joint recommendation of Min. of IConservation and Min. of Transport =Minister of Conservation, MInister of Lands and Minister of Transport Gazettal subject to notwithstanding anything to the contrary in the conservation Act 1987, Gvt. Railways Act 1949 and any other Act affecting lands of the Crown. Act administered by Min. of Conservation.	Proclamation issued by Governor-General, for: Crown land-Joint recommendation of Min. of Conservation and Min. charged with administration of the Department of State having control of the land Waters of the Sea/Harbour -Joint recommendation of Min. of Conservation and Min. of Transport. Gazettal subject to notwithstanding anything to the contrary in the conservation Act 1987, Gvt. Railways Act 1949 and any other Act affecting lands of the Crown. Act administered by Min. of Conservation	Landowners consent required. Proclamation issued by Governor-General, for: Crown land-Joint recommendation of Min. of Conservation and Min. charged with administration of the Department of State having control of the land Waters of the Sea/Harbour -Joint recommendation of Min. of Conservation and Min. of Transport. Gazettal subject to notwithstanding anything to the contrary in the conservation Act 1987, Gvt. Railways Act 1949 and any other Act affecting lands of the Crown. Act administered by Min. of Conservation.
6	Offence to fail to comply with restrictions and conditions, and giving misleading statements etc Purse seining and laying of traps, using vehicles for which no penalty is provided a fine not exceeding $5,000 and in any other case a fine not exceeding $1,000	Offence to fail to comply with Act or to commit a breach of provisions punishable by a fine not exceeding $2,500 and $200 per day the offence continues Resisting rangers $500 Taking protected wildlife, liberation, export of animals $1,500 and $100 per head Take or kill game, $500 per head	Offence to fail to comply with Act or to commit a breach of provisions punishable by a fine not exceeding $1,000 and $50 for every head of wildlife Resisting rangers $500 Taking protected wildlife, liberation, export of animals $1,500 and $100 per head Take or kill game $500 per head	Offence to fail to comply with Act or to commit a breach of provisions punishable by a fine not exceeding $1,000 and $50 for every head of wildlife Resisting rangers $500 Taking protected wildlife, liberation, export of animals $1,500 and $100 per head
7	Likelihood of success -High potential if marine mammals need protection, also protect habitat	Likelihood of Success -Possible	Likelihood of Success -Possible	Likelihood of Success -Possible

Figure 7 - Provisions of selected statutory mechanisms available to protect New Zealand's marine environment.

1	Historic Places Act 1993 Historic Places Register	Historic Places Act 1993 Heritage Covenant
2	Historic places, historic areas, wahi tapu and wahi tapu areas.	Historic place, historic area, wahi tapu, or wahi tapu area and surrounding land (if any) out to the territorial limts of NZ
3	-Protection, preservation, and conservation of the historical and cultural heritage of New Zealand. - Aspects of NZ history - NZ history -interpretation -NZ history -association with -Importance to tangata whenua -Community association with the place -Potential for public education -Technical accomplishment -Value of the place -Relevance to a wider historical and cultural complex	--Protection, conservation, and maintenance of any historic place, historic area, wahi tapu, or wahi tapu area.
4	Variable - dependent on recomendations of the NZ Historic Places Trust, accorded by need for protection.	Variable according to its tenor. "Include such terms and conditions as the parties think fit, including provision for public access." (s 6(2), Historic Places Act 1993). Not to prevent the Trust from excercising its powers under the RMA. No activities contrary to the provisions of the Historic Places Act 1993 permitted within a heritage covenant.
5	Consent of owner is not required, but in cases of disagreement a submission may be lodged	"The Trust may negotiate and agree with the owner or lessee or licensee ... to provide for the protection, conservation and maintenance of that place, wahi tapu or wahi tapu area." (s6(1) Historic Places Act 1993). The Trust is not required to negotiate or agree with any person to enter into or execute any heritage covenant.
6	Powers of search and seizure Enforcement orders => payment to remedy or mitigate adverse effect and reimbursement for damage. Non-compliance with enforcement order => max. of 2 years jail or $200,000 fine and $10,000 every day the offence continued. and $1,500 (max.) fine for non-compliance with person executing procedures under the Act or failure to give evidence in response to a summnons or order made under the Act.	Destruction or modification of the site payable by fines of up to $100,000 and $40,000 respectively.
7	Sucess dependent on values of the area meeting specified criteria and the Trust is satisfied the proposal is supported by suffiecient evidence. Written submissons prior to confirming registration by the Trust, but owner's permission not required	Sucess dependent on the recipient being a historic place, historic area, wahi tapu or wahi tapu area. Not limited by requirement for concurrence. Legislation relatively new. Likely if conditions met.

Figure 7 - Provisions of selected statutory mechanisms available to protect New Zealand's marine environment.

1	Fisheries Act 1983 Controlled fisheries	Fisheries Act 1983 s89 Regulations	Fisheries Act 1983 Mataitai Reserves (s89mb)	Fisheries Act 1983 s85 - Closed Seasons	Fisheries Act 1983 Quota Management System	Fisheries Act 1983 Total allowable catch
2	New Zealand and New Zealand fisheries waters	New Zealand and New Zealand fisheries waters	NZ and NZ fisheries waters	New Zealand and NZ fisheries waters	Quota management Area -	In specified Quota mangemnent Area
3	Purpose - Management or Conservation ...or economic stability of the fishing industry -Particular species -Areas fished -Class of fish Aquatic wildlife -Persons who may be engaged in the fishery	For any of the following: (a) Generally regulate fishing (c)Protection of shellfish and shellfish beds (d) Prohibiting or regulating the taking ...(of) any fish or any part or particular state or condition of any fish (f) Regulating the quantity of fish that may at any one time be on board any vehicle or vessel or kept or conveyed ... or in the possession of any prescribed number of persons (g) Prescribing a quota ... for any fish ...or any fishery or method of fishing in any part of N.Z. fisheries waters, and authorising the Minister to allocate any such quota ...to such commercial fishermen as he may specify by notice in the Gazette (h) Providing for the issue, refusal, renewal, suspension, revocation, modification, and imposition by the regulations or the Dir-General of conditions on licences for persons who wish to acquire or be in possession ... in prescribed conditions of fish taken ...	-Recognition of non-commercial customary food gathering -Sustainable management (of the fish, aquatic life, and seaweed) -Local users -Customary use	-Closed season(s) declared in respect of any species of fish (other than sports fish), aquatic life, or seaweed	-Conservation of fish stocks -Manage fisheries to ensure maximum economic efficiency -Specified species only (increasing number)	s280(B)Check - Reduction of total allowable catch -Specific species -Specific time periods restricted
4	Variable -Range -Protection of an area , to - limiting catch of a particular species	Variable - Regulations specify variable range of protection	Variable - Bylaws to restrict or prohibit the taking of fish, aquatic life or seaweed. Regulations under s89. For customary food gathering.	High level of protection as area is.closed for any term not exceeding three years or any month, week or day. (Note term is renewable) Unlawful for any person to have possession of any fish,aquatic life, or seaweed, or in any way injure or disturb any fish, aquatic life, or seaweed and to so so is an offence	Survival of specified species. Can reduce level of fishing. Quota of total allowable catch per person	Reduction of level of fishing for survival of species - amount affected by s12 of the Territorial Sea and EEZ Act 1977, as allowable catch for foreign fishing crafts and other controls and measures specified in the Act.
5	Organisation responsible -Governor-General on recommendation of Minister of Fisheries after Consultation with Fishery Industry board , Minister of Conservation, and fisheries commission	Organisation responsible -Governor-General by order in council Concurrence Not specified in Act	Organisation responsible Minister of Fisheries declares by notice in Gazette after Consultation by Min of Fisheries and tangata whenua with the local community a and having regard to sustainable management of the fish, aquatic life and seaweed in the reserve.	Dir-General of Fisheries declares by notice in the Gazette after consulting with the Dir-General of Conservation.	Minister of Fisheries by notice in the Gazette, after consultation with the Commission and the fishing industry board specify any species or class of fish subject to the QMS.The Dir-General shall make any allocation of a provisional maximum individual transferable quota	Minister of Fisheries by notice in the Gazette Minister shall consult with commission and the Fisheries Industry board and such other persons or organisations as the Minister considers are representative of persons having an interest in the fishery and have regard to any views expressed by such persons or organisations. Have regard to non-commercial interests in the fishery.
6	Offence to fish in a controlled fishery without license. Punishable by a fine not exceeding $10,000 and if fail to stop fishing, fine not exceeding $1,000	s89(l)-Prescribe offences in respect of contravention of or non-compliance with any regulations. Penalty not exceeding $10,000 in respect of any offence and $500 every day the offence continued s89(m)-Infringement offences and fees prescribed	s89(l)-Prescribe offences in respect of contravention of or non-compliance with any regulations Penalty not exceeding $10,000 in respect of any offence and $500 every day the offence continued s89(m)-Infringement offences and fees prescribed	Offence to take fish, aquatic life, or seaweed. Fine not exceeding $5,000 and $20 for every fish taken. If a continuing offence, $500 per day after first day the offence was committed.	Powers of seizure Offence against the Fisheries Act for which there is no other penalty, fine not exceeding $250,000 and not exceeding $1,000 per day offence continued	Powers of seizure Offence against the Fisheries Act for which there is no other penalty, fine not exceeding $250,000 and not exceeding $1,000 per day offence continued.
7	Requires a lot of behind the scenes work from MAF. Possible.	Likelihood of success -Fisheries laws changing in near future	Likelihood of success -MAF policy for implementation currently being produced. High likelihood in the near future	Likelihood of success -Provides general protection of an area - Protection in long term not guaranteed - Fisheries legislation undergoing review - Successfully used in the past	Likelihood of success -Good for species preservation. Not designed for general area protection -Fisheries legislation currently under review.	Likelihood of success -Not designed for protection Only preservation of fishing stocks. Fisheries legislation undergoing review

Figure 7 - Provisions of selected statutory mechanisms available to protect New Zealand's marine environment.

1	Marine Reserves Act 1971	Territorial Sea and EEZ Act 1977 s22(i, j) Regulations	Territorial Sea and EEZ Act 1977 s27 Regulations	Fisheries Act 1983 s54 Taiapure	Territorial Sea and Exclusive Economic Zone Act 1977 s8 Regulations	Resource Management Act 1991 N.Z. Coastal Policy Statement	Resource Management Act 1991 Regional Coastal Plan
2	Foreshore - 200 miles seaward from MLWM.	EEZ zone = 12 - 200 miles seaward from MLWM	EEZ zone = 12 - 200 miles seaward.	Estuarine or littoral coastal waters	Low water mark - 12 miles seaward	MHWM - 12 miles seaward	MHWM -12 miles seaward
3	Purpose -Maintaining an area in its natural state as the habitat of marine life for scientific study. Criteria - Underwater features Natural features Marine Life\; of such distinctive quality Typical Beautiful Unique, that their continued preservation is in the natural interest	Conservation and management of fisheries resources in New Zealand AND/OR Specifying types of high migratory species of fish in New Zealand and beyond New Zealand fisheries waters for New Zealand vessels	-Protection and preservation of the marine environment	-Make better provision for the recognition of rangatiratanga and Treaty of Waitangi with respect to fisheries -Customarily of special significance to iwi or hapu as a source of food or for spiritual or cultural reasons -Size of fishery affected -Impact on general welfare of the community -Impact on those with a special interest in the area -Impact on fisheries mngt -Species of aquatic life of particular importance or interest -Maori interests -Traditional interests -Recreational interests -Commercial interests -Other interests in the area -Why the area is customarily of special significance	-Protection and preservation of the marine environment	-Areas of Significant value -Sustainable Management -Preservation of the natural character of the coastal environment -Protection from inappropriate use -Characteristics of special value to the tangata whenua -Crown's interest in land -International obligations -National priorities -Protection of natural features -Protection of areas of significant indigenous vegetation and fauna -Public access -Maori relationship -Kaitiakitanga -Intrinsic values -Heritage values -Quality of the environment -Finite characteristics -Treaty of Waitangi	-Guidelines in NZCPS -Purpose of RMA -Natural character of coastal environment -Protection of outstanding natural features -Protection of area of significant indigenous vegetation and fauna -Public access -Maori relationship -Kaitiakitanga -Intrinsic values -Heritage values Quality of the environment -Finite characteristics -Treaty of Waitangi
4	Level(s) Variable -Conditions specified in the notice -Restrictions and Regulations via the Fisheries Act DOC policy-> Total protection	Variable - Range -Low-High regulations, for regulating fishing. -General protection or protection of a specific species	Variable -Range -Low-High specified in regulations.	Variable - regulations -Conservation and mngt of fish, aquatic life and seaweed -Specific or general regulations	Variable Protection and Preservation via regulations	Level of protection is baseline, to protect the character of the coastal environment and instances where the Minister of Cons. will decide resource consent applications.	Variable, restrictions of activities, protection of habitat. Level of protection specified in the plan. eg ARC RCP -> two levels of protection according to values of the area. Fit within existing protection.
5	Organisation responsible -Minister of Conservation Concurrence -Minister of Transport -Minister of Fisheries	Organisation responsible -Governor -General No requirement for consent specified in the Act.	Organisation responsible -Governor -General No requirement for consent specified in the Act.	Organisation responsible -Governor-General on recommendation of Min. of Fisheries, on receipt of application from any person -Consideration of objections from any person.	Governor-General makes regulations where no other provision is for the time being made by any other enactment for any such purposes. No requirement for consent specified in the Actt.	NZCPS is prepared by the Minister of Conservation. Procedures and methods to review the policies and monitor their effectiveness are to be stated within the NZCPS. Generally, if provided for within the NZCPS, protection already implemented.	RCP prepared by Regional Council concerned in consultation with the Min. of Cons. and iwi authorities of the region. If already in force, reliance on existing policies.
6	Enforcement Potential -Offence to remove material - Fine see Act.	Enforcement Potential -Offence to breach regulations-> fine not exceeding $10,000 for owner, licensee or master and not exceeding $1,000 for other crew member	Enforcement Potential -Offence to breach any regulations punishable by a fine not exceeding $10,000 for any such offence	Offence to breach regulations- -Fine not exceeding $250,000 and $1,000 per day	Offence to breach regulations- Fine not exceeding $10,000	Powers of search and seizure Enforcement orders => payment to remedy or mitigate adverse effect and reimbursement for damage. Non-compliance with enforcement order => max. of 2 years jail or $200,000 fine and $10,000 every day the offence continued. $1,500 (max.) fine for non-compliance with person executing procedures under the Act or failure to give evidence in response to a summnons or order made under the Act.	Powers of search and seizure Enforcement orders => payment to remedy or mitigate adverse effect and reimbursement for damage. Non-compliance with enforcement order => max. of 2 years jail or $200,000 fine and $10,000 every day the offence continued. $1,500 (max.) fine for non-compliance with person executing procedures under the Act or failure to give evidence in response to a summnons or order made under the Act.
7	Likelihood of Success -Process provided -Implementation promoted by DOC Success affected by the level of support for a marine reserve.	Likelihood of success -No specific policies for implementation. -Past use restricted to MAF Where no other provision by any other enactment	-No specific policies for implementation -Past use restricted to MAF Where no other provision by any other enactment s22(9) provides for implementation of Act.	Likelihood of success High potential At present, only one, but more applications pending.	Likelihood of success Possible	Likelihood of Success. High - NZCPS already in place, therefore areas specified will be protected according to specifications	Likelihood of Success. High - RCP already in place, therefore areas specified will be protected according to specifications

Figure 7 - Provisions of selected statutory mechanisms available to protect New Zealand's marine environment.

	National Parks Act 1980 National Park	National Parks Act 1980 Specially Protected Area	National Parks Act 1980 Wilderness Area	National Parks Act 1980 Amenity Area
1	National Parks Act 1980 National Park	National Parks Act 1980 Specially Protected Area	National Parks Act 1980 Wilderness Area	National Parks Act 1980 Amenity Area
2	Foreshore and Land -Is the Area proposed for protection of sufficient size to justify a National Park?	Foreshore and Land. Any area of a National Park. First ensure fits national park specifications.	Foreshore and Land. Any area of a National Park. First ensure fits national park specifications.	Foreshore and Land. Any area of a National Park. First ensure fits national park specifications.
3	-Preserve for intrinsic worth, benefit, use and enjoyment of the public areas that contain scenery of distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest	Set apart any area of a National park as a specially protected area Any area of a National Park => Purpose of Act ie. -Preserve for intrinsic worth, benefit, use and enjoyment of the public areas that contain scenery of distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest	Set apart any area of a National park as a wilderness area Any area of a National Park => Purpose of Act ie. -Preserve for intrinsic worth, benefit, use and enjoyment of the public areas that contain scenery of distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest	Set apart any area of a National park as an amenity area Any area of a National Park => Purpose of Act ie. -Preserve for intrinsic worth, benefit, use and enjoyment of the public areas that contain scenery of distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest
4	-Preserve native plants and animals in natural state -Preserve archeological and historical site -Maintain value as a soil, water and forest conservation are --Public to have freedom of entry for inspiration, enjoyment, recreation, and other benefits (except where provisions and restrictions necessary for the preservation of the native plants and animals or welfare of the park) -No person may cut, destroy, take any plant or part of a plant or hunt, trap, or kill any animal without the Min. of Conservation's permission -Bylaws on use of park -Entry may be restricted if for the benefit of flora or fauna or the park	Very High No person may enter or remain in any specially protected area except under the authority of and in accordance with a permit issued by the Min. of Conservation. Offence not to apply with conditions in the permit	High Kept and maintained in a state of nature -No building, ski-lifts or other apparatus to be erected or constructed in the area. (Min. may authorise erection of huts essential for the eradication of introduced plants and animals or for the purposes of scientific study) -No animals or vehicles taken into or issued in the area -No roads, tracks, or trails constructed except for the use of persons entering on foot as are contemplated by the management plan	Moderate-High -Development and operation of recreational and public amenities and related services appropriate for the public use and enjoyment may be authorised in accordance with Act and the management plan
5	Governor-General by Order in Council made on the recommendation of the Min. of Conservation on recommendation of the Authority made after consultation with the appropriate board Foreshore only declared a national park with the joint recommendation of the Min. of Conservation and the Minister of Transport and where the foreshore is under control of a Regional council under the RMA 1991, except with the consent of that Body s7(B)	Governor-General by order in Council on recommendation of the Min. of Conservation after consultation with the authority and the appropriate board	Minister of Conservation on recommendation of the authority made in accordance with a cons. management plan, by notice in the gazette	Minister of Conservation on recommendation of the authority made in accordance with the mngt. plan by notice in the gazette
6	-Bylaw -fine for breach of -$500 -Bylaw to prescribe fine -$5,000 -Offence to take animals in, liberate seed etc. Powers of search and seizure -cost of damage restoration -Twice full market value of anything taken plus penalty incurred. Maximum Penalty: -Corporation $25,000 plus $2,500 per day offence continued -Individual $2,500 and 250 per day offence continued or prison 3 months	-Bylaw -fine for breach of -$500 -Bylaw to prescribe fine -$5,000 -Offence to take animals in, liberate seed etc. Powers of search and seizure -cost of damage restoration -Twice full market value of anything taken plus penalty incurred Maximum Penalty: -Corporation $25,000 plus $2,500 per day offence continued -Individual $2,500 and 250 per day offence continued or prison 3 months	-Bylaw -fine for breach of -$500 -Bylaw to prescribe fine -$5,000 -Offence to take animals in, liberate seed etc. Powers of search and seizure -cost of damage restoration -Twice full market value of anything taken plus penalty incurred Maximum Penalty: -Corporation $25,000 plus $2,500 per day offence continued -Individual $2,500 and 250 per day offence continued or prison 3 months	-Bylaw -fine for breach of -$500 -Bylaw to prescribe fine -$5,000 -Offence to take animals in, liberate seed etc. Powers of search and seizure -cost of damage restoration -Twice full market value of anything taken plus penalty incurred. Maximum Penalty: Corporation $25,000 plus $2,500 per day offence continued -Individual $2,500 and 250 per day offence continued or prison 3 months
7	Likelihood Possible -Foreshore.	Likelihood Possible -Foreshore	Likelihood Possible -Foreshore	Likelihood Possible -Foreshore

Figure 7 - Provisions of selected statutory mechanisms available to protect New Zealand's marine environment.

1	Conservation Act 1987 Conservation Area	Conservation Act 1987 Conservation Park	Conservation Act 1987 Wilderness Area	Conservation Act 1987 Ecological Area	Conservation Act 1987 Sanctuary Area
2	Crown Land and Foreshore	Conservation Area	Conservation Area	Conservation Area	Conservation Area
3	For Conservation purposes	Protect natural and historic resources and subject to this, facilitate public recreation and enjoyment	-Preserve Indigenous natural resources	Protect the value for which it is held	Preserve indigenous plants and animals in their natural state, and for scientific and other purposes
4	Mod-High. -Protect its natural and physical resources -Minister may close Conservation Area -Conditions in CMS/CMP Dir-General may make regulations-range (eg.to control actions of public)	Moderate- Protection of resources (natural and historic). -Recreation and enjoyment. Provides additional specific protection or preservation requirements to basline of conservaton area.	-High- Preserve indigenous natural resources. Protect natural and historic resources. -No building, machinery, or apparatus to be erected or maintained on it. -No road, tracks, or trails to be constructed. -No livestock, vehicles, or aircraft. Provides additional specific protection or preservation requirements to basline of conservaton area. -Min. of Cons. may authorise scientific study. -Provides additional specific protection or preservation requirements to basline of conservaton area.	Variable -Protect the value for which it is held. Protect its natural and historic resources. --Provides additional specific protection or preservation requirements to basline of conservaton area.	High: -Preserve in natural state. Managed to preserve indigenous plants and animals in their natural state; and for scientific and other purposes. Protect natural and historic resources. -Provides additional specific protection or preservation requirements to basline of conservaton area.
5	Min. of Conservation and Minister responsible for control of any land or foreshore by notice in the Gazette (Min. may declare any cons. area to be a reserve under the Reserves Act) Min. may acquire land for conservation purposes by agreement).	Minister, by notice in the Gazette declare any land or interest in land held under the Cons Act for conservation purposes to be held for the purpose of a cons. park. Prior to declaring any conservation area of a specialised class or description Minister shall give public notice of intention. Rights of objection, Dir-General gives objections with recommendation to Min. of Cons. Minister's decision.	Minister, by notice in the Gazette declare any land or interest in land held under the Conservation Act for cons. purposes to be held for the purpose of a Wilderness Area. Prior to declaring any conservation area of a specialised class or description Minister shall give public notice of intention. Rights of objection, Dir-General gives objections with recommendation to Min. of Cons. Minister's decision.	Minister, by notice in the Gazette declare any land or interest in land held under the Conservation Act for cons. purposes to be held for the purpose of an Ecological Area. Prior to declaring any conservation area of a specialised class or description Minister shall give public notice of intention. Rights of objection, Dir-General gives objections with recommendation to Min. of Cons., Minister's decision	Minister, by notice in the Gazette declare any land or interest in land held under the Conservation Act for cons. purposes to be held for the purpose of a Sanctuary Area. Prior to declaring any conservation area of a specialised class or description the Min. shall give public notice of intention. Rights of objection, Dir-General gives objections with recommendation to Min. of Cons., Minister's decision
6	-Dir-General may make payments to informers leading to convictions -Offence for which no other penalty is provided: Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued Corporation Max. fine of $80,000 and $10,000 per day offence continued. Offenders liable for loss or damage. Forfeiture of property.	Dir-General may make payments to informers leading to convictions -Offence for which no other penalty is provided Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued Corporation Max. fine of $80,000 and $10,000 per day offence continued Offenders liable for loss or damage Forfeiture of property.	Dir-General may make payments to informers leading to convictions -Offence for which no other penalty is provided: Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued Corporation Max. fine of $80,000 and $10,000 per day offence continued Offenders liable for loss or damage Forfeiture of property.	-Dir-General may make payments to informers leading to convictions -Offence for which no other penalty is provided: Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued Corporation Max. fine of $80,000 and $10,000 per day offence continued. Offenders liable for loss or damage. Forfeiture of property.	-Dir-General may make payments to informers leading to convictions -Offence for which no other penalty is provided: Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued Corporation Max. fine of $80,000 and $10,000 per day offence continued Offenders liable for loss or damage Forfeiture of property.
7	Likelihood....	Likelihood.... (First needs to become a conservation area).	Likelihood....	Likelihood....	Likelihood....

Figure 7 - Provisions of selected statutory mechanisms available to protect New Zealand's marine environment.

1	Reserves Act 1977 Recreation Reserve	Reserves Act 1977 Historic Reserve	Reserves Act 1977 Scenic Reserve	Reserves Act 1977 Nature Reserve	Reserves Act 1977 Scientific Reserve	Reserves Act 1977 Government Purpose Reserve	Reserves Act 1977 Local Purpose Reserve	Reserves Act 1977 NZ (National) Reserve
2	Foreshore or Crown land	Foreshore or Crown land	Foreshore or Crown land	Foreshore or Crown land	Foreshore or Crown land	Foreshore or Crown land	Foreshore or Crown land	Crown land Reserve Foreshore Reserve
3	Purpose: -Providing areas for the recreation and sporting activities and the physical welfare and enjoyment of the public, and -For the protection of the natural environment and beauty of the countryside with emphasis on the retention of open spaces and on outdoor recreational activities including recreational tracks in the countryside	Protect and preserve places, objects, and natural features of historic, archaeological, cultural, educational, and other special interest -Illustrate the history of NZ	Protect and preserve areas of scenic interest, beauty, or natural features or landscape desirable in the public interest for their intrinsic worth and for the benefit, enjoyment and use of the public -Provide suitable areas which by development and the introduction of flora will become of scenic interest or beauty that ...protection ... is in the public interest -Preserve indigenous flora, fauna, ecological associations and natural environment and beauty -Retention and preservation of natural and scenic values	-Protect and preserve in perpetuity indigenous flora or fauna or natural features that are of such rarity, scientific interest or importance, or so unique that their protection and preservation are in the public interest	-Protecting and preserving in perpetuity: ecological associations, plant or animal communities, types of soil, geomorphological phenomena, and like matters of special interest for scientific study, research, education, and the benefit of the Country	-Providing and retaining areas for such Government purpose as may be specified -May be for wildlife management or for other specified wildlife purposes	-Providing and retaining areas for such educational, community, social, or other local purposes as may be specified	-Protect values of National or International importance
4	Moderate-Low Protect natural features	Variable Preserve indigenous flora and fauna and natural environments as much as possible Public access and entry unless non-entry is necessary for protection and well-being of reserve	Variable Low-High Preserve natural environment Public to have freedom of entry subject to bylaws and administering bodies. Conditions and restrictions necessary for the well-being and protection of the reserve (and of the public using it). Amenities, facilities	Very High -Preserve as far as possible in it's natural state -Exotic flora and fauna exterminated as far as possible -No person to enter the reserve (except with a permit).	High -Preserve indigenous flora and fauna as far as possible and exterminate exotic flora and fauna as far as possible -Minister may from time to time prohibit access (to all or any part) -Protect other natural values eg.geol etc. -May be manipulated for experimental purposes with Minister's consent. Regulations made by Gvnr-Genrl. to give full effect to the provisions of the Act	Variable -May from time to time limit, restrict access -Manage and protect scenic, historic, scientific, or natural features or wildlife present on the reserve ... to the extent compatible with the primary purpose of the reserve (s22(3)(a)). -Maintain the area's value as a soil, water, and forest conservation area to the extent compatible with the primary purpose of the reserve (s22(3)(b)). -Nothing in the reserve is to contravene the doing of anything with respect to fauna in the Wildlife Act 1953.	-Local authority (or Minister if not managed by local authority) may prohibit access from time to time -Value as a soil, water and forest cons. area maintained -Nothing to contravene Wildlife Act or Historic Places Act -Manage and protect scenic, historic, archaeological, biological or natural features to extent compatible with primary purpose of the reserve.	Management policies to protect the values of national or international significance and for the co-ordination of management with other national reserves
5	Minister of Cons. by notice in the Gazette classifies reserves, but if vested in a local authority, classified by the local authority. Min. shall not classify the reserve without consulting the administering body	Minister of Cons. by notice in the Gazette classifies reserves, but if vested in a local authority, classified by the local authority. Min. shall not classify the reserve without consulting the administering body	Minister of Cons. by notice in the Gazette classifies reserves, but if vested in a local authority, classified by the local authority. Min. shall not classify the reserve without consulting the administering body	Minister of Cons. by notice in the Gazette classifies reserves, but if vested in a local authority, classified by the local authority. Min. shall not classify the reserve without consulting the administering body	Minister of Cons. by notice in the Gazette classifies reserves, but if vested in a local authority, classified by the local authority. Min. shall not classify the reserve without consulting the administering body	Minister of Cons. by notice in the Gazette classifies reserves, but if vested in a local authority, classified by the local authority. Min. shall not classify the reserve without consulting the administering body.	Local authority may declare land vested in it to be a reserve for any purpose specified in s17-23 of this Act. -Publication in circulating paper with one month for objections (Not necessary if district plan makes provision for land to be a reserve or land is designated as a proposed reserve under RMA 1991). Copy of resolution forwarded to the commissioner for transmission to the Minister of Conservation with objections. -Minister considers resolution and objections and comments of local authority, then causes resolution to be gazetted or refuses to do so.	Governor-General on recommendation of the Minister of Conservation. Prior to recommendation Min. shall: -give public notice of plan -give 3 months for submissions and objections -If area is managed by another Min. of the Crown or the NZ Historic Places Trust, obtain consent of that other Min. or the Trust.
6	Powers of seizure Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence Max. for corporation of $1,000 and $10 per day the offence continued	Powers of seizure Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence Max. for corporation of $1,000 and $10 per day the offence continued	Powers of seizure Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence Max. for corporation of $1,000 and $10 per day the offence continued	Powers of seizure Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence. Max. for corporation of $1,000 and $10 per day the offence continued. Breach of bylaws => max. fine of $250 and $5 per day the offence continued	Powers of seizure Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence Max. for corporation of $1,000 and $10 per day the offence continued Breach of regulations => max. fine of $200 and $5 per day the offence continued	Powers of seizure. Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence. Max. for corporation of $1,000 and $10 per day the offence continued. Breach of regulations => max. fine of $200 and $5 per day the offence continued	Powers of seizure. Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence Max. for corporation of $1,000 and $10 per day the offence continued Breach of regulations => max. fine of $200 and $5 per day the offence continued	Powers of seizure Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence. Max. for corporation of $1,000 and $10 per day the offence continued. Breach of regulations => max. fine of $200 and $5 per day the offence continued
7	Likelihood of success ...	Likelihood of success ...	Likelihood of success ...	Likelihood of success ...	Likelihood of success ...	Likelihood of success ...	Likelihood of success ...	Likelihood of success

(B) Evaluation and selection of strategies

Evaluation and selection of strategies or statutory mechanisms available for protection is addressed in this section. A comparison is made between the selected mechanisms contained in the flow chart and the area proposed for protection.

Information gained from the fist stage which may assist in stage two include the issues or criteria which isolate the area as one needing protection. These criteria may be ecological, sociological or economic in origin as are presented in Chapter Two. As it is difficult to measure the importance of each of these values, often the implementation of statutory protection will be dependent upon public and political support of protection, and the level of protection proposed and any influence on user groups.

Box 4 identifies steps which need to be worked through in conjunction with the flow chart to provide an assessment of the most appropriate statutory mechanism in relation to an area proposed for protection.

Box 4: Steps to assess the suitability of selected statutory mechanisms to protect a proposed area.

Compare information relating to the area proposed for protection with that contained within potential mechanisms to assess the most suitable mechanism(s)

1- Options of more than one piece of legislation.
   Determine the need for one or more 'types' of protection.
   -Is more than one level of protection required in specific parts of the area under consideration for protection?
   -Are there different criteria in different parts of the area proposed for protection?
2- Assess mechanism suitability by boundary.
3- Assess mechanism suitability by purpose and criteria.
4- Assess mechanism suitability to provide level(s) of protection required.
5- Assess most suitable mechanism in relation to organisational support required.
6- Assess mechanism suitability to provide the level of enforcement required.
7- Consider likelihood of success at implementing the mechanism(s).
8- General assessment of final mechanisms selected.
9- Notification of proposed mechanism(s) to be used, and the way in which they will be used. Also consider feedback.

Steps presented in Box 4 are described in greater detail as this comprises the main focal point of this thesis.

Step one - Options of more than one piece of legislation.

Provision of adequate protection to some specified areas may require the use of more than one mechanism. A variety of reasons contribute to this need, including the disproportionate allocation of values (ecological, cultural and otherwise) among the proposed area and differing needs of those using the area in different parts of the proposed area. An example of a potential need for a differential level of protection could be where part of an area proposed for protection is used for bird feeding, and another part is used for bird breeding. A higher level of protection may be required where the bird breeds and any disturbance may disrupt breeding, but a lower level of protection may be satisfactory in feeding areas.

A need for differential levels of protection may be necessary to reflect the requirements of various user-groups of the area. Causes contributing to this need may include recreational or customary fishing in an area proposed for protection. Alternatively, the area proposed for protection may span one or more legislative boundaries, limiting the mechanisms available to protect the entire area. This may occur if an area proposed for protection covers the foreshore and extends below mean low water mark. Also, if different values within the proposed area contributed to its need for protection, these may be localised within the proposed area giving cause for different mechanisms with different purposes and containing different criteria. Use of more than one mechanism may provide for more site specific protection.

Step two - Assess mechanism suitability by boundary.

Protection of any specified area requires mechanisms which provide protection over the proposed area. To protect the foreshore, for example, requires specific mechanisms which cover this area. In certain instances some mechanisms may cover only part of the proposed area. These mechanisms can be used in conjunction with others covering the remaining area to provide continuous protection providing this is practicable as determined in later stages. In some instances, a choice of utilising more than one piece of legislation for overlapping boundaries may be preferable to provide an appropriate form of protection for all areas. Figure 4 in Chapter Two illustrates which mechanisms cover various positions of the coastal marine environment.

Figure 7 provides for a graphical assessment of statutory mechanisms in relation to their suitability at each step. Steps to determine mechanisms suitable to cover the area (by legislative boundary) proposed are provided below.

1. Note within what legislative boundary the proposed area lies.
2. Eliminate those mechanisms which do not provide protection to the area proposed.

Place arrows below suitable mechanisms to step three.

3. Continue with mechanisms which cover the proposed area.

Although in practice, the boundaries of areas to be protected may be influenced slightly by the mechanisms available for protection, it is assumed for the purpose of this part of the process that the area has been predetermined according to the values and other causative factors found within the area.

Step three - Assess mechanism suitability by purpose and criteria.

Suitability of any particular mechanism to an area proposed for protection lies heavily on the similarity between the mechanism's purpose and that of the area proposed for protection. Those mechanisms which provide protection for purposes corresponding to that of the proposed area may potentially be used for protection of the area. Mechanisms designed for different purposes will not be applicable in relation to providing the required protection. The purpose of any particular mechanism may be subject to interpretation, more often in instances where contents of a mechanism are very broad. One example of this is the use of the Marine Reserves Act 1971, which, although originally designed to protect areas in a pristine state for scientific study is now being used for a wider variety of purposes for lack of other appropriate mechanisms.

Steps to determine those mechanisms suitable for protection of the proposed area's purpose and values are listed below.

1. List mechanisms isolated in step 1.
2. List the purpose and criteria of each mechanism (this is done in Figure 7).
3. Compare the purpose and criteria provided by each mechanism with the purpose and and values contained in the proposed area to determine those mechanisms most suitable to provide protection for the proposed area.
4. Continue to step four with those mechanisms comprising purpose and criteria suitable for the proposed area.

Graphically this may be done using a copy of Figure 7 which shows mechanisms covered in the proposed process and provides a brief description of their content.

Limitations of this analysis include the degree of specificity provided by the mechanisms. A good example of this is the difference between the Marine Reserves Act 1971, and Wildlife Act 1953. The Wildlife Act 1963 provides as its purpose, the protection of wildlife, while the Marine Reserves Act 1971 provides a much greater level of detail not only of its purpose, but also contributing criteria of importance for protection.

Step four - Assess mechanism suitability to provide level(s) of protection required.

Selection of mechanisms by the level of protection afforded is important to achieve objectives for the proposed area. Levels needed will differ according to the purpose and values specified for the area. These will have been predetermined for the proposed area in the information gathering stage. Mechanisms may provide a range of possible levels, thus increasing their potential use.

Steps involved in determining possible mechanisms are listed below:

1. List Level(s) of protection required for the proposed area.
2. List Level(s) of protection available in mechanisms isolated in previous stages. (provided in Figure 7).
3. Determine which mechanisms provide the range of protection suitable for the proposed area.
4. Continue on with those mechanisms in Figure 7 which provide the levels of protection required.

Step five - Assess most suitable mechanism in relation to organisational support required.

Organisational support is vital from the organisation responsible for the statutory mechanism, and is often required from other organisations involved with management and use of the area. This section enables the user to consider which mechanisms require consent from which organisations, and if consent is not forward coming from one particular organisation, what other mechanisms may avoid this need.

Identification of mechanisms for which consent is likely to be granted may be determined through use of the following steps.

1. Determine the organisation(s) responsible for implementation of the mechanism.
2. Determine the support of the organisation responsible for the mechanism
3. Determine from whom consent is required by each mechanism.
4. Determine from whom consent is likely to be provided.
5. Determine which mechanisms can be used in instances where support is not available from a particular quarter.

Before eliminating any mechanism because of a lack of consent, an attempt to use mediation techniques to rectify the situation could be beneficial. Changing to a mechanism which eliminates the need for consent from a particular quarter may require going back to an earlier stage or reassessing some values. One example of a reassessment of values may include a re-evaluation of the level of protection required. This may enable the use of alternative mechanisms to protect the specified area.

Step six - Assess mechanism suitability to provide the level of enforcement required.

Enforcement is necessary where the values to be protected are of a high standard, and in situations where the level of support is low or many operators work in the field (i.e., the tragedy of the commons situation). Ideally, if the process has been worked through with maximum public input, the need for enforcement will be reduced due to local public support, and self-policing. However, certain protection mechanisms may not be effective without some form of enforcement to act as a deterrent.

Steps involved in determining possible mechanisms:

1. Is the enforcement potential of the mechanisms being considered adequate to provide protection to the area?
2. Is there significant public support for protection of the area?
   Is there a need for a high level of enforcement?
3. Assess mechanisms suitability in relation to enforcement that will be required and available and continue on with those mechanisms providing the level of enforcement required.

These questions need to be asked in relation to the values being protected. For example if protection is being sought for high ecological values and there is not much local or public support, a greater need for enforcement may exist if statutory protection is implemented.

Step seven - Consider likelihood of success at implementing the mechanism(s).

Likelihood of success depends very much on the factors previously specified within the process, but variables include the level of public and political support, resources available for working on the proposal to reach the implementation stage, and time constraints.

Steps involved in determining possible mechanisms:

1. Consider time and resources available to implement the proposal.
2. Consider support for mechanism implementation. This includes support from the organisational, public, and political sector.
3. Consider time (approximate) to implement mechanism.
4. Assess value of implementing mechanism, and mechanisms considered most appropriate.

Step eight - General assessment of final mechanisms selected.

Consider whether final mechanism(s) selected ideally suit protection of the area. Step seven provides for general considerations, possibly regarding matters within the legislation not covered above. It is the final step for deciding between options prior to notifying a proposed mechanism. If no problems are perceived to affect use of the mechanism, continuation to the following step may occur.

Step nine - Notification of proposed mechanism(s) to be used, and the way in which they will be used. Also consider feedback.

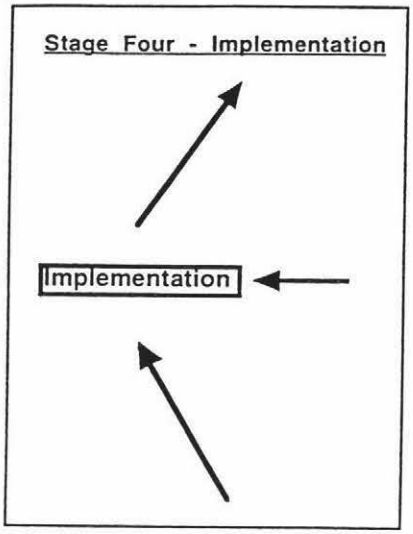
Feedback through submissions and objections should be sought to provide a backup in determining whether the mechanism is acceptable and may succeed. If no significant objections to use of the proposed process are received, implementation of the mechanism(s) may proceed. In most cases, the legislation will require public notification and consideration of objections and submissions but this is not always the case.

Reconsideration of the area to be protected, as affected by available legislation is provided for within the proposed process, leading the user to reconsider earlier stages with the increased information available.

(C) Stage three reassessment/feedback

If notification has caused lot of adverse response there is a need to reconsider the mechanisms suggested for protection. The need for protection may also need reassessment, in relation to stage two. While the process is designed to allow a continuous flow from beginning to end, it also incorporates reassessment of earlier steps, if an earlier decision is limiting at a later stage. For example, a high level of protection, whilst providing for the primary objective, may not be suitable to a particular organisation or group from which consent is required. Returning to this stage and considering different levels of protection acceptable to the proposed area may widen the choice of areas available. Assessment is done prior to beginning the process to implement a particular mechanism which is a point of no easy return. Submissions and objections should provide a guideline for the implementation of this task.

3.3.5 STAGE FOUR - IMPLEMENTATION



If no major objections are received that could cause foreseeable problems with implementation and use of the protection method, the implementation process of the statute may be initiated. This is a point of no return to previous stages or steps without a significant loss of time and effort.

Public input is important for implementation of the process. This occurs primarily at the information gathering level, but may be reflected at every level in some form. Whilst public input reduces the likelihood of failure, it is a constantly changing phenomenon and may be influenced by education. Implementation of the proposed mechanism is usually finalised by notice in the Gazette, this being the point of no return for all practicable purposes.

3.4 SUPPLEMENTARY INFORMATION

At every step within stage three, each piece of legislation should be seen as providing the potential opportunity for protection. As blockages occur at each stage, the number of mechanisms are reduced. Two options are available, first to continue with those still available, or secondly to return to an earlier stage and reassess previous factors. This may be easier for cases which specify a broad set of objectives. Mediation techniques may also play a role in certain instances where no easy solution can be found.

3.5 PUBLIC CONSULTATION AND FEEDBACK

Public consultation is extremely important to incorporate within the planning framework. It enables more accurate decisions to be made with regard to social and economic issues. Planning has moved in that

> Planning from technics to politics, from individual action to collective action, from passive science to active science all increase the need for increased participation and understanding to overcome the endemic uncertainty i.e., social learning (Bills, 1990).

An important step is to determine who constitutes the public, who they represent and the form that consultation should take. Priscoli and Homenuck have outlined these issues

in their paper in Lang's book and also identify goals and objectives for public consultation programs. Lang, in his introduction state that "They ... offer six goals and objectives for public consultation programs: building credibility, identifying public concerns and values, developing consensus, creating the greatest number of "unsurprised apathetics", producing better decisions, and enhancing the democratic process" (Lang, 1986, 4). They provide a set of 12 principles which can be used to guide planners and managers designing and conducting public consultation programs. Also discussed are techniques and how to apply them. Mitchell notes that "formulation of a policy which attempts to solve the problem ... has primarily been decided in the political arena" (Mitchell, 1989, 6). However, as he also notes, politicians often rely heavily on information provided by advisors and that the effectiveness of input into the final outcome depends on individual abilities and "the level of administrative hierarchy at which it is made" (Mitchell, 1989, 7).

> "Since politics always overrides ecological, economic, or ethical considerations, we have to figure out how to solve the political problems or we won't solve any environmental problems" (Watt, 1992).

Politics can have a large impact on both the selection of areas to be protected and the provision of support for implementing statutory protection. Predominantly, political support will affect the implementation of protection, an adverse reaction may eliminate the chance of success for implementation of any particular mechanism.

3.6 OUTLINE OF POTENTIAL USE OF THE PROCESS

The process may be used by a wide variety of individuals and groups interested in determining mechanisms potentially available for protection of a proposed area. Although the mechanisms are always changing, it is the presentation of criteria and other guidelines by which to assess the potential of different mechanisms for protection of a specified area that comprises the main body of this process. New mechanisms, or those with relevance to the proposed area may easily be inserted into the proposed process to enable simplified comparison of statutory mechanisms available for protection. Although the process is simple, it is designed to provide for the selection of mechanisms potentially suitable for protection of an area and to provide clear reasons for their suitability.

3.7 LIMITATIONS OF THE PROCESS

The proposed process is limited in relation to the number of statutory mechanisms available for protection which are included for analysis and comparison. Protection of unusual values may be provided for by little used or specific mechanisms not included in the process. However, these can easily be added for analysis and consideration in the process, but first need to be identified as potentially providing some form of useful protection.

3.8 CONCLUSION

Planning for protection of the coastal marine environment and surrounds of New Zealand currently occurs through policies and the implementation of legislation by those organisations responsible. Public and other group pressure may influence this outcome as has been noted with respect to the recent growing support for protection of the marine environment.

This chapter presents a process comprising bare essentials which may be utilised to identify areas requiring protection and assess statutory mechanisms available for implementation. The proposed process is designed to be used by any group or organisation with an interest in the protection of New Zealand's marine environment. In the case of governmental organisations responsible for the implementation of mechanisms, it is recognised that there may be a preference for those administered by that organisation. The process is very broad and while it does not cover all legislation available it includes the steps for the analysis of relevant legislation which can be included in the process. This allows the incorporation of all legislation which may be applied to a range of areas and values worthy of protection. Initially based on the strategic planning process, the process developed provides a mixture of strategic and rational comprehensive planning. Most detail is provided in stage three, for the identification of appropriate mechanism(s) to protect a previously defined location. The process is designed to provide a logical approach to the comparison of different mechanisms available to protect the marine environment. Chapters Four and Five present case studies to test the applicability of the proposed process to real life situations.

CHAPTER FOUR

PROTECTION OF POLLEN ISLAND

Chapter Four aims to present a practical example of the potential use of the proposed process presented in Chapter Three. The proposed process is tested in relation to Pollen Island, proposed for protection as a marine reserve in 1989. Available statutory mechanisms are compared and assessed with respect to their suitability to protect the area proposed. First, a brief description of the site and values of the area proposed for protection is provided. The process which occurred prior to the proposal of Pollen Island as a marine reserve is then presented. Following this, the proposed process is applied to the case to assess alternative mechanisms which may be used to protect the area.

4.1 SITE DESCRIPTION

Pollen Island, situated in Auckland's Waitemata Harbour was proposed as a marine reserve in 1989 by the Royal Forest and Bird Protection Society. Reasons for protecting the area included its high wildlife values, contributing to the national significance of the area. The potential for different mechanisms currently available for protection of the area is considered by use of stage three of the proposed process. Use of stage two, to identify areas requiring protection is not used in this chapter except to present basic information needed in stage three.

The area proposed for protection covers the foreshore, extending from Pollen Island into the Waitemata Harbour. Part of this foreshore is currently being leased to Ports of Auckland limited from the Auckland Regional Council, formerly the Auckland Harbour Board. The site is a potential port development, having been noted in the Port Development Plan. Negotiations for protection of Pollen Island as a marine reserve have successfully resulted in approval by the Minister of Conservation, and the area is due to be gazetted a marine reserve in October 1995. The marine reserve proposal has taken five and a half years to date, with consent obtained from the Ministry of Fisheries in July 1995 with a modification in the proposed boundary to exclude areas of fishing. It is the intent of this study to assess whether other mechanisms may have been proposed, and while it is impossible to assume the time they may have taken to implement, the legal requirements for implementation and of the end product (for example the level and purpose of protection provided) will be discussed.

4.2 GENERAL DESCRIPTION AND REASONS PROTECTION WAS SOUGHT

Pollen Island, a one kilometre long "low lying island" whose "extensive shell banks, mangroves, and salt marshes comprise an important wildlife area in the Waitemata Harbour" (Campbell, 1982, 26). Located east of Te Atatu in Auckland's Waitemata Harbour, the Island "has the last significant stand of indigenous coastal flora" (Cotrell, 1988, 1). It is the Island's inaccessibility that has enabled this state to be maintained. A motorway runs parallel to the island with a tidal channel between the two preventing easy access by animals and motorists alike thus creating a buffer zone. Although access can be gained by crossing a footbridge over the motorway, "extensive tidal mudflats, mangroves and channels" (Cotrell, 1988, 2) need to then be crossed prior to reaching the Island. Protection of the Island's habitat is of primary importance to the many nationally important and threatened species which use the island for feeding and breeding.

In 1988, Pollen Island was sold by the Harbour Board to the Ports of Auckland Ltd. under the Port Company Plan approved by the Minister of Transport. The surrounding foreshore, which could not be sold under the Port Companies Act was vested with the Auckland Regional Council under the local government reforms of 1989. This was then leased to Ports of Auckland, but issues regarding the legality of the lease may still need resolving at some stage in the future. The 1991 Foreshore and Seabed Revesting Act reverted ownership of the foreshore and seabed to the Crown, but did not nullify the legality of the lease over the foreshore.

Pollen Island had been recognised as a potential site for possible port expansion since the inception of Ports of Auckland Ltd in 1988. The 1989 *Draft Port Development Plan* for Auckland 1989 specified the area as an alternative port site. The area off the Whau river is noted as having "strategic advantages for West Auckland as well as being close to the motorway access" (*Draft Port Development Plan for Auckland*, 1989). However, the report also noted limitations of height restrictions imposed by the need to travel under the Auckland Harbour Bridge, restricting container berths although "for many years bulk shipping will still be of a size capable of navigating under the bridge" (*Draft Port Development Plan for Auckland*, 1989).

Realisation of the area's ecological values prompted attempts to provide some form of protection to the area. In 1975, the *Waitemata Harbour Plan* acknowledged "the valuable natural qualities of the Island and proposed that it be designated a reserve with the underlying zone recreation instead of industrial, but only if the Island was not required for port or related development in the future." (Cotrell, 1988, 3). Currently the area is designated a special Pollen Island Zone in the *Waitemata Harbour Maritime*

Planning Scheme. It was "not ... included as a conservation zone or a habitat zone because it has been identified in both the regional planning scheme and this scheme as the possible location for future major wharf and terminal facilities outside the commercial port area" (*Waitemata Harbour Maritime Planning Scheme*, 1987, 5). This will change in the near future with the implementation of the *Auckland Coastal Plan.*

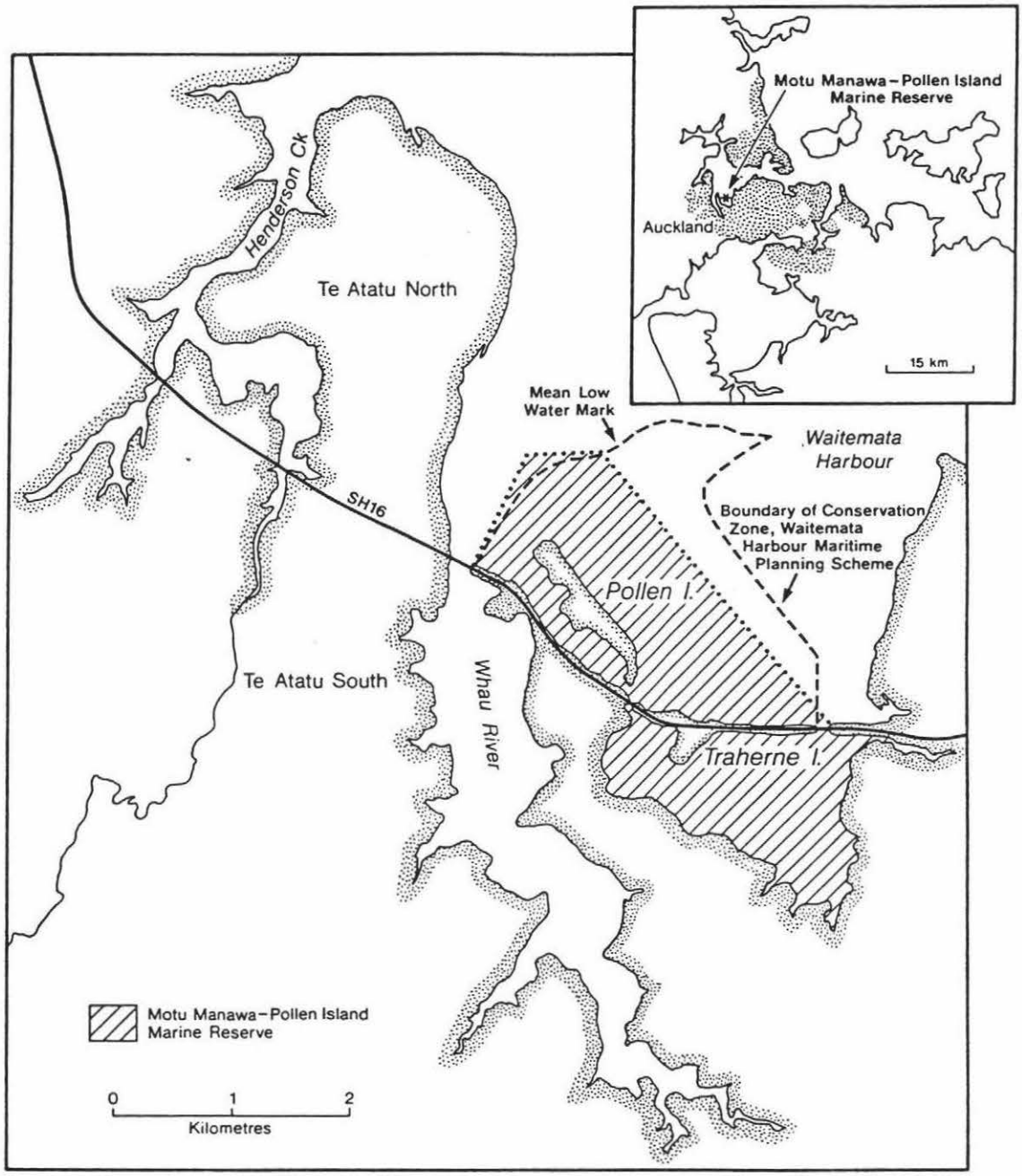
The Department of Conservation attempted to have the Island excluded from any future port development at Maritime Planning Hearings held in the late 1980s. This, however, was unsuccessful due to Ports of Auckland Ltd's position regarding their ownership rights of the Island and as lessee of the surrounding seabed (McAuley, 1993, 121-122).

The application to protect the area as a marine reserve by the Royal Forest and Bird Protection Society was aimed at protecting the Island and its surrounds from any potential development which may destroy this last remnant of native coastal flora and fauna in Auckland. Figure 8 portrays the area initially proposed as a marine reserve by the Royal Forest and Bird Protection Society as that area within the mean low water mark boundary. The area to be gazetted is reduced in size, and identified on Figure 8.

4.3 NEED FOR PROTECTION OF THE PROPOSED AREA

While the proposed planning process has been designed to determine the most appropriate mechanism for protection of a specified area, verification of the need for protection reinforces the potential acceptance of any mechanism to protect a proposed area. Pollen Island has many ecological features of value placing the area as a site of national significance which presented a need for protection. The lack of other unmodified areas in Auckland also constitute a reason in terms of the need for protection within the general locality. However, Auckland as a major city may potentially need sites for future port development. Identified as a future area for port development, Pollen Island is no higher than fourth in the Port company's list of preferred sites for future port development. This suggests that the Port company was assuming that it was in the public interest to develop at least four more port sites around Auckland (before they got to Pollen Island). They were also assuming that the economic benefits they were protecting would outweigh the ecological costs. The Minister of Conservation, after consideration of these objections, ruled them all out of order in his answer to objections within the marine reserve process.

FIGURE 8 - Pollen Island Marine Reserve



Source: Department of Conservation Auckland Conservancy, and Royal Forest and Bird Protection Society.

The area proposed for protection already has a limited form of protection through provisions under the Resource Management Act 1991. These include the need for resource consents prior to any port or other development taking place. Decisions on such matters have to take into account any environmental impacts. If the area is ranked of significant conservation value in the Regional Coastal Plan, the decision of resource consent applications will, in specific circumstances (restricted coastal activities) pass to the Minister of Conservation. However, a need for greater protection beyond those provided by the Resource Management Act 1991 provisions may be required due to the potential threat of development and its adverse impacts on the area.

4.4 IMPLEMENTATION OF PROTECTION MECHANISMS

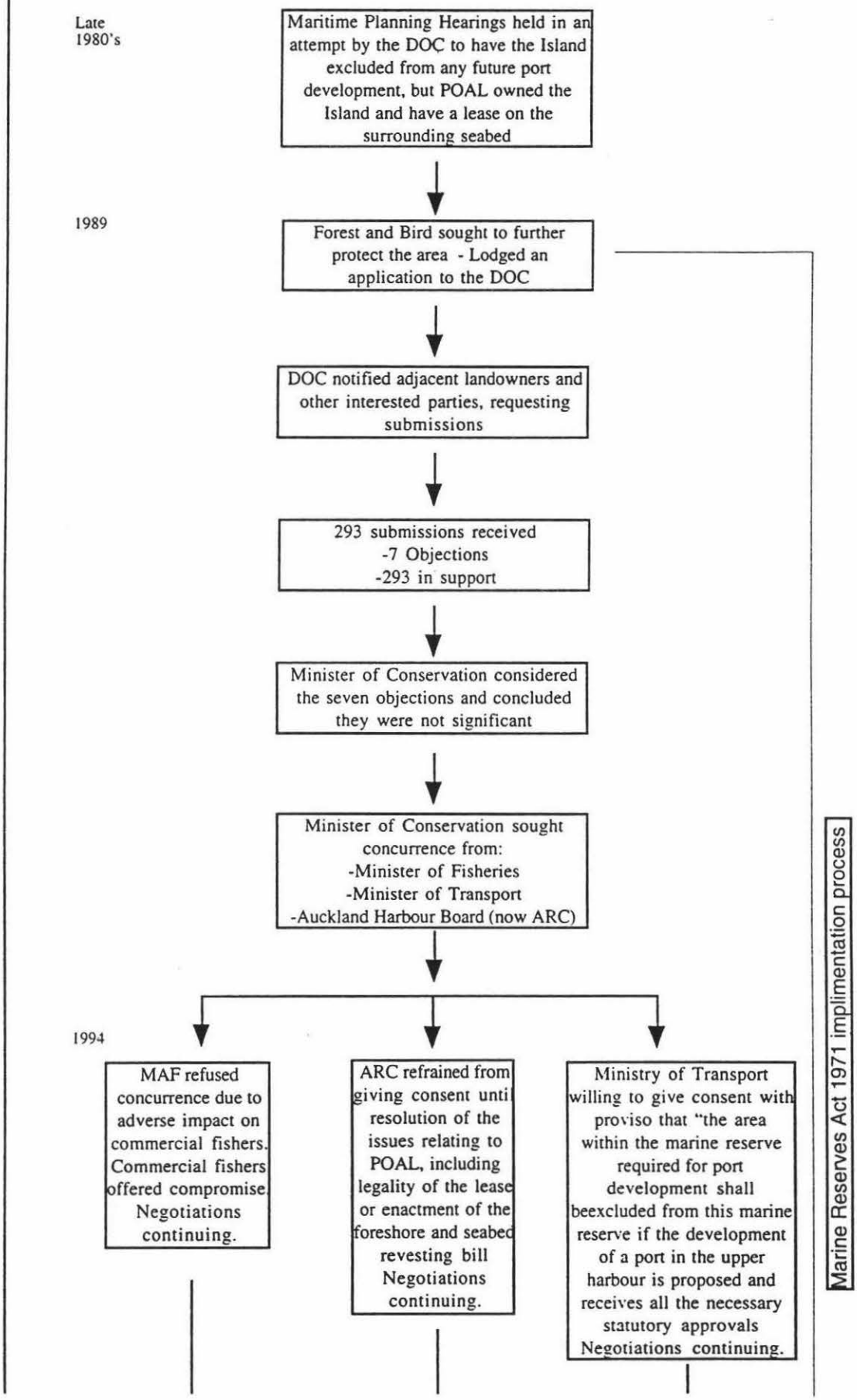
The Royal Forest and Bird Protection Society presented an application for a marine reserve at Pollen Island with the Department of Conservation in 1989. Figure 9 portrays steps taken toward implementing protection of the foreshore surrounding Pollen Island.

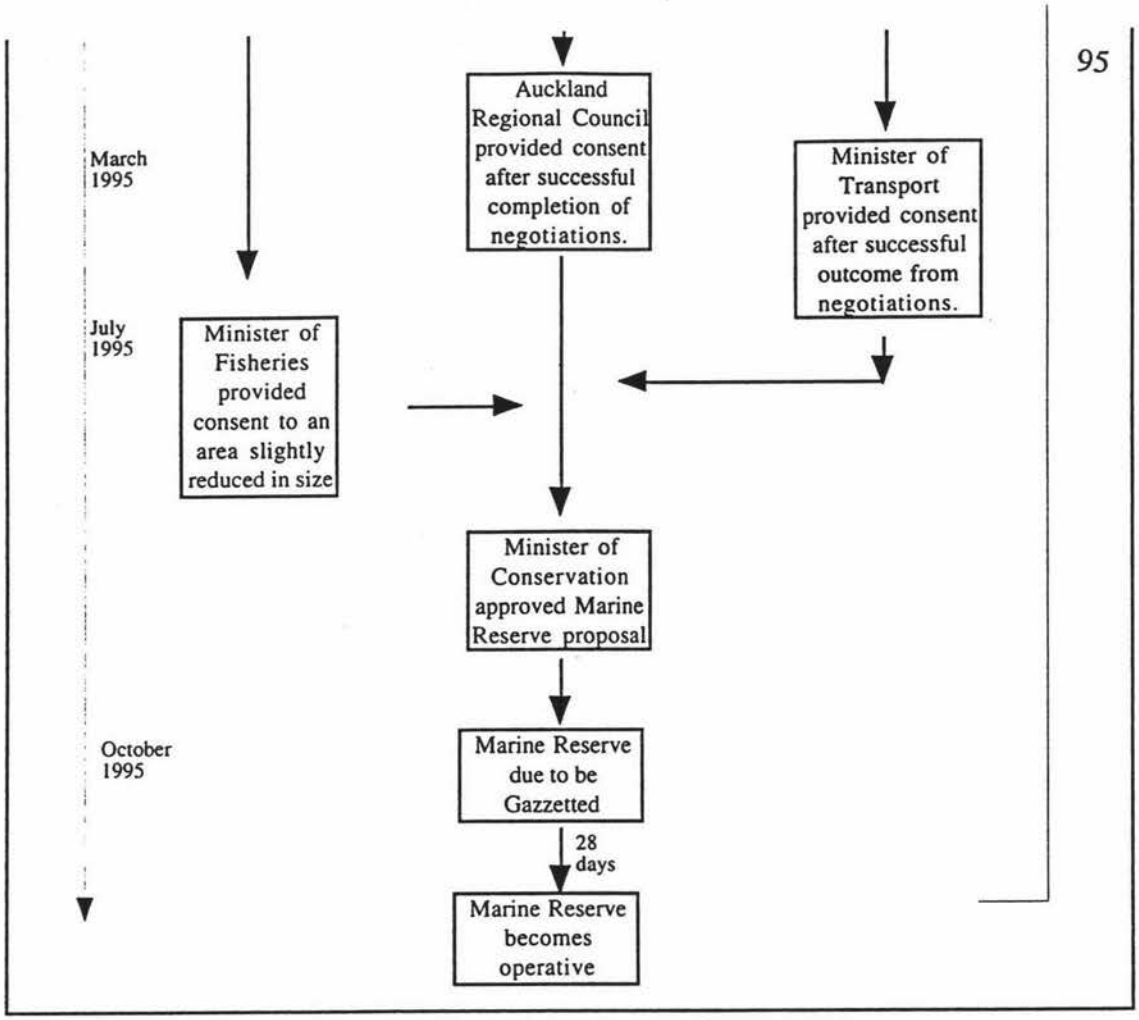
Consent required from the Auckland Regional Council related to their role as executers of the functions of the old Harbour Board. However, the Auckland Regional Council, while generally supporting the establishment of a reserve required resolution of the issues related to their potential liability as lessor of the foreshore to Ports of Auckland Ltd. prior to providing consent. Resolution of this issue occurred with an agreement between Ports of Auckland Ltd., the Auckland Regional Council, and Auckland City Council for Ports of Auckland Ltd to further develop existing ports thereby enabling the Auckland Regional Council to grant its consent (Randall, pers. comm., 1994).

The Ministry of Transport expressed its willingness to give consent on condition that "the area within the marine reserve required for port development shall be excluded from this marine reserve if the development of a port in the upper harbour is proposed and receives all the necessary statutory approvals" (Minister of Transport, 1991). As a potential port development would nullify the marine reserve and prejudice the right of objectors if the condition was attached to the Order in Council, in effect protection of Pollen Island would be limited and significantly reduced if a port development was proposed for the area. The Minister of Transport provided consent in early 1995 after resolving those issues related to port development for the Ports of Auckland Ltd.

The Minister of Fisheries provided consent necessary for the gazettal of a marine reserve in July 1995. Initially, refusal of consent from the Minister of Fisheries related to use of the area for commercial fishing. A compromise was offered by commercial fishers

Figure 9 Pollen Island
Implementation of Protection




March 1995
July 1995
October 1995
Auckland Regional Council provided consent after successful completion of negotiations.
Minister of Transport provided consent after successful outcome from negotiations.
Minister of Fisheries provided consent to an area slightly reduced in size
Minister of Conservation approved Marine Reserve proposal
Marine Reserve due to be Gazzetted
28 days
Marine Reserve becomes operative

which involved a change in the proposed boundary for protection. Negotiations led to an agreement to reduce the boundary line of the proposed marine reserve to accommodate existing fishing areas (Department of Conservation staff member, pers. comm., 1995).

Resolution of the above issues was completed through negotiation and compromise between the above parties. Briefly, Ports of Auckland Ltd. have forgone any development of Pollen Island in the near future in return for the rights to further develop existing Port sites (Higgins, pers. comm., 1995). The company has leased Pollen Island to the Royal Forest and Bird Protection Society for a minimal sum on a ten year renewable lease.

The Resource Management Act 1991 identifies certain matters as being of national importance including the protection of the natural character of the coastal environment and the protection of natural features, indigenous vegetation and habitats. The Department of Conservation has identified Pollen Island as an area of significant conservation value. Development potential of the Island, may, therefore have been limited with the *Proposed Auckland Regional Coastal Plan* classifying the Island as a Conservation Area '1'. This affects policies, objectives, and rules for use of the area to provide greater protection.

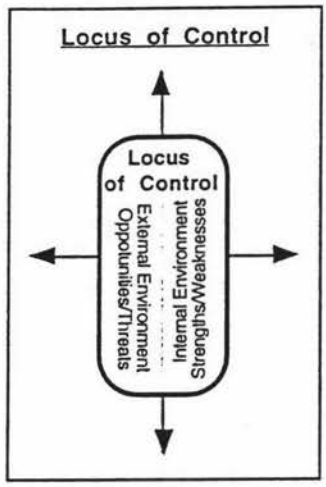
To summarise, a marine reserve application was made by a non-governmental group to protect an area containing outstanding ecological values from potential development. The mechanism chosen for protection was that thought most appropriate at the time of application. Many issues increased the complexity of imposing statutory protection onto the area, not least of which is the designation of the site as a potential port location. In the five years since the proposal for a marine reserve was first lodged, many of these issues were resolved through negotiations, one of the most notable being the removal of opposition from a company which has a lease over the foreshore. The complexity of these issues slowed down the process of creating a marine reserve.

4.5 APPLICATION OF THE PROCESS.

The process, presented in Chapter Three is now drawn on for the case of Pollen Island. This section outlines each step of the process, detailing in a practical sense how the proposed process may be used to illustrate its potential in a real-life situation. All stages of the process are worked through in varying degrees. Where possible, information from the case study is used, for example to determine the goal of using the process. The

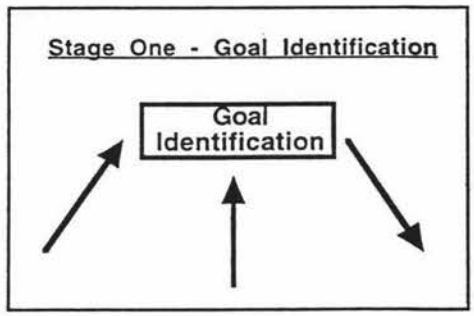
decision of which statutory mechanisms are most appropriate will reflect the requirements of the user. For example, use of the process by the Royal Forest and Bird Protection Society may have resulted in a different outcome due to differing emphasis being placed on particular issues. In part these will be regulated through public consultation.

4.5.1 LOCUS OF CONTROL



The Royal Forest and Bird Protection Society was the initiator of protection of Pollen Island in the case of the marine reserve application. It is assumed for the purpose of this case study that the process is being used by an impartial user. However, many of the issues surrounding the need for protection will be based on available information. In certain situations decisions will be made which might have been different had another user worked through the process. Examples of this include determining the goal for which protection was sought. Different groups had different viewpoints on how the area should be managed. The user would determine the goal as fitted that group, although some consultation with others may have resulted in some modification of the user's original goal. In this case an arbitrary decision had to be made. In relation to external and internal controls, as the user is identified as being an impartial body, no policies or mandates will affect the overall aim of the process in relation to any of the goals or objectives identified.

4.5.2 STAGE ONE - MISSION/PURPOSE/GOAL IDENTIFICATION



Following an analysis of the internal and external environment by the user, and the decision to use the process, progression is made to the first stage, that of goal identification.

Realisation of high ecological values associated with the Pollen Island and its foreshore extending to Traherne Island led to a marine reserve application. The goal 'to protect an ecologically important area' was realised by an environmental group (Royal Forest

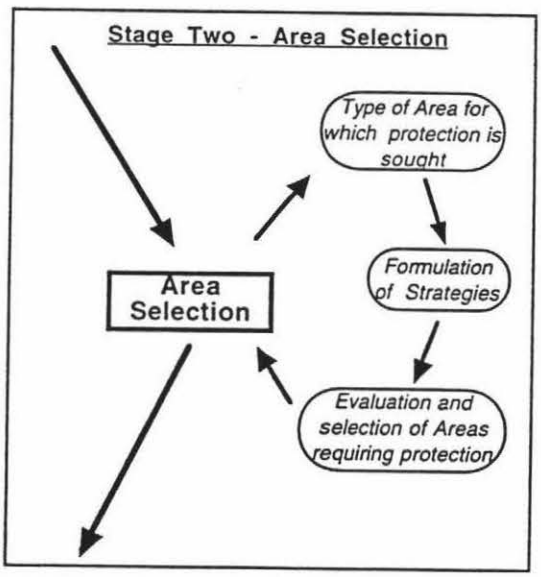
and Bird Protection Society) which took steps to protect the area using a mechanism considered appropriate by the applicant.

Different groups concerned with using Pollen Island or its surrounds had different goals for the area's future management. These ranged from full protection of the area surrounding the Island by the Royal Forest and Bird Protection Society to providing some protection, but maintaining some recreational and commercial fishing in part of the area by the Commercial Fishers Association. Ports of Auckland Ltd preferred the area to be maintained as it was, not initially being supportive of any move to implement protection, resulting from its potential impact on port development plans for the area. The goal assessed by the user of the process was therefore determined as follows.

> To provide some form of protection to provide for the ecological values located adjacent to Pollen Island.

It is important to note at this stage that the process is being used for the foreshore adjacent to Pollen Island out to mean low water mark and extending to Traherne Island. Protection in this instance is not being sought for the land mass above mean high water mark. This is land owned by Ports of Auckland Ltd (and leased by the Royal Forest and Bird Protection Society) and statutory mechanisms to protect this area are not being sought through this process. As the goal for protecting the area has been identified the process then moves on to stage two, that of identifying the exact area requiring protection.

4.5.3 STAGE TWO - IDENTIFICATION OF AREAS REQUIRING PROTECTION



Stage two comprises the identification of areas requiring protection. In the case of Pollen Island, the process is being used primarily to determine what statutory mechanisms are suitable to protect the area proposed as a marine reserve. In this case, the area for which protection is being sought has already been determined. However, stage two is worked through to provide the reader with an example of how the process might be worked through. Also,

through working through stage two an indication of the reasons protection is being sought and the associated values of the area will be realised more fully by the reader along with requirements of protection which will be used when working through stage three.

(A) Type of area for which protection is sought.

1. Determine for what purpose protection is being sought.

The purpose of the user in this case was to protect values of ecological importance. Pollen Island provides such values as indicated within the purpose.

2. Determine criteria/values considered important to protect.

This step involves the identification of values considered important to protect by the user. Once this has been completed, areas are then assessed in relation to their compatibility with these values.

As presented in stage three, two tasks comprise the identification of any areas requiring protection, that of a formulation of strategies or areas needing protection, and the evaluation and selection of strategies. In the case of Pollen Island's foreshore, only one area is identified as potentially requiring protection and then selected for protection. This therefore represents use of stage two at its simplest.

(B) Formulation of strategies

This involves the identification of the range of areas potentially requiring protection as determined by requirements or needs of the user.

Information gathering

Information which needs to gathered prior to making a decision on whether a specified area requires protection, or the suitability of different areas requires knowledge on various factors. The following box contains requirements in relation to information needed which needs to be gathered to assist the user in identifying areas potentially needing protection. Specifications listed in the box comprise a minimum of information that would generally need to be gathered. In certain instances more information may be required as needed by the user of the process.

Refer to Box 1, presented in Chapter Three for the steps taken to gather information regarding Pollen Island. These are outlined below.

1. Determine what areas provide for the purpose of protection.

The purpose of protecting Pollen Island's surrounds as included within the proposed process is to:

> protect an area "of high marine and biological significance" suitable for scientific study and which is of national significance as a breeding ground for rare birds and various invertebrates along with a great variety of fish. (Royal Forest and Bird Protection Society of New Zealand Inc., 1989).

2. Determine areas containing criteria/values considered important to protect.

In the case of Pollen Island, the area was identified as being important because of important ecological values contained within the area. No other areas are therefore analysed in this instance for values contained within the area. The land area itself, while containing many important values which may justify protection was excluded from the area to be protected this area is owned by Ports of Auckland Ltd. Criteria identified as contributing to the need for protection within the foreshore of Pollen Island are outlined below.

Table 11: Ecological values within the foreshore surrounding Pollen Island

Ecological
Naturalness
Nationally significant due to naturalness in close proximity to Auckland -as classified by DoC and Auckland Regional Authority, now Auckland Regional Council.
* Geology -fresh water peat beneath marshlands over 170,000 years old. Laid down in pleistocene era.
* Nationally threatened seabirds frequent the island -Caspican tern and NZ dotterel (1,500 in NZ)
* Threatened native species (banded rail) breeds on Pollen island, preferring mangroves and adjacent salt marshes
Nationally threatened species -Wrybill plovers (5,000 individuals) winter in the Waitemata)
Feeding and breeding area for: Pied Oystercatchers, Bar-tailed godwits and Pied stilts.
* Several species frequent Pollen island and surrounding shellbanks, mudflats, and mangroves. ie. White faced heron, Pied shag, Mullard and grey ducks, Black backed gull, and Australasian harrier.
Mudflats on east of Pollen and Traherne islands are important feeding areas for waders and wetland birds.
Diversity of habitats -attracts variety of birdlife.

Ecological
Fragile habitat/vulnerable
Most important wildlife habitat in the Waitemata harbour. Extensive intertidal area of mature mangroves.
* Nationally important marine vegetation. Perhaps the best representation of the type of coastal vegetation that once existed over the Waitemata. Includes Manuka, coastal tree daisy, swamp flax, salt marsh ribbonwood, sea rush and various sedges. Mangroves between island and Motorway provide a rich habitat.
Fish: Approximately 21-30 species associated with mangroves.
Feeding ground for fish and several species of wading bird.
Migratory species - resting place (palaearctic and endemic species).
Wide variety of invertebrates.
* Rare invertebrates -four locally restricted and rare moth species (Bactra species -found nowhere else). -Rare ant species, found in two other locations in NZ.
* Possibly a new species of psyllid (a small native insect similar to an aphid located adjacent to Traherne island, with its food source, Olearia solandri growing on Pollen island).
* Regionally threatened native fernbird nest on Pollen island -12 breeding pairs, which is the largest and most viable population in the Auckland urban area = only place in the Waitemata and Auckland harbour.

Note: Those criteria with an asterix are related to both the land area and the foreshore of Pollen Island.

Table 12: Social-Cultural values within the foreshore surrounding Pollen Island

Social-Cultural.
Recreational fishing - Some recreational fishing occurs in the eastern sector of the proposed area.
Locality -proximity to Auckland, very close but not easily accessible due to motorway and tidal channels.
Access difficult. Effect of motorway on visiting public. Limited parking.
Interpretation required. Need to educate public. Area easily destroyed. Large numbers of visitors and insufficiently educated people harmful to the environment. Need boardwalks to protect ecological values of the area.

Table 13: Economic values within the foreshore surrounding Pollen Island

Economic.
Commercial fishing - Limited commercial fishing occurs in the eastern sector of the proposed area.
Development - Island designated for possible future port development - subject to environmental report.
Foreshore and seabed leased to Ports of Auckland Ltd. (Any change)
Potential cost of providing access via boardwalks and parking. Cost of protecting the environment from visitor impact.

3. Consider user groups of the areas suggested and their needs.

Pollen Island, as the only area being suggested for protection is used for occasional flounder fishing (recreational and commercial). Birdwatchers also use the area. The area is not easily accessed and therefore not used as extensively as many other areas of Auckland's coastal environment.

Fishers comprise one user group of Pollen Island's foreshore. Fishing occasionally occurs around Pollen Island and so consideration needs to be had of this user group. The boundaries first proposed for protection included some fishing areas and a compromise may have been possible between the fishermen and those proposers of protection. During the process to implement a marine reserve, commercial fishers offered a compromise which involved the marine reserve boundary being reduced in return for no objection by the fishermen. This would have sped up the process of implementing protection in relation to mechanisms requiring consent from the Minister of Fisheries and objectors.

Ports of Auckland Ltd. made it clear that they would not object to protection on the proviso it would not affect potential development of a port at the site. However, implementation of statutory protection may reduce the likelihood of receiving any consents required prior to development. After discussions with the Royal Forest and Bird Protection Society, Ports of Auckland Ltd. has leased the Island to this environmental group for a minimal rent of $10.00 a year on a ten year renewable lease.

Providing a high level of protection to the foreshore of Pollen Island, while also providing for the conflicting use by commercial and recreational fishers could occur in one of two ways. First, a reduction in the size of the protected area to exclude the fishing zones could be achieved. Alternatively, a lower level of protection in those areas

used for fishing could be implemented. Both these potential solutions are based on the assumption that fishing in the area is not detrimental to the effects of protection of the remainder of the original area proposed.

4. Assess public and political support for protection, in what areas, to what level?

The majority of submissions received after notification of the area to become a marine reserve were supportive of providing protection to the area. "Of the 319 submissions received, only six registered opposition, while another five were supportive or not in opposition, but included qualifying comments" (Royal Forest and Bird Protection Society, 1989, 7). The Minister of Conservation ruled out the significance of the objections in relation to the marine reserve proposal clearing the way for the application to proceed.

5. Specify groups/organisations involved with the area(s) being considered.

Pollen Island represents a very complex case with respect to organisations associated with the proposed area. Ports of Auckland Ltd. began leasing the foreshore from the Auckland Harbour Board (now Auckland Regional Council) in 1988 in recognition of the possible need of the area as a potential port site. Ports of Auckland Ltd. is also a local landowner by virtue of owning Pollen Island, purchased in the event that the land should be needed for a port site. In 1991 the Foreshore and Seabed Revesting Act returned the foreshore to the Crown, although the lease was unaffected by this Act. As specified within the Act all liabilities were transferred which included an agreement to lease the seabed to Ports of Auckland Ltd. from the Auckland Regional Council thus limiting future protection of the area as Ports of Auckland Ltd. wished to retain the area for potential development. Discussions between the Port company, Auckland Regional Council, Department of Conservation, and Royal Forest and Bird Protection Authority resulted in an agreement between the Auckland Regional Council and Ports of Auckland Ltd. that the Auckland Regional Council and Auckland City Council will support the capacity, infrastructure and facilities of Ports already in existence and that the agreement does not affect any other potential port sites west of the Harbour Bridge. Ports of Auckland Ltd. will also favourably consider the sale of Pollen Island to the Royal Forest and Bird Protection Society with satisfaction of the agreement by Ports of Auckland Ltd.

The foreshore adjacent to Pollen Island lies within a Fishery Management Area designated by the Ministry of Agriculture and Fisheries. As the organisation responsible for fisheries management, implementation of any potential protection mechanism of the sea involves consideration of the provisions of the Fisheries Act 1983, and the Ministry of Agriculture and Fisheries (now Fisheries) rights and obligations. Also of consideration

are the stormwater outlet pipes into the surrounding area for which the Auckland City Council is responsible. Upgrading of these will require time and money. Auckland City Council, responsible for the landward area adjacent to the proposed area may have some input in terms of their role and responsibility with the district plan.

Locals living adjacent to the area may also have some input into management of the area, most probably via public input into processes relating to the management and protection of the area. Submissions sought during the marine reserve application process indicated nearly all (293 of the 319) replies received were supportive whilst six objected to using the area as a reserve.

Overall, those organisations having some regulatory function within the area include, the Department of Conservation (foreshore), Auckland Regional Council (lessor, region), Ports of Auckland Ltd (lessee, the Auckland Regional Council owns 80% of Ports of Auckland Ltd in shares), Auckland City Council (district area), and the Ministry of Fisheries (Quota Management Area). These organisations, each with different goals and objectives, are in conflict over management of the area. Prior to implementation of a mechanism, the suitability of it in relation to these related bodies needs to be considered.

Organisations involved with the use or management of Pollen Island in some way are presented below with their stance on protection of the area generally.

Ports of Auckland Ltd. - As owner of Pollen Island and lessee of the surrounding foreshore in case of a need to develop the area into a port site, Ports of Auckland was opposed to the area being protected. Discussions with the Auckland Regional Council, Department of Conservation, the Royal Forest and Bird Protection Society, and the Auckland City Council have negotiated an agreement whereby Ports of Auckland Ltd. no longer objected to the marine reserve proposal, but will instead upgrade existing port facilities. The island itself, owned by Ports of Auckland Ltd. has been leased to the Royal Forest and Bird Protection Society on a ten year renewable lease.

Auckland Regional Council - The Auckland Regional Council is responsible for the lease of the foreshore of Pollen Island to Ports of Auckland Ltd. In place of the former harbour board they are responsible for providing consent in matters of navigation and safety. In respect of protection of the proposed area, the Auckland Regional Council is in agreement in principle, but their role as lessor to Ports of Auckland Ltd. inhibited their providing consent until resolution of issues surrounding the lease.

Department of Conservation - The Department of Conservation, having as its primary objective the conservation of New Zealand's natural resources, has the obligation to proceed with any application lodged for a marine reserve. In relation to Pollen Island, moves to protect the area by way of a marine reserve were made from 1989 onwards resulting in the successful implementation of statutory protection.

Auckland City Council - The Auckland City Council, whilst not being directly concerned with the proposed area will be affected in relation to standards required from stormwater outflow pipes which release outflows into the area.

Minister of Fisheries - The Ministry of Fisheries, whilst primarily concerned with the management of fisheries, in the case of areas proposed for protection represents fisheries in the area. As commercial fishermen operate in the area, consent for protection was not granted. However, a successful compromise was reached which provided for a reduction in the area protected to exclude those areas required for fishing.

Minister of Transport - The Minister of Transport, in the case of Pollen Island, was not in favour of protection being implemented if it negated potential development of a port site. However, if protection were not to affect future port development in the area, the Minister would not have any objections to protection. In the case of the proposed marine reserve the Minister of Transport gave his consent in early March 1995 (Fullin, pers. comm., 1995) without conditions after resolution of the issues surrounding Ports of Auckland Ltd.

Royal Forest and Bird Protection Society - As an environmental group focused on conservation, the Royal Forest and Bird Protection Society lodged the proposal for a marine reserve with the Department of Conservation in 1989. As applicants of the marine reserve, the organisation favoured the implementation of a high level of statutory protection.

6. Consider other factors of importance to potential areas of protection.

No other major factors contributing to the need to protect the area are prevalent so this step is not continued with further.

Information analysis

Pollen Island's foreshore may be recognised as containing important ecological values which require a high level of protection. Some questions which need to be answered by the user of the process to determine if the area requires protection include; are the

purpose, criteria etc. of the area compatible with the user organisation or groups aims and goals for the implementation of protection and is this type of protection preferred by the user of the process?. If multiple areas are being considered does the information gathered regarding any particular area have a stronger affinity with the users goals for protection?.

Box 2, presented in Chapter Three, lists steps which may aid in the analysis of information gathered in the previous section.

1. Develop suggested boundaries from the information sought.

A decision on the boundaries of the area requiring protection would be decided from information sought on where the important values lie, their needs for maintenance, organisations directly involved with different locations and their attitudes to implementation of protection, along with other factors such as political support for protection of the area.

The boundaries suggested for protection were those covering the foreshore, extending out into the Waitemata harbour from Pollen Island. Although the land area contains many values of importance to protect (see Appendix Five for a list of those criteria found in the land area), protection was not sought for this area. The primary reason for this is that the Island is owned by Ports of Auckland Ltd.

2. Determine the level of protection required to protect the values contained within the proposed area.

Assessment of the level of protection required for the proposed area is based on the values for which protection is being sought. Ecological values, more specifically wildlife and species maintenance are the primary reasons for seeking protection.

Protection has primarily been advocated to protect ecological values of the area, including the wildlife living on or around Pollen and Traherne Islands. Vulnerability of Pollen Island to disturbance also affects the type and level of protection required. Although a large population is within easy reach of the area, the compatibility of the area with this population needs consideration. The scenic values in terms of a place for recreation or picnicking by Aucklanders is minimal. Also, the impact of visitors on the area is potentially harmful to many of the wildlife values found on or in the foreshore of Pollen Island. "Limiting public access is essential to the preservation of this important wildlife area" (Campbell, 1982, 26).

The foreshore surrounding Pollen Island with its high wildlife value and high degree of vulnerability needs a high - very high level of protection to ensure there is minimal disturbance to the ecological balance. The sea surrounding Pollen Island provides a spawning, nursery and feeding ground as well as a haven for smaller fish from predators. The potential impact from disturbance and vulnerability here is lower than on the land area, but is still needed to protect wildlife and ecological values.

The following table presents a list of the primary values for which Pollen Island's foreshore was proposed for protection, and the level of protection required to maintain these values.

Table 14: Values contributing toward the need for protection of Pollen Island's surrounds and the level of protection required to meet these needs.

Type of protection required for Pollen island	Level of protection required to meet the type of protection.
Scientific	High
Wildlife	High
Species	High
Ecological	High
Educational	Mod-High
Recreational (Minimal)	Low

Protection may range from an excellent interpretive program to educate the public on values and potential impacts on the area, to restricting access to the Island. Protection sought through the marine reserve application was to exclude all fishing, an activity occurring in the proposed area. Possible solutions to this conflict include restricted fishing but this may be extremely difficult to monitor so a total ban may be preferable. The vulnerability of values specified for protection of Pollen Island's surrounds, along with the type of protection required and values of the area indicate the need for a high level of protection.

It is therefore assumed for the purposes of this study that a high level of protection is being sought. Progression through stage three of the proposed process is intended to identify those mechanisms providing for this level of protection.

Note that a high level of protection, as defined in Chapter Two indicates entry is permitted, tracks and trails may be built to protect the environment, but there are to be no amenities.

3. Define the need for protection of the area(s) suggested.

Pollen Island's foreshore was proposed for protection as a result of important wildlife and other ecological values not found elsewhere in the vicinity. The high level of protection required to ensure adequate protection necessitated the implementation of some form of statutory protection.

4. Consider how the area fits into any requirements (statutory or otherwise) of the organisation/group proposing protection.

The Royal Forest and Bird Protection Society Inc. is a non-profit making organisation with a conservation oriented purpose. The values for which protection is being sought are compatible with the instigator of protection, the Royal Forest and Bird Protection Society.

(C) Evaluation and selection of areas proposed for protection

This involves the assessment of alternative areas requiring protection to decide that considered most appropriate to protect. In the case of Pollen Island, only one area in the immediate vicinity contains such significant ecological values resulting in its identification and selection as requiring protection. It is assumed for the purpose of this study that the area surrounding Pollen Island and proposed for protection as a marine reserve (ie. the larger area) is that for which statutory mechanisms are to be assessed in relation to their suitability. Note, the area comprising the approved marine reserve is reduced in size to the area first proposed for protection and on which this process is applied.

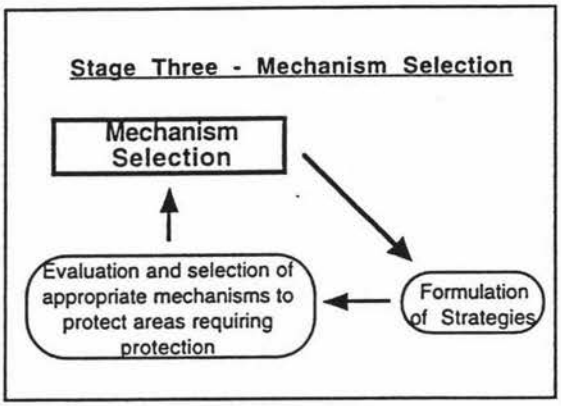
(D) Stage two reassessment/feedback

Reassessment/feedback at this stage will enable easier implementation of those statutory mechanisms selected for protection. If there is a need to alter boundaries to prevent major disputes at a later stage, doing so at this stage in the process will prevent large amounts of wasted time later. In the case of Pollen Island, it is possible that negotiation with the fishermen prior to selecting the boundaries may have prevented the blockage toward implementation of protection by fishermen. In retrospect, an alteration in the boundaries was acceptable to fishermen, by providing easily identifiable boundaries and removing areas customarily fished thereby enabling consent for the marine reserve to be provided by the Minister of Fisheries.

Use of the process to this stage should have identified areas requiring protection. The foreshore surrounding Pollen Island had already been selected as requiring protection, but this stage was worked through to show the reader how an area requiring protection

may be identified. Differences will occur with the user of the process as affected by that user's policies and mandates. Often areas may already have been identified but minor issues such as boundaries may need to be clarified. Stage three is now continued with to provide an example of how statutory mechanisms may be assessed in relation to their suitability to provide protection to a pre-specified location.

4.5.4 STAGE THREE - ASSESSING SUITABLE MECHANISMS



Stage three comprises the section providing for the determination of statutory mechanisms suitable to protect any specified location in the marine environment. The area may have been identified in stage two of this process or though other means. Information necessary to proceed through stage three is gathered in stage two of the process, but in instances where an area is identified as requiring protection by other needs, specific information regarding the area may need to be obtained.It is assumed for this case study that the area requiring protection is that proposed for a marine reserve surrounding Pollen Island. It is assumed that the boundary of the area for protection has been identified and that the level required has been determined. Statutory mechanisms considered are limited to those mechanisms covering the marine environment and contained within the proposed process presented in Chapter Three.

(A) Formulation of strategies

This involves the identification and analysis of statutory mechanisms to consider in relation to the area proposed for protection. All mechanisms to be considered are listed, then assessed in relation to the guidelines provided in Box 3 in Chapter Three. The same flow chart containing the information from selected mechanisms as specified in Box 3 is used as a basis for the assessment of suitable mechanisms to protect Pollen Island. Chapter Two also provides an analysis of the mechanisms in relation to the guidelines specified above.

Alternative strategies to achieve the predetermined goal of protection of Pollen Island may range from statutory to non-statutory mechanisms. Those statutory mechanisms to be considered comprise those contained in the flow chart (Figure 10). It is during the

evaluation and selection of strategies that these mechanisms are assessed in relation to their suitability to the area proposed.

The accompanying flow chart (Figure 10) divides the information for each mechanism into units or steps as outlined by number in Box 3. Use of the flow chart is designed to assist the user in selecting the most appropriate mechanisms at each step. The following steps describe both in the text and accompanying flow chart how the decisions of which mechanisms are continued with were reached. Often the decision may be arbitrary and therefore use of the chart provides only a basis to identifying mechanisms, the need to introduce other facets of knowledge being paramount.

Figure 10 - Visual representation of the suitability of selected statutory mechanisms to protect Pollen Island's foreshore.

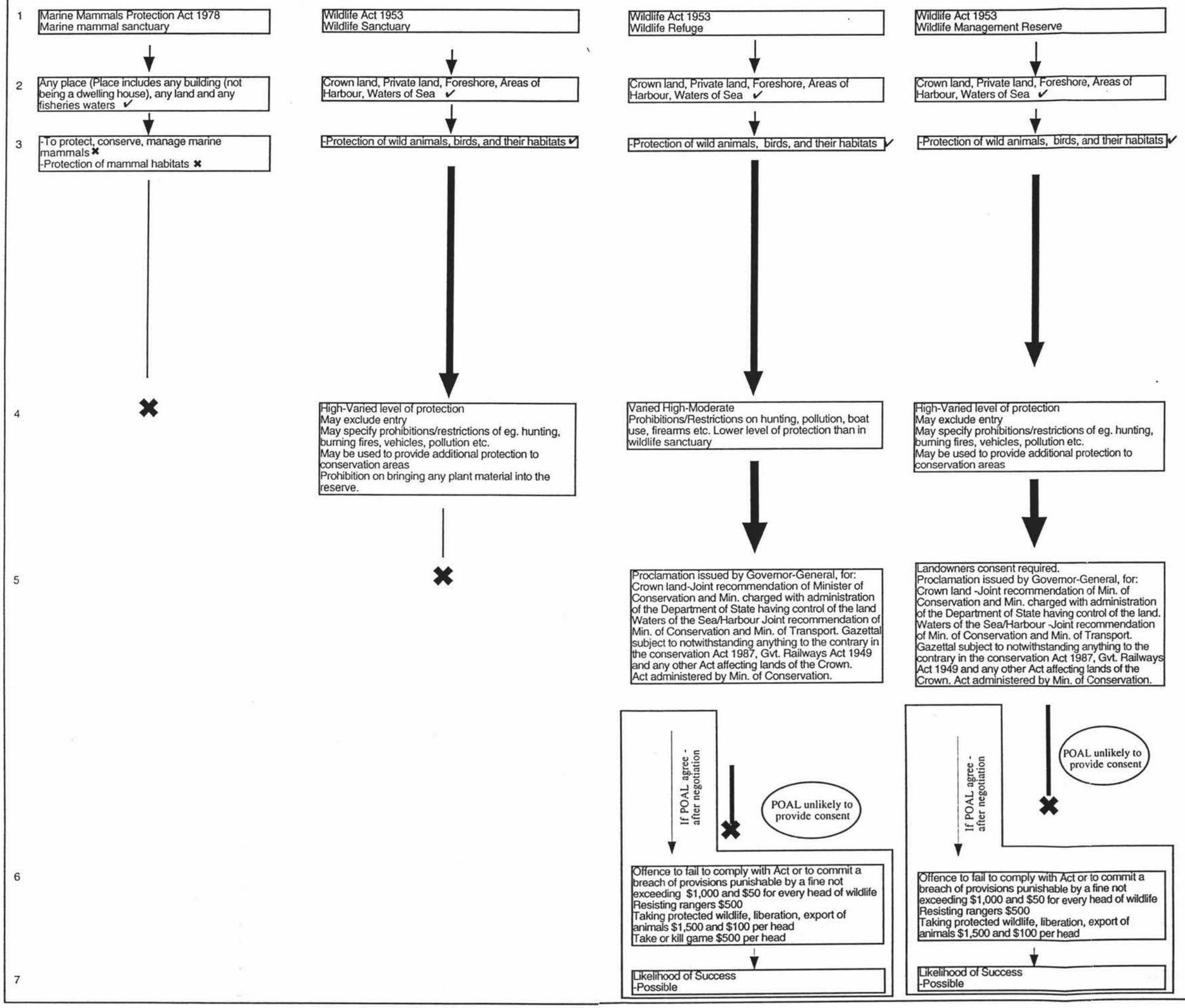


Figure 10 - Visual representation of the suitability of selected statutory mechanisms to protect Pollen Island's foreshore.

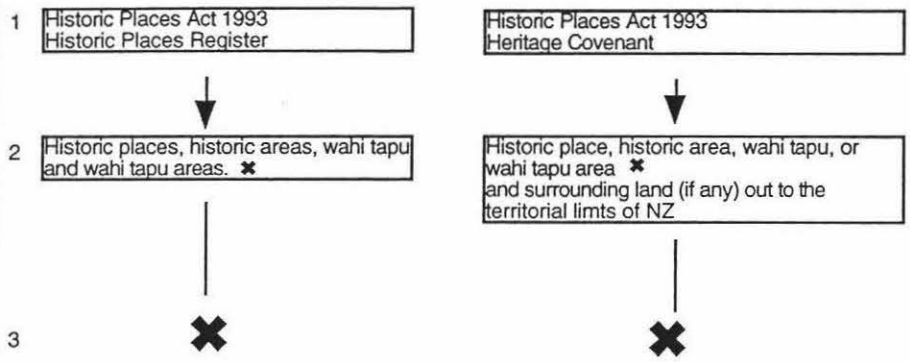


Figure 10 - Visual representation of the suitability of selected statutory mechanisms to protect Pollen Island's foreshore.

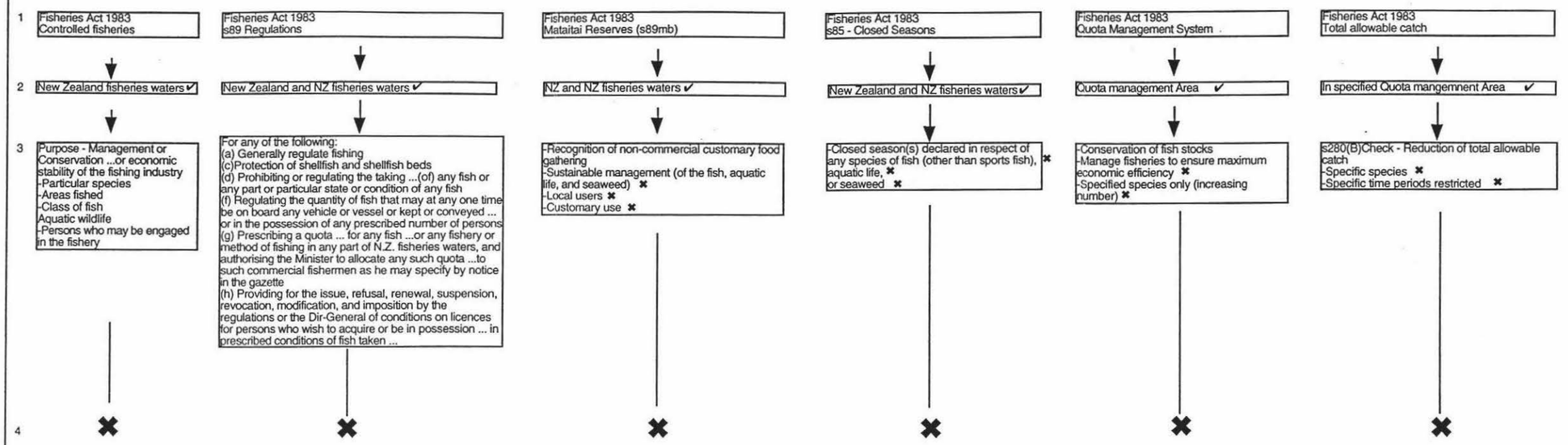


Figure 10 - Visual representation of the suitability of selected statutory mechanisms to protect Pollen Island's foreshore.

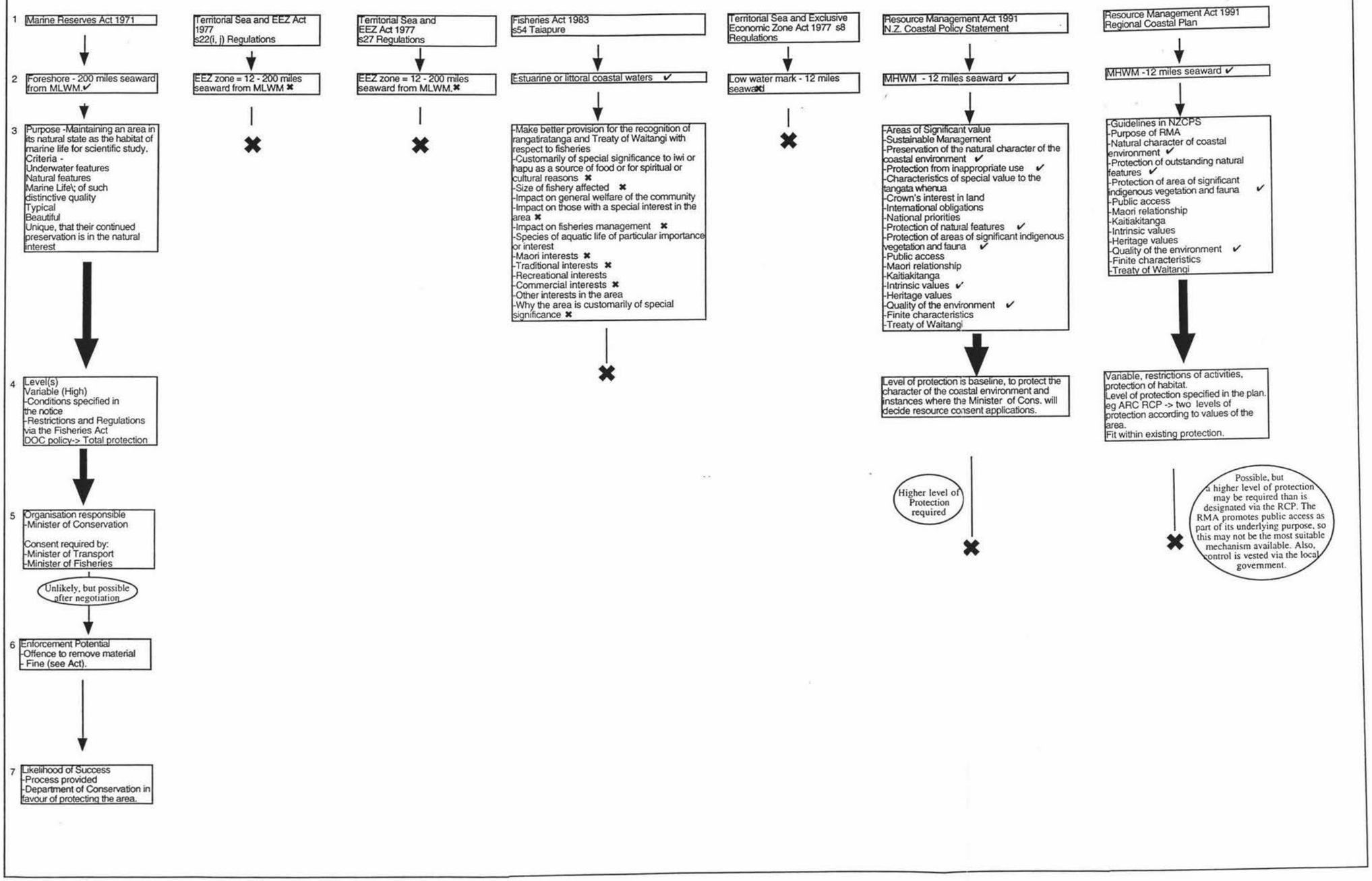


Figure 10 - Visual representation of the suitability of selected statutory mechanisms to protect Pollen Island's foreshore.

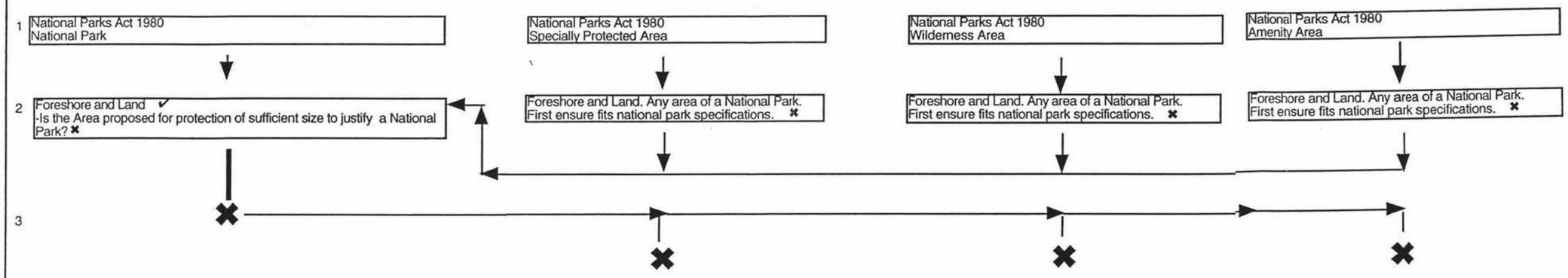


Figure 10 - Visual representation of the suitability of selected statutory mechanisms to protect Pollen Island's foreshore.

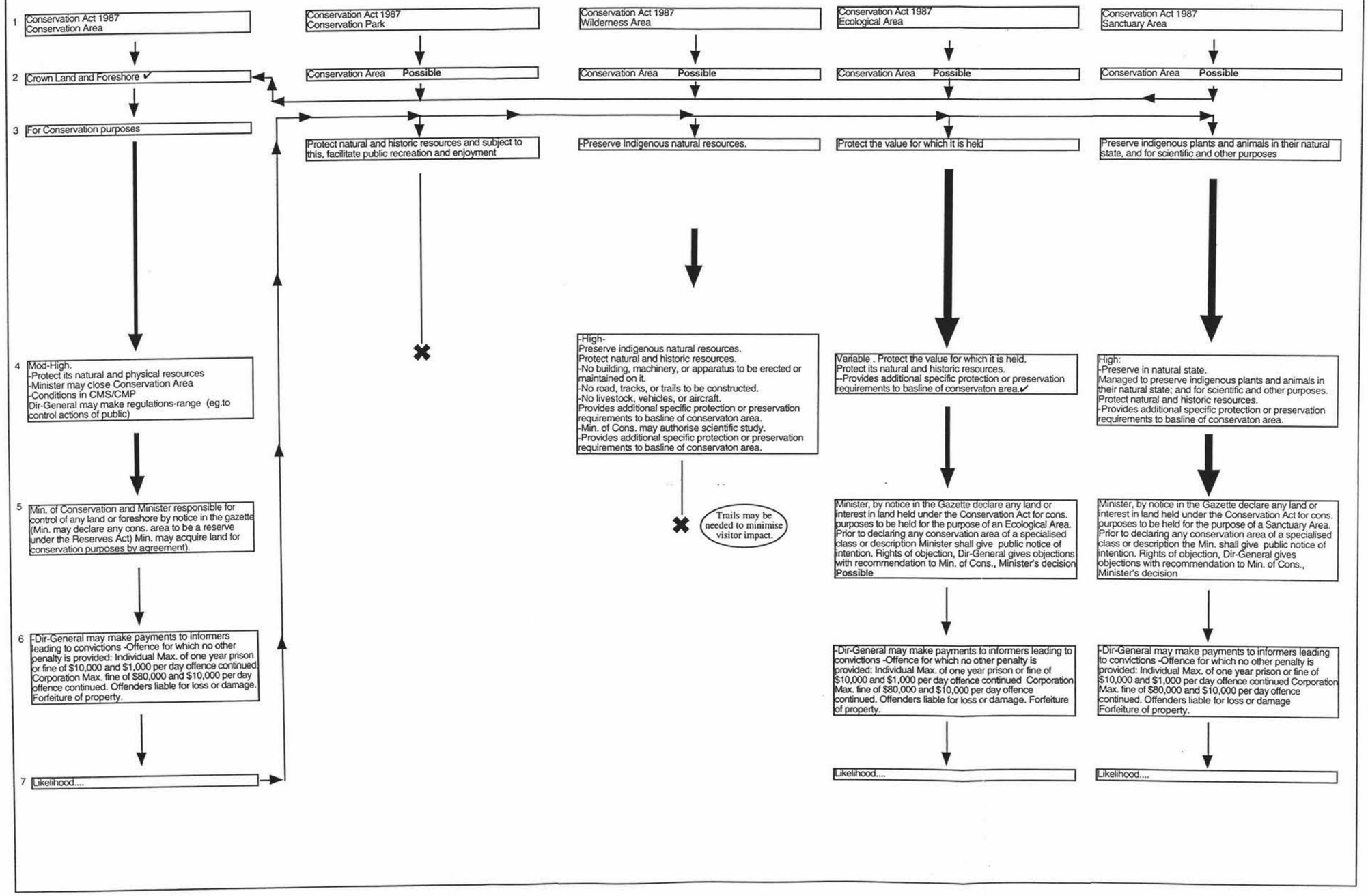
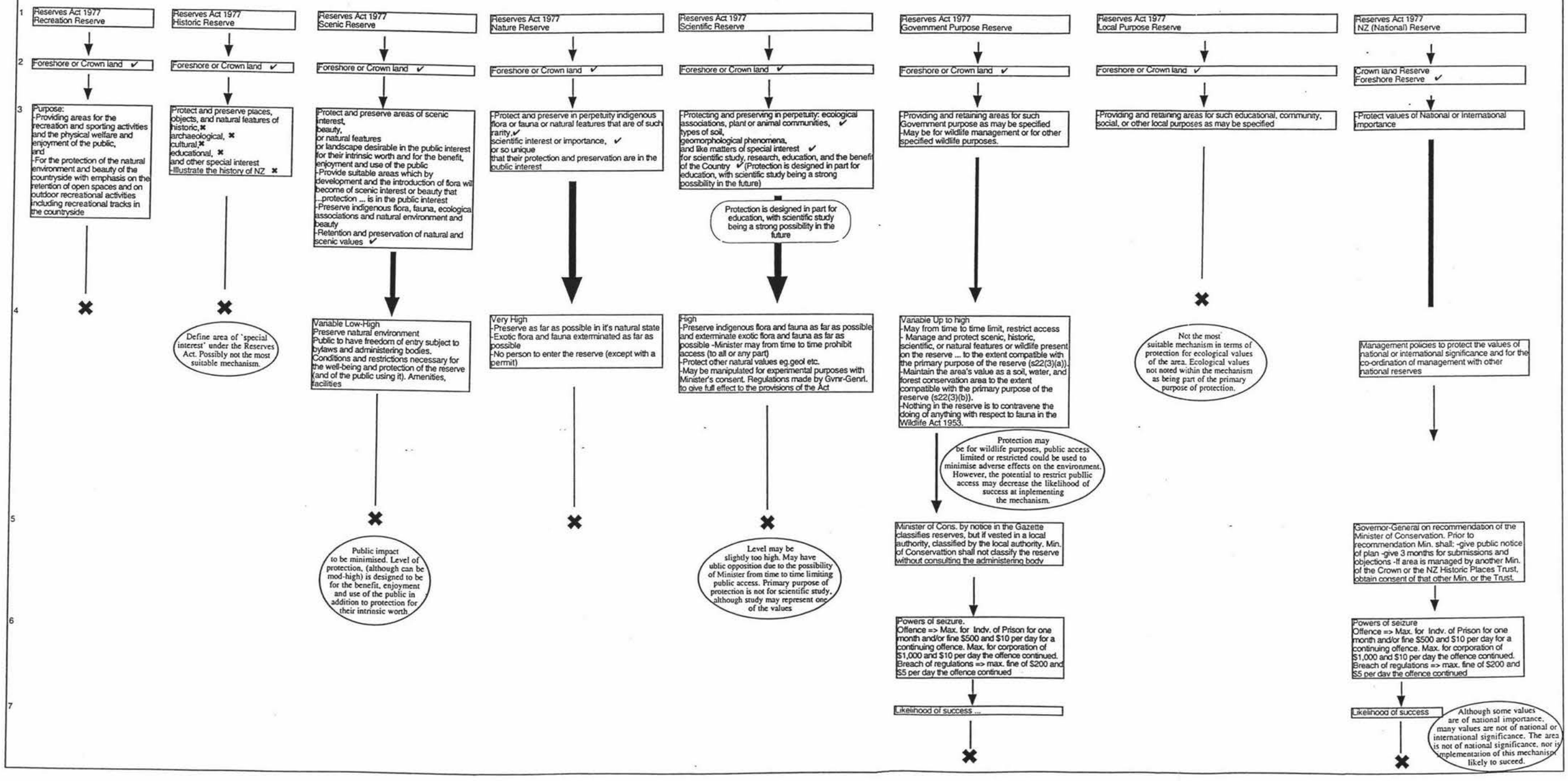


Figure 10 - Visual representation of the suitability of selected statutory mechanisms to protect Pollen Island's foreshore.



(B) Evaluation and selection of strategies

Evaluation and selection of selected statutory mechanisms identified as being potentially suitable for Pollen Island is accomplished in this section. This involves the comparison between values contained in the foreshore of Pollen Island and those statutory mechanisms identified in the previous section. Box 4, presented in Chapter Three indicates steps which assist the user in this purpose. Use of Figure 10, the flow chart assists in this objective. Arrows and crosses are used to indicate the suitability of the mechanism to provide protection in relation to those guidelines developed in Chapter Two. This section is structured such that each step contained in Box 4 is worked through, with those mechanisms providing for the needs of Pollen Island at each step being continued with, whilst those not suitable are halted with a large cross. In some instances a reassessment of the needs of protection may provide the use of mechanisms previously excluded. This may occur at any stage of the process where a requirement is altered.

Step one - Options of more than one piece of legislation.

The first step in selecting appropriate mechanisms for protection involves the consideration of whether the area for which protection is being sought contains sufficient variation to justify more than one form of protection. Variation may include different values in different parts of the proposed area, or a need for different levels of protection among other factors. The use of more than one mechanism can provide benefits as afforded by different mechanisms. These may include the provision of protection to different areas, and the ability to provide different levels of protection dependent on specific need.

In the case of Pollen Island, the area proposed for protection is limited to the foreshore which does not stretch over legislative boundaries and is not extensive. Values of the area are also uniformly distributed. For these reasons only one mechanism needs to be used.

Step two - Assess mechanism suitability by boundary.

The area proposed for protection as specified in stage one lies between mean high water mark and mean low water mark. Although this area was modified prior to approval of the marine reserve, it is this initial area for which suitable mechanisms are being assessed.

> The 800 hectare area proposed for inclusion in this marine reserve encompasses saltmarsh and mangrove ecosystems, intertidal mud flats,

> tidal channels and shell banks. It is bounded to the south by the industrial suburb of Rosebank peninsula and to the east by the residential suburb of Waterview. To the north and west the boundary largely flows the edge at the mud flats at mean low water springs (Royal Forest and Bird Protection Society of New Zealand Inc., 1989, 1).

Although Pollen Island's land mass contains many values justifying protection, statutory protection has not been sought due to it being owned by Ports of Auckland Ltd. However, with the recent lease of the Island to the Royal Forest and Bird Protection Society, it is possible that some form of statutory protection may be imposed.

Mechanisms assessed for protection of the proposed area are those covering any part of the area bounded by mean high water mark and mean low water springs. Those mechanisms deemed unsuitable to provide protection to this area are outlined below with reasons for their exclusion.

National park, specially protected area, wilderness area, and amenity area - These mechanisms, all from the National Parks Act 1980, are considered unsuitable as the proposed area is too small to justify their use.

Section 8, section 22, and section 27 of the Territorial Sea and Exclusive Economic Zone Act 1977 - These mechanisms are designed to protect areas of the territorial sea or exclusive economic zone, both of which lie outside the proposed area.

Historic places register, and Heritage covenant - These mechanisms, contained in the Historic Places Act 1993 are eliminated as they are intended to protect historic places, historic areas, wahi tapu, or wahi tapu areas, none of which apply to the area proposed for protection.

Figure 10 illustrates via crosses those mechanisms excluded from step two (purpose and criteria). Those mechanisms with an arrow are continued on to the next step. All mechanisms potentially able to provide protection to the area proposed, in terms of legislative boundaries (in this case, the foreshore) are continued with to the next step. Mechanisms continued past this step are contained in Table 15, presented below.

Table 15: Mechanisms included in the proposed process and which may be used to protect the foreshore of Pollen Island of part thereof.

Area	Mechanisms covering Mean high water mark - mean low water mark.
Mean high water mark - Mean low water mark (Foreshore)	- Marine mammal sanctuary. - Wildlife sanctuary, wildlife refuge, wildlife management reserve. - Controlled fisheries, s89 regulations, mataitai reserves (s89mb), closed seasons (s85), quota management system, total allowable catch, taiapure. - Marine reserve. - New Zealand Coastal Policy Statement, Regional Coastal Plan. - Conservation area, conservation park, wilderness area, ecological area, sanctuary area. - Recreation reserve, historic reserve, scenic reserve, nature reserve, scientific reserve, government purpose reserve, local purpose reserve, NZ (national) reserve.

Step three - Assess mechanism suitability by purpose and criteria.

This step comprises further analysis of the statutory mechanisms isolated as being available to protect the proposed area. The target of this step is to determine which mechanisms are best suited to the proposed area in relation to similarity of purpose and criteria.

Two methods of assessing suitable statutory mechanisms in relation to purpose and criteria are used in this step. The first involves the use of a flow chart (Figure 10), which outlines the purpose and criteria provided within each mechanism. This provides a graphical, easy to read, if somewhat simplified method of assessing suitable mechanisms.

Alternatively, a more technical analysis of mechanisms to assess their suitability to provide protection is possible. This involves, first an analysis of selected statutory mechanisms to determine those providing for criteria (or values) identified in Chapter Two as contributing to the need for marine protection. The purpose and criteria for which protection is sought is then compared to that provided by each statutory mechanism through the use of tables. Tables illustrating each mechanisms potential to provide for different criteria, by the use of ticks and stars were presented in Chapter Two (Tables 5, 6, and 7). To assess those mechanisms most appropriate to protect Pollen Island, the criteria for which protection is sought are shaded on these base tables. Light and dark shades are used to illustrate whether the criteria is of primary importance for protection, or is a value of the area, but does not contribute to protection. Appendix

Four presents a list of the criteria identified as contributing to the need for marine protection, and indicates whether that criteria is present in Pollen Island's foreshore. Numbers are used to indicate the relevance of that criteria to Pollen Island's foreshore. A '3' indicates that the criteria is present, and contributes to the purpose of protection. This transfers into a dark shade on the appropriate table. A '2' indicates that the criteria is present, but not the purpose of protection. This '2' transfers into a light shade on the appropriate table. A '1', which indicates that the criteria is not present on Pollen Island's foreshore, and subsequently transfers into an unshaded criteria on the appropriate table.

Tables 16, 17, and 18, presented below illustrate the criteria provided by each mechanism, and the criteria present on Pollen Island's foreshore. Mechanisms which have ticks placed within darkly shaded criteria (indicating that the mechanism provides for criteria contributing toward the need to protect Pollen Island's foreshore) are considered suitable for providing protection to the foreshore of Pollen Island, in relation to purpose and criteria. Those mechanisms providing for the purpose of protection (as indicated by ticks) for darkly shaded criteria (being the purpose of protecting Pollen Island) are continued with past this step.

Analysis of Tables 16, 17, and 18 indicates those mechanisms likely to provide protection to Pollen Island, dependent upon purpose and criteria. The three tables are designed to be read in unison from the top down. For example, examination of the Marine Reserves Act 1971 would consist of looking for all criterium that are darkly shaded and contain a tick, whether the criteria be of an ecological, social-cultural or economic nature. Examination of all the ticks within the lightly shaded criteria should also extend across the ecological, social-cultural and economic criteria. Those ticks contained within non-shaded areas do not contribute to the mechanism's appropriateness as those criteria are not part of the proposed area's purpose or values for protecting the area. For example, the Marine Reserves Act specifies 'typicalness' as one criterium for consideration of proposed areas. However, Pollen Island is not 'typical' according to the definition of 'typicalness' in Appendix One and so coverage of this value by the Marine Reserves Act does not contribute toward protection of Pollen Island's surrounds. Some mechanisms may specify 'any of the following' (criteria) for protection, and in these instances, the neglect of some does not negate the possibility of using the mechanism. However, in other instances a mechanism may require all of the criteria to be present prior to implementation. In these instances, the lack of a particular value from the proposed area is important. This is an external factor which must be kept in mind when analysing the various mechanisms for suitability, and recognised as a constraint of the

Table 16 - Statutory mechanisms providing protection for ecological criteria present in Pollen Island (as represented by dark shading over ticks).

Ecological Criteria	Marine Reserves Act 1971	Mataitai Reserves	Fisheries Act 1983 Controlled Fisheries	Fisheries Act 1983 Total allowable catch	Fisheries Act 1983 Quota management system	Fisheries Act 1983 Closed Seasons	Fisheries Act 1983 s69 Regulations (except Mataitai reserves)	Fisheries Act 1983 Taipure (s54A)	Marine Mammals Protection Act 1978 Marine Mammal Sanctuary	Wildlife Act 1953 Wildlife Sanctuary	Wildlife Act 1953 Wildlife Refuge	Wildlife Act 1953 Wildlife Management Reserve	Resource Management Act 1991 NZ Coastal Policy Statement	Resource Management Act 1991 Regional Coastal Plan	Conservation Act 1987 Conservation Area	Conservation Act 1987 Conservation Park	Conservation Act 1987 Wilderness Area	Conservation Act 1987 Ecological Area	Conservation Act 1987 Sanctuary Area	Reserves Act 1977 Recreation Reserve	Reserves Act 1977 Scenic Reserve	Reserves Act 1977 Nature Reserve	Reserves Act 1977 Scientific Reserve	Reserves Act 1977 Historic Reserve	Reserves Act 1977 Government Purpose Reserve	Reserves Act 1977 Local Purpose Reserve	Reserves Act 1977 NZ (National) Reserve
																												For specified local purposes
Distinctive/Unusual Landform	✪																											
Unique Area	✓																											
Area Significance	✪																											
Representative Area	✪																											
Typicalness	✓																											
Character																												
Marine Environment	✪																											
Ecosystem processes, structure, and habitat features	✪																											
Ecological habitat integrity	✪								✪	✪	✪	✪	✪	✪	✓													
Productivity																												
Sustainability			✓		✪								✓	✓	✓/✖													
Species maintenance	✪		✪	✓	✓	✓	✓		✪	✪	✪	✪	✪	✪	✪								✓					
Genetic diversity preservation	✪		✪												✪													
Rarity	✪														✪							✓						
Ecologically important species	✪														✪								✓					
Indigenous flora and fauna	✪												✓	✓	✓	✪	✓	✪	✓	✪	✪	✪	✓	✓	✪			
Wildlife									✓	✓	✓				✪													
Unique Species Associations	✓														✪							✓						
Diversity															✪													
Dependency															✪													
Naturalness	✓												✓	✓	✪							✓						
Resilience/Vulnerability															✪													
Natural features	✓												✓	✓	✓/✖	✓	✓	✪	✪	✓	✓	✓	✪					
Corridor potentiality															✪													
Size															✪													
Stock replenishment			✪												✪													
International interest													✓		✪													✓
National interest	✓												✓		✪								✪					✓

Every stewardship area shall be managed so that its natural and historic resources are protected

Min. may specify

Regulating fishing and shellfish protection

Value for which Ecological purpose

For conservation purposes

Government purposes

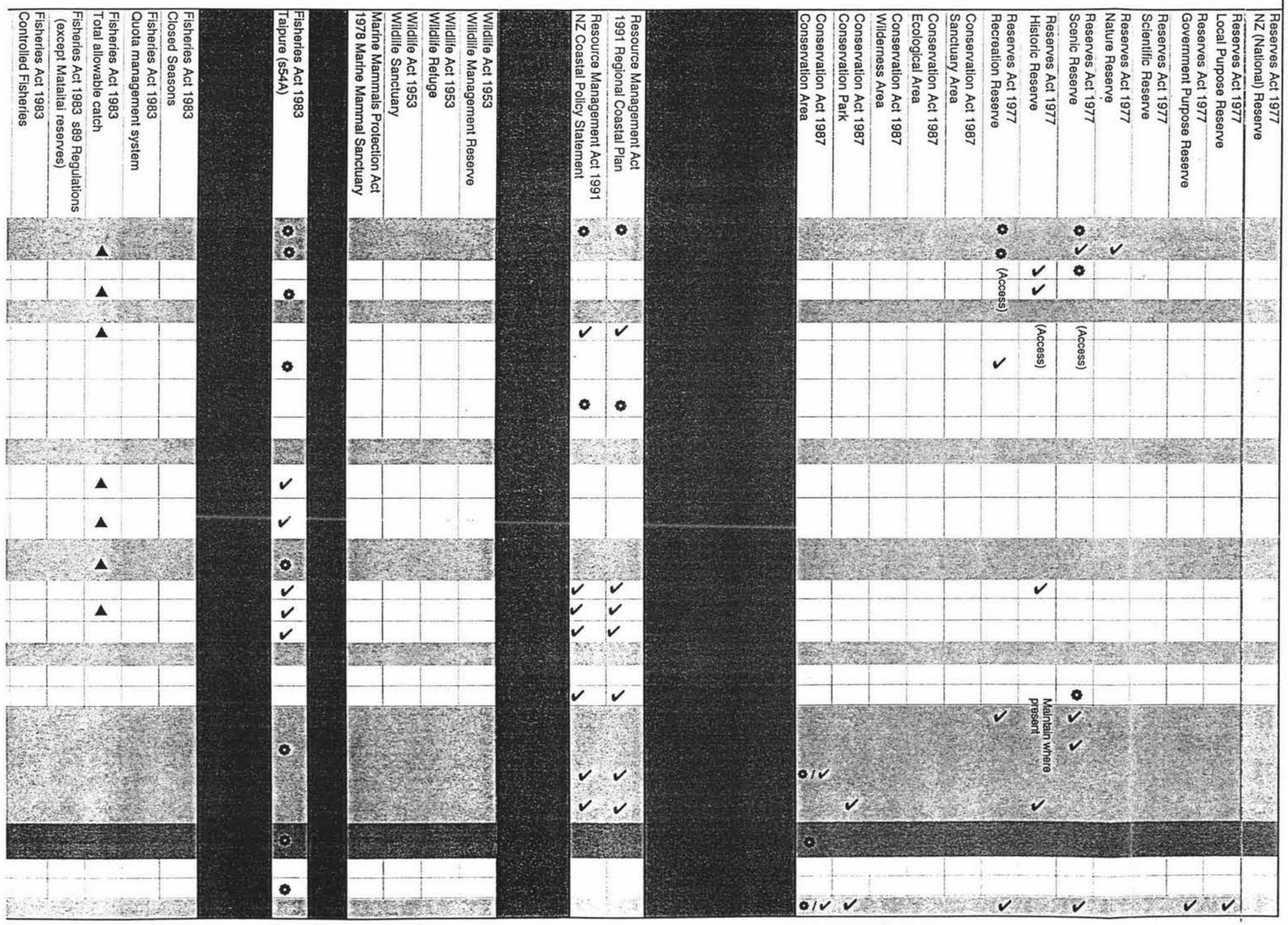
KEY

- ✓ Criteria contributes toward the purpose of the mechanism
- ✪ Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.
- Criteria contributing toward the need for protection of Pollen Island
- Criteria found within Pollen Island, but not of sufficient cause to protect the area, OR criteria similar, but not identical to that specified in the table.
- Criteria not found at Pollen Island

Note: `Pollen Island' means the area proposed for protection.

Table 16

Table 17 - Statutory mechanisms providing protection for social - cultural criteria present in Pollen Island (as represented by dark shading over ticks).



KEY

- ✔ Criteria contributes toward the purpose of the mechanism
- ✪ Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.
- Criteria contributing toward the need for protection of Pollen Island
- Criteria found within Pollen Island, but not of sufficient cause to protect the area, OR criteria similar, but not identical to that specified in the table.
- Criteria not found at Pollen Island

Note: `Pollen Island' means the area proposed for protection.

Table 17

Table 18 - Statutory mechanisms providing protection for economic criteria present in Pollen Island (as represented by dark shading over ticks)

Economic Criteria	Reserves Act 1977 NZ (National) Reserve	Reserves Act 1977 Local Purpose Reserve	Reserves Act 1977 Government Purpose Reserve	Reserves Act 1977 Scientific Reserve	Reserves Act 1977 Nature Reserve	Reserves Act 1977 Scenic Reserve	Reserves Act 1977 Historic Reserve	Reserves Act 1977 Recreation Reserve	Conservation Act 1987 Sanctuary Area	Conservation Act 1987 Ecological Area	Conservation Act 1987 Wilderness Area	Conservation Act 1987 Conservation Park	Conservation Act 1987 Conservation Area	[redacted]	Resource Management Act 1991 Regional Coastal Plan	Resource Management Act 1991 NZ Coastal Policy Statement	[redacted]	Wildlife Act 1953 Wildlife Management Reserve	Wildlife Act 1953 Wildlife Refuge	Wildlife Act 1953 Wildlife Sanctuary	[redacted]	Territorial Sea and EEZ Act 1977 s8 Regulations	[redacted]	Territorial Sea and EEZ Act 1977 s22 Regulations	Fisheries Act 1983 Closed Seasons	Fisheries Act 1983 Quota management system	Fisheries Act 1983 Total allowable catch	Fisheries Act 1983 s89 Regulations (except Mataitai reserves)	Fisheries Act 1983 Controlled Fisheries	Fisheries Act 1983 Mataitai Reserves	Marine Reserves Act 1971
Shipping																															
Commercial fishery resources																									✔			✔			
Importance to fisheries																															
Biological Productivity																															
Area importance to species																															
Research opportunity	✔																														
Nature/Degree of threats																															
Suitability for activities, Potential value, alternative use																															
Economic benefits																															
Ecodevelopment																															
Tourism																															

Other purposes
✔
✔
✔

KEY

✔ Criteria contributes toward the purpose of the mechanism

Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.

Criteria contributing toward the need for protection of Pollen Island

Criteria found within Pollen Island, but not of sufficient cause to protect the area,
OR criteria similar, but not identical to that specified in the table.

Criteria not found at Pollen Island

Note: 'Pollen Island' means the area proposed for protection.

Table 18

process. Note that those mechanisms blacked out have been excluded as the area they cover is not appropriate to the foreshore of Pollen Island for which protection is sought.

Table 19 presents the statutory mechanisms in relation to their suitability to protect values specified as being of consideration for protection of the proposed area. Those mechanisms providing as part of their purpose more than one criteria found in Pollen Island are classified as providing a high level of protection. Mechanisms providing for one criterium present on Pollen Island are presented as high - moderate. This category has been included to minimise the likelihood of overlooking mechanisms which are very general in specifying their purpose. This is often the case in older legislation. Also included in the category high - moderate are two mechanisms which are very broad in their specifications, and which do not therefore provide for a specific criteria found in Pollen Island. These are the mechanisms, conservation area and government purpose reserve. The mechanism, government purpose reserve does not contain criteria which specify a particular purpose (and transfer into ticks or stars), but specifies protection to be for any 'Government purpose.' This may represent many values according to the government's need for the mechanism in particular instances. For this reason the mechanism is placed within the category high - moderate although no ticks are present in a darkly shaded criterium. The mechanism, conservation area, by sole analysis of the tables would be classified moderate -low. However, the Conservation Act 1987 specifies conservation reserves to be 'for conservation purposes,' which is interpreted in Section 2 of the Act as encompassing a range of other criteria contained in the tables.[3] Because both mechanisms, government purpose reserve and conservation area contain broad specifications which may be interpreted as including a range of criteria, they are placed in the category high - moderate and are therefore continued with to the following step.

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3 See the glossary for a full definition of 'conservation,' as contained in section 2 of the Conservation Act 1987.

Table 19: Mechanisms suitability to provide protection to Pollen Island's foreshore as assessed by criteria noted in the mechanism.

HIGH	HIGH-MODERATE
Marine Reserves Act 1971 -Marine reserve Resource Management Act 1991 -New Zealand Coastal Policy Statement -Regional Coastal Plan Conservation Act -Ecological area Reserves Act 1977 -Nature reserve -Scientific reserve	Wildlife Act 1953 -Wildlife sanctuary -Wildlife refuge -Wildlife management reserve Conservation Act 1987 -Conservation area -Wilderness area -Sanctuary area Reserves Act 1977 -Scenic reserve -Government purpose reserve -NZ (national) reserve
MODERATE- LOW (Ticks on lightly shaded criteria)	**LOW (Stars or less shaded on table 16, 17, and 18)**
Conservation Act 1987 -Conservation park Reserves Act 1977 -Recreation reserve -Historic reserve -Local purpose reserve	Fisheries Act 1983 -Mataitai reserve -Controlled fishery -s89 fisheries reg's (except mataitai reserve) -Total allowable catch -Quota management system -Closed seasons -Taiapure Marine Mammals Protection Act 1978 -Marine mammal sanctuary

Statutory mechanisms classified as having a moderate -low, or low suitability to provide for protection of Pollen Island are eliminated at this step. These mechanisms have not been designed to protect the values for which protection of Pollen Island is being sought (i.e., they contain no ticks in darkly shaded criteria).

Statutory mechanisms classified as high, or high - moderate are continued with to step four. At this step in the process, probable sources of protection for the foreshore around Pollen Island (by area and purpose and criteria specified within the legislation) would include the Marine Reserves Act 1971, Resource Management Act 1991 (*New Zealand Coastal Policy Statement* and Regional Coastal Plan), Conservation Act 1987 (Ecological area), and the Reserves Act 1977 (nature reserve and scientific reserve). Other

mechanisms which may be appropriate include the Wildlife Act 1953 (wildlife sanctuary, wildlife refuge, and wildlife management reserve), Conservation Act 1987 (conservation area, wilderness area, sanctuary area), and Reserves Act 1977 (scenic reserve, government purpose reserve and New Zealand (national) reserve).

Arrows on the flow chart (Figure 10) illustrate the likelihood of using each mechanism; the greater the arrow thickness, the higher the compatibility and hence likelihood of use. A very thick arrow represents a mechanism with a high similarity in purpose and criteria, a moderately thick arrow, a moderate-high compatibility. A thin, straight line leading to a cross indicates the mechanism is not suitable. A moderately thick line leading to a cross indicates the mechanism is of the moderate-low category and might be of use if alternative, more suitable mechanisms are discovered not to be suitable at a later stage of the process.

Step four - Assess mechanism suitability to provide level(s) of protection required.

Assessment of the level of protection required to protect the proposed area is undertaken in stage two. Pollen Island's surrounds were assessed to require a high level of protection.

> A high level is being sought and progression through step four of the proposed process is intended to identify those mechanisms providing for this level of protection.

Legislation supporting a high level of protection is required for the proposed area surrounding Pollen Island. Assessment of statutory mechanisms in relation to their ability to provide for the required level of protection may be achieved through use of the flow chart (Figure 10) which specifies the level of protection afforded by each mechanism. Arrows continuing to step five indicate mechanisms for which the level of protection afforded by that mechanism is considered appropriate. Those mechanisms for which lines are attached to a cross are not as suitable as other mechanisms.

Statutory mechanisms excluded at this step for reasons stemming from their providing an unsuitable level of protection include: wildlife sanctuary (access is usually restricted - too high), wilderness area (too high), *New Zealand Coastal Policy Statement* (too broad), Regional Coastal Plan (too broad), nature reserve (too high), scientific reserve (too high), and scenic reserve (inadequate, the provision of amenities is not appropriate to Pollen Island). A reassessment of the level of protection required could significantly alter the suitability of different mechanisms to protect the proposed area. However, in the case of Pollen Island, a change in the level of protection required would nullify the

purpose of implementing protection.

Mechanisms providing for a high level of protection, as required for Pollen Island are listed in Table 20. Also contained in Table 20 is a description of the permitted access to areas protected by use of each mechanism. Mechanisms contained in Table 20 are continued with to step five, which provides for their assessment in relation to the level of organisational support required.

Table 20: Mechanisms suitable to protect Pollen Island to the level required to maintain values specified for protection.

HIGH	Access permitted	MODERATE - HIGH	Access permitted
Marine Reserves Act 1971		Conservation Act 1987	
-Marine Reserve	Yes	-Conservation area	Opt
Wildlife Act 1953		Reserves Act 1977	
-Wildlife Refuge	Yes	-Government purpose reserve	Opt
-Wildlife Management Reserve	Opt[4]	-NZ (national) reserve	Opt
Conservation Act 1987			
-Ecological Area (variation)	Opt[5]		
-Sanctuary Area	Opt		

Step five - Assess most suitable mechanism in relation to organisational support required.

Pollen Island provides a complex scenario with the involvement of many organisations as was outlined in stage two. It is the intent of this step to assess the likely support required prior to the implementation of mechanisms isolated to this step. Support is needed from the organisation responsible for implementation and management of the proposed mechanism, and also from those organisations from whom consent is required. Although not necessary, it is preferable to have support from those other organisations involved to minimise conflict at a later stage (e.g., through submissions and objections)

4 Access to a wildlife management reserve may be restricted by notice in the Gazette, protection is not automatic (Royal Forest and Bird Protection Society, 1992).

5 Section 49 of the Conservation Act 1987 states that the Governor-General may, by Order in Council make regulations to provide for the care, management, and protection of any natural or historic resource or any conservation area or areas. Actions of the public, including entry into any conservation area may also be restricted and/or controlled via this section. Different levels of protection may also be conferred onto conservation areas by way of reclassification to any class of reserve within the Reserves Act 1977 by notice in the Gazette from the Minister of Conservation.

that may reduce the likelihood of implementation. In cases where support is not initially forthcoming, the possible use of mediation or other techniques to resolve this situation could be considered prior to continuing through the process.

The following tables provide a clear, easy to read comparison of the requirements for support prior to implementation of any particular mechanism. Also included is the organisation responsible for implementation of each mechanism and the likely level of support from that organisation. Although the information required for this step may need to be partially guessed, assumed, or obtained through interaction with organisations involved, use of this information will ease the process of implementation later in the process.

Table 21: Provision of consent required to protect the proposed area.

Mechanism	Conservation Act 1987 -Conservation Area	Conservation Act 1987 -Ecological Area	Conservation Act 1987 -Sanctuary Area
Organisation responsible	DoC	DoC	DoC
Support of Organisation	Possible, but unknown	Possible, but unknown	Possible, but unknown
Implementation via:	Minister of Conservation and Minister for an agency or department of state that has control of any foreshore	Minister of Conservation by notice in the Gazette.	Minister of Conservation by notice in the Gazette.
Consent required	-Public consultation -Min. responsible for control of foreshore	Further protection to a conservation area. Public notice of intention to specify the particular scientific value for which it is held. Min. of Conservation to consider submissions/objections and recommendation of Director-General.	Minister of Conservation to give public notice of intention. Minister to consider submissions/objections and recommendation of Director-General.
Consent available	Possible, but unknown.	Possibly obtain all required consent.	Possibly obtain all required consent.

Mechanism.	Marine Reserves Act 1971 -Marine Reserve	Reserves Act 1977 -Government Purpose Reserve	Reserves Act 1977 -NZ (national) reserve
Organisation responsible	DoC	DoC (Minister other than Minister of Conservation may be appointed to control and manage Govt. purpose reserve).	Department of Conservation.
Support of Organisation	Yes	Possible	Possible (May be too small an area to justify use)
Implementation via:	Governor-General by Order in Council on recommendation of Minister of Conservation	Reserves created by Governor-General by Order-in Council. Made on recommendation of Minister of Conservation after public notification. Minister of Conservation, by notice in the Gazette shall classify reserves.	Gvnr-Genrl on recommendation of Min. of Conservation
Consent required	Minister of Fisheries Harbour Board -> ARC Minister of Transport Public notification - Minister of Conservation to decide whether to uphold objections.	- public notification of purpose of Government purpose reserve. - Minister shall give full consideration to all objections and submissions.	-consider submissions/ objections -If area managed by another Min. of the Crown or NZ Historic Places Trust, their consent.
Consent available	Possible problems with: Minister of Transport Minister of Fisheries ARC These were all resolved in the real life situation	Possible public objections.	Possible

Mechanism	Wildlife Act 1953 Wildlife Refuge	Wildlife Act 1953 Wildlife Management Reserve
Organisation responsible	DoC	DoC
Support of Organisation	Possibly	Possibly
Proclamation issued by:	Proclamation issued by Governor-General.	Proclamation issued by Governor-General.
Consent required.	Joint recommendation of Min. of Conservation, Lands, and Transport. Consent of occupier required except when Crown land. In this instance vested in crown but leased by Ports of Auckland Ltd.	Joint recommendation of Min. Conservation, Lands, and Transport. Consent of occupier required when not Crown land (Ports of Auckland Ltd. is the lessee).
Consent available.	Probably not while the area being leased by Ports of Auckland Ltd.	Probably not while the area being leased by Ports of Auckland Ltd.

Analysis of the above tables indicates variations in the likelihood of implementing different mechanisms. Of those mechanisms considered, those with a greater likelihood of implementation are: conservation area, ecological area and sanctuary area, government purpose reserve and NZ (national) reserve. All of these mechanisms require consent from organisations that are not directly opposed to protection of the area.

The Marine Reserves Act 1971 requires consent from both the Minister of Transport, Auckland Regional Council and Minister of Fisheries. Gazettal of the marine reserve over Pollen Island's foreshore illustrated difficulties encountered, and the need for negotiation prior to obtaining consent. Support from the Auckland Regional Council was restricted, for reasons of their position as lessor of the area to Ports of Auckland Ltd. Also, the Auckland Regional Council owns 80% of Ports of Auckland's shares which may cause a conflict of interest. Problems stemming from this interest were however resolved through mediation. Consent by the Minister of Transport was forthcoming after resolution of the issues concerned relating to Ports of Auckland Ltd. Support from the Ministry of Fisheries required a compromise in the marine reserve boundaries, to allow for continued fishing in specific areas. This mechanism, therefore, is less desirable comparatively to others isolated to this step. It is, however continued with as the mechanism was shown to be of use in the real life situation.

Continuation of mechanisms from this step onward is subjective, dependent on the need to implement mechanisms providing for values considered important by the user of the proposed process. Also, knowledge may be limited, in particular with respect to the actions of outside organisations and their influences on the potential success at implementing a particular mechanism. This provides a greater need to constantly reassess those mechanisms isolated as more information or knowledge is obtained.

Elimination of the mechanisms, wildlife refuge and wildlife management reserve is probable at this stage due to consent of the occupier being required prior to implementation of either of these mechanisms. As lessee of the area, Ports of Auckland Ltd. is unlikely to have provided the required consent for the implementation of either of these mechanisms. It is possible that one of these mechanisms may potentially be used after resolution of issues between Ports of Auckland Ltd., the Royal Forest and Bird Protection Society, the Department of Conservation, Auckland Regional Council and Auckland City Council. Another cause for discussion is the legality of the lease, which if proved void would increase the likely success of implementation of either a wildlife refuge or wildlife management reserve. At the time of creation, not all requirements were met regarding the creation of a lease under the relevant legislation. This may provide cause for the legality of the lease to be void by way of a court decision. However, to test this would require a great deal of time and expense which may not be available or could be better spent elsewhere.

Step six - Assess mechanism suitability to provide the level of enforcement required.
The need to enforce any rules or regulations made by way of any protection mechanism will relate to the public support of implementation of that mechanism, and possibly the severity of rules or regulations imposed. Some areas may be self-regulating while others may require a greater degree of input. The value of items protected, ease of access to them, and public knowledge of the area all contribute to the requirements for protection. In the case of Pollen Island, the area is not easily accessible, and the only features of commercial value are the fish taken from the area. Increased public knowledge of the area's existence may occur with the implementation of protection status, particularly through any process involving a lot of public consultation and discussion prior to its implementation. However, limiting the number of visitors to the area, which would be preferred by the Royal Forest and Bird Protection Society (Peter Maddison, pers. comm., 1994) will prevent probable adverse effects to the area by the public.

A decision on the level of enforcement needed is subjective, relating to perceived need, resources available and access by staff responsible to perform such action as required.

As Pollen Island does not contain many values of economic importance to the public, (with the exception of fishing), and is not easily accessible, the need for enforcement may be lower than in other locations. However, the ease with which ecological values contained within the area can be damaged is reason to provide a reasonable level of enforcement and a good interpretation programme. The availability and provision for rangers or others to enforce such powers is also necessary, particularly in isolated areas. Of the mechanisms separated to this step, the following are suitable.

Suitable

Conservation Area, Ecological area, Sanctuary Area - Penalties include prison or fines of up to $10,000 and $1,000 per day the offence continues for individuals and $80,000 max. plus $10,000 per day the offence continues. Offenders are liable for loss or damage caused and property may be forfeited. Payments may also be provided to informers leading to convictions.

Marine Reserve - Presently rangers have the power of search and seizure, it being an offence to remove any material for which fines may be imposed. Three months prison and/or a fine not exceeding $500 may be imposed in certain instances, and if no other provisions apply, fines of up to $200 and up to $10 per day the offence continued may be imposed. Powers for enforcement will be increased with the incoming fisheries legislation. Changes include increasing the powers of rangers to pursue and apprehend without warrant, along with providing increased powers of search and seizure. Fines are to be increased to a maximum of $250,000 and/or three months prison. Upgrading of the degree of enforcement will provide further deterrence to potential violaters.

Government Purpose Reserve, New Zealand (National) Reserve - Penalties for offences range from a max. of one month prison and/or a fine of $500 and $10 per day the offence continued.The maximum penalty for a corporation is a fine of $1,000 and $10 per day the offence continued. Fines of up to $200 and $5 per day the offence continued may be imposed for a breach of regulations.

Although a lot of variation exists between the level of penalties and enforcement of different mechanisms, all mechanisms isolated to this step are potentially adequate as the area is not of high economic importance and is not currently easily accessible by the public.

Step seven - Consider likelihood of success at implementing the mechanism(s).

This step provides for the consideration of any other information of relevance potentially affecting the suitability of mechanisms being considered to provide protection. Issues to consider may include factors such as the degree of support for each mechanism isolated to this step, the time, effort and expense required to implement the various mechanisms. Also to consider is the past success of implementation of the mechanism, the process required prior to implementation, and any foreseeable difficulties in undergoing this process. Issues relating to the proposed area will still be prevalent regardless of mechanism proposed. However the implications and impacts of implementing different mechanisms may differ to such an extent that potential problems (prior to implementation) may be avoided.

The mechanism, New Zealand (national) reserve is excluded at this step. Reasons for the exclusion are primarily focused on the potential difficulty of implementation, and that the focus of protection is not purely for 'national' purposes. It is not known whether the Department of Conservation would have recommended implementation of a NZ (national) reserve to the Governor-General as alternative mechanisms may have been considered more suitable.

Pollen Island provides a good example of how, in the case of implementing a mechanism for which not all requirements had been met, negotiation provided an important role in the resolution of issues to provide an adequate solution to all parties involved. The foreshore is still leased by Ports of Auckland, to keep future options open, but is not realistically envisioned as a future port site. Instead Ports of Auckland will develop the existing Auckland port site. Resolution of issues surrounding consent required from the Minister of Fisheries was solved with the reduction in the proposed area to exclude the most popular fishing sites.

Implementation of any mechanism over an area which is being leased often requires the need to obtain the consent of the lessee. Use of the mechanisms, government purpose reserve, conservation area, ecological area, and sanctuary area do not require consent from the lessee as specified in the legislation. However, use of these mechanisms will involve Ports of Auckland in relation to submissions, necessitating the need to consider these values. All of the mechanisms isolated could potentially be used. Other factors which could be considered prior to implementing the process is the management of the proposed area. The area can only sustain limited disturbance, so there may need to be restrictions on visitor impact by limiting numbers, ease of access and/or providing good interpretation and education about the area. Of the above mechanisms, those not

associated with fishing may have been implemented more easily than the Marine Reserves Act 1971. The primary reason for this being that those mechanisms not related to fishing are less likely to require consent from the Ministry of Fisheries prior to implementation. As this consent represented a major stumbling block which was eventually resolved through compromise (involving a reduction in the original proposed area), use of alternative mechanisms may have negated the need for this. However, use of alternative mechanisms may not have provided such a high level of protection to the area proposed. This may represent another form of a trade-off. Inclusion of marine reserve status will provide greater protection generally, but the values which require protection can be protected either through a conservation area, ecological area, sanctuary area or government purpose reserve. Access to these areas can also be restricted, which would in effect prevent fishing. However, as the area proposed for protection lies within a quota management area, this possibility may have needed resolution through discussions between the Department of Conservation and Ministry of Fisheries prior to implementation of any of the mechanisms selected to this step.

Step eight - General assessment of final mechanisms selected.

This is the final step prior to making a proposal to implement one or more of the various mechanisms isolated. The final decision of which mechanism to proceed with should involve all of the major participants to minimise conflict at a later date. If an agreement on protecting the area by use of a particular mechanism is not likely to be resolved amicably between different parties, an application for protection by any group or organisation through use of a specified mechanism may occur. An application will identify any further questions regarding the mechanisms suitability, and resolve questions relating to its potential use to protect the proposed area.

Several mechanisms could potentially be used to protect the proposed area surrounding Pollen Island. The choice of which one is dependent on the user groups needs, values of the area, and other parties involved. Any of a conservation area, ecological area, sanctuary area and government purpose reserve could potentially be used, as assessed by the process used. Use of the Marine Reserves Act 1971 has been shown to be possible, with the Department of Conservation approving a marine reserve at the area in July 1995. However, prior to the use of this mechanism a lot of negotiation and compromise was required which commanded time. However, many of the issues to be resolved would have been similar regardless of the proposed mechanism. Ports of Auckland Ltd. had a vested interest in maintaining their lease over the foreshore, and without the company's support it is unlikely any other mechanisms isolated could have been implemented with ease. Issues regarding the legality of the lease of the foreshore

are still not clear as creation of the lease involved some possible error. One exception to the issues requiring resolution prior to a mechanism's use is that of fishing. An alternative mechanism which recognised the importance of other ecological values (excluding fishing) as the primary focus of protection may have reduced the need for consent by the Minister of Fisheries, enabling a larger area to be protected.

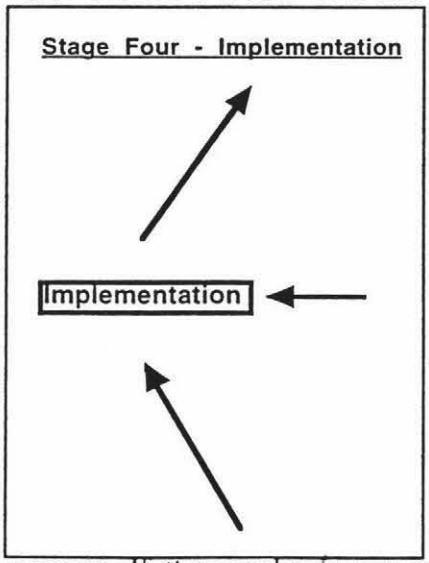
Step nine - Notification of proposed mechanism(s) to be used, and the way in which they will be used.

Prior to implementation of any mechanism isolated to this stage, public notification of the mechanism proposed and its intended use may assist in determining potential issues and hurdles before the process of implementation is started.

(C) Stage three reassessment/feedback

Consideration of any issues not previously worked through will provide the opportunity to resolve any potential impediments to protection. This may involve an alteration in the way any mechanism is used, for example in relation to the level of protection proposed. There may need to be some reassessment of the mechanisms available for protection. This may occur to any stage and/or step in the process. As this process is being run through hypothetically with the aid of a case scenario, it is not possible to second-guess specific feedback from any mechanisms identified while using the process.

4.5.4 STAGE FOUR - IMPLEMENTATION



Stage four consists of implementing the statutory mechanism(s) selected for protection. Contained within the legislation is the process which needs to be worked through prior to gazettal of any area for protection by any statutory mechanism.

This stage involves proceeding toward implementation of any mechanism selected. Application for implementation of the statutory mechanism is attempted, involving any required process. If the mechanism cannot be successfully implemented, another attempt with another mechanism could then proceed. It is not the intention of this thesis to proceed beyond the stage of selecting an appropriate mechanism suitable to protect any specified area.

4.6 CONCLUDING COMMENTS REGARDING PROPOSED PROCESS FOR THE SPECIFIED AREA.

Not all available legislation of potential use for protecting Pollen Island has been considered in the process. In addition, non-statutory mechanisms could also potentially be employed, such as the case with the Royal Forest and Bird Protection Society negotiating to lease the Island from Ports of Auckland Ltd. The general aim was to assess the most appropriate mechanism with the greatest likelihood of success in being implemented. This included determining those mechanisms with the most similar purpose, values or criteria, and those with input from organisations in support of protecting the proposed area. Although in any situation, those organisations involved will make submissions, their degree of impact may differ according to the statutory mechanism being employed. The difference between the Marine Reserves Act 1971 and the Fisheries Act 1983 is a good example of this, the Marine Reserves Act specifying to a much greater degree those groups to be notified and those from which consent is required.

All of the proposed statutory mechanisms isolated to step eight could potentially be used to provide the protection required for Pollen Island's foreshore. It is therefore necessary to consider the likely success of implementation as determined by various factors including: the political environment, organisations involved, organisations responsible for implementation of the mechanism (their degree of commitment, resources, internal policies, working documents, resources), and the potential for application by interested parties.

Protection of the land mass of Pollen Island is a separate issue, but continuous protection could be provided either through use of non-statutory or statutory protection. Statutory protection involves a large increase in the number of potential mechanisms. If the area was leased by the Royal Forest and Bird Protection Society, statutory protection may not be required. Also, Ports of Auckland Ltd. would retain ownership rights, limiting the use of many mechanisms otherwise available.

4.7 CONCLUSION

Use of the proposed process to identify alternative mechanisms available for protection of the marine reserve located adjacent to Pollen Island has illustrated its potential use. The process is user-friendly, and can be used by a wide range of people, operating with various degrees of knowledge regarding statutory mechanisms. Care needs to be taken when adding other mechanisms to the process to ensure accuracy. Chapter Five presents

another case study with slightly different issues, including the need for two levels of protection within the area specified for protection.

CHAPTER FIVE

PROTECTION OF THE WHANGANUI INLET

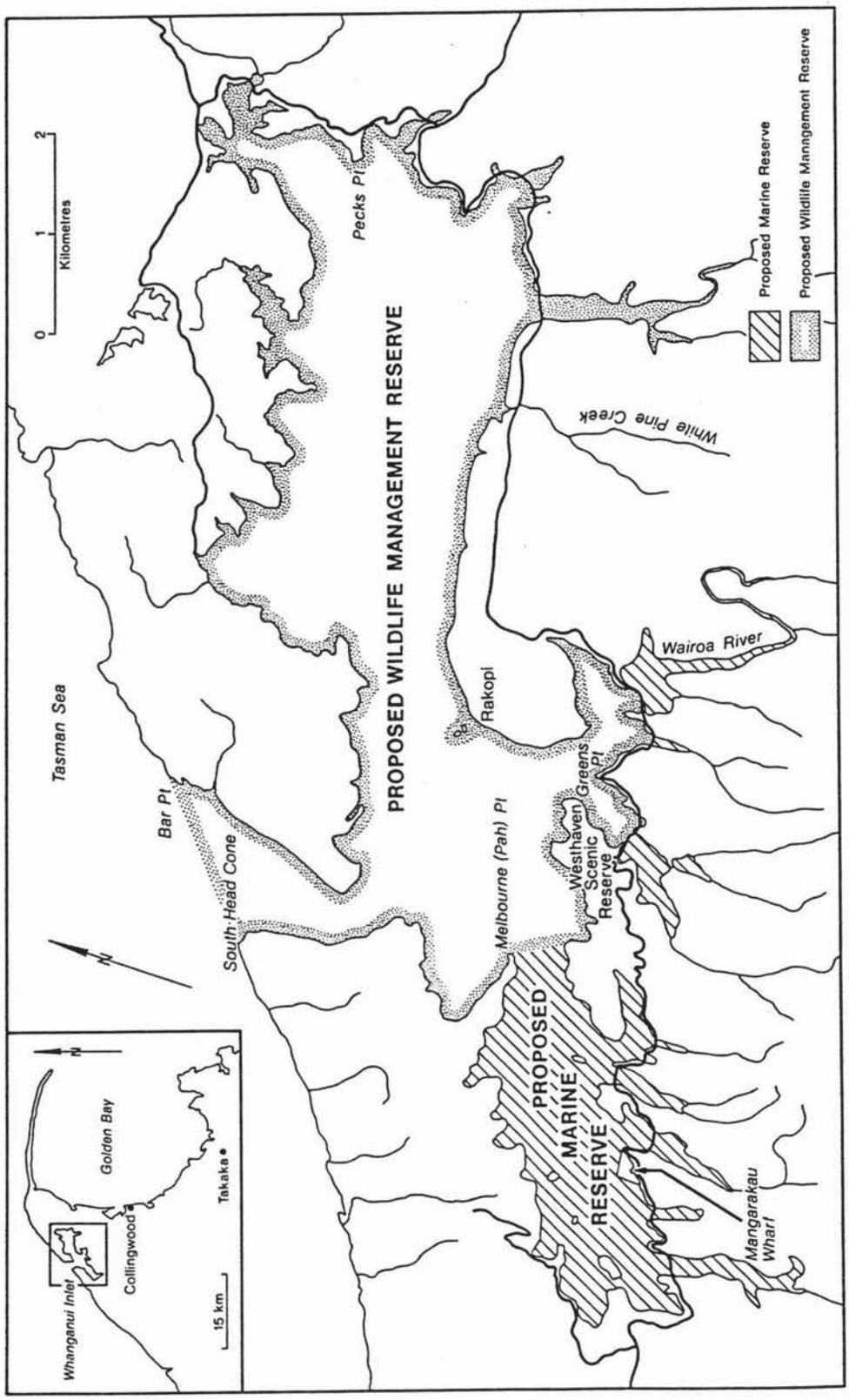
Chapter Five presents another example of the potential use of the process developed in Chapter Three. The Whanganui Inlet is used as an example of an area proposed for protection and for which suitable mechanism(s) need identification to provide protection for the area. The structure of the chapter is similar to that of Chapter Four. First, the area proposed for protection is briefly discussed, followed by a presentation of the resulting process that occurred. This is followed by application of the proposed process to the Whanganui Inlet case. This revolves primarily around stage three of the proposed process, that is to identify suitable mechanisms available to protect the Whanganui Inlet. Stage three is studied in greatest detail, as this is the primary purpose of providing the process presented in this thesis. All other stages are briefly presented, to provide the reader with an understanding of where in the overall framework of protection stage two and three lie. The applicability of the proposed process to the Whanganui Inlet as an example of its potential suitability is then discussed. Conclusions of the chapter are presented in section 5.6. Chapter Six then continues to present major findings of the thesis.

5.1 SITE DESCRIPTION

Whanganui Inlet, an estuary situated in the North-West of the South Island had its northern area gazetted as a wildlife management reserve and its southern Inlet gazetted as a marine reserve in May and June of 1994 respectively. Figure 11(a) provides an illustration of the protected areas. Implementation of two different protection mechanisms adjacent to one another to provide continuous, but varying levels of protection over an area (which displays a range of values) is unique to Whanganui. Utilisation of the proposed process may provide for determination of more than one available mechanism, its flexibility being determined by the user(s). Future use of mechanisms for adjacent areas to provide continuous but varying levels of protection may become more frequent with proven success. The aim of this chapter is to determine the suitability of the proposed process in a real-life situation.

Figure 11(a)

Whanganui Inlet: Marine Reserve and Wildlife Management Reserve.



Source: Department of Conservation, 1993.

5.2 GENERAL DESCRIPTION AND REASONS PROTECTION WAS SOUGHT

Whanganui Inlet has been recognised as an area of national importance for its ecological values which have had minimal human impact, the most significant human use being logging which occurred approximately 50 years ago causing silt to be released into the estuary. Land surrounding the estuary consists of the North-West Forest Park (approximately 50%), private land (farmland or lifestyle blocks), Crown land (some of which has reserve status) or legal road. A road reserve stretches around much of the inlet. The Golden Bay District Scheme recognises a 200 metre coastal zone around the inlet (Davidson et al., 1993, 22). This will become redundant with implementation of the combined Tasman District and Regional Plan, currently forecast to occur sometime before the end of 1995 (Tasman District Council staff member, pers. comm., 1995). Much of the topography is quite steep, bush minimising siltation runoff. Some of the surrounding land is subject to Maori land claims, there being wahi tapu and urupa sites on the Inlet (J. Mitchell, pers. comm., 1994).

Activities occurring in the area include recreational fishing (of important traditional use, but limited to certain stretches of the Inlet (Climo, pers. comm., 1994), windsurfing at high tide near Maori Point (Davidson et al., 1993, 21), hunting, and stock movement along the borders of the estuary. Minimal commercial fishing occurs due to the difficulty in obtaining fish (a result of climatic conditions). Food gathering of flax, kiekie and pingao occurs in the Mangarakau and North Head areas, and many marine, freshwater, and shellfish species are gathered. (Mitchell and Mitchell, 1990 in Davidson et al., 1993, 21). Eelgrass which washes up along the high tide zone is gathered by some locals.

5.3 NEED FOR PROTECTION OF THE PROPOSED AREA

Values of the estuary include its importance as a feeding and breeding habitat for many species, the abundance and diversity of species which grow on or around the estuary, or which use the estuary, and the area's aesthetic value. Also present, are historical values associated with the area, both Maori and European archaeological sites being located around the Inlet. The Inlet's national importance is due to it representing a large estuarine system which functions in a natural state (Davidson 1990). It is nationally important for "a breeding population of the 'vulnerable' (Bell, 1986) banded rail, banded dotterel and Australasian bittern (Davidson, 1990). The Inlet has the only alluvial forest situated adjacent to an estuary in New Zealand (G. Park, pers. comm., in Davidson et al., 1993, 20).

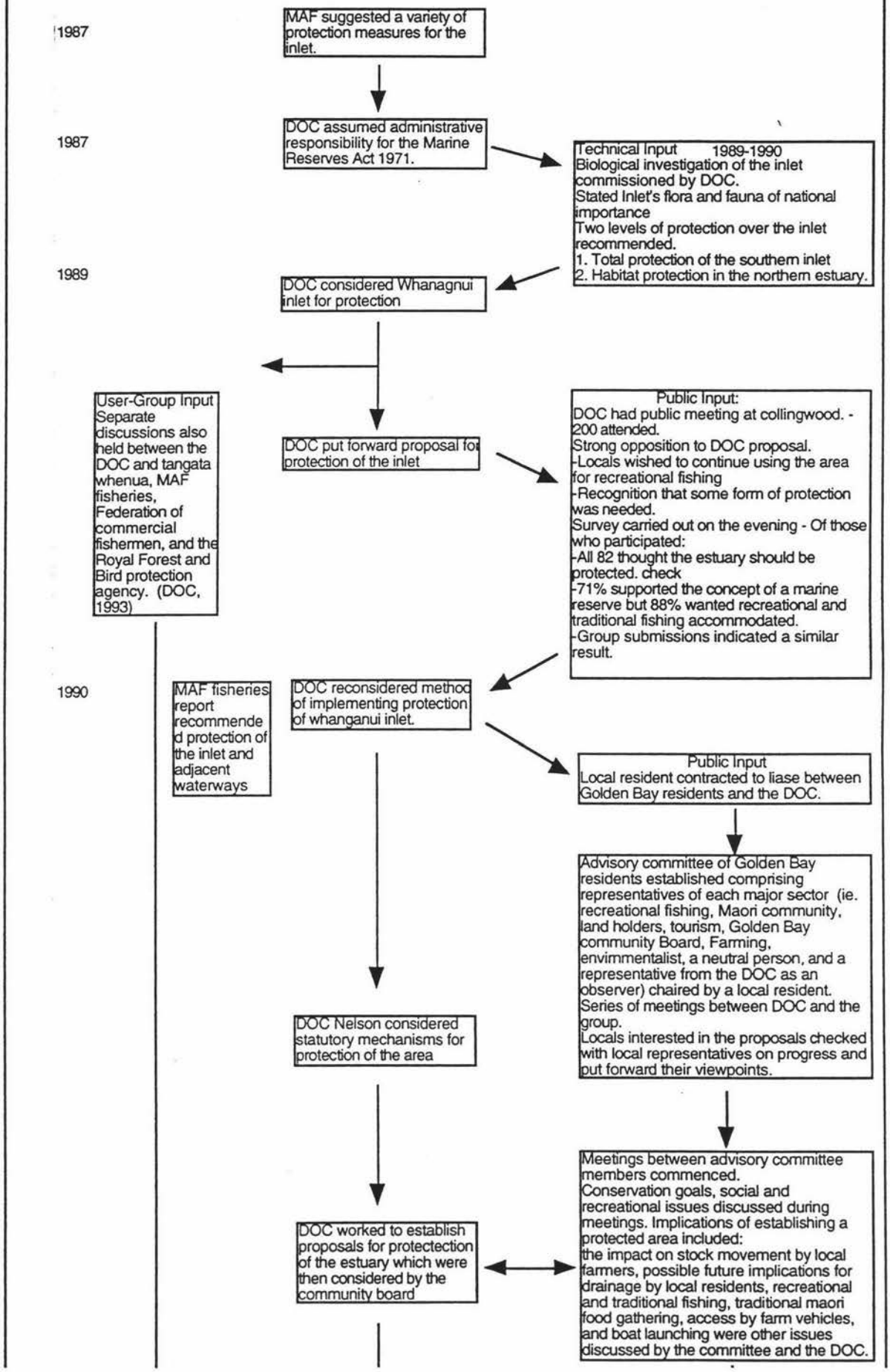
5.4 IMPLEMENTATION OF PROTECTION MECHANISMS

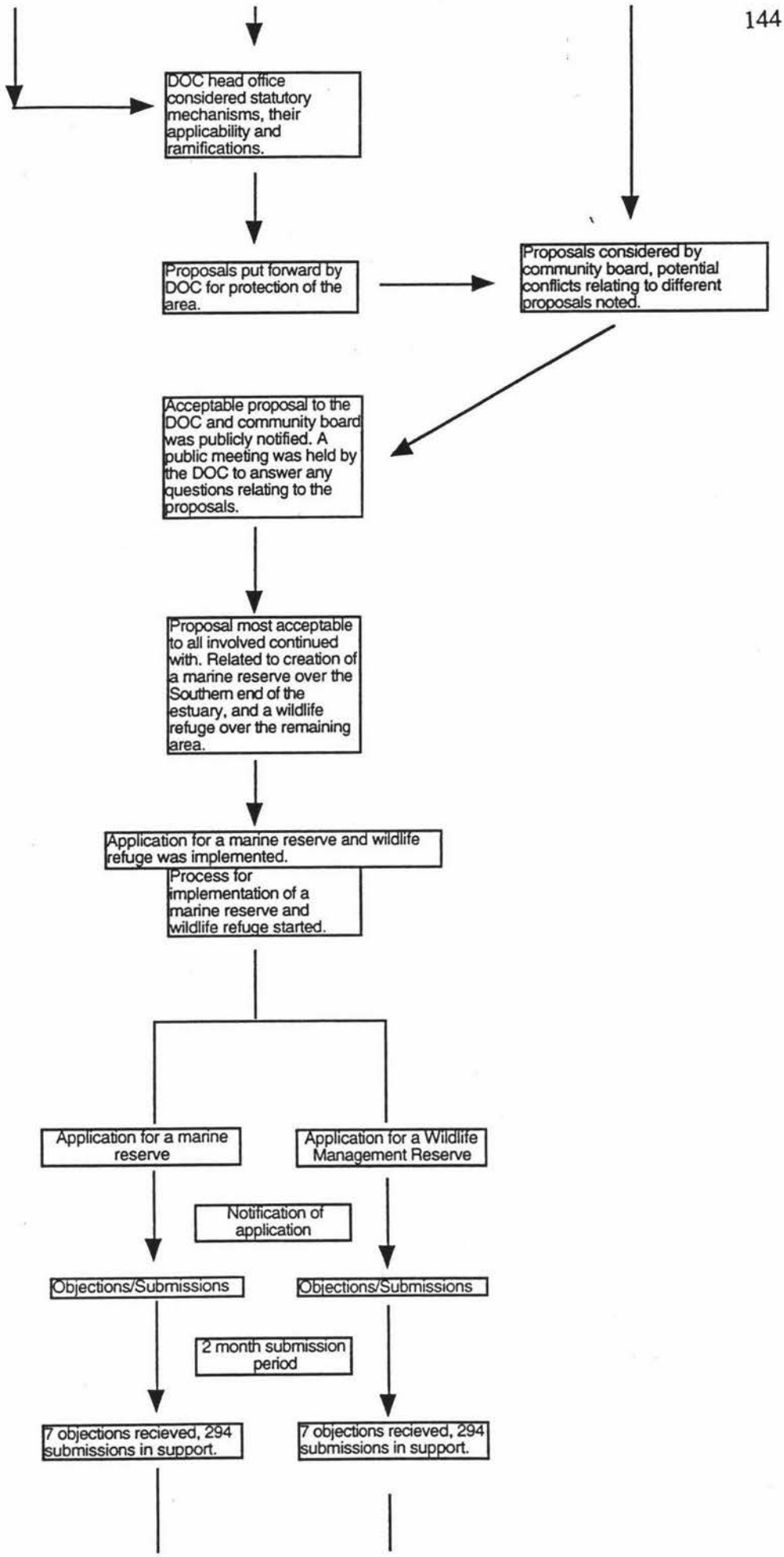
Implementation of protection mechanisms to prevent future disturbance to the area was sought from government agencies, initially the Ministry of Agriculture and Fisheries, followed by the Department of Conservation after creation of the Department in 1987. The Department of Conservation was the major driving force toward protection of the Whanganui Inlet. Prior to this, the Ministry of Agriculture and fisheries had produced reports on the area and the need for its protection (Eldon and Ward, 1991). However, with the change of responsibility for the marine reserves legislation in 1987, the Ministry of Agriculture and Fisheries took a background role on the issue. Initially the Department of Conservation favoured use of the Marine Reserves Act 1971 to protect the area, but then considered other available mechanisms in response to adverse public reaction. A range of available mechanisms were considered, including those managed by different organisations (eg taiapure). Those mechanisms restricted to providing protection to the foreshore were also assessed, as use of more than one mechanism was considered. The historical lack of disturbance to the area meant many locals did not consider implementation of statutory protection to be important or needed. The Department of Conservation promoted protection of the area and went through an extensive consultation process with representatives of the various groups associated with the area to derive a suitable method of protection acceptable to all.

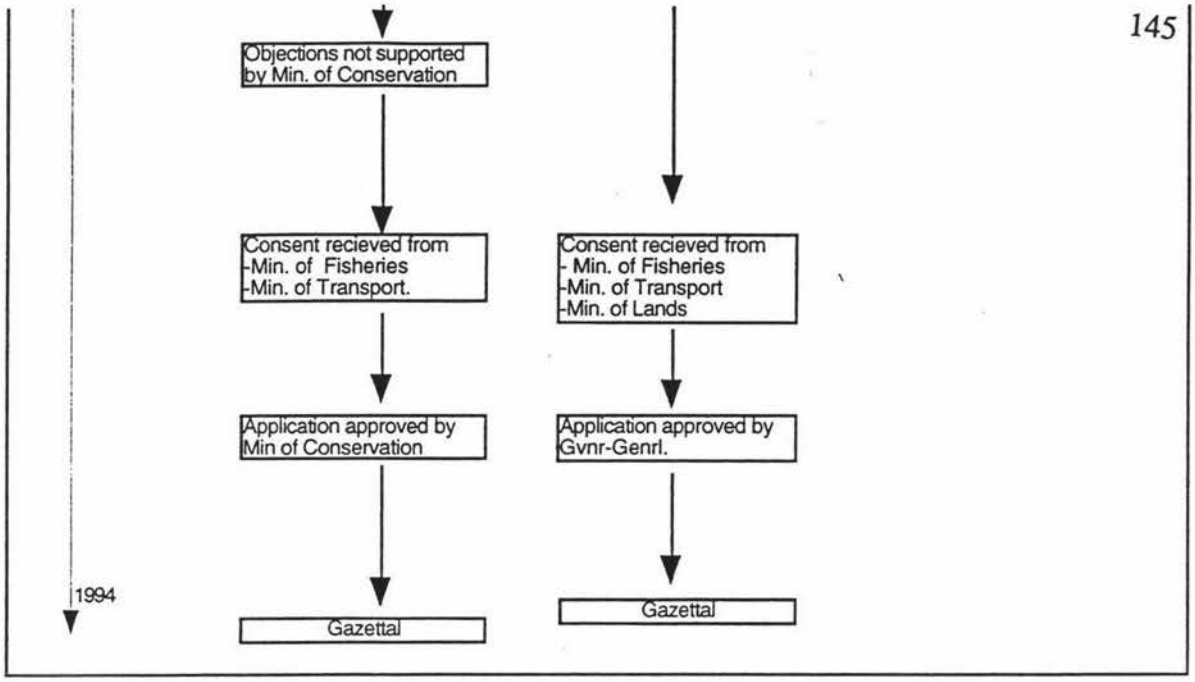
Figure 11(b) illustrates in brief the process that occurred prior to implementation of protection of the estuary. Much consideration was given to the various mechanisms to determine which would be most appropriate. This was done by the Department of Conservation, both at Nelson Conservancy and Head office level. Results of these analysis were then transformed into proposals which were considered by the local advisory group, set up to consult with the Department of Conservation. Generally this worked well (King, pers. comm., 1994), with individuals satisfied they had a significant input into the process and aired the views of the groups which they were representing. One issue highlighted by committee members was the time and expense required by those on the advisory committee (J. Mitchell, pers. comm., 1994).

Figure 11(b)

Whanganui Inlet - Implementation of Protection




DOC head office considered statutory mechanisms, their applicability and ramifications.
Proposals put forward by DOC for protection of the area.
Proposals considered by community board, potential conflicts relating to different proposals noted.
Acceptable proposal to the DOC and community board was publicly notified. A public meeting was held by the DOC to answer any questions relating to the proposals.
Proposal most acceptable to all involved continued with. Related to creation of a marine reserve over the Southern end of the estuary, and a wildlife refuge over the remaining area.
Application for a marine reserve and wildlife refuge was implemented.
Process for implementation of a marine reserve and wildlife refuge started.
June 1993
Application for a marine reserve
Application for a Wildlife Management Reserve
Notification of application
Objections/Submissions
Objections/Submissions
2 month submission period
7 objections recieved, 294 submissions in support.
7 objections recieved, 294 submissions in support.

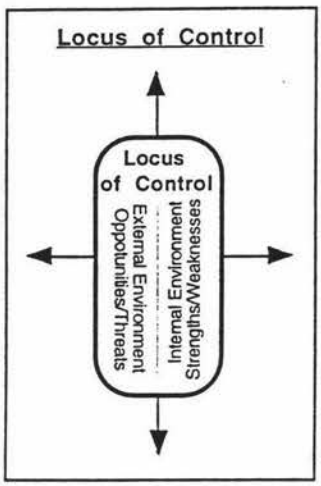

Objections not supported by Min. of Conservation
Consent recieved from -Min. of Fisheries -Min. of Transport.
Application approved by Min of Conservation
Gazettal
Consent recieved from - Min. of Fisheries -Min. of Transport -Min. of Lands
Application approved by Gvnr-Genrl.
Gazettal
1994

5.5 APPLICATION OF THE PROCESS

This section applies the proposed process presented in Chapter Three to test its suitability. Utilisation of the process provides an assessment of available mechanisms in terms of their applicability to the Whanganui Inlet. The area proposed for protection at Whanganui Inlet extends over a range of legislative boundaries, including the foreshore and sea, providing for the possibility of using more than one mechanism to protect different parts of the Inlet. The consultation process found that some uses of the Inlet were incompatible with a high level of protection, necessitating the need for either a lower level of protection throughout the Inlet, or alternatively, a higher level of protection in part of the Inlet, with a lower level of protection being imposed in areas where some activities occur. Suitable statutory mechanisms to provide for these requirements of protection are identified through use of the process. Application of the process to the Whanganui Inlet focuses primarily on the comparison of alternative statutory mechanisms to select those most appropriate to protect the Inlet. Limited space is given for the selection of the area for protection. What is provided at this stage is primarily given to provide the reader with an understanding of the issues involved, which are then used in relation to the requirements of protection mechanisms for the area. This thesis does not attempt to consider the entire planning process leading to the creation of protected areas, but aims to present an example of how the process presented in Chapter Three could be used on a real-life case study.

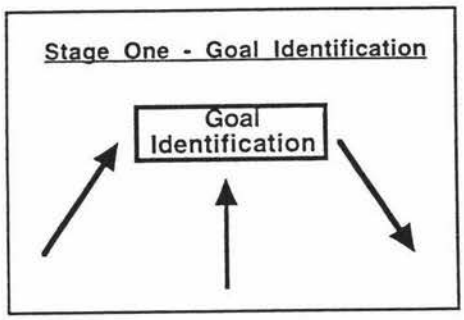
Information gained from local users, groups, and organisations during the Department of Conservation's efforts to protect the area has been applied for use in the proposed process. This is because such information is required for using the process. Also, it is important to note that the process cannot be used in its entirety theoretically as inputs such as public feedback cannot be second-guessed or assumed. This is noted as one of the limitations within this thesis. To use the proposed process in a real-world situation would enable a greater degree of involvement at each stage from all those concerned. The following stages and steps therein follow Figure 6 presented in Chapter Three. First, a brief discussion of the locus of control or user of the process and their environment is provided, followed by goal identification, area selection, mechanism selection, and subsequent implementation.

5.5.1 - LOCUS OF CONTROL



The principal initiator of protection over the Whanganui Inlet was the Department of Conservation. Although the Ministry of Agriculture and Fisheries had recognised the need for protection at an earlier stage, no action for the implementation of specific mechanisms to protect the area had been taken. The overriding purpose of the Department of Conservation is to protect New Zealand's natural and historic resources (s6, Conservation Act 1987). For the purposes of this study it is assumed that the Department of Conservation is the primary user of the process in relation to the selection of the area requiring protection, and of identifying the requirements of protection.

5.5.2 STAGE ONE - MISSION/PURPOSE/GOAL IDENTIFICATION



In the case of the Whanganui Inlet, although the Department of Conservation's goal was to preserve the Inlet to the highest possible level, this needed to be modified in light of other user groups interests in the proposed area.

Goals for implementation of the proposed process were assumed to include that determined by the public consultation process and are outlined below. Whanganui Inlet had varying goals from different sectors which included:

Varying goals of different user groups:

1. Full protection - no take area (Department of Conservation)
2. Recreational fishing permitted, but otherwise no-take (Recreational Fishers Association)
   Full protection or limited fishing permitted by any quarter (ie. no segregation by use - Commercial Fishers Association).

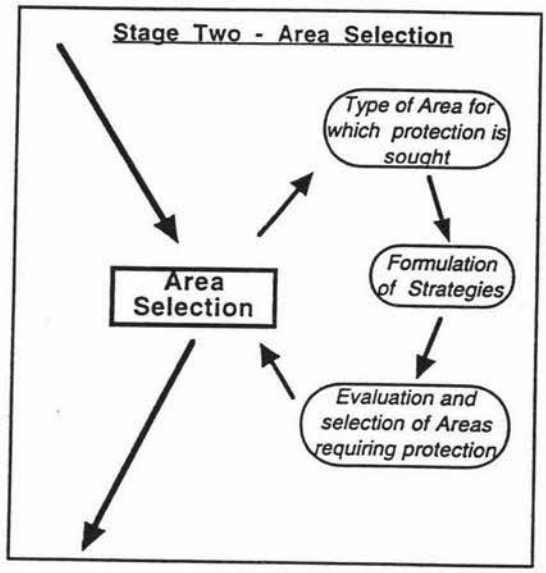
A compromise was reached between the Department of Conservation and locals for total protection over part of the inlet and limited protection of the rest of the Inlet.

It is therefore assumed for the purpose of this study that the aim was to provide both for the area's ecological and recreational values, achievable by the incorporation of two levels of protection. These ranged from a no-take area to an area with permitted activities including fishing.

Goals defined within the proposed process are designed to be adjusted as a result of external influences. In the case of Whanganui Inlet, goals were initially derived by organisations involved in management of the area, based on technical input. Goals of the local population were incorporated at the proposal stage, from which choices were made as to the most compatible option to all involved.

The next section, stage two provides steps involved in the identification of areas requiring protection.

5.5.3 STAGE TWO - IDENTIFICATION OF AREAS REQUIRING PROTECTION



Although the Whanganui Inlet had previously been identified as being an area for which protection is needed, the stage is worked through to provide the reader with an understanding of the issues involved in the area. Stage two also provides the background information required for the following stages.

(A) Type of area for which protection is sought.

1. Determine for what purpose protection is being sought.

A decision on the purpose of protecting any specified area will assist in the decision making process as to whether the area provides for such specified purpose. The Department of Conservation's objectives of protection were outlined at the Nelson Conservation Board meeting on 25 June 1991; "specifically:

> (a) to preserve the natural functioning of the Whanganui Estuary through protection of the productive base of the ecosystem (the benthic plants and filter feeders);
> (b) to preserve the largest possible portion of the estuary in its natural state (a sanctuary area);
> (c) to include in the sanctuary area the full range of diversity including the best remaining intact sequences of terrestrial to estuarine flora" (Department of Conservation, 1991, file COA:006A PDG).

2. Determine criteria/values considered important to protect.

This step involves the identification of values considered important to protect by the user. Once this has been completed, areas are then assessed in relation to their compatibility with these values. The Department of Conservation (Nelson Conservancy) has identified in its draft *Coastal Management Strategy* areas which contain values sufficient to justify protection of such areas.

(B) Formulation of strategies

This involves the identification of the range of areas potentially requiring protection as determined by requirements or needs of the user.

Information gathering

Information needs to gathered prior to identifying areas in need of protection. Box 1 presented in Chapter Two, outlines requirements in relation to information required for the identification of potential areas to be protected. Such information includes deciding on the purpose for initiating protection, and the criteria or values considered important to protect. Further requirements include a realisation of the needs of different user groups, public and political support for protection in different areas, along with the identification of organisations involved with the areas being considered. Other factors potentially influencing the identification and potential decision of areas requiring protection should also be sought. Specifications listed in Box 1 and presented below comprise a minimum of information that would generally need to be gathered. In certain instances more information may be required as needed by the user of the process.

1. Determine what areas provide for the purpose of protection.

The purpose of the user (Department of Conservation) in this case was to protect values of ecological importance. Many ecologically significant values are present in the Whanganui Inlet, contributing to its need for protection. In addition, the Department of Conservation recognised "the importance of the Whanganui Inlet as a special and quite unique area for traditional and recreational fishing."

2. Determine areas containing criteria/values considered important to protect.

The Department of Conservation, in fulfilling its statutory requirements, identifies those values of importance to protect within the various conservancies. Criteria contributing to the need for protection of areas have been identified by the Department. Although this general ranking system was not used in the case of the Whanganui Inlet, sufficient values of importance had been identified that required protection. These are predominantly ecological by classification. Presented below is a list of the values present

in the Whanganui Inlet. Not all these are primary causes contributing to the need for protection of the area. Values present, but not contributing to the need for protection of the area and therefore not used to identify appropriate statutory mechanisms in the following stage have an asterix placed beside them.

TABLE 22: ECOLOGICAL VALUES WITHIN THE WHANGANUI INLET

Ecological Values	Ecological Values	Ecological Values
Land - Mean high water mark (including internal waters)	Mean high water mark - Mean low water mark	Mean low water mark - 12 miles seaward.
	Wide range of habitat types including: "eelgrass, mobile sand, fine sand, very fine sand, highshore, native rushes and sedges, pebble/cobble, mud" (DoC).	Wide range of habitat types. Underwater reefs swept by strong tidal currents - Unusual habitat in NZ estuaries (DoC).
Wildlife	Wildlife	Wildlife
	~860ha eelgrass beds and 628ha of sand/mud substrate suitable as a feeding habitat for waders.	
Bird feeding, breeding, and migratory area. Wide variety of birds. Threatened banded dotterel - nationally important breeding population. Australasian bittern-nationally important breeding population. Only breeding area on the South Island for the threatened banded rail. Regionally threatened South Island fernbird. 1,000 - 2,000 waders are supported by the inlet in summer. Nationally important breeding area for banded rail, banded dotterel, and Australasian bittern. (DoC)	Bird feeing, breeding, migratory area. Western most site for banded rail in the South Island. (DoC) Inlet contains second largest number of wader species recorded in the South Island. (DoC)	Bird feeding, breeding, migratory area.

Ecological Values	Ecological Values	Ecological Values
Land - Mean high water mark (including internal waters)	Mean high water mark - Mean low water mark	Mean low water mark - 12 miles seaward.
Rare estuarine resource, as unmodified	Rare estuarine resource, as unmodified	Rare estuarine resource, as unmodified.
Significant (Zonation)	Significant (Zonation)	Significant (Zonation)
Only estuary in New Zealand with adjacent alluvial forest.	Only estuary in NZ with adjacent alluvial forest. This reduces: -flood size and frequency -sedimentation rate -nutrient input from human activity -erosion of estuarine margins. (DoC)	Only estuary with adjacent alluvial forest.
Important site for juvenile marine fish. Juvenile flatfish and snapper common. Breeding and habitat area for adult freshwater fish.	Important site for juvenile marine fish.	Important site for juvenile marine fish.
Large estuarine system which functions in natural state, and is therefore nationally important. Surrounding landscapes and catchments either forested, regenerating, or in pasture resulting in sedimentation, nutrient regimes, faunal composition and the food chain to operate in a natural state.	Large estuarine system which functions in natural state.	Large estuarine system which functions in natural state.
Adjacent land mostly farmed: half is part of the North-West Forest Park. Remaining is either private land, Crown land, or legal road. Road reserve stretches around much of the inlet.*		

Ecological Values	Ecological Values	Ecological Values
Land - Mean high water mark (including internal waters)	Mean high water mark - Mean low water mark	Mean low water mark - 12 miles seaward.
Naturalness - virtually no human impact	Naturalness - virtually no human impact. Most saltmarsh and eelgrass beds intact.	Naturalness - virtually no human impact. Marginal vegetation grades into mature forest around much of the inlet.
	860ha eelgrass beds and 628ha sand/mud substrate suitable as feeding habitat for waders.	
	Fish - ~27 species. Large numbers of juvenile snapper, flounder, kahawai recorded (DoC).	Fish - ~27 species. Large numbers of juvenile snapper, flounder, kahawai recorded (DoC).
	Invertebrates - Unusual distribution due to mixing of salt and fresh water by wind. Also range of habitat types contributes to diverse faunal assemblage. ~160 species in estuary + highest recorded in any South Island estuary to date. Possibly more at entrance to inlet (DoC).*	Invertebrates - Unusual range and distribution. Diverse faunal assemblage (DoC).

TABLE 23: SOCIAL-CULTURAL VALUES WITHIN THE WHANGANUI INLET

Social-Cultural values	Social-Cultural values	Social-Cultural values
Land - Mean high water mark (including internal waters).	Mean high water mark - Mean low water mark.	Mean low water mark - 12 miles seaward.
High landscape/aesthetic values*	High landscape/aesthetic values*	High landscape/aesthetic values*
Traditional maori gathering of many marine, freshwater, and shellfish species, as well as flax, kiekie, and pingao. *	Traditional fishing and shellfish gathering ground to the maori. *	Traditional maori fishing ground. *
Several wahi tapu and urupa adjacent to the inlet. *	Several wahi tapu and uropa on the inlet. *	Several wahi tapu and uropa on the inlet. *
Maori land claims in progress *		

Social-Cultural values	Social-Cultural values	Social-Cultural values
Land - Mean high water mark (including internal waters).	Mean high water mark - Mean low water mark.	Mean low water mark - 12 miles seaward.
18 Maori and 3 European archaeological sites around the inlet.		
Historical value - Rich Maori and European history. *	Historical value - Rich Maori and European history. *	Historical value - Rich Maori and European history. *
Three pa sites in 1830's. *		
Inlet comprised part of the Greenstone trail southward to the West Coast. *		
Mangarakau wharf provides for boat mooring and launching, and for shore-based fishing. *		
Recreational hunting (and fishing?) *	Recreational fishing *	Recreational fishing (Area exempt from large scale commercial fishing - by weather -wind and currents.
		Regular recreational fishing by locals at Pah Point to the entrance North-East to Pecks point (ie. the northern area).
Some shore fishing and drag fishing occurs in the Rakopi/Wairoa area. *	Some shore fishing and drag fishing occurs in the Rakopi/Wairoa area	
Some local gather eelgrass which washes up along the high tide zone. *	Some locals gather eelgrass which washes up along the high tide zone. *	
	Windsurfers at high tide near Maori point. *	Windsurfers at high tide near Maori Point.*

TABLE 24: ECONOMIC VALUES WITHIN THE WHANGANUI INLET

Economic criteria	Economic criteria	Economic criteria
Land - Mean high water mark (including internal waters).	Mean high water mark - Mean low water mark.	Mean low water mark -12 miles seaward.
Tourism -fishing in channels (whitebaiting in freshwater). *	Tourism -fishing. (Traditional and recreational fishing and shellfish gathering).	Tourism -fishing. Traditional and recreational fishing ground.
Goats, sheep, and cattle often graze conservation land or inlet itself. *		
Stock movement. *	Stock movement. *	

NB: DoC means information from Department of Conservation, 1991, file COA:006A.
* A star indicates criteria which do not fit into the primary objectives of protection, but are values contained within the area which may enhance the stand for use of a particular mechanism.

The potential for adverse impacts to the area was another consideration in the implementation of protection. The following list provides an outline of those issues relevant to the area proposed for protection and in need of consideration prior to the implementation of protection.

1. An illegal rubbish dump located on conservation land in the south-eastern corner of the Inlet (Davidson et al., 1993, 22).
2. Structures on or near the estuary margins would lower the scenic value of the estuary (Davidson et al., 1993, 22).
3. "Clearance of adjacent forest may result in increased sedimentation and erosion" (Davidson et al., 1993, 22).
4. Drainage of swamps in the white pine area threatens the survival of this swamp forest" (Davidson et al., 1993, 22).
5. A Maori land claim is currently in progress for that land surrounding part of the North-Western Inlet (near the mouth of the Inlet). If this claim is successful, Maori will wish to fish off the land adjacent to the wildlife management reserve. The implied harvesting rights to these titles are issues the Waitangi Tribunal will be asked to address. An application for taiapure may possibly be lodged at some future date if this application is successful.
6. Historically, most European activity around the inlet was concerned with the extradition of timber, flax, gold and coal. Seven ships were either wrecked or built in the inlet.

7. "Some shore-fishing and drag netting occurs in the Rakopi/Wairoa area" (Davidson et al., 1993, 21).

Many of the above issues can be resolved through use of provisions under the Resource Management Act 1991. Presently, the Golden Bay District Scheme, for example, contains a 200 metre coastal zone around the inlet. Implementation of the Tasman Regional Plan will replace this scheme, putting alternative controls on use of the area.

3. Consider User groups of the areas suggested and their needs.

A consultation process organised by the Department of Conservation included the gathering of information from those involved with the location proposed for protection. Those groups involved with the area proposed included landowners, farmers, Maori, fishermen, and hunters (in the upper streams).

Recreational fishers - Wished to continue using the area for occasional fishing.

Commercial fishermen - Wished to have the right to fish the area.

Maori - Traditional fishing site.

Farmers - used the Inlet boundaries to move stock, and were also concerned with the possibility of more stringent controls on farm runoff (e.g., of pesticides).

Adjacent landowners - A variety of views were expressed by local landowners (Department of Conservation, 1993(a), 11). Stock movement and "grazing on the foreshore and within the estuary would be incompatible with the proposed marine reserve" (Department of Conservation, 1993(a), 11). Concerns included the impact of reserve status on the need to increase the quality of runoff from local land. Most owners of land blocks being subdivided were supportive of protection, provided that access to the estuary was maintained (Department of Conservation, 1993(a), 11).

Hunters - Hunting occurs in the forest surrounding the Inlet.

Tourism (fishing, and sightseeing) - local residents at times take tourists around the area (by road and on boat). This can sometimes include fishing on the Inlet.

An agreement was reached between these various groups and the Department of Conservation concerning the area proposed. It was split into two distinct parts, the southern end for a higher level of protection and the northern end to permit the current activities of fishing. A small area surrounding the wharf was to also be included with the area permitting fishing. The contributing streams were, however to be protected to the higher level. It is assumed for the purpose of this study that the solutions reached in regard to area selection will be used to provide an adequate background for stage three (mechanism selection) of the process. Agreements reached during the process of selecting the boundaries and levels of protection required are therefore used in this stage.

4. Assess public and political support for protection, in what areas, to what level?

A number of questions to be addressed in this step include the level of support available for the implementation of protection in different areas. Also, support may be conditional on particular circumstances, for example, the restrictions which may be imposed from the implementation of protection. Potential conflicts between different user groups may also assist in determining areas potentially requiring protection.

Initially locals were opposed to the idea of implementing protection on the Inlet. Generally, the Inlet was not seen to have been badly degraded with use in the past (with the exception of logging approximately fifty years ago) and had remained in a natural state without any statutory protection so the implementation of any such protection was not needed. However, after the consultation process, while this attitude was still predominant, there was a greater degree of acceptance toward the idea of two levels of protection. A major breakthrough occurred with the realisation that the zoostra were of primary concern to the Department of Conservation. Much of the negative opinions stemmed partly from a distrust of government departments in the area. Reasons for this distrust being caused by the perception that much of the land is 'locked up' in conservation projects which do not contribute taxes to the area.

5. Specify groups/organisations involved with the area(s) being considered.

Consideration of organisational support and the subsequent likelihood in obtaining consent for protection of the proposed area is achieved in this step. Also, a consideration of the potential for mediation techniques may be included. Prior to implementation of protection over the Whanganui Inlet, consideration needed to be given to:

Ministry of Agriculture and Fisheries (now Ministry of Fisheries) - Recognised the need for some form of protection over the inlet, but also recognised the area's value to fishing, and were therefore not happy with the whole Inlet being protected from fishing, but gave consent for no-fishing over the Southern end of the Inlet.

Department of Conservation - Proponents of protection. Favoured maximum protection possible.

Locals - Wished to continue using the area for recreational fishing purposes.

Tasman District Council (Unitary Authority) - In favour of protection dependent on "public views on the kind of complementary controls council should apply to realise and maintain the benefits of the reserves proposal" (Jackson, pers. comm., 1993).

6. Consider other factors of importance to potential areas of protection.

Any other factors relevant to the identification of areas requiring protection are considered in this step. This may include policies and mandates of the user of the process. The Whanganui Inlet had previously been identified as requiring protection due to its high ecological values, consistent with the purpose of the Department of Conservation.

Information analysis

This step involves making a selection of areas requiring protection, as assessed by causative factors assessed in previous sections, of the type of area for which protection is being sought and information gathering. A decision on the levels of protection needed to protect those values identified as contributing to the cause of protection also needs to be achieved at this stage in the process.

Box 2, presented in Chapter Three, provides a guide detailing factors contributing to the analysis of information gained in the previous section. This includes the development of suggested boundaries from the information sought, determining the level of protection required, and the need for protection. Also to be considered is how the area fits into any requirements (statutory or otherwise) of the organisation/group proposing protection.

1. Develop suggested boundaries from the information sought.

Whanganui Inlet is a tidal estuary, freshwater from the surrounding tributary mixing with seawater to create varying degrees of salinity dependent on the tide. There are large fluctuations in water level with the change in tide. Whanganui Inlet's boundaries extend from mean high water mark to below mean low water mark.[6]

The boundaries initially suggested for protection comprised of a range of options. These included protection extending out of the Inlet into the surrounding sea, to various areas within the inlet. After consideration of each proposal by the committee and the Department of Conservation, the boundaries finally proposed consisted of two distinct parts.

* Northern Inlet - mean high water mark to below mean low water mark, but not beyond the 12 mile limit. Moderate level of protection.
* Southern Inlet - mean high water mark to below mean low water mark, but within the 12 mile limit. High level of protection.

6

Note: Mean low water mark boundaries have not been clearly established for the estuary (Ministry of Agriculture and Fisheries Staff member, pers. comm., 1994) but lie within the estuary.

2. Determine the level of protection required to protect the values contained within the proposed area(s).

Currently the area is in a natural state, much of the surrounding land being forested or in private blocks. No commercial fishing (with the exception of some fishing by tourists) occurs in the Inlet, as the climate is not suitable.

Reasons for protection of the estuary, contributing toward the level of protection required are outlined below.

1. Protection of the productive base of the estuary (ie. the benthic plants and filter feeders), and to include the full range of diversity including the best remaining intact sequences of terrestrial to estuarine flora.
2. "preserve the .. natural functioning of the estuary... in its natural state whilst recognising the importance of the area to recreational fishers." Therefore, for the purposes of this study it is assumed that a 'reasonably high' level of protection was favoured.
3. "preserve the largest possible portion of the estuary in its natural state" (Department of Conservation, 1991, file COA:006A PDG). This would undoubtably include marine invertebrate and vertebrate species.

A high level of protection, however, was in conflict with some users of the area, particularly recreational fishers (commercial fishing in the area being minimal), whitebaiters, and hunters (along the sides of contributing streams). Most locals were concerned with the 'right to fish' as customarily enjoyed in the area.

A consultative process between the main proponents of protection (Department of Conservation), local user groups and Maori established the need for more than one level of protection to allow continued use of part of the estuary for fishing. A lower level of protection still being adequate to protect the zoostra and other ecological values of the area with the exception of fish. This solution represented a compromise between the Department of Conservation and local user groups. Boundaries for the two levels of protection were decided between the Department of Conservation and local user groups.

Public input plays a major role in determination of the level of protection desired, often an area of ambiguity. The political climate can also have a major impact. The technical role is also important to assess minimum and maximum required levels of protection to reach the overall objectives of protection.

Davidson (1990) recommended that the Department of Conservation seek protection for the inlet and that two levels of protection be investigated: total protection in the Southern Inlet and habitat protection in the northern estuary. A Ministry of Agriculture and Fisheries report on freshwater fish in the inlet area demonstrated the importance of its natural catchments and also recommended protection of the inlet and adjacent waterways (Department of Conservation, 1993; Eldon and Ward, 1991).

Level(s) of protection specified.	Area of the inlet.
High	Southern
Moderate = access, some fishing, recreational use etc.	Northern and contributing streams

3. Define the need for protection of the area(s) suggested.

The need to protect the Whanganui Inlet rests primarily with ecological values within the area. Although the area has remained undisturbed since logging approximately fifty years ago, the potential impact of development on the area justifies its need for protection.

4. Consider how the area fits into any requirements (statutory or otherwise) of the organisation/group proposing protection.

This section analyses the requirements of the group/organisation proposing protection and identifies whether the area(s) identified fit into those requirements. In the case of the Whanganui Inlet, this is acceptable to any requirements of the Department of Conservation. In relation to the two level(s) of protection proposed, these were judged to be adequate to meet the needs of protection and the Department of Conservation's overall purpose in implementing protection of the area.

(C) Evaluation and selection of areas proposed for protection

Evaluation and selection of areas initially proposed for protection is done during this step of the process. In the case of the Whanganui Inlet, the area was chosen by the Department of Conservation. It is assumed for the purposes of this process that the same area was chosen for protection, with the need for two different levels of protection.

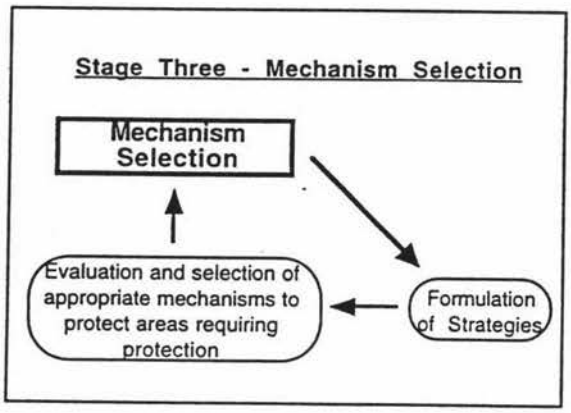
(D) Stage two reassessment/feedback

Reassessment/feedback provides a degree of certainty on the area selected as requiring protection. In the case of the Whanganui Inlet, the boundaries, level of protection and mechanisms were decided simultaneously, interaction between the Department and representative groups providing feedback to the Department of Conservation. Feedback was also provided from public meetings held in Collingwood by the Department of Conservation to discuss the proposal and any issues arising from it.

Incorporating stage two of the process was intended to demonstrate how the process could be used in a real life situation. Information contained in stage two is intended to provide the background for stage three which is used to assess suitable statutory mechanisms available to protect the area to the pre-specified requirements. For this reason, many assumptions need to be made, and the information gathered during the process of implementing a marine reserve and wildlife management reserve is used.

Stage three comprises the identification of conceivable alternatives to obtain the desired goal. Often the goal will be loosely shaped and modifications may occur dependent on available methods of protection. This study isolates mechanisms available to protect an area dependent on values of the area, some of which may be compromised to reach a solution acceptable to all parties involved.

5.5.4 STAGE THREE - ASSESSING SUITABLE MECHANISMS



Stage three comprises the selection of suitable statutory mechanisms to protect any specified area of the marine environment. The stage consists of two parts, the first being the formulation of strategies, or methods to protect the marine environment. Part two comprises the assessment of these methods of protection (mechanisms) in relation to the selected area.

Stage three of the process comprises a set of steps to assess available mechanisms for protection of a pre-specified area to determine which is most suitable in relation to criteria isolated for comparison between the area selected and each potential mechanism. Continuation from one step to the next is affected by the suitability of the previous step. These steps are presented in the same order as displayed diagrammatically in Chapter

Three (Figure 6b). Accompanying the written analysis is a flow chart, used to graphically display by the use of arrows, the mechanisms continued with as the assessment is made at each step. The steps for comparison of mechanism and area proposed are presented in the following order: Area, Purpose and Criteria, Level, Organisational support available and required, Enforcement potential available and required, Likelihood of success at implementation, and finally a general assessment of the mechanisms identified for any other factors of importance but not previously specified. Stage three also consists of the need to consider more than one mechanism for protection in certain instances which is provided in the proposed process and discussed in step one. Feedback on the suitability of the mechanisms chosen is discussed at the end of section, in section (C) Stage three reassessment/feedback. The evaluation and selection of strategies available to protect New Zealand's marine environment is the prime focus of this study. This is contained in stage three, after the formulation of strategies which comprises the selection and analysis of statutory mechanisms potentially of use to protect the proposed area. Presentation of detail in stage two was intended to provide the reader with a necessary background prior to embarking on stage three.

(A) Formulation of strategies

Formulation of strategies, or methods available for protection is achieved in this section. As presented in Chapters Three and Four, a range of alternative statutory mechanisms are collated and analysed in relation to their potential to provide protection for the requirements of the area(s) proposed. Box 3, presented in Chapter Three outlines these requirements. Generally, for each potential mechanism factors to assess are the legislative boundary covered by the mechanism, the purpose for which the mechanism was designed and the criteria provided for within that mechanism. Also, the level of protection provided, organisations from which support is required prior to implementation, and the degree of enforcement provided needs to be ascertained.

Alternative strategies to achieve the predetermined goal of protection of the Whanganui Inlet may range from statutory to non-statutory mechanisms. All mechanisms included in Chapter Two and Three are considered in relation to the Whanganui Inlet. Alternative strategies for the purpose of this study are limited to mechanisms covering the coastal environment from internal waters to 200 miles seaward or part thereof for the purposes of this study.

The following section indicates how the proposed process was applied to Whanganui Inlet. Each step is visually presented via Figure 12 and also discussed within the text. Use of both Figure 12 and the written text is designed to be complementary to one

another for the purposes of using the process.

Figure 12 provides the mechanisms selected in Chapter Two for inclusion into the proposed process. Of these, each is considered in relation to its compatibility with the requirements for protection of the Whanganui Inlet. A comparison is done at each step of the process, those determined to be suitable are continued on with to the next step. With respect to the two levels of protection proposed, each step proceeds as normal until step four (levels) where two lines of mechanisms are continued with in relation to the two levels of protection being sought through the use of statutory mechanisms. Another approach would be to use Figure 12 twice, once for the northern Inlet and once for the southern. However, this is not necessary in light of the slight differences in requirements, the ecological and other such values being sufficiently similar in both areas such that previous steps may be examined as one.

Figure 12 - Visual representation of the suitabiliity of selected statutory mechanisms to protect the Whanganui Inlet

	Marine Mammals Protection Act 1978 Marine mammal sanctuary	Wildlife Act 1953 -Wildlife Sanctuary	Wildlife Act 1953 -Wildlife refuge	Wildlife Act 1953 -Wildlife Management Reserve
1				
2	Any place (Place includes any building (not being a dwelling house), any land and any fisheries waters ✔	Crown land, Private land, Foreshore, Areas of Harbour, Waters of Sea ✔	Crown land, Private land, Foreshore, Areas of Harbour, Waters of Sea ✔	Crown land, Private land, Foreshore, Areas of Harbour, Waters of Sea ✔
3	Purpose - -To protect, conserve, manage marine mammals ✖ -Protection of mammal habitats ✖	-Protection of wild animals, birds, and their habitats ✔ Note: Although a high level of protection may be afforded, it would be used to provide a level considstent with fishing which is on a moderate level of protection.	-Protection of wild animals, birds, and their habitats ✔	-Protection of wild animals, birds, and their habitats ✔
4	✖	High-Varied level of protection May exclude entry May specify prohibitions/restrictions of eg. hunting, burning fires, vehicles, pollution etc. May be used to provide additional protection to conservation areas Prohibition on bringing any plant material into the reserve. ✔	Varied High-Moderate Prohibitions/Restrictions on hunting, pollution, boat use, firearms etc. Lower level of protection than in wildlife sanctuary	High-Varied level of protection May exclude entry May specify prohibitions/restrictions of eg. hunting, burning fires, vehicles, pollution etc. May be used to provide additional protection to conservation areas ✔
5	✖	Proclamation issued by Governor-General, for: Crown land-Joint recommendation of Min. of Conservation and Min. charged with administration of the Department of State having control of the land Waters of the Sea/Harbour -Joint recommendation of Min. of Conservation and Min. of Transport. Gazettal subject to notwithstanding anything to the contrary in the conservation Act 1987, Gvt. Railways Act 1949 and any other Act affecting lands of the Crown Act administered by Min. of Conservation ssible	✖	Landowners consent required. Proclamation issued by Governor-General, for: Crown land -Joint recommendation of Min. of Conservation and Min. charged with administration of the Department of State having control of the land. Waters of the Sea/Harbour -Joint recommendation of Min. of Conservation and Min. of Transport Gazettal subject to notwithstanding anything to the contrary in the conservation Act 1987, Gvt. Railways Act 1949 and any other Act affecting lands of the Crown. Act administered by Min. of Conservation. **Possible**
6		Offence to fail to comply with Act or to commit a breach of provisions punishable by a fine not exceeding $1,000 and $50 for every head of wildlife Resisting rangers $500 Taking protected wildlife, liberation, export of animals $1,500 and $100 per head Take or kill game $500 per head		Offence to fail to comply with Act or to commit a breach of provisions punishable by a fine not exceeding $1,000 and $50 for every head of wildlife Resisting rangers $500 Taking protected wildlife, liberation, export of animals $1,500 and $100 per head
7		Likelihood of Success.	✖	Likelihood of Success-Possible General Assessment

Key

- Northern Inlet - Requiring a moderate - high level of protection.
- Southern Inlet - Requiring a high level of protection.

Figure 12

Figure 12 - Visual representation of the suitabiliity of selected statutory mechanisms to protect the Whanganui Inlet

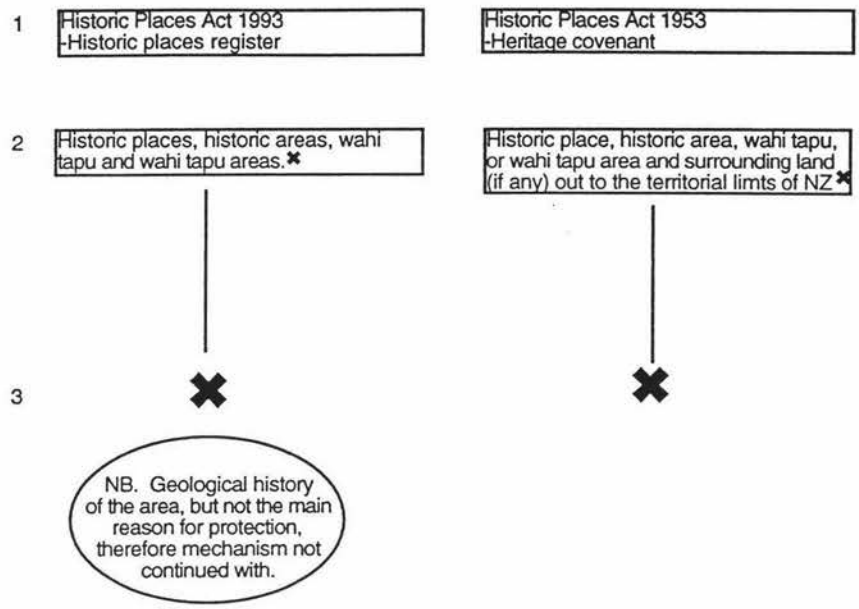


Figure 12 - Visual representation of the suitabiliity of selected statutory mechanisms to protect the Whanganui Inlet

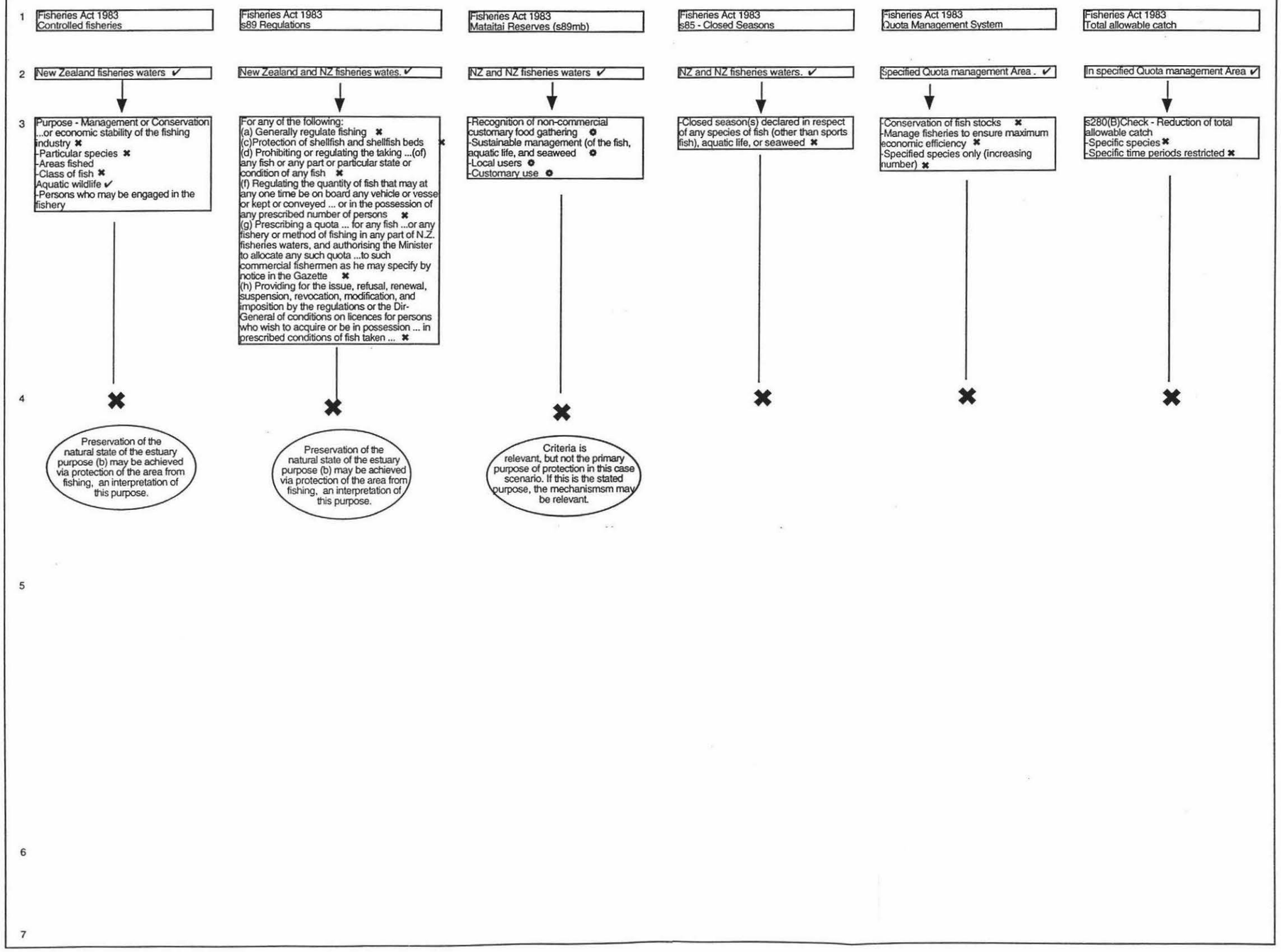


Figure 12 - Visual representation of the suitabiliity of selected statutory mechanisms to protect the Whanganui Inlet

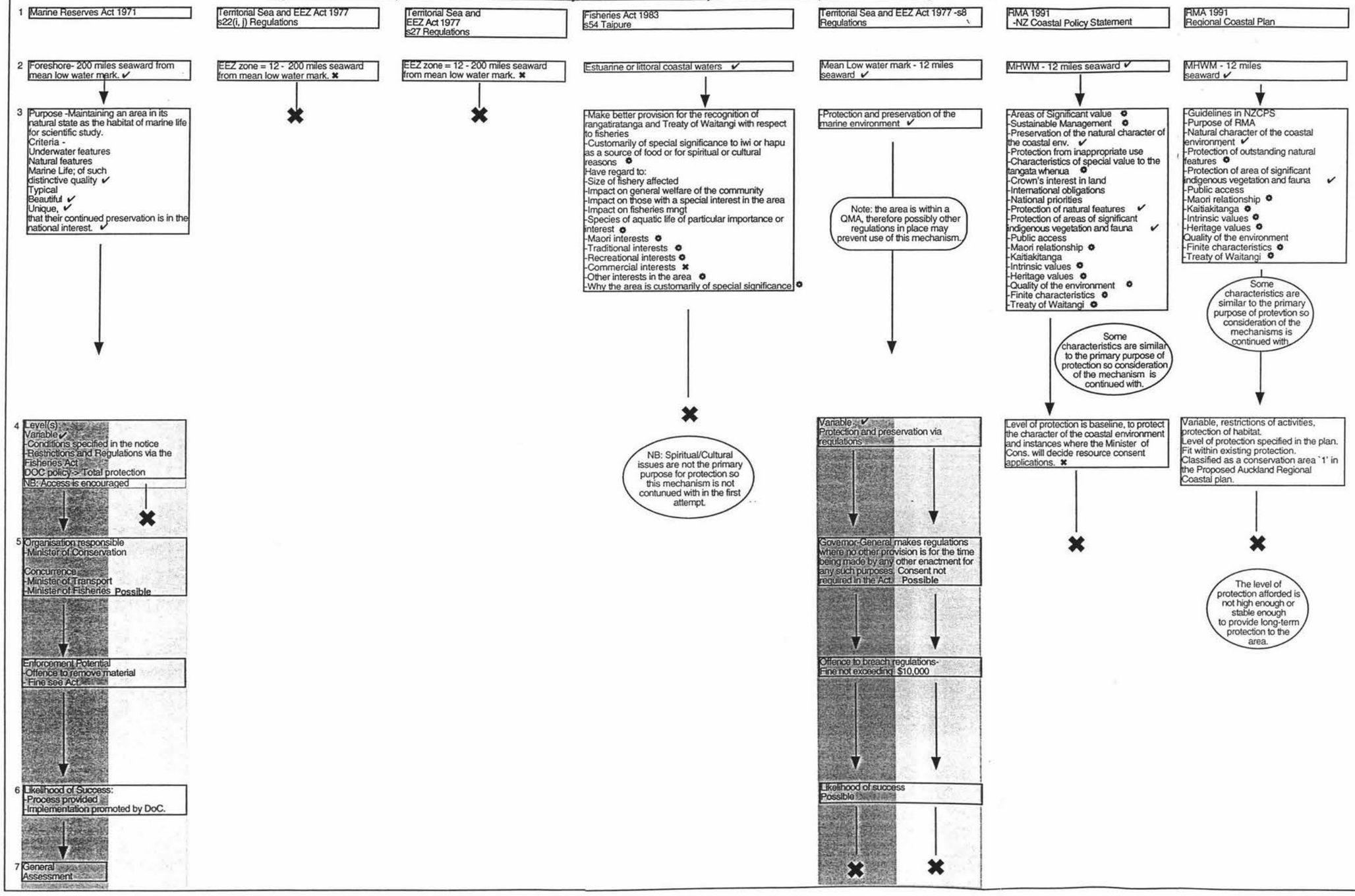


Figure 12 - Visual representation of the suitabiliity of selected statutory mechanisms to protect the Whanganui Inlet

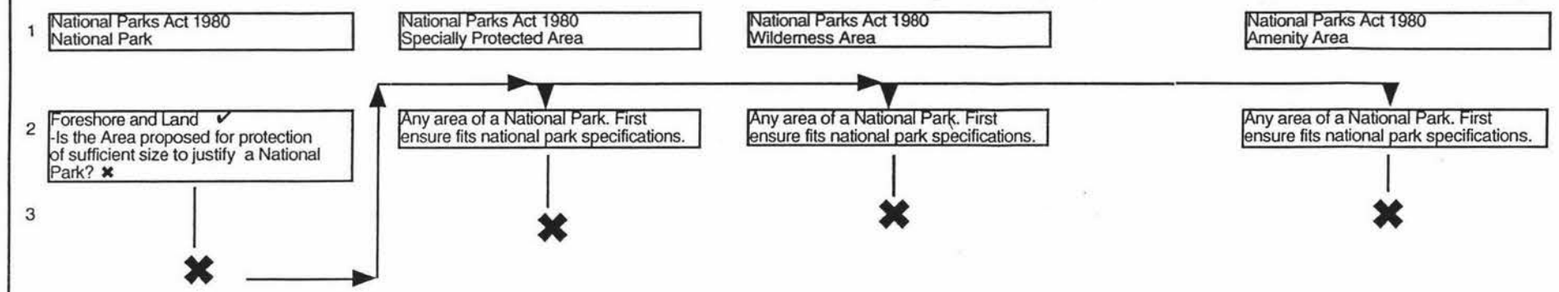


Figure 12 - Visual representation of the suitabiliity of selected statutory mechanisms to protect the Whanganui Inlet

1	Conservation Act 1987 Conservation Area	Conservation Act 1987 Conservation Park	Conservation Act 1987 Wilderness Area	Conservation Act 1987 Ecological Area	Conservation Act 1987 Sanctuary Area
2	Foreshore and Crown Land	Conservation Area	Conservation Area	Conservation Area	Conservation Area
3	For Conservation purposes ✔	Protect natural ✔ and historic resources ✪ and subject to this, facilitate public recreation and enjoyment ✖	-Preserve Indigenous natural resources ✔	Protect the value for which it is held (ecological purposes) ✔	Preserve indigenous plants and animals in their natural state, ✔ and for scientific and other purposes ✪
4	Mod-High: ✔ -Protect its natural and physical resources -Minister may close Conservation Area ✖ -Conditions in CMS/CMP Dir-General may make regulations-range (eg.to control actions of public)	Moderate- ✔ Protect natural and historic resources and subject to this, facilitate public recreation and enjoyment	-High- Preserve indigenous natural resources. Protect natural and historic resources. -No building, machinery, or apparatus to be erected or maintained on it. ✖ -No road, tracks, or trails to be constructed. ✖ -No livestock, vehicles, or aircraft. ✖ -Min. of Cons. may authorise scientific study.	Variable -Protect the value for which it is held. Protect its natural and historic resources. ✔	High: ✔ -Preserve in natural state. Managed to preserve indigenous plants and animals in their natural state; and for scientific and other purposes. Protect natural and historic resources.
5	Min. of Conservation and Minister responsible for control of any land or foreshore by notice in the gazette (Min. may declare any cons. area to be a reserve under the Reserves Act) Min. may acquire land for conservation purposes by agreement)	Minister, by notice in the Gazette declare any land or interest in land held under the Conservation Act for conservation purposes to be held for the purpose of a conservation park. Prior to declaring any conservation area of a specialised class or description Minister shall give public notice of intention. Rights of objection, Dir-General gives objections with recommendation to Min. of Cons., Minister's decision		Minister, by notice in the Gazette declare any land or interest in land held under the Conservation Act for conservation purposes to be held for the purpose of an Ecological Area. Prior to declaring any conservation area of a specialised class or description Minister shall give public notice of intention. Rights of objection, Dir-General gives objections with recommendation to Min. of Cons., Minister's decision	Minister, by notice in the gazette declare any land or interest in land held under the Conservation Act for conservation purposes to be held for the purpose of a Sanctuary Area. Prior to declaring any conservation area of a specialised class or description Minister shall give public notice of intention. Rights of objection, Dir-General gives objections with recommendation to Min. of Cons., Minister's decision
	Possible				
6	-Dir-General may make payments to informers leading to convictions - Offence for which no other penalty is provided: Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued. Corporation Max. fine of $80,000 and $10,000 per day offence continued. Offenders liable for loss or damage. Forfeiture of property.	Dir-General may make payments to informers leading to convictions -Offence for which no other penalty is provided Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued Corporation Max. fine of $80,000 and $10,000 per day offence continued Offenders liable for loss or damage Forfeiture of property.		-Dir-General may make payments to informers leading to convictions - Offence for which no other penalty is provided: Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued Corporation Max. fine of $80,000 and $10,000 per day offence continued. Offenders liable for loss or damage. Forfeiture of property.	-Dir-General may make payments to informers leading to convictions - Offence for which no other penalty is provided: Individual Max. of one year prison or fine of $10,000 and $1,000 per day offence continued Corporation Max. fine of $80,000 and $10,000 per day offence continued. Offenders liable for loss or damage. Forfeiture of property.
	Likelihood of Success	Likelihood of Success		Likelihood of Success	Likelihood of Success
7	✖ ✖	✖	✖ ✖	✖	✖

Figure 12 - Visual representation of the suitabiliity of selected statutory mechanisms to protect the Whanganui Inlet

	Reserves Act 1977 Recreation Reserve	Reserves Act 1977 Historic Reserve	Reserves Act 1977 Scenic Reserve	Reserves Act 1977 Nature Reserve	Reserves Act 1977 Scientific Reserve	Reserves Act 1977 Government Purpose Reserve	Reserves Act 1977 Local Purpose Reserve	Reserves Act 1977 NZ (National) Reserve
1								
2	Foreshore or Crown land ✔	Foreshore or Crown land ✔	Foreshore or Crown land ✔	Foreshore or Crown land ✔	Foreshore or Crown land ✔	Foreshore or Crown Land ✔	Foreshore or Crown land ✔	Crown land Reserve Foreshore Reserve
3	Purpose: -Providing areas for the recreation and sporting activities and the physical welfare and enjoyment of the public, ✖ and -For the protection of the natural environment and beauty of the countryside ✔ with emphasis on the retention of open spaces and on outdoor recreational activities ✖ including recreational tracks in the countryside ✖	Protect and preserve places, objects and natural features of historic, ✪ archaeological, ✪ cultural, ✪ educational, ✪ and other special interest illustrate the history of NZ ✖	Protect and preserve areas of scenic interest, ✪ beauty, ✪ or natural features or landscape desirable in the public interest for their intrinsic worth and for the benefit, enjoyment and use of the public ✪ -Provide suitable areas which by development and the introduction of flora will become of scenic interest or beauty that...protection ...is in the public interest ✖ -Preserve indigenous flora, fauna, ecological associations and natural environment and beauty ✖ -Retention and preservation of natural and scenic values ✖	-Protect and preserve in perpetuity indigenous flora or fauna or natural features ✔ that are of such rarity, ✔ scientific interest ✪ or importance, ✪ or so unique ✪ that their protection and preservation are in the public interest ✪	-Protecting and preserving in perpetuity: ecological associations, ✔ plant or animal communities, ✪ types of soil, ✪ geomorphological phenomena, ✪ and like matters of special interest ✪ for scientific study, ✪ research, ✪ education, ✪ and the benefit of the Country ✪	-Providing and retaining areas for such Government purpose as may be specified ✖ -May be for wildlife management or for other specified wildlife purposes ✔ Gvt. purpose may be tourism etc.	-Providing and retaining areas for such educational, ✖ community, ✖ social, ✖ or other local purposes as may be specified ✔/ ✖	-Protect values of National ✔ or International importance
4	✖ 'And' implies both areas need to lie within the purpose. Recreation is not the purpose for which protection is sought.	✖ NB: The primary purpose of protection is not historical in origin so this is not continued with.	✖	Very High -Preserve as far as possible in it's natural state -Exotic flora and fauna exterminated as far as possible -No person to enter the reserve (except with a permit) ✖	✖ Protection is designed 'FOR'... therefore this is not conitnued with. Possibly continue with on second try. Level may be too high.	Variable ✔ -May from time to time limit, restrict access -Other rules as specified ?	✖ Not the most appropriate mechanism. Protection is being sought for ecological values.	Management policies to protect the values of national or international significance and for the co-ordination of management with other national reserves. ✪ Possible, but not being solely protected for its national interest. Possibly continue with on second try. Level may be too high. ✖
5				✖		Minister of Cons. by notice in the Gazette classifies reserves, but if vested in a local authority, classified by the local authority (Min. shall not classify the reserve without consulting the administering body In the case of the Whanganui Inlet, the estuary is vested in the crown. (DoC)		Governor-General on recommendation of the Minister of Conservation. Prior to recommendation Min. shall: -give public notice of plan -give 3 months for submissions and objections -If area is managed by another Min. of the Crown or the NZ Historic places Trust, obtain consent of that other Min. or the trust
6						Possible Powers of seizure Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence. Max. for corporation of $1,000 and $10 per day the offence continued. Breach of regulations => max. fine of $200 and $5 per day the offence continued		Powers of seizure Offence => Max. for Indv. of Prison for one month and/or fine $500 and $10 per day for a continuing offence. Max. for corporation of $1,000 and $10 per day the offence continued. Breach of regulations => max. fine of $200 and $5 per day the offence continued
7						Likelihood of Success ✖		Likelihood of Success ✖

(B) Evaluation and selection of strategies

Box 4, presented in Chapter Three, contains a list of steps to aid in the assessment of mechanisms to determine that most suitable to an area proposed for protection. Factors to consider when assessing the suitability of individual mechanisms to the proposed area include the ability of the mechanism to protect the legislative boundary within which the proposed area lies. Also, the purpose of using the mechanism needs to be compatible with the purpose for which protection is being sought. Other factors to consider include suitability in terms of level of protection required and available, consent required and available, the degree of enforcement potentially required and available, and any other factors contributing to the likely success and effectiveness of available statutory mechanisms. Each of these factors is used to assess hypothetically, the suitability of selected mechanisms to protect the Whanganui Inlet. Information obtained from the case study and used in stage two is used for this purpose.

Step one - Options of more than one piece of legislation.

This preliminary step is designed to determine the possible requirement for using more than one mechanism to protect the proposed area. Alternatively, one mechanism may be used in different ways to provide for different requirements of protection in different parts of the proposed area. Assessment of the need to use more than one method of protection can be ascertained through an analysis of the different requirements for protection of the area proposed. Different requirements may include the need for different levels of protection, or different values in different parts of the proposed area representing different types of protection required. Also, support may be forthcoming for only part of the area proposed, representing a need for different mechanisms to reflect the support available.

In relation to the Whanganui Inlet, as assessed in stage two, two levels of protection were required for the Inlet to accommodate different uses, particularly recreational fishing. The northern Inlet, where the majority of fishing occurs was proposed for a level of protection that would provide for the continued use of this activity, whilst a higher level of protection was required in the Southern end. In relation to the proposed process presented in Chapter Three, these needs may be provided for with either one mechanism being used to provide different levels of protection, or two different statutory mechanisms.[7]

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7 Note that at times the use of one mechanism to provide different levels of protection may cause confusion. In the case where the Department of Conservation was deciding on mechanisms, it was decided that the use of two mechanisms would clarify the protection requirements for the public.

The process is used to seek one mechanism to step four. At this point, mechanism selection is based on the level of protection provided by each in relation to that required. Two mechanisms are then sought to represent the different levels of protection required. The decision to use two mechanisms is intended to minimise potential confusion to visitors of the area if implementation were to occur.

Step two - Assess mechanism suitability by boundary.

Figure 12 illustrates via arrows those mechanisms which could potentially be used to protect the Whanganui Inlet (Step 2). Those excluded from the list at this stage are: s22 and s27 of the Territorial Sea and Exclusive Economic Zone Act 1977, as those mechanisms provide protection over New Zealand's exclusive economic zone. Also excluded is the National Parks Act as this area is not adjacent to a current National Park nor is it large enough to warrant the time consuming process of implementing a National Park solely for the area proposed for protection. The two mechanisms, heritage covenant and historic places register (within the Historic places Act 1993) are also excluded at this stage as they were developed to protect historic places, historic areas, wahi tapu, or wahi tapu areas, none of which apply to the area proposed for protection. All other mechanisms included in the proposed process cover the Whanganui Inlet to some extent. Although all other mechanisms cover the area to some extent, it is necessary to note that many partially cover the area proposed for protection. These include the following:

TABLE 25: MECHANISMS AVAILABLE TO PROTECT WHANGANUI INLET (BY STATUTORY BOUNDARY)

Area	Mechanisms
MHWM - MLWM (Foreshore)	*Conservation Act 1987 Conservation area Conservation park Wilderness area Ecological area Sanctuary area *Resource Management Act 1991 NZ Coastal Policy Statement Regional Coastal Plan *Fisheries Act 1983 Taiapure Controlled fisheries s89 regulations Mataitai reserve Closed seasons Quota management system Total allowable catch *Wildlife Act 1953 Wildlife sanctuary Wildlife management reserve Wildlife refuge *Reserves Act 1977 Recreation reserve Historic reserve Scenic reserve Nature reserve Scientific reserve Government purpose reserve Local purpose reserve NZ (national) reserve *Marine Reserves Act 1971 Marine reserve *Marine Mammals Protection Act 1978 Marine mammal sanctuary
MLWM - 12 miles seaward	*Territorial and EEZ Act 1977 s8 Regulations *Fisheries Act 1983 Controlled fisheries s89 regulations Mataitai reserve Closed seasons Quota management system Total allowable catch Taiapure *Marine Mammals Protection Act 1978 Marine mammal sanctuary *Marine Reserves Act 1971 Marine reserve *Wildlife Act 1953 Wildlife sanctuary Wildlife management reserve Wildlife refuge *Resource Management Act 1991 NZ Coastal Policy Statement Regional Coastal Plan

Step three - Assess mechanism suitability by purpose and criteria.

The compatibility of any mechanism to the area proposed will be largely affected by the similarity between the purpose of the mechanism and of implementing protection of the

area proposed. Criteria provided for within the statutory mechanism will need to be compatible to the criteria or values for which protection is being sought for the mechanism to be used. Note that mechanisms providing solely for criteria which do not comprise the purpose of protecting the proposed area will not be suitable to provide protection. Two methods are produced in this study for the analysis of the suitability of different mechanisms to provide protection to the Whanganui Inlet.

The flow chart (Figure 12) indicates the overall purpose of each mechanism analysed and the criteria for which protection is provided. Placement of ticks adjacent to criteria, provided for by a mechanism and which contributes to the need to protect the Whanganui Inlet, indicates a mechanism's suitability in relation to this step.

Another method of determining those mechanisms suitable to protect the Whanganui Inlet in terms of criteria is by use of tables. Tables 26, 27, and 28 present the relationship between a mechanism and the criteria it provides for. Theoretical criteria are listed in the left hand column, while the rows are headed by selected mechanisms. Criteria contained within each mechanism are marked in the appropriate cell to indicate the provision of that criteria within the appropriate statutory mechanism. The presence of a criteria being provided for within the mechanism is indicated with a tick. Shading is placed along the criteria which are present in the Whanganui Inlet. A dark shade represents that the criteria lies within the purpose of protection and a light shade indicates that the criteria is present in the Whanganui Inlet, but is not a primary reason for protecting the area. Comparison between the suitability of different mechanisms is easily done by assessing those containing the greatest number of darkly shaded criteria (or ticks) present. Mechanisms for which only stars are shaded are not considered suitable, as a star indicates criteria which, while contained within a mechanism, does not contribute to the purpose of implementing that mechanism.

In respect to the two levels of protection being proposed, recreation is recognised as one of the criteria to be taken into consideration when protecting the area and so is noted in brackets where appropriate. These numbers were then transformed into shading on the tables. The dark shade represents a 3, i.e., that particular criteria is a reason for protection of the proposed area. A light shade represents a 2, (indicating that while the criteria is present in the area, it is not the primary reason for protection). Ticks and stars indicate the presence of those criteria within various mechanisms and provide the means for comparison. Those mechanisms containing ticks within darkly shaded criteria are likely to be suitable for protection in relation to purpose and criteria.

Table 26 - Statutory mechanisms providing protection for ecological criteria present in the Whanganui Inlet (as represented by dark shading over ticks).

Ecological Criteria	Reserves Act 1977 NZ (National) Reserve	Reserves Act 1977 Local Purpose Reserve	Reserves Act 1977 Government Purpose Reserve	Reserves Act 1977 Scientific Reserve	Reserves Act 1977 Nature Reserve	Reserves Act 1977 Scenic Reserve	Reserves Act 1977 Historic Reserve	Reserves Act 1977 Recreation Reserve	Conservation Act 1987 Sanctuary Area	Conservation Act 1987 Ecological Area	Conservation Act 1987 Wilderness Area	Conservation Act 1987 Conservation Park	Conservation Act 1987 Conservation Area	Resource Management Act 1991 Regional Coastal Plan	Resource Management Act 1991 NZ Coastal Policy Statement	Wildlife Act 1953 Wildlife Management Reserve	Wildlife Act 1953 Wildlife Act 1953 Wildlife Refuge	Wildlife Act 1953 Wildlife Sanctuary	Marine Mammals Protection Act 1978 Marine Mammal Sanctuary	Fisheries Act 1983 Taipure (s54A)	Fisheries Act 1983 Closed Seasons	Fisheries Act 1983 Quota management system	Fisheries Act 1983 Total allowable catch	Fisheries Act 1983 s89 Regulations (except Mataitai reserves)	Fisheries Act 1983 Controlled Fisheries	Fisheries Act 1983 Mataitai Reserves	Marine Reserves Act 1971
	For specified local purposes		Government purposes						Value for which it is held	Ecological purpose		For conservation purposes							Min. of Cons. discretion									
Distinctive/Unusual Landform																												⊙
Unique Area				✓	⊙					⊙																		✓
Area Significance					✓	✓			✓	✓			✓															⊙
Representative Area														✓	✓													⊙
Typicalness														⊙	⊙													✓
Character														⊙	⊙													⊙
Marine Environment														⊙	⊙													⊙
Ecosystem processes, structure and habitat features														⊙	⊙													⊙
Ecological habitat integrity														⊙	⊙													⊙
Productivity																												
Sustainability													Every stewardship area shall be managed so that its natural and historic resources are protected	✓	✓						✓		⊙				✓
Species maintenance														⊙	⊙													⊙
Genetic diversity preservation														⊙	⊙													⊙
Rarity														⊙	⊙													⊙
Ecologically important species														⊙	⊙													⊙
Indigenous flora and fauna														⊙	⊙													⊙
Wildlife														⊙	⊙													⊙
Unique Species Associations														⊙	⊙													⊙
Diversity														⊙	⊙													⊙
Dependency																												
Naturalness														⊙	⊙													⊙
Resiliance/Vulnerability																												
Natural features														⊙	⊙													⊙
Coridoor potentiality														⊙	⊙													⊙
Size														⊙	⊙													⊙
Stock replenishment														⊙	⊙													⊙
International interest														⊙	⊙													⊙
National interest														⊙	⊙													⊙

Regulating fishing and shellfish protection

Min. may specify

KEY

- ✓ Criteria contributes toward the purpose of the mechanism
- ⊙ Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.
- Criteria contributing toward the need for protection of the Inlet
- Criteria found within the Inlet, but not of sufficient cause to protect the area, OR criteria similar, but not identical to that specified in the table.
- Criteria not found in the Inlet

Table 26

Table 27 - Statutory mechanisms providing protection for social - cultural criteria present in the Whanganui Inlet (as represented by dark shading over ticks).

Social - Cultural criteria	Marine Reserves Act 1971	Maataitai Reserves	Fisheries Act 1983 Controlled Fisheries	Fisheries Act 1983 (except Maataitai reserves)	Fisheries Act 1983 s89 Regulations Total allowable catch	Fisheries Act 1983 Quota management system	Fisheries Act 1983 Closed Seasons	Fisheries Act 1983 Taipure (s54A)	Marine Mammals Protection Act 1978 Marine Mammal Sanctuary	Wildlife Act 1953 Wildlife Sanctuary	Wildlife Act 1953 Wildlife Refuge	Wildlife Act 1953 Wildlife Management Reserve	Resource Management Act 1991 NZ Coastal Policy Statement	Resource Management Act 1991 1991 Regional Coastal Plan	Conservation Act 1987 Conservation Area	Conservation Act 1987 Conservation Park	Conservation Act 1987 Wilderness Area	Conservation Act 1987 Ecological Area	Conservation Act 1987 Sanctuary Area	Conservation Act 1987 Recreation Reserve	Reserves Act 1977 Historic Reserve	Reserves Act 1977 Scenic Reserve	Reserves Act 1977 Nature Reserve	Reserves Act 1977 Scientific Reserve	Reserves Act 1977 Government Purpose Reserve	Reserves Act 1977 Local Purpose Reserve	Reserves Act 1977 NZ (National) Reserve
Social acceptance		⊙						⊙					⊙	⊙						⊙		⊙						
Community interest	✓				▲			⊙												⊙ (Access)	✓	✓ ⊙		✓				
Special interest								⊙													✓ ✓							
Other interest					▲			⊙																				
Locality																							(Access)	(Access)				
Level of use					▲								✓	✓														
Need of area for activities								⊙												✓								
Potential activity impacts													⊙	⊙														
Adjacent land use																												
Recreation					▲			⊙							⊙ / ✓	✓				✓								
Traditional use and users		✓			▲			✓																				
Traditional maori food gathering		✓			▲			✓																				
Traditional recreational fishing					▲			⊙																				
Culture		✓						✓					✓	✓							✓							
Maori interest		✓			▲			✓					✓	✓														
Spiritual values								✓					✓	✓														
Education	⊙												⊙								✓		✓		✓			
Safety																												
Amenities													✓	✓								⊙						
Aestheitcs scenic visual	✓																				✓	✓						
Species -beautiful -of interest	✓							⊙												Maintain where present		✓						
Intrinsic values													✓	✓	⊙ / ✓													
Archaeological -Historic/Heritage													✓	✓		✓					✓							
Public relations and extension								⊙							⊙													
Defence areas																												
Conflicts of interest								⊙																				
Enjoyment/Inspiration	✓	✓													⊙ / ✓	✓				✓		✓			✓			

KEY

- ✓ Criteria contributes toward the purpose of the mechanism
- ⊙ Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.
- Criteria contributing toward the need for protection of the Inlet
- Criteria found within the Inlet, but not of sufficient cause to protect the area, OR criteria similar, but not identical to that specified in the table.
- Criteria not found in the Inlet

Table 27

Table 28 - Statutory mechanisms providing protection for economic criteria present in the Whanganui Inlet (as represented by dark shading over ticks)

Economic Criteria	Marine Reserves Act 1971	Mataitai Reserves	Fisheries Act 1983	Fisheries Act 1983 s89 Regulations (except Mataitai reserves)	Total allowable catch	Quota management system	Fisheries Act 1983	Closed Seasons	Fisheries Act 1983	Territorial Sea and EEZ Act 1977 s22 Regulations	Territorial Sea and EEZ Act 1977 s8 Regulations	Wildlife Sanctuary	Wildlife Act 1953	Wildlife Refuge	Wildlife Act 1953	Wildlife Management Reserve	Wildlife Act 1953	NZ Coastal Policy Statement	Resource Management Act 1991	1991 Regional Coastal Plan	Resource Management Act	Conservation Area	Conservation Act 1987	Conservation Park	Conservation Act 1987	Wilderness Area	Conservation Act 1987	Ecological Area	Conservation Act 1987	Sanctuary Area	Conservation Act 1987	Recreation Reserve	Reserves Act 1977	Historic Reserve	Reserves Act 1977	Scenic Reserve	Reserves Act 1977	Nature Reserve	Reserves Act 1977	Scientific Reserve	Reserves Act 1977	Government Purpose Reserve	Reserves Act 1977	Local Purpose Reserve	Reserves Act 1977	NZ (National) Reserve	Reserves Act 1977
Shipping																																													
Commercial fishery resources			✪	✔						✔																																				
Importance to fisheries			✪	✪						✪																																				
Biological Productivity																																													
Area, importance to species			✪																																										
Research opportunity											✪																								✪	✔		✔	✔							
Nature/Degree of threats																																													
Suitability for activities, Potential value, alternative use																																			✪											
Economic benefits			✪	✪	✪				✪		✔									✪	✪																										
Ecodevelopment																																													
Tourism																																													

Other purposes

KEY

- ✔ Criteria contributes toward the purpose of the mechanism
- ✪ Criteria noted (directly or indirectly in the mechanism, but not contributing toward the purpose of protection.
- Criteria contributing toward the need for protection of the Inlet
- Criteria found within the Inlet, but not of sufficient cause to protect the area, OR criteria similar, but not identical to that specified in the table.
- Criteria not found in the Inlet

Table 28

At least one tick in a darkly shaded criteria is required to indicate the possibility of a mechanism's suitability. Those mechanisms for which the purpose of the mechanism is similar to the purpose of providing protection (i.e., ticks which are darkly shaded) are considered to have a high compatibility with the criteria in the Whanganui Inlet. Those mechanisms with one tick darkly shaded are considered to have a high - moderate compatibility. Note that there is often a fine difference between the number of shaded ticks. Some mechanisms provide detailed descriptions on the intended purpose and use of the mechanism, which may in turn relate to a greater number of ticks within that mechanism. Other mechanisms may be described more briefly, but are no less able to provide protection for an area with a need for protection that is compatible with the mechanism's purpose.

Mechanisms containing criteria which are only lightly shaded (= criteria within the area proposed for protection, but which are not within the purpose of protection) are unlikely to be useful to provide protection to the proposed area. Extremely unlikely mechanisms are those containing no criteria relevant to the area proposed for protection (i.e., no ticks in shaded areas).

Table 29(a) presented below, indicates mechanisms suitable to provide protection of the Whanganui Inlet, as assessed by purpose and criteria. Those mechanisms providing, as their purpose, for criteria for which the Whanganui Inlet is to be protected are classified as being 'high' or 'high - moderate'. A 'high' classification indicates the presence of more than one tick in a darkly shaded criteria. A 'moderate - high' classification incorporates those mechanisms with one tick in a darkly shaded criteria.

Table 29(a): Mechanisms suitability to provide protection over the Whanganui Inlet as assessed by criteria noted in the mechanism.

High (>1 purpose of protection provided for in the mechanism) ie. >1 tick in Dark shade.	High - Moderate (1 purpose of protection contained in the mechanism) ie. 1 tick in dark shade).
Marine reserves NZ Coastal Policy Statement Regional Coastal Plan Wilderness area (in Conservation Area) Ecological area (in Conservation Area) Nature reserve	s8 regulations of the Territorial Sea and Exclusive Economic Zone Act 1977 (excludes foreshore). Wildlife sanctuary Wildlife refuge Wildlife management reserve Sanctuary area (in conservation area) Conservation area Conservation park NZ (national) reserve Government purpose reserve
Low (Ticks only in light shades)	**Extremely Unlikely (No ticks in shaded criteria)**
Mataitai reserve Taiapure Recreation reserve Scientific reserve* Historic reserve** Scenic reserve** s89 fishing regulations*** Quota management system*** Total allowable catch*** Closed seasons*** Local purpose reserve	Marine mammal sanctuary Controlled fisheries

Additional information relevant to the suitability of a particular mechanism for a specified area may be contained within the legislation, but be too detailed to have been included in Tables 26, 27, and 28. This necessitates either the consideration of specific criteria contained in the mechanism in addition to solely using the tables. Examples of situations where sole reliance on the tables could lead to inaccuracies include those mechanisms with a star placed next to them. These mechanisms, although appearing suitable from analysis of the table, are not considered practical with further consideration. Outlined below is an explanation of why each mechanism (identified with a star) is placed in the low category and therefore not considered further.

*Scientific Reserve - Ecological criteria are a primary issue for the use of this mechanism. Although the Whanganui Inlet is to be protected for ecological criteria,

scientific study is not the primary purpose of protecting the area. For this reason the mechanism is eliminated at this step despite ticks being present in darkly shaded criteria.

**Historic reserve, scenic Reserve - These mechanisms, by sole analysis of the table would be included in the category high - moderate. A tick (indicating cause for implementation of the mechanism) is placed in the darkly shaded criteria of 'natural features'. Although the Whanganui Inlet has a high degree of natural features, this is not the sole purpose of protecting the area. Also, a historic reserve is designed to protect natural areas of 'historic, archaeological, cultural, educational, and other special interest', which is not compatible with the primary reason for protecting the Whanganui Inlet.

***s89 Regulations, Quota Management Area, Total Allowable Catch, Closed Seasons- s89 Regulations provide for regulating fishing and shellfish protection. When developing the chart, this was included in the species maintenance category and so a tick was placed in the appropriate box. The mechanisms, quota management area, total allowable catch, and closed seasons, likewise provide for the purpose of maintaining fish stocks in accordance with the purpose of the Fisheries Act 1983. However, the Fisheries Act 1983, with its overlying purpose of fisheries management, is not suited to the primary purpose of protecting the Inlet, which was proposed to protect a wide variety of ecological values.

The flow chart also provides assistance when assessing the suitability of a mechanism to provide protection. Ticks and crosses indicate those criteria present or not present in the Whanganui Inlet. Each mechanism discontinued with (due to incompatibility between the purpose of the mechanism and the purpose of providing protection to the Whanganui Inlet) at this step has an explanation on the flow chart. All mechanisms continued past classified as 'high' or 'high - moderate' in Table 29(a) are continued with past this step.

Step four - Assess mechanism suitability to provide level(s) of protection required.

Stage two indicated (from information gathered during the process undertaken by the Department of Conservation) that two levels of protection were required. These are outlined below:

Level(s) of protection specified.	Area of the inlet.
High - No fishing	Southern
Moderate = access, some fishing, recreational use etc.	Northern and contributing streams

These two levels of protection were then compared to the mechanisms presented in the flow chart to assess which, of those isolated to this step are potentially suitable in relation to the level of protection required. Table 29(b) provides a list of those mechanisms potentially suitable to protect the two areas in relation to the level of protection required.

TABLE 29(b): MECHANISMS PROVIDING HIGH AND MODERATE-HIGH LEVELS OF PROTECTION.

High (complete no take - including fish)	Access permitted	Moderate-High	Access permitted
*Marine Reserves Act 1971		Wildlife Act 1953	
Marine Reserve	Yes	Wildlife Refuge	Yes
		Wildlife Management Reserve	Yes
*Territorial Sea and Exclusive			
Economic Zone Act 1977		Territorial Sea and Exclusive	
s8 Regulations (MLWM - Sea)	Yes	Economic Zone Act 1977	
		s8 Regulations (MLWM - sea)	Yes
Conservation Act 1987			
(Foreshore only)		Conservation Act 1987	
Conservation Area	Yes	(Foreshore only)	
Ecological Area	Yes	Conservation Area	Yes
Sanctuary Area	Opt	Conservation Park	Yes
Reserves Act 1977			
Government purpose reserve	Yes		
NZ (national) reserve	Yes		

* Access may be restricted.

Table 29(b) illustrates those mechanisms available to provide the two specified levels of protection required. Of these, many are restricted in area coverage.

The mechanism, wildlife sanctuary has been removed, because, in practice, this mechanism has in the past been used to provide a higher level of protection than that required for the Whanganui Inlet. "All current sanctuaries are islands, and the status has only been applied to areas of such special significance that the public needs to be excluded from. Unrestricted access, fishing, and gamebird shooting are not appropriate uses within the most highly protected status given under the Wildlife Act" (Department of Conservation, 1992, file MPA0181).

The mechanisms, wilderness area and nature reserve are also excluded at this step. Both

mechanisms provide a level of protection which is too high for either the northern or southern Inlet. A wilderness area does not provide for any tracks or trails to be constructed, while a nature reserve excludes the public.

Also excluded from both categories at this step are the mechanisms, *New Zealand Coastal Policy Statement* and Regional Coastal Plan. These mechanisms are considered too broad to be suitable to protect the Whanganui Inlet. The mechanisms wilderness area, and nature reserve are also excluded at this step. These all provide too high a level of protection than that required in either of the two areas specified.

Specifically excluded from the area requiring a high level of protection are the mechanisms wildlife refuge, wildlife management reserve, and conservation park. Reasons for this relate to the inadequate level of protection provided to suit the requirements of the area. The Wildlife Act 1953, as stated previously, does not control fisheries management and so does not provide an adequate level of protection than that required for the southern Inlet.

Mechanisms excluded from providing protection for a moderate - high level of protection, in addition to those noted above are ecological area, sanctuary area, government purpose reserve, NZ (national) reserve and marine reserve. The Reserves Act 1977 protects all native species, which includes fish. Mechanisms contained in the Reserves Act 1977, therefore are not suitable for protection of the northern Inlet, in which recreational fishing is to be provided for. The Marine Reserves Act 1971, although theoretically providing for a range of protection, is currently being used to provide complete no take areas. This eliminates confusion over the mechanism, and so it is only considered in relation to its provision for a high level of protection from this point on.

Step five - Assess most suitable mechanism in relation to organisational support required.

Implementation of mechanism(s) to protect a specified area for specific purposes is, in large part dependent on the organisation responsible for the proposed mechanism and consent required from other organisations with different policies and objectives.

Support for protection of the Whanganui Inlet in two parts was forthcoming from most people. If the entire area had been proposed as a marine reserve this level of support would have been significantly reduced, both from locals and in all likelihood the

Ministry of Agriculture and Fisheries (now Ministry of Fisheries). The main reason for this is that recreational fishing occurs on the Inlet.

The following tables provide a summary of the organisation responsible for implementation of each mechanism isolated to this step, likely support from that organisation, consent required prior to implementation of each mechanism and consent likely to be received. In some cases, it is difficult to second guess the likelihood of obtaining consent. In the event of using the process in a life-situation, this information would be sought by the user.

Table 30: Consent required prior to implementation of statutory mechanisms to provide a high level of protection.

Mechanism	Marine Reserve	Sanctuary area	Conservation Area	Ecological Area
Proportion of Area proposed	Lower half	Foreshore (limited)	Foreshore (Limited)	Foreshore (Limited)
Organisation responsible	Department of Conservation	Department of Conservation	Department of Conservation	Department of Conservation
Support of Organisation	Yes	Probable	Probable	Probable
Consent required	Min. of Fisheries Min. of Transport Harbour Board	Min. resp. for control of foreshore. Public consultation	Minister of Conservation and Minister responsible for control of foreshore. Public consultation	Min. resp. for control of foreshore. Public consultation
Consent available	Was given - therefore possible	Possible (Consider objections)	Possible (Consider objections)	Possible (Consider objections)

Mechanism	Government purpose reserve	NZ (national) reserve	s8 Regulation (TS&EEZ Act 1977)
Proportion of Area proposed	Foreshore	Foreshore	From mean low water mark - sea (Limited)
Organisation responsible	Department of Conservation	Gvnr-Genrl on recommendation of Min. of Conservation	Minister of External Relations and Trade.
Support of Organisation	Unknown	Unknown - possible	Unknown
Consent required	-Public notification of purpose of Gvt. purpose reserve -Min. shall give full consideration to all objections and submissions	-Consider submission/objections -If area managed by another Min. of the crown or NZ Historic Places Trust, their consent.	Minister of Fisheries regulates fishing in any quota management area. So the Minister of Fisheries may have some say in the decision.
Consent available	Possibly public objections	Possible public objections	Possible.

Table 30 indicates that of those mechanisms providing a high level of protection for the proposed purpose of protection, all could potentially be implemented in relation to the consent required prior to implementation. All mechanisms outlined in Table 30 are continued with for the high level of protection. It is noted that only a marine reserve will cover the entire southern area (beyond the foreshore) the other mechanisms being limited in the area they may be used to protect. Table 31 indicates, for mechanisms isolated to this step (providing for a high - moderate level of protection), the organisation responsible, and from whom consent is required prior to implementation.

Table 31: Consent required prior to implementation of statutory mechanisms to provide a moderate-high level of protection.

Mechanism	Conservation Area	Conservation Park
Proportion of area proposed	Foreshore (Limited)	Foreshore (Limited)
Organisation responsible	Min. of Conservation	Min. of Conservation
Support of organisation	Probable	Probable
Consent required	Min. resp. for control of any foreshore	Min. resp. for control of any foreshore
Consent available	Possible (consider objections)	Possible (consider objections)

Mechanism	Wildlife refuge	Wildlife management reserve	s8 TS and EEZ Act 1977
Proportion of area proposed	All	All	Mean low water mark - sea (Limited)
Organisation responsible	Dept. of Conservation	Dept. of Conservation	Ministry of External Relations and Trade.
Support of organisation	Probably	Probably	Unknown
Consent required	In the case of Crown land, the joint recommendation of the Min. of Conservation, lands and transport.	In the case of Crown land, the joint recommendation of the Min. of conservation, lands, and transport.	The area lies in a quota management area, and so consent from the Minister of Fisheries may improve the likelihood of success
Consent available	Probable	Probable	Possible

Analysis of the statutory mechanisms presented in Table 31 indicate that most are likely to be potentially available for use. However, of the above mechanisms, only wildlife refuge and wildlife management reserve could be used to provide a moderate-high level of protection across the entire northern Inlet. A combination of mechanisms would need to be used if any of the other mechanisms were employed. All mechanisms presented in Table 31 are, however continued with to the next step in light of the potential for all to be of some use.

Step six - Assess mechanism suitability to provide the level of enforcement required.

The level of enforcement required to protect the Whanganui Inlet is dependent on the degree of local and other support provided. Although locals were initially opposed to the idea of placing protection status on the Inlet, the negotiation process led to a more amicable agreement. As the area is reasonably isolated, there is a higher potential to 'break the rules' without any adverse impacts. It is unlikely that the level of enforcement would make a large difference to the actions of locals of the area, although it is possible that large fines may reduce the likelihood. Of the mechanisms continued to this step, all provide sufficiently large fines that could be used to enforce protection. Enforcement provided for classified conservation areas and s8 of the Territorial Sea and Exclusive Economic Zone Act 1977 is sufficient. The potential for enforcement by way of the Marine Reserves Act 1971 and Wildlife Act 1953 (s63A) is due to be updated with the incoming Fisheries Bill. For these reasons, none of the mechanisms isolated to this step are eliminated at this step.

Step seven - Consider likelihood of success at implementing the mechanism(s).

Questions to be asked while proceeding through this step to determine the most suitable statutory mechanism(s) to protect the proposed area(s) include the past history of success at implementing the mechanism, and the probable ease of success in the case being considered. Also to consider is the time required to implement the mechanism, and the level of support afforded for its implementation. The legislative boundaries protection may be afforded to by the mechanism(s) in consideration, and the need for use of more than one mechanism also needs consideration. The number of mechanisms employed to provide protection should, for all practical purposes be minimised to ease confusion. Also, where more than one organisation needs to be employed, the use of mechanisms administered by one organisation with primary responsibility may assist to minimise potential conflicts of interest via policies and objectives of different organisations. Another factor to be considered in this step is the group/organisation initiating protection. Compatibility of that group to the organisation responsible for implementation will affect the suitability of using particular statutory mechanisms. The necessity or need to work with more than one organisation (in response to the use of different mechanisms), and the potential implications of this.

Southern

Marine reserve - This mechanism provides for a high level of protection (i.e., no take) which is required for the southern Inlet. The mechanism is administered by the Department of Conservation, the organisation which proposed protection of the Inlet. The likely acceptance or refusal of required consent may be determined through

discussions. As a result of the negotiation between local users of the area and staff of the Department of Conservation, issues regarding the need to fish the area were resolved, removing potential problems with regard to required consent from the Ministry of Fisheries. The mechanism, can, in theory be used to protect all of the proposed area (to the different levels of protection required), eliminating the need for more than one mechanism to protect the Inlet. However, the Department of Conservation is currently avoiding use of the Marine Reserves Act 1971 to provide less than a complete no-take zone.

Section 8 Regulations (Territorial Sea and Exclusive Economic Zone Act 1977) - This mechanism is of use to provide protection from mean low water mark seawards. In this respect it is limited, as another mechanism would need to be employed to protect the foreshore. While this is possible, with use of one of the other mechanisms identified to this level, it would increase the number of mechanisms employed to more than two (inclusive of all mechanisms used to protect both the northern and southern areas) thereby increasing the time and cost involved in implementation. Also, too large a number of mechanisms may cause confusion to the general public.

Conservation area - This statutory mechanism, provided within the Conservation Act 1987, is intended to identify areas "for conservation purposes." In the case of the Whanganui Inlet, it is likely the conservation area would be classified to a more specific rating, most probably an ecological area. However, use of the mechanism is limited to the foreshore (and land), thereby requiring the need for more than two methods of protection over the estuary causing similar problems as stated above.

Ecological area, sanctuary area - These mechanisms have been identified as providing a suitable level of protection over the Southern Inlet. The mechanisms are, however restrictive in the area they may potentially provide protection over, this area being limited to the foreshore. This incurs a similar problem as would occur with use of the mechanism, conservation area, in that although the mechanism is potentially of use, other mechanisms with coverage extending below mean low water mark would also need to be employed. This would increase the total number of mechanisms used to more than three, a number which may cause confusion to the general public. Other mechanisms providing for a greater range of protection may, therefore, be more suitable. The mechanisms, ecological area and sanctuary area are therefore eliminated at this step.

Government purpose reserve - This mechanism provides for retaining areas of Crown land and foreshore for such government purpose as may be specified. This may be for

wildlife management or for other specified wildlife purposes. In relation to the Whanganui Inlet, although the mechanism may be useful to protect the wildlife on the foreshore, the protection will not extend to wildlife beyond mean low water mark, thereby leaving a need for another mechanism for that area. This will increase the number of mechanisms to more than two, likely consequences being increased administration, and confusion among the public.

New Zealand (national) reserve - Implementation of a NZ (national) reserve may be used to protect values of national or international importance. Two limiting factors affecting the potential use of this mechanism include the limited criteria within the Inlet providing for its use and the size of the area on which the mechanism would be employed. Although the northern part of the Whanganui Inlet is a nationally important breeding area for banded rail, banded dotterel, and Australasian bittern, implementation of the mechanism on this strength may not be successful. There is a good chance protection could be successfully implemented, but coupled with the limited range of the mechanism to Crown land reserve and foreshore reserve (and the size of this area in the southern Inlet), it may not be worth the effort required for implementation.

In conclusion, s8 regulations of the Territorial Sea and Exclusive Economic Zone Act 1977, conservation area, ecological area and sanctuary area of the Conservation Act 1987 are removed at this step because they would require use of two mechanisms to protect the southern Inlet. Also removed at this step are the mechanisms, Government purpose reserve, and NZ (national) reserve. Although the mechanisms both potentially provide for protection, the area they would be used to protect is too small to justify their use. In theory, a combination of mechanisms available to protect the foreshore with one available to protect below mean low water mark may increase the potential of using some of these mechanisms. For example, a combination of s8 Regulations and an ecological area could be combined to protect the southern end of the Inlet. Alternatively a combination of the Marine Reserves Act 1971 and an ecological area could be created to protect the southern Inlet. However this might be confusing to members of the public along with administrative difficulties incurred. In particular each is managed by a different government department (Department of Conservation and the Ministry of Fisheries respectively). Also, use of s8 Regulations may be restricted as the Whanganui Inlet is contained within a fisheries management area, possibly incurring difficulty in relation to its potential ease of implementation.

Northern

Wildlife refuge and wildlife management reserve - These are potential statutory mechanisms available for protection of the northern Inlet. Analysis of these mechanisms indicates that use of a wildlife refuge provides a lower level of protection than is desired for the northern Inlet. The mechanism, wildlife management reserve is therefore most likely to provide an adequate level of protection. (Note that the mechanism wildlife sanctuary was eliminated in step four as the term 'sanctuary' implies a higher level of protection than that desired).

Conservation area and conservation park - These mechanisms are also eliminated at this step for the same reasons as are specified regarding their potential use to protect the southern part of the Inlet. Both are limited in their coverage, and to use too many mechanisms will cause confusion among the public. Also, use of one mechanism to provide more than one level of protection will significantly increase the confusion.

s8 Regulations of the Territorial Sea and Exclusive Economic Zone Act 1977 - This mechanism is removed at this step for the same reason it is removed from the mechanisms being considered to protect the southern Inlet. The area to which protection may be provided over the northern Inlet is too small to justify its use.

In conclusion, the statutory mechanism deemed of greatest use (at this step in the process) to protect the northern Inlet to the required specifications is a wildlife management reserve. These two mechanisms are the same identified by the Department of Conservation for protection of the Inlet. Reasons for the same result include, the use of the same information obtained by the Department of Conservation in relation to the values of the area to be protected, the needs of the locals, any other requirements.

Step eight - General assessment of final mechanisms selected.

As isolated in step seven, a marine reserve is the most appropriate mechanism to protect the southern area of the Whanganui Inlet. Use of a wildlife management reserve at the northern end is a likely mechanism for protection to the specified requirements of protection. This step involves the analysis of these two mechanisms to indicate any potential drawbacks to their use in this particular instance.

Marine reserve - This mechanism has gained prominence in recent years, the strong probability of success adding to the mechanism's prominence. A result of the public consultation process between the Department of Conservation and locals indicated that, with a compromise over the northern area, opposition to implementation of a marine

reserve would be dramatically reduced. Also, the Department of Conservation, as a proposer of protection, is likely to prefer use of a mechanism for which the Department is responsible. No major problems regarding the process of implementation or management are foreseen at this stage so the mechanism may now proceed to the next step of the process.

Wildlife management reserve - Use of the wildlife management reserve as a mechanism for protection poses a slightly riskier prospect to that of implementing a marine reserve. This relates to the infrequent use of the mechanism in the past. Also, the mechanism is not as well known to the public. However, these do not represent serious impediments to implementation and no major drawbacks with implementation are foreseen and so the mechanism may proceed to the next step of the proposed process.

Step nine - Notification of proposed mechanism(s) to be used, and the way in which they will be used. Also consider feedback.

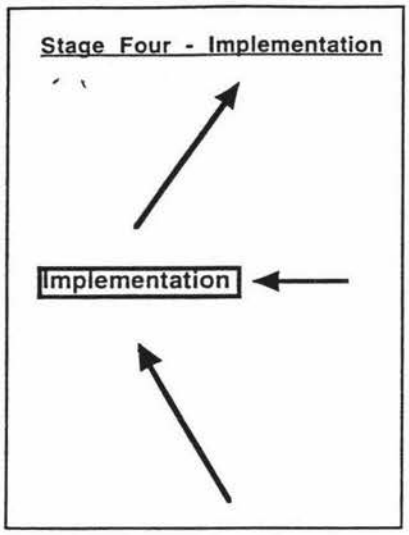
The Department of Conservation held an 'open day' prior to application of the marine reserve and wildlife management reserve to enable the public to ask any questions regarding use of either mechanism. This assisted all parties involved to reconsider their decisions and make any necessary changes. In respect of the proposed marine reserve and wildlife management reserve, feedback at this stage indicated no major problems with the combined implementation of both mechanisms and so the process continued to the stage of formal application.

(C) Stage three reassessment/feedback

Goal reassessment and feedback may alter mechanism availability. Goals may have been altered during the process of choosing the best practical option via modification of ideas relating to requirements of protection (for example the level of protection preferred). It may then be realised at a later date that this is not acceptable.

In the case of the Whanganui Inlet, the process was used hypothetically. Feedback would occur at this step in relation to the mechanisms identified to this step. It is possible that some may require modification in accordance with particular requirements not previously noted. If notification were to cause a lot of adverse response, it would then be necessary to reconsider the mechanisms. Also, the boundaries identified may be modified in response to feedback. Although this would generally occur in stage two, it is possible that the availability of particular mechanisms to protect specific areas of the marine environment may influence the boundaries set.

5.5.5 STAGE FOUR - IMPLEMENTATION



Implementing protection requires consideration of many other factors including the process involved with implementation. This study did not cover this issue, as emphasis was restricted to a consideration of the mechanisms suitability by issues and other guidelines identified in Chapter Two. Study of stage four and the remainder of the process lay beyond the scope of this study.

5.6 CONCLUSION

Protection of the Whanganui Inlet in relation to the assessment of statutory mechanisms was used to test the proposed process presented in Chapter Three. The proposed process was found to be workable in relation to the assessment of selected statutory mechanisms to identify those most suitable to protect the Whanganui Inlet.

Use of the process on a practical example illustrated its adaptability in a situation involving more than one set of requirements for protection. In the case of the Whanganui Inlet, this involved the need to apply two levels of protection over adjacent parts of the Inlet. Results stemming from use of the process will, in large part be affected by the information used in the decision making process. In some instances the user of the process may not be privy to a lot of information required to make some decisions, especially in the latter steps of stage three. With regard to the potential use of the process, it provides a basic process to identify mechanisms available to protect any specified area in the marine environment. Dependent on the user, often additional information will need to be obtained to complete the final steps regarding specific details regarding the potential use of the process under specific circumstances and in relation to the institutional framework within which protection will operate.

CHAPTER SIX

CONCLUSIONS

This chapter revisits the research goal and objectives presented in Chapter One. The research goal was "to develop a planning process to determine the most appropriate mechanism for protection of a specified marine area". Key findings of the thesis are reviewed and discussed. Following this, the limitations of the process presented are acknowledged. The chapter concludes with a discussion of the potential use and limitations of the proposed process.

6.1 RESEARCH GOAL AND OBJECTIVES

The need for marine protection and the increased interest generated among the public in recent years was examined in Chapter One. There is a greater public awareness of the Marine Reserves Act 1971, leading to effort being directed toward use of the Marine Reserves Act 1971 to protect many marine areas requiring protection. The need to apply alternative statutory mechanisms to provide protection of a specified marine location was noted as being important in situations where the Marine Reserves Act 1971 is not the most appropriate mechanism. A recognition of the lack of any framework to assist in the identification of such appropriate mechanisms led to the development of the proposed planning process presented in this thesis.

Development of the planning process occurred in several steps. First, selected statutory mechanisms available to protect New Zealand's marine environment were analysed in detail. Second, guidelines were developed to assess various attributes of the selected statutory mechanisms in relation to their potential to provide protection for differing requirements. Third, the statutory mechanisms were analysed in relation to their potential to provide protection under different circumstances, notably in situations where there is a lack of support from other organisations whose consent is required to protect an area. It was concluded that success of implementation would be more problematic where the mechanism employed is not suitable in relation to the various guidelines identified as contributing to the requirements of protection. Fourth, the potential effectiveness of implementing protection was then assessed in relation to the provision of enforcement provided by the statutory mechanisms and their likely potential for implementation.

The proposed process is designed to be flexible in relation to its end use. The provision for protection of different values and different areas through the use of various mechanisms is intended to provide greater flexibility for protection of the marine environment. This flexibility provides for protection of ecological, social-cultural, or economic values or a combination of these.

Some mechanisms, for example the Wildlife Act 1953, are designed to protect specific ecological values - namely those relating to wildlife. Other mechanisms, however are designed to provide protection for other values. The use of taiapure, for example, is designed primarily to provide greater recognition of rangitiratanga and of the right secured in relation to fisheries by article II of the Treaty of Waitangi. Taiapure specifically provide for the management by Maori of areas customarily of special significance. Other mechanisms provide for protection to enhance the economic value of fishery areas. These reasons are quite distinct, and recognition (within the process) of these various criteria or values in the choice of different mechanisms will aid in their ability to provide protection. In time, the range of values will, in all likelihood, become increasingly important in the requirements for protection of the marine environment, with greater competition between representatives of different values. One example is the increased desire by Maori to manage areas of special significance. Other reasons include the need for protection to enhance the economical value of surrounding areas, or solely for conservation purposes. There will, therefore, be an increased need for flexibility in relation to the use of different mechanisms to provide for different needs and requirements of protection.

Initially, the process developed in this thesis was designed to synthesise a combination of strategic planning with processes designed to cater for goals and issues of different user groups which have specific rights (including statutory) outside the control or realm of the proposer of protection. This involved the use of other planning theories, including the rational-comprehensive approach. The proposed process provides for the user to apply a strategic approach in relation to his/her perspective while also providing for the step-by-step rational comprehensive approach required within each major stage of the process. The first stage comprises the identification of goals by the user of the proposed process (or the body comprising the locus of control) as is relevant to the situation. The process is designed to be used by any agency or group interested in the protection of any part of New Zealand's marine environment. Deciding on an appropriate area to protect, and assessing the statutory mechanisms to find that most suitable, represent the second and third stages of the proposed process respectively. The fourth stage comprises the implementation of that statutory mechanism selected as being appropriate to protect

the specified location. The process was developed primarily to identify appropriate statutory mechanisms available for protection and, thus, stage three is described in greater detail. Other stages of the process are provided in more general terms.

The proposed process will provide a basis for the selection of appropriate mechanisms by those with limited knowledge of legislation. It provides a framework for the comparative analysis of statutory mechanisms available for protection of New Zealand's marine environment. This will enable the layperson to consider a broader range of statutory mechanisms than the user may have previously considered. The process is still very rudimentary, and further work may be required to extend the area selection and implementation stages. Also, guidelines used to consider the mechanisms are reasonably brief, and in some instances further information may need to be sought. Further information from those administering the different statutory mechanisms may need to be obtained to provide the finer points prior to application for protection by any specified statutory mechanism.

6.2 KEY FINDINGS

Development of the planning process presented in this thesis represents the primary outcome of this thesis. Inherent within this process, designed to provide a method of assessing the suitability of statutory mechanisms to provide protection to New Zealand's marine environment, are important findings which comprise part of the overall process. These include the analysis of statutory mechanisms available for protection, the potential of statutory mechanisms to protect New Zealand's marine environment, and how and why different areas may be selected for protection. Additional features of the research include the empowerment of the user to compare different mechanisms for achieving marine protection. Each of these key findings will be summarised in greater detail below.

6.2.1 AVAILABILITY OF STATUTORY MECHANISMS TO PROTECT NEW ZEALAND'S MARINE ENVIRONMENT.

A number of statutory mechanisms are available to protect New Zealand's marine environment. These are outlined in Chapter Two. The majority of mechanisms, however, provide protection to the area between mean high water mark to mean low water mark, this being the foreshore. Statutory mechanisms providing protection to the territorial sea (12 miles seaward from low water mark) are reduced in number. Following this trend, those mechanisms providing protection to the exclusive economic zone are significantly reduced in number. Thus, the ability to protect the foreshore is more versatile than other

areas in the marine environment.

6.2.2 ANALYSIS OF STATUTORY MECHANISMS AVAILABLE TO PROTECT NEW ZEALAND'S MARINE ENVIRONMENT.

Statutory mechanisms available to protect New Zealand's marine environment, and selected for inclusion into the proposed process were analysed in relation to specific guidelines developed in Chapter Two. These guidelines comprised: the area the mechanism covered, criteria the mechanism was suitable to protect, the level of protection provided by the mechanism, the organisations whose consent is required prior to implementation, the degree of enforcement potential, and any other factors of relevance in relation to use of that mechanism.

Of those mechanisms covering each of the three areas, foreshore, territorial sea, and exclusive economic zone; more criteria were provided for by mechanisms providing protection closer to land. Generally, however, most, but not all criteria, were provided for in some form or another by at least one mechanism in each area. Some statutory mechanisms provided for protection in such sufficiently vague terminology that the specification could be interpreted to include a range of criteria. An example here included the term 'marine environment' which may provide for a range of ecological values. The level of protection provided by the different statutory mechanisms varied. Generally, a range of levels of protection were provided for by mechanisms, with the majority providing a moderate level of protection. Most mechanisms did not provide exclusive no-take restrictions. Consent or approval required from different organisations prior to implementation of that mechanism varied greatly. It was found that in many instances where consent was not likely to be forthcoming, the need for that consent could be alleviated through the use of alternative mechanisms with different requirements for consent while still retaining a similar purpose of protection.

6.2.3 PRESENTATION OF A PROCESS TO COMPARE DIFFERENT STATUTORY MECHANISMS.

The proposed process illustrates the framework within which a planning process operates, to provide for the overall goal of marine protection. Two stages provided for in some detail comprise area selection and mechanism selection. Area selection is intended to provide a process by which areas requiring protection may be identified. Mechanism selection, comprising the main component of this thesis, provides a means by which different mechanisms may be assessed in relation to their suitability to protect any specified location. Different mechanisms may chosen in relation to their suitability to the situation in case.

6.2.4 SUITABILITY OF THE PROPOSED PROCESS IN A RANGE OF SITUATIONS.
The proposed process was tested in relation to two case studies, Pollen Island and the Whanganui Inlet, being areas proposed and subsequently provided with statutory marine protection. The two areas were chosen to represent different cases in point in relation to their needs from the proposed process.

Pollen Island comprised an area of high ecological values, but many issues needed resolution prior to implementation of protection as a marine reserve. This lead to a long delay from the time of application to the area being gazetted. Use of the process was intended to ascertain alternative mechanisms that could be used to protect the area. A range of mechanisms were found to be potentially available to protect the area proposed as a marine reserve. Those identified included, wildlife sanctuary, conservation area, ecological area, sanctuary area and government purpose reserve. Possibly, the use of one of these mechanisms may have significantly reduced the six year process from time of application for a marine reserve to gazettal.

Whanganui Inlet, initially suggested as a marine reserve site, was gazetted as a marine reserve and wildlife management reserve in adjacent sections of the Inlet. This represented a need to provide two different levels of protection to both protect the ecological values of the area, yet retain the use of the area by customary users. Use of the proposed process, to assess different mechanisms to protect the area, and to ascertain the use of the proposed process in such a situation was tested in Chapter Five. The process is adequate in relation to such a use, providing the required information is available, opening the way to use it on other areas in need of more than one level of protection.

The two case studies differed in relation to the requirements for use of the process. Pollen Island was proposed as a marine reserve by a non-governmental, environment-oriented organisation. This contrasted with the Whanganui Inlet which was recognised by governmental departments as requiring protection. A preference by organisations, for use of mechanisms administered by the proponent of protection could, in practice occur. In the case of the Whanganui Inlet this did not occur, although the potential was there. A full investigation of alternative statutory mechanisms was considered in the case of the Whanganui Inlet, to determine that most suitable and acceptable to all. However, the potential preference by an organisation to use mechanisms administered by that organisation represents a need for a slightly different adaptation of the process developed. This may involve the removal of statutory mechanisms not administered by the organisation prior to the evaluation section in stage three of the process.

In relation to the two areas proposed for protection, Pollen Island was located adjacent to a highly modified environment, with most opposition to protection stemming from governmental groups. This differed to the Whanganui Inlet which is situated in a relatively pristine area, with an active local community with strong views on the management of the environment in which they live. This significantly affects the potential outcome of implementing potential mechanisms available for protection. Increased consultation was shown to alleviate potential problems of implementing protection.

Use of the two case studies displayed the potential for the process to be used in different ways. More than one mechanism was required for the Whanganui Inlet to incorporate the two levels of protection required. Pollen Island, however, only required one level of protection, but was affected by the current management of the foreshore, in relation to the lease to Ports of Auckland Ltd. Implementation of protection over Pollen Island involved much more negotiation between parties at a political-organisational level.

Similar results were obtained regarding mechanisms found to be potentially suitable through use of the process compared with those used to provide protection for both case studies. Potential reasons for the similarity in results include the information used. Information obtained by the proposer of protection, and the organisation responsible for implementation of the proposed mechanism was used for application of the process. Also, in the case of the Whanganui Inlet, the Department of Conservation, as the initiator of protection considered a full range of statutory mechanisms prior to selecting those chosen. All mechanisms were considered in relation to their suitability and so those most suitable in relation to the requirements of protection were selected. Results from use of the process for Pollen Island, however, differed slightly. Alternative mechanisms of potential use to protect the area proposed were identified. Reasons for this include the greater abundance of mechanisms available to protect the foreshore. Requirements for protection of the Whanganui Inlet extended below mean low water mark. Also Pollen Island's proposed area required only one level of protection, unlike the two levels required over the Whanganui Inlet. Less public opposition by residents of the area proposed for protection may also influence those statutory mechanisms considered acceptable. A much greater degree of public participation surrounded the selection of suitable mechanisms for the Whanganui Inlet (in terms of their use and constraints) than for Pollen Island. The Department of Conservation, after realisation of the difficulty of imposing a marine reserve over the entire Inlet, incorporated views of local groups which provided feedback on issues of importance to each group. It is important to note that the degree of information drawn on during the course of applying

the process for Pollen Island was significantly less to that used for the Whanganui Inlet. This may have had an impact on those statutory mechanisms identified.

Results from using the process on two case studies highlights its applicability for different situations. The process was shown to be generally applicable and adaptable in practical situations. Strengths of the process include its adaptability in relation to catering to the specific requirements of protection, while it is flexible in relation to the ability to add or remove mechanisms which need/do not need to be considered, allowing it to cater for different user groups. A potential weakness of the process is the degree of information required. The outcome of the process will reflect the quality of the inputs, for example, the available data and extent of public consultation.

6.2.5 FUTURE USE OF THE PROPOSED PROCESS.

The proposed process is designed to be used by any group or organisation interested in assessing different means to protect New Zealand's marine environment. Use of the two case studies has shown the process to be feasible. However, a great deal of information about the area to be protected needs to be known for use in the proposed process.

6.3 LIMITATIONS OF THIS STUDY

One restriction of the proposed process is that it incorporates much specific information contained within statutory mechanisms, information that is likely to change as legislation is updated. An example of this is the proposed fisheries legislation which will amend parts of the Marine Reserves Act 1971, as well as the statutory mechanisms contained within the Fisheries Act 1983 and other assorted legislation. Although this presents a problem in relation to information contained in the process, it is easily rectified by those with a knowledge of legislation. However, this may be more difficult for those with limited knowledge. Another problem is the restriction of the legislation to those mechanisms selected by the criteria identified in Chapter Two. This eliminates other, potentially useful statutory mechanisms from the proposed process. This problem, however can be easily solved with the insertion of any mechanism(s) required in the proposed process. Again this requires some knowledge of legislation from the user.

Another limitation of this study involves the use of criteria developed by different groups and organisations, each with a specific perspective on marine protection. Scientists and ecologists have developed criteria to represent ecological and species values. Values of other groups (e.g., Maori) may not be as well developed in the literature. Criteria used in this study to assess the suitability of statutory mechanisms to

provide for various criteria may therefore be biased. Criteria contained within the legislation will reflect the purpose for which the legislation was developed. Selection of mechanisms to be included in this study (as outlined earlier in the chapter) represents another limitation.

The proposed process is also limited in that it considers only statutory mechanisms. Non-statutory mechanisms such as rahui potentially available to protect areas were excluded on the grounds that they were not readily enforceable in law. The rationale for this involved the lack of enforcement available to implement these mechanisms, with the potential to implement an area protected on paper, but which for all practical intents is not treated any differently to its neighbouring counterparts.

6.4 ADAPTATION AND APPLICATION OF THE PROCESS

Development of the proposed process has highlighted the need for the consideration of a larger variety of statutory mechanisms by the advocates of marine protection. Most lay people perceive the Marine Reserves Act 1971 as providing for marine protection and do not consider alternative statutory mechanisms available which may be more suited to the area proposed. At present much marine protection centres around the Marine Reserves Act 1971, which, while providing a high level of protection, is limited in its purpose. Also, there may be a backlash from local communities if they do not perceive themselves to be taking a more active role or participation in the decision of whether or not to implement protection and if so, through use of what mechanism. Wolfenden (1995) has reported on the negative effects of technocracy with respect to the Hahei marine reserve proposal. "Residents felt strongly about having no personal involvement in the decision-making process" and recommended that social and environmental impacts be carried out in proposed reserve areas. Proof of a positive outcome through involving the public during the process of implementing marine protection occurred with the Whanganui Inlet. Involvement of representatives from different groups provided an acceptable compromise, alleviating the large number of potential objectors to protection.

Input by the general public in relation to areas proposed for protection may provide assistance for those seeking to protect areas for which the Marine Reserves Act 1971 is not the most suitable mechanism. At present information available to the public regarding statutory mechanisms available to protect New Zealand's marine environment is limited. The most comprehensive publication is the Royal Forest and Bird Protection Society's "Handbook of Environmental Law". The content of statutory mechanisms contained within the proposed process presented in this thesis will become outdated with

incoming legislation (e.g., the Fisheries Bill which is currently before the select committee, September 1995). There will be a need for a current, updated, accessible provision of information on different statutory mechanisms and their potential use to those not directly involved in environmental management.

The process developed in this thesis is intended to provide for the needs of a range of organisations and non-governmental groups interested in implementing protection over the marine environment. Implementation of protection by any one user group is likely to derive from different values which will be reflected in the choice of mechanisms. While the process outlined is limited because only some mechanisms have been considered, its further expansion at stage three (mechanism selection) can be undertaken by those with knowledge in the field.

In conclusion, the process contributes to the development of a more versatile approach towards marine protection. Because it allows for different solutions to emerge in response to different and sometimes competing values, the prospects for successful marine protection are enhanced.

LIST OF LEGISLATION CITED

Conservation Act 1987
Conservation Law Reform Act 1990
Historic Places Act 1993
Fisheries Act 1983
Fisheries Bill
Foreshore and Seabed Revesting Act 1991
Historic Places Act 1993
Maori Fisheries Act 1989
Marine Mammals Protection Act 1978
Marine Reserves Act 1971
Ministry of Agriculture and Fisheries (restructuring) Act 1995
National Parks Act 1980
Queen Elizabeth the Second Trust Act 1977
Reserves Act 1977
Resource Management Act 1991
Sugar Loaf Islands Marine Protected Area Act 1991
Territorial Sea and Exclusive Economic Zone Act 1977
Treaty of Waitangi (Fisheries Claims) Settlement Act 1992
Wildlife Act 1953
1994 Tables of New Zealand Acts and Ordinances and Statutory Regulations in Force (including Acts passed and Regulations made up to 1 January 1995). Wellington: New Zealand Government Printer, 1995.

LIST OF PERSONAL COMMUNICATIONS

Bob Drey (Ministry of Agriculture and Fisheries - Auckland, 1993-1994)
Rob Davidson (Department of Conservation - Nelson, 1994)
Richard Farneslow (Ministry of Agriculture and Fisheries - Auckland, 1994)
B. Ferguson (Nelson Farmer, 1994)
Louise Gobby (Auckland Regional Council - Auckland, 1993)
Geoff Higgins (Ports of Auckland Ltd. - Auckland, 1995)
Paul Irving (Department of Conservation - Auckland, 1993)
Guy Kerrison (Department of Conservation - Wellington, 1995)
Peter Maddison (Royal Forest and Bird Protection Society - Auckland, 1994-1995)
Chris Randall (Auckland Regional Council - Auckland, 1994)
Gerry Rushton (Ministry of Agriculture and Fisheries - Nelson, 1994)
Kaye Starke (Department of Conservation - Takake, 1994)

Nelson Working Party.

Ken King (coordinator, 1994)

Bob Butts (Commercial fisherman, 1994)

Andy Clark (Environmentalist,1994)

Bill Climo (Recreational fisher, 1994)

Jock Lill (Chairman of the Collingwood Community Board with an interest in Tourism, 1994)

Alan Lowen (Farmer, 1994)

Joyce Henderson (Neutral, 1994)

John Mitchell (Maori interests, 1994)

FILES CITED.

Department of Conservation, 1991, file COA:006A PFL:CMF, *Nelson/Marlborough Conservancy, Whanganui (Westhaven) Inlet protection*, 8 August 1991.

Department of Conservation, 1991, file COA:006A.

Department of Conservation, 1991, file COA:006A PDG, *Whanganui (Westhaven) Inlet Protection*, 14 June 1991.

Department of Conservation, 1992, file MPA0181.

Department of Conservation, 1994(a), file MPA 0042, Letter posted to organisations regarding proposed amendments to the Marine Reserves Act 1971, September 1994.

Department of Conservation, 1994(b), file MPA 0042, *Proposed Amendments to the Marine Reserves Act 1971*, 11 May 1994.

BIBLIOGRAPHY

Allen, R.E., 1990: *The Concise Oxford Dictionary (8th ed.).* New York: Oxford University Press.

Auckland Regional Council, 1989: *Draft Port Development Plan for Auckland.* Auckland: prepared jointly by the Auckland Regional Council, Auckland City Council, and Port Company.

Auckland Regional Council, 1994: *Proposed Auckland Regional Coastal Plan.* Auckland: Auckland Regional Council.

Ballantine, W.J., 1979: New Zealand's first marine reserve, *Environment 77*, 67-71 (Proceedings 7. Coastal Zone Workshop), Canterbury.

Ballantine, W., 1990: The significance of island reserves for ecological restoration of marine communities, *Proceedings of Conference on Island Management: Ecological Restoration of New Zealand Islands.* Wellington: Department of Conservation.

Ballantine, W., 1991: *Marine Reserves for New Zealand.* Auckland: University of Auckland Leigh Laboratory Bulletin No.25.

Bartol, K. and Martin, D., 1994: *Management.* New York: McGraw-Hill.

Battershill C.N. et al. (eds), 57-62. *Proceedings of the Second International Temperate Reef Symposium, 7-10 January 1992, Auckland, New Zealand.* Wellington: NIWA Marine. 252p.

Batty, M., 1979: On planning processes, in *Resources and Planning.*, Goodall, B. and Kirby, A., Pergamon Press, Oxford.

Bell, B.W., 1986: *The Conservation Status of New Zealand Wildlife.* Wellington: New Zealand Wildlife Service, Occasional Publication, No. 12.

Bills, K., 1990: *Strategic Flood Management: A Planning Process: Case Study Horowhenua.* Palmerston North: Massey University, Department of Geography, Master of Regional Planning Thesis (unpublished).

Collins English Dictionary (3rd ed.), 1991: Glasgow, Scotland: Harper Collins Publishers.

Campbell, G., Mann B., and Muir M., 1982: *The Natural Environment of the Auckland Region: A Bibliography and Inventory*: Auckland: Auckland Regional Authority, Planning Department.

Concom, 1985: *Summary Report of the Second Technical Workshop on Selection and Management of Marine and Estuarine Resources.* Jervis Bay, A.C.T.: Canberra college of advanced education field station.

Cotrell, N. 1988: Pollen Island, *Department of Conservation Wetland Inventory 1988.* [Wellington]: Department of Conservation (unpublished report).

Cronin, K., 1988: *Ecological Principles for Sustainable Management.* Wellington: Ministry for the Environment, July 1988.

Davidson, R.J., 1990: *A Report on the Ecology of the Whanganui Inlet, North-West Nelson.* Nelson: Department of Conservation, Nelson/Marlborough Conservancy, Occasional Publication, No. 2.

Department of Conservation, 1992: *Draft New Zealand Coastal Policy Statement.* Wellington: Department of Conservation.

Davidson, R., Stark K., Preece J., Lawless P., and Clarke I., 1993: *Internationally and Nationally Important Coastal Areas from Kahurangi Point to Waimea Inlet, Nelson, New Zealand; Recommendations for Protection.* Wellington: Department of Conservation, Official Publication, No. 14.

Department of Conservation, 1993(a): *Westhaven (Whanganui Inlet), North-west Nelson: application for a marine reserve and proposal for a wildlife management reserve.* (Ed.): R.J. Davidson & P.F. Lawless. Nelson/Marlborough Conservancy: Department of Conservation, Occasional Publication No. 12.

Department of Conservation, 1993(b): *Draft Conservation Management Strategy for Hawke's Bay Conservancy 1993-2003.* Napier: Department of Conservation, Hawkes Bay Conservancy.

Department of Conservation, 1994(a): *New Zealand Coastal Policy Statement, 1994.* Wellington: Department of Conservation.

Department of Conservation, 1994(b): *Report of the Department of Conservation Te Papa Atawhai for the year ended 30 June 1994.* Wellington: Department of Conservation.

Department of Conservation, 1994(c): *Revised Draft Conservation Management Strategy for Auckland 1993-2003.* Newton, Auckland: Department of Conservation, Auckland Conservancy.

Department of Conservation, 1994 (d): *Draft Conservation Management Strategy for Wellington 1994-2003.* Wellington: Department of Conservation.

Dean, L.F., 1979: Planning for environmental management: new directions and initiatives, *Coastal Zone Management Journal,* 5(4), 285-306.

Eagles, P.F.J., 1984: *The Planning and Management of Environmentally Sensitive Areas.* London and New York: Longman.

Eldon, G.A., and Ward, M., 1990: *Freshwater Fisheries in the Catchments of Whanganui Inlet, North-West Nelson.* [Christchurch]: New Zealand Freshwater Fisheries Report.

Francis, M.P., 1984: *Marine Reserves in New Zealand: History, Current Status and Recommendations for Future Progress.* Wellington: New Zealand Ministry of Agriculture and Fisheries, Fisheries Research Division, Internal Report No. 17.

Gardner, J.E., 1984: *Coastal Conservation in New Zealand.* Christchurch: University of Canterbury, Department of Geography, PhD Thesis (unpublished).

Goodall, B. and Kirby, A., 1979: *Resources and Planning.* Oxford, New York: Pergamon Press.

Grange, K., 1990: *Selection Criteria for Marine Protected Areas: A Discussion Document.* Wellington: Prepared for the Department of Conservation project No. s1030/584 by the New Zealand Oceanographic Institute and DSIR Marine and Freshwater.

Handford, C., 1986: *Planning for Marine Protected Areas in New Zealand.* Auckland: University of Auckland, Department of Planning, Essay for the Diploma of Town Planning.

Hodder, J., and Pepperell P. (eds), 1994: The Fisheries Bill, in *The Capital Letter,* 17(47), pp.13.

Hodder, J., and Pepperell P. (eds), 1995: Statutory regulations, in *The Capital Letter,* 18(26), pp. 11.

International Union for the Conservation of Nature, 1978: *Categories, Objectives and Criteria for Protected Areas.* Morges, Switzerland: International union for the conservation of nature and natural resources.

International Union for the Conservation of Nature, 1982: Categories, Objectives and Criteria for Protected Areas. IUCN's Commission on National Parks and Protected Areas, in chapter 2 in McNeely J.A., Miller K.R. (eds)., 1984: *National Parks, Conservation, and Development: the Role of Protected Areas in Sustaining Society., Proceedings of the world congress on National Parks, Bali, Indonesia, 11-22 October 1982.* Washington D.C.: Smithsonian Institute Press.

Jebson, M.P., 1987: *Coastal and Marine Conservation: A New Zealand Perspective.* Canterbury: University of Canterbury, Masters of Resource Management Thesis (Unpublished).

Jeffs, A., 1993: Opportunities for marine protection in other legislation: New Zealand Conservation Authority, *Marine Conservation and Wildlife Protection conference 1992.* Wellington: New Zealand Conservation Authority.

Kozlowski,J., Hill, G., Rosier, J., 1986: *Planning with the Environment: Introduction to the Threshold Approach.* Queensland: University of Queensland Press.

Lang, R. (ed.), 1986: *Integrated Approaches to Resource Planning and Management.* Banff, Alta: Banff Centre School of Management, Resource Management Programs.

Lichfield, N., Kettle P., and Whitbread M., 1975: *Evaluation in the Planning Process.* Oxford: Pergamon Press.

Manion, T., and Flowerdew R., 1982: Introduction: institutional approaches in geography, in Flowerdew, R. (ed.)., 1982: *Institutions and Geographic Patterns.* New York: St Martins.

McAuley, I.G., 1993: *A Realist Interpretation of the Processes Used to Establish Marine Reserves in New Zealand.* Auckland: University of Auckland, Department of Geography, MSc Thesis (unpublished).

Minister of Transport, 1991: Letter to Department of Conservation regarding marine reserve proposal at Pollen Island, 29 April, 1991.

Ministry of Agriculture and Fisheries, 1989: *Proposed Auckland Fishery Management Plan.* Auckland: Minister of Agriculture and Fisheries.

Ministry of Agriculture and Fisheries, 1993: *Ministry of Agriculture and Fisheries Annual Report (1 July 1992 - 30 June 1993).* Wellington: Ministry of Agriculture and Fisheries.

Ministry of Agriculture and Fisheries, 1994: *Ministry of Agriculture and Fisheries Outcome Statements 1993/1994.* Wellington: Ministry of Agriculture and Fisheries.

Mitchell, B., 1989: *Geography and Resource Analysis.* Harlow, Essex, England: Longman Scientific and Technical, and New York: Wiley (2nd ed.).

Mitchell, H.A., and Mitchell M.J., 1990: *First Order Survey: Maori Community Responses, Kahurangi to Delaware Bay.* [Nelson]: Mitchell Research.

Ng, M.K., 1993: Strategic planning in Hong Kong: Lessons from TDS (Territorial Development Strategy) and PADS (Port and Airport Development Strategy), *Town Planning Review,* 64(3), 287-311.

Park, G., 1993: Personal communication in Davidson R.J. et al., 1993, pp. 20.

Palmer, G., 1987: *Unbridled Power: An Interpretation of New Zealand's Constitution and Government.* Oxford: Oxford University Press.

Pearse, P.H., 1991: *Building on Progress: Fisheries Policy Development in New Zealand.* Wellington: Commissioned by the Ministry of Agriculture and Fisheries.

Ray, G.C., 1976: Critical Marine Habitats: Marine Parks and Reserves. *Proceedings of an International Conference on Marine Parks and Reserves, Tokyo, Japan, 12-14 May 1975.* Morges, Switzerland: IUCN Publication New Series No.37.

Royal Forest and Bird Protection Society of New Zealand, 1989: *A Report on the Royal Forest and Bird Protection Society Nomination of MOTU MANAWA (Pollen Island) Marine Reserve.* Auckland: Royal Forest and Bird Protection Society of New Zealand, unpublished Report.

Royal Forest and Bird Protection Society of New Zealand, 1992: *Handbook of Environmental Law.* Wellington: Royal Forest and Bird Protection Society Inc.

Salm, R., and Clark, J., 1984: *Marine and Coastal Protected Areas: A Guide for Planners and Managers.* Switzerland: International Union for Conservation of Nature and Natural Resources.

Smitheram, G.J., 1986: *An Appraisal of Coastal Zone Management Problems, and Potential Approaches for Institutional Reform.* Christchurch: University of Canterbury and Lincoln College, MSc Thesis (unpublished).

Stringer, J., 1967: Operational Research for 'Multi-Organisations'. *Operational Research Quarterly,* Vol. 18 (2).

Tisdell, C., and Broadus J.M., 1988: *Marine Reserves: Relevant Policy and Management Issues with Examples from the Great Barrier Reef Marine Park, Australia, and the United States.* Newcastle: University of Newcastle, Research Report or Occasional Paper No. 157, No. 6 Research and Development Research Papers.

Towns, D.R., Daugherty, C.H., and Atkinson, I.A.E. (eds), 1990: *Ecological Restoration of New Zealand Islands.* Wellington: Department of Conservation, Conservation Sciences Publication, No. 2.

Waitemata Harbour Maritime Planning Authority, 1987: *Waitemata Harbour Maritime Planning Scheme [Auckland N.Z.].* Auckland: Waitemata Harbour Maritime Planning Authority.

Walls, K., and McAlpine, G., 1992: Developing a Strategy for a Network of Marine Reserves around New Zealand - A Managers Perspective, in Battershill C.N. et al. (eds), 57-62. *Proceedings of the Second International Temperate Reef Symposium, 7-10 January 1992, Auckland, New Zealand.* Wellington: NIWA Marine. 252p.

Wengert, N., 1971: Political and social accommodation: the political process and environmental preservation, *Natural Resources Journal,* 11(3): 437-446.

Wolfenden, J., 1995, Marine Reservations, *New Zealand Science Monthly,* December 1994/January 1995, 5(11) 13-14.

APPENDIX ONE

THEORETICAL CRITERIA DEFINITIONS

ECOLOGICAL CRITERIA

Ecology "is the study of the relationship of living organisms with each other and with their environment" (Cronin, 1988, 13). Any form of sustainable development relies on the continuation of ecological processes. Two distinct parts of ecology are the physical environment, and the biological species and processes.

1. Distinctive and Unusual Landform

Physical factors: Geography and geomorphology of the area.

"The area represents a distinctive and unusual landform" The protection of one portion may lead to a throughflow effect to other areas not protected. eg., protection of the higher section of a watershed may prevent less clean water downstream.

2. Unique Area

Common and/or unique area. (New Zealand is unique due to its South Pacific location, long isolation, largely temperate climate, geology, and topography).

"Uniqueness: whether an area is 'one of a kind.' Habitats of endangered species occurring only in one area are an example. The interest in uniqueness may extend beyond country borders, assuming regional or international significance. To keep visitor impact low, tourism may be prohibited but limited research and education permitted. Unique sites should always have a high rating" (Salm, 1984, 224). "Uniqueness can be determined by the frequency of occurrence of a given natural environmental element, or, more often, of its particular components within the whole country or in particular regions. The spatial differentiation of this occurrence can be characterised by three classes, unique, rare, and common" (Kozlowski, 1986, 41). The amount of transformation and uniqueness should, and where possible be considered and if it would be possible for the system to revert back to its original state and if so the time which would be required. This information is difficult to obtain for marine areas as not much work has been done in this area.

3. Area significance

Significance of the area. The area may be internationally, nationally, or regionally significant. Different areas of significance that must be analysed and considered include:
Community attributes

-dominant species
-diversity -population characteristics (degree of breeding in the area)
-habitat requirements

Species attributes
-significance
-endemicity

Use by species

Interdependence with other species.

4. Representative Area

"Representativeness, the degree to which an area represents a habitat type, ecological process, biological community, physiographic feature or other natural characteristic. If a habitat of a particular type has not been protected, it should have a high rating. (A classification scheme for coastal and marine areas is desirable in applying this criterion)" (Salm, 1984, 224).

Regional representation.

The area is characteristic of the broad biogeographic region in which it is located.

Subregional representation.

The area under consideration is representative of the biogeographic subregion in which it is located. For example, this criterion would apply to an area containing species assemblages that are especially characteristic of the Oregonian subregion of the British Columbian region. Another example would be an area containing species assemblages that are especially characteristic of the Floridian or American Atlantic Antillean subregion of the West Indian region.

Community representation.

The area is significant for the ecological communities that are found within the specified habitat type or within the biogeographic region or subregion. For example, coral reef, grass bed, soft bottom, and open bay habitat areas in the Key Largo National Marine Sanctuary support a variety of ecological communities associated with the east Florida reef tract" (Salm, 1984, 226).

"The ability of a site to represent a large number of the characteristic ecosystems of a geographic area is important" (Eagle, 1984, 45).

5. Typicalness

Inclusion of representative sites which may be widespread in distribution.

6. Character

7. Marine Environment

8. Ecosystem processes, structure and habitat features

"The area is characterised by special chemical, physical, and/or geological habitat features. Transition zones occur where two different marine ecosystems converge, such as at coastal/marine system interfaces, shelf/slope interfaces, soft bottom/hard bottom ecotones, or cold water/warm water current convergence zones. These areas of mixing often have unique physical and ecological characteristics, high production, and species diversity and population densities greater than in areas flanking them" (Salm, 1984, 227).

9. Ecological habitat integrity

The degree to which the area is a functional unit-an effective, self-sustaining ecological entity. The more ecologically selfcontained the area is, the more likely its values can be effectively protected, and so a higher rating should be given to such areas" (Salm, 1984, 225). To preserve habitats (and habitat types) considered critical for the survival of species and populations which are depleted, threatened, or endangered. Areas relevant to life history stages. Benthic communities, water columns.

10. Productivity

"The degree to which productive processes within the area contribute benefits to species or to humans. Productive areas that contribute most to ecosystem sustainment should receive a high rating. Exceptions are eutrophic areas where high productivity may have a deleterious effect" (Salm, 1984, 225).

11. Sustainability

12. Species maintenance

"The area is important to life history activities, including special feeding, courtship, breeding, birthing/nursery, resting/wintering, and migration areas. For example, the waters around certain Hawaiian islands are important wintering, birthing/nursery, and perhaps courtship/breeding areas for important humpback whales; spiny lobster migration routes off Florida are important for the "off shelf" movement of this species; and the mouth of the Mississippi River is an important brown shrimp overwintering ground" (Salm, 1984, 227).

13. Genetic diversity preservation

Preservation of genetic diversity is both a matter of insurance and investment as stated by the world conservation strategy.

-to sustain and improve fisheries production
-to keep open future options
-as a buffer against harmful environmental change
-raw material for scientific and industrial innovation
-moral principal
-future generations
-preservation of aesthetic values
-tourism, recreation, education, conservation.

14. Rarity

"The protection of rare or local species is an important consideration" (Eagle,1984, 45) i.e., the protection of rare/unusual or high quality local plant and/or animal communities of an area. Also, "if the area is an unusual habitat with limited representation, ... or a small remnant of particular habitats which have virtually disappeared. Habitats for rare and endangered indigenous species that are endangered regionally, provincially, or nationally" (Eagle, 1984, 46). Also, marine habitats on which rare species are dependent during all or part of their lives contributes to this criteria.

15. Ecologically important species

"This criterion would apply to marine areas containing species that contribute in a significant way to the maintenance of a specified ecosystem in the region or subregion, such as the Channel Islands National Marine Sanctuary, which supports one of the largest and most varied assemblages of marine mammals and seabirds in the world" (Salm, 1984, 227).

16. Indigenous Flora and Fauna

Characteristic of the native land/marine ecosystem.

Flora and Fauna in the area. Its rarity, stability, distribution, value (commercially, aesthetically, for recreation fishing and collecting etc.). For example rarer, less widely dispersed, less stable species would rank more highly than a common, stable, rapidly growing, widely dispersed species.)

Flora and Fauna, their uniqueness, rarity, productivity.

Diversity - Larger numbers of species and communities is desirable and may be due to " a variety of geomorphological features, soils, water, sunlight and associated vegetation and microclimate effects" (Eagle, 1984, 46).

17. Wildlife

"means any animal that is living in a wild state, and includes any such animal or egg or offspring of any such animal held or hatched or born in captivity, whether pursuant to an authority granted under this Act or otherwise; but does not include any animals of any species specified in the sixth schedule to this Act (being animals that are subject to the Wild Animal Control Act 1977)" s2 Wildlife Act 1953.

18. Uniqueness (Species and Species associations)

Unique species associations. For example, the waters off Point Lombos, California, support a unique assemblage of kelp, sea urchin, abalone, and sea otters. Submarine canyons support unusual biological communities of soft corals, crustaceans, and fish. This criterion would also apply to wide sandy bottom areas characterised by low productivity, but unique species composition, such as certain areas off central Texas" (Salm, 1984, 227).

19. Diversity

Diversity of habitats "the variety or richness of ecosystems, habitats, communities, and species. Areas having the greatest variety should receive higher ratings. However, this criterion may not apply to simplified ecosystems, such as some pioneer or climax communities, or areas subject to disruptive forces, such as shores exposed to high energy wave action" (Salm, 1984, 224).

Diversity within the regional environment-local or regional

varieties of terrestrial and marine organisms

20. Dependency

"The degree to which a species depends on an area, or the degree to which an ecosystem depends on ecological processes occurring in the area. If an area is critical to more than one species or process, or to a valuable species or ecosystem, it should have a higher rating" (Salm, 1984, 224).

21. Naturalness

"The lack of disturbance or degradation. Degraded systems will have little value to fisheries or tourism, and make little biological contribution. A high degree of naturalness scores highly. If restoring degraded habitats is a priority, a high degree of degradation may score highly" (Salm, 1984, 224).

Natural unit size and buffer zone compatibility (Ray, 1976)

Also affecting naturalness is the level of transformation. This is defined as how far any given environmental elements or their components have changed as compared with the

original state, that is, the state in which self-regulating natural mechanisms are working and the balance between biotic and abiotic factors is maintained. Three distinct degrees of transformation can be distinguished: minimal, partial, and total. The last can be divided into reversible and irreversible. (Kozlowski, 1986, 41). Modification by Humans. Vegetation pattern altered little from the original. A factor may be the water quality of the area.

22. Resilience / Vulnerability

Resilience of ecologically sensitive areas in deriving ecological limits to development. The ecological and spatial limits (whether derived qualitatively or quantitatively) need to be determined where there might be irreversible damage. For example, a more stable area which has greater productivity and more links in the food chain may be better able to have some degree of fishing within the protected area as compared to a unique area with rare species (flora and fauna) and low productivity with few links in the food chain.

"Vulnerability: the areas susceptibility to degradation by natural events or the activities of people. Biotic communities associated with coastal habitats may have a low tolerance to changes in environmental conditions, or they may exist close to the limits of their tolerance (defined by water temperature, salinity, turbidity, or depth). They may suffer such natural stresses as storms or prolonged emersion that determine the extent of their development. Additional stress (such as domestic or industrial pollution, excessive reductions in salinity, and increases in turbidity from watershed mismanagement) may determine whether there is total, partial, or no recovery from natural stress, or the area is totally destroyed" (Salm, 1984, 225).

Degree of damage:

Type of occurrence -possible not imminent
-Imminent and planned
-Imminent and not planned.

23. Natural features

24. Corridor potentiality

Passage of species from location to location. Difficult in the marine environment, however protection may be species particular, for example migratory species.

25. Size

Size of each unit to be used for different purposes (ie. building, preservation, protection etc.) This will be based on ecological processes of the area. For example if the area is an excellent breeding ground the size must cover the breeding area. Also, the Human population's needs must be considered. If the area covers too much beach front, local residents accustomed to early morning fishing may not wish to walk for miles to catch fish. The surrounding population must therefore also be considered. Site importance increases with the geographical area which it serves, and larger areas may be required for survival by some species.

26. Stock Replenishment

Protection of areas providing for the maintenance and/or development of marine organisms will aid in the survival and replenishment of species. Areas set aside should ideally provide the requirements necessary for marine organisms to sustain themselves.

27. International Interest

In the international interest to protect the area. May include a range of values, eg. rare species, unique community etc.

28. National Interest

In the national interest to protect the area. Various values may be included, eg rare species, nationally significant area etc.

SOCIAL:CULTURAL CRITERIA

1. Social acceptance

The degree to which the support of local people and the general public is ensured. How people in the area (and those distant to the area) value the resource. The level of support afforded or willing to be given to the area/s. This can in part be measured by: The willingness to pay by people for marine development or protection, or to set aside a particular area for a designated use. People may propose higher amounts than they would be willing to pay at the crunch time and this must be taken into account.

The public need to support the use of the coastal area and it is the job of the planner to determine to what level this support lies. How the public values different activities and to what extent needs to be assessed. In general, the different factions and their importance/representativeness needs to be considered. The public needs to know what impact the restricted uses would have on their personal lives and this should be clear

when their views are gathered.

2. Community interest

This may include Intrinsic appeal or aesthetic value. Protection of areas for widespread community interest. This category may also include the amenity value.

3. Special interest

4. Other interest

5. Locality

Accessibility of the area. Easily accessible areas close to a large number of people have a higher level of use, providing greater public benefit in terms of education and recreation, but are also associated with more user conflicts and a lower level of protection for the environment.

6. Level of use

The level of use considered most worthwhile by locals and the public and a favoured/ideal use for the area and demands for other uses. Full implications of this choice need to be realised in the planning process.

7. Need of area for activities

User groups needs and their aspirations for the future.

The significance of species or/and habitats for human activities. e.g., resource collectors. This will differ according to the area. Concerned groups should know how they are affected. Surveys may be useful to gather the required information.

8. Potential activity impacts

Existing and potential human activities and a preliminary assessment of their environmental impacts. "Since pressures may arise from various activities, the present or potential ecological significance of each activity, and their cumulative impacts must be analysed so that appropriate management action may be designed and implemented" (Salm, 1984, 228).

9. Adjacent land use

Is the area adjacent to an existing marine or land park/reserve which could be complemented by a particular use (e.g., by zoning). Siltation/erosion from adjacent land can have an adverse impact on the area's environmental quality.

10. Recreation

Recreational activities provide for a higher quality of life through enjoyment, use, and learning about the environment. Ecological and aesthetic resources may be "of importance for recreational activities other than fishing" (Salm, 1984, 227).

11. Traditional use and users

Consideration of the continued welfare of people who have customarily used the area. This includes local residents and Maori of the area. Traditional food gathering is one use.

12. Traditional Maori food gathering

13. Traditional Recreational Fishing

The area may contain "fish and shellfish species, species groups (eg. the snapper-grouper complex), or fishery habitats that are important to the recreational fishing industry and community whose conservation and management is in the public interest. For example, the Florida Middle Grounds rank high in statistical surveys of demersal and pelagic fish catch, recreational participation, and socioeconomic contribution" (Salm, 1984, 227). Traditional hunting and fishing, especially with respect to indigenous people is an important factor in protecting any area unless those species are endangered or very rare.

14. Culture

The religious, historic, artistic, or other cultural value of the site. Natural areas that also contain important cultural features should be given high ratings as their protection may help to maintain the integrity of the adjacent ecosystems.

15. Maori interest

16. Spiritual values

17. Education

Education: two functions.

1. Increasing general public awareness and understanding of marine ecosystems, for example through the provision of interpretive facilities and publicity material at or close to the main entry points

2. As a focus for special educational programmes run through schools on marine ecology. This could involve the establishment of small Marine Protected Areas located close to major areas which are managed expressly for educational purposes" (Handford,

1986, 6).

"The degree to which the area represents various ecological characteristics and can serve for research and demonstration of scientific methods. Areas that clearly demonstrate different habitat types and ecological relationships and are sufficiently large both to serve conservation and to accommodate teaching (ie., field trips or on-site learning centres) should receive a higher rating" (Salm, 1984, 223-224).

Criteria important for cultural, recreational and educational features include:
Diversity and abundance
Physiography and topography
Uniqueness and rarity
Climate, weather and oceanographic conditions
Scientific value
Cultural value

18. Safety

"The degree of danger to people from strong currents, surf, submerged obstacles, waves, pollution etc. The principal users will often be swimmers, snorkelers, divers, and boaters. It is important that they are able to pursue their activities safely" (Salm, 1984, 223).

19. Amenities

Facilities within the area, eg. carparks, toilets etc.

Consider social limits when/of providing settings for specified recreational or tourism experiences. Anchorages may also be considered an amenity. Zoning of sites may be possible to allow access and most activities associated with overnight or longer anchoring of vessels to continue. In sensitive and potentially heavily used areas, the need for anchoring should be removed by the provision of moorings and a requirement that these should be used.

20. Aesthetics (scenic/visual)

A seascape, landscape, or other area of exceptional scenic or visual beauty.

21. Beautiful Species

22. Intrinsic value

23. Archaeological - Historical/Heritage

Historical, archaeological, cultural or palaentological sites/values. "The area contains (or is likely to contain) submerged remnants of past life that are of special historical, cultural, or palaeotological value. For example, this criterion would apply to marine areas where known or possible shipwrecks, armaments, or other maritime relics are found and where protection is desirable to conserve or restore aesthetic values and to advance U.S. laws protecting historical resources. This criterion would apply to marine areas containing, or suspected of containing, remnants of historic human occupation" (Salm, 1984, 228). This would include historical Maori values. "It also would apply to marine areas containing fossils and geologic formations with clues to the Earth's geologic history, the characteristics of ancient environments, and the relationship of ancient plants and animals to the earth's evolutionary history" (Salm, 1984, 228). The area's heritage value is intangible, it may be of immense significance.

-Ecological heritage (species, landforms - unique in world)

-Cultural heritage (buildings, artifacts, remains)

24. Public relations and extension

Interpretive opportunity: "The area provides an excellent opportunity to interpret the meanings and relationships of special marine resources to enhance general understanding, appreciation, and wise use of the marine environment. For example, through a variety of interpretive media, including aquarium displays, narrated slide shows, and glass bottom boat tours, a visitor to the Key Largo National Marine Sanctuary is exposed to a variety of marine and coastal ecosystems, including open ocean, fringing coral reefs, patch reefs, mangroves, and open bay and barrier islands. The Channel Islands National Marine Sanctuary provides an exceptional opportunity to interpret marine and insular ecosystem features through the use of various participatory techniques that go beyond such traditional educational tools as brochures and pamphlets" (Salm, 1984, 228).

25. Defence areas

These areas may need to be set aside for defence requirements.

26. Conflicts of interest

27. Enjoyment/Inspiration.

To provide for the continued welfare of people living in the area may be included in this category.

ECONOMIC CRITERIA

1. Shipping

The access of international, or national shipping, or their routes or to existing ports on the coast, or potential ports.

2. Commercial Fishery resources

"Fishery resources of commercial importance ...whose conservation and management is in the public interest. (Salm, 1984, 227). Commercial fishing makes up a significant percentage of New Zealand's export dollars. As fish is becoming more popular as a food source in many countries due to changes in diet there is an increased demand for its supply despite reduced stock levels due to overfishing.

3. Importance to fisheries

"The number of dependent fishermen and the size of the fishery yield. The greater the dependence of fishermen on an area, and the greater its yield of fishes, the more important it becomes to manage the area correctly and to ensure sustainable harvest" (Salm, 1984, 227).

4. Biological productivity

"The area is significant for its level of primary and/or secondary production. For example, East Breaks at the edge of the outer continental shelf off Corpus Christi, Texas, is characterised by intense local upwelling, high primary productivity, and exceptional fish production." (Salm, 1984, 226).

5. Area importance to species

Consideration of the importance of the area to species. ie. commercially important species. "Reefs or wetlands, for example may be critical habitats for certain species that breed, rest, shelter, or feed there and that form the basis of local fisheries in adjacent areas. Such habitats need management to support these stocks" (Salm, 1984, 226).

6. Research opportunity

Research opportunity or scientific study of species. Classified as an economic criteria if the species studied is economically important.

7. Nature/Degree of threats

"The extent to which changes in use patterns threaten the overall value to people. Habitats may be threatened directly by destructive practices, such as fishing with explosives and certain bottom trawls, or by over exploitation of resources. Areas

traditionally harvested by local fishermen become important to manage. The numbers of fishermen on these grounds may increase, bringing extra pressure to bear on stocks and habitats. Even if the numbers do not change, the traditional capture methods may be replaced by others that yield more per unit effort (an extreme example is the use of explosives). The stocks of some species may not be capable of withstanding such increased drains on their breeding populations. In this way whole species have disappeared from fishing grounds or have become exceedingly rare" (Salm, 1984, 224).

8. Suitability for activities - Potential value/Alternative use

The suitability of the resource for various activities in different localities.

9. Economic benefits

Economic benefits: "The degree to which protection will affect the local economy in the long term" Initially, some protected areas may have a short-lived, disruptive economic effect. Those that have obvious positive effects should have higher ratings (for example, for protecting feeding areas of commercial fishes or areas of recreational value)" (Salm)

10. Ecodevelopment

Ecodevelopment - economic development undertaken in a manner which is ecologically sensitive. Overdevelopment or over exploitation may adversely affect the quality of life. It is necessary to consider the benefits both in the short and long term.

11. Tourism

"The existing or potential value of the area to tourism development. Areas that lend themselves to forms of tourism compatible with the aims of conservation should receive a higher rating" (Salm, 1984, 224). Tourist companies which provide guides and take tourists in groups may in some instances have less impact on the environment. Awareness of damage from overuse needs to be taken into consideration.

APPENDIX TWO

MECHANISMS SELECTED FOR ANALYSIS

Statutory mechanisms available to protect New Zealand's marine environment are briefly discussed in this section, for the purposes of the proposed process presented in Chapter Three. Mechanisms considered are restricted to those within the legislation indicated in Table 1. Those excluded often apply only in specific circumstances and are not appropriate for a generalised planning process for use in determining the most ideal legislation for protection of a specific area by a range of guidelines.

Mechanisms selected for use within the proposed planning process are restricted to those covering part of the coastal marine area. Conservation covenant, Private protected land, Marginal strip, and Open space covenants are included in this chapter, but not contained within the proposed process as their use is restricted to special case situations where 'land' may include the foreshore. Marginal strip is also briefly noted in this section but not continued with in the proposed process.

The following Acts and mechanisms are presented in accordance with the organisation responsible for them. The statutory mechanisms analysed are considered in terms of: criteria contained within each, coverage, level of protection afforded, ability of the mechanism to provide specific forms of protection, ease of implementation to specific situations, consent required, and enforcement potential.

1	Department of Conservation
1.1	Resource Management Act 1991
1.2	Conservation Law Reform Act 1978
1.3	Marine Reserves Act 1971
1.4	Marine Mammals Protection Act 1978
1.5	Wildlife Act 1953
1.6	Conservation Act 1987
1.7	Reserves Act 1977
1.8	National Parks Act 1980
1.9	Historic Places Act 1993
2	Ministry of Fisheries
2.1	Fisheries Act 1983
2.2	Maori Fisheries Act 1989
2.3	Treaty of Waitangi (Fisheries Claims) Settlement Act 1992
3	Ministry of External Relations and Trade
3.1	Territorial Sea and Exclusive Economic Zone Act 1977
4	Local Government
4.1	Resource Management Act 1991
5	Queen Elizabeth National Trust
5.1	Queen Elizabeth II Trust Act 1977

1 DEPARTMENT OF CONSERVATION

1987 heralded the passing of the Conservation Act into law which marked a major turning point for management of conservation resources in New Zealand. "An Act to promote the conservation of New Zealand's natural and historic resources, and for that purpose to establish a Department of Conservation," the resultant effect of which has created an organisation strongly directed toward planning for and management of New Zealand's natural resources. In 1990, the Conservation law reform, "An Act to amend the law relating to conservation organisations, freshwater fish and game, conservation management planning, and marginal strips" (Conservation Law Reform Act 1990) was passed, further clarifying the Department's roles and responsibilities with respect to management of resources. The Conservation Law Reform Act 1990 provides for the integration of planning and management of different areas and statutory responsibilities of the department, through Conservation Management strategies and plans, which are to be developed as specified by the Act.

Legislation the Department of Conservation is responsible for (in relation to those included in the proposed process), and which are to be included in conservation

management plans and strategies currently being developed include the Conservation Act 1987, Marine Mammals Protection Act 1978, Marine Reserves Act 1971, National Parks Act 1980, Reserves Act 1977, and the Wildlife Act 1953. The Conservation Act 1987, provided mechanisms of use to provide protection to areas for conservation purposes. The base mechanism provides for conservation areas which can then be afforded additional protection by way of further classification into other protected areas. For example, a conservation area may become "a conservation park, an ecological area, a sanctuary area, a wilderness area, for any other specified purpose or purposes, or for 2 or more of those purposes" (s18, Conservation Act 1987). Conservation areas are designed to protect areas of land and foreshore. The 1991 Foreshore and Seabed Revesting Act defined the foreshore as being Crown land, to be administered by the Crown. Provisions for reclassification of protected areas to be managed within different mechanisms has also been made more flexible with an amendment to the Conservation Act 1987 by the Conservation Law Reform Act 1990. This provides that "The Minister [of Conservation] may from time to time, by notice in the *Gazette*, declare any conservation area to be a reserve under the Reserves Act 1977 and to have a classification under that Act, or to be included in any existing reserve under that Act, and may in like manner amend or revoke any such notice; and every such declaration shall have effect as a reservation under that Act for the purposes specified in the notice." (Section 8(1A) Conservation Act 1987, as INSD by s 6(1) of 1990 No. 31). An example would include government purpose reserves which may be created from conservation areas.

The Department of Conservation is responsible for implementation of a *New Zealand Coastal Policy Statement*, a mandatory document providing for the protection of areas of the coast of significant value and retaining the power of decision on major resource consents within the coastal marine area.

Another means of protection available to the Department of Conservation is its advocacy role under the Resource Management Act 1991 and other Acts which may require discussion or concurrence with the Department. Protection through mechanisms provided by this Act are generally focused on the prevention of adverse impacts. This is in direct contrast to alternative mechanisms which provide specific protection status over specified areas, and which often provide a higher level of protection.

To summarise, the Department is responsible for the administration of overall documents containing policy for conservation management on a national and regional scale and ensuring at the local level adequate protection of areas as well as having a more

practical role by use of mechanisms provided within Acts it administers. The Department of Conservation has an important role to play in the protection of New Zealand's coastal environment. Other organisations which also have an important role are the Ministry of Fisheries, and Regional Councils. The roles of these organisations are distinct in most cases, although there may be an unavoidable overlap in certain areas. For example, Regional Councils are required to provide sustainable management of the coastal marine area, an environment which can be affected by fishing techniques which comes under the jurisdiction of the Ministry of Fisheries. The need for protection in the coastal environment by use of a particular mechanism will often require consent from the other organisations involved.

Mechanisms contained within the proposed process presented in Chapter Three which the Department of Conservation has primary responsibility for implementation and management of are outlined below. The mechanisms are presented inside borders to allow easy identification from the Acts within which they lie. Factors identifying suitability for use in particular instances, as specified earlier are included within the analysis of each mechanism.

1.1 RESOURCE MANAGEMENT ACT 1991

The Resource Management Act 1991 provides for the development of a *New Zealand Coastal Policy Statement* by the Department of Conservation. This comprises a mechanism by which the Department of Conservation has control of the preservation of the coastal environment within legislation primarily administered by local government.

New Zealand Coastal Policy Statement:

Specification of areas of significant value requiring a higher level of protection, and the degree of protection is contained within the coastal policy statement as prepared by the Department of Conservation.

The *New Zealand Coastal Policy Statement* must have regard to the purpose of the Resource Management Act and may state policies about the matters to be included in any or all regional coastal plans in regard to the preservation of the natural character of the coastal environment, including the specific circumstances in which the Minister of Conservation will decide resource consent applications relating to (i) Types of activities which have or are likely to have significant or irreversible effects on the coastal marine area; or (ii) Areas in the coastal marine area that have significant conservation value: (s58(e) Resource Management Act, 1991). Also included in the guidelines are policies on "National priorities for the preservation of the natural character of the coastal environment of New Zealand, including protection from inappropriate subdivision, use and development [and] The protection of the characteristics of the coastal environment of special value to the tangata whenua including wahi tapu, tauranga waka, mahinga mataitai, and taonga raranga; activities involving the subdivision, use, or development of areas of the coastal environment; the Crown's interest in land of the Crown in the coastal marine area; the implementation of New Zealand's international obligations affecting the coastal environment; The procedures and methods to be used to review the policies and to monitor their effectiveness; [and] Any other matter relating to the purpose of a *New Zealand Coastal Policy Statement*" (Section 53, Resource Management Act, 1991) as required to be included by the Resource Management Act 1991.

Although a higher level of protection may be obtained via the Regional Coastal Plan as a result of the *New Zealand Coastal Policy Statement*, this protection is again baseline, providing for a restriction in harmful activities. The specified area needs to be considered of significant conservation value for this additional protection, and if the area warrants it, protection is provided regardless of public and other reasons for protection of an area. Applicability of this mechanism will therefore depend on representation of the specified area within the *New Zealand Coastal Policy Statement* and needs to considered on a case by case basis. Enforcement orders may be applied if necessary with the same penalties as those stipulated within the Regional plan/Regional coastal plan.

Policies contained in the 1994 *New Zealand Coastal Policy Statement* which are relevant to marine protection are briefly listed below.

"1.1.2 Preservation of he natural character of the coastal environment to protect areas of significant indigenous vegetation and significant habitats of indigenous fauna.

1.1.3 Protection of essential or important features (specified in the New Zealand Coastal Policy Statement).

1.1.4 Preservation of the natural character of the coastal environment to protect the integrity, functioning, and resilience of the coastal environment.

1.1.5 To restore and rehabilitate the natural character of the coastal environment where appropriate.

3.1.1 Use of the coast by the public should not be allowed to have significant adverse effects on the coastal environment, amenity values [etc.]

3.1.2 That policy statements and plans should identify ... those features, which are important to the region or district and which should therefore be given special protection; and that policy statements and plans should give them adequate protection.

3.1.3 That policy statements and plans should ... give appropriate protection to areas of open space.

3.3.1 A precautionary approach should be adopted towards proposed activities, particularly those whose effects are as yet unknown or little understood.

5.3.1 The types of activities in which the Minister of Conservation is to decide resource consent applications (as defined in schedule 1) (1994 *New Zealand Coastal Policy Statement*).

These do not represent all policies (included in the NZCPS) which are relevant to protection of New Zealand's coastal environment. Refer to the 1994 *New Zealand Coastal Policy Statement* for further detail.

The Minister of Conservation is also responsible for approving Regional Coastal Plans prepared by local authorities. An outline of the purpose and content of Regional Coastal Plans is provided in section 4.1 of this Appendix.

1.2 CONSERVATION LAW REFORM ACT 1990

This was enacted to amend the legislation relating to conservation generally, including the incorporation of conservation management strategies and plans.

The Conservation Law Reform Act 1990 is to be read as part of the Conservation Act 1987. No mechanisms providing specifically for protection (as contained in the process presented in Chapter Three) exist as a single entity within the Act. Mechanisms to be provided for in plans and strategies specified in the Conservation Law Reform Act 1990 are considered under the enactments in which they were formed.

Conservation Management Strategy:

Conservation Management Strategies are being prepared "to implement general policies and establish objectives for the integrated management of natural and historic resources, including any species managed ny the Department under the Wildlife Act 1953, the Marine Reserves Act 1971, the Reserves Act 1977, the Wild animal control Act 1977, the Marine Mammal Protection Act 1978, the National Parks Act 1980, the New Zealand Walkways Act 1990, or this Act, or any of them and for recreation, tourism, and other conservation purposes" (s17D Conservation Law Reform Act 1990). Specific areas to be protected and policies for management will be included in the completed plans so each case needs to be considered separately. The Conservation Management Strategy does not provide for specific protection of an area, it integrates management of protected areas managed by the Department of Conservation (DoC). Areas which are being considered for protection may be included in the plan along with their associated values and potential mechanism for protection.

Conservation Management Plan

"The purpose of a Conservation Management Plan is to implement Conservation Management Strategies and establish detailed objectives for the integrated management of natural and historic resources within any area or areas referred to in subsection (4) of this section, and for recreation, tourism, and other conservation purposes" (s17E Conservation Law Reform Act 1990). As with conservation management strategies, specific mechanisms for protection are excluded from Conservation Management Plans, however, the potential exists for their use in clarifying and reaching protection objectives within protected areas, and possibly for those areas being considered for protection.

1.3 MARINE RESERVES ACT 1970

Marine Reserves

Protection of "...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" (s3(1) Marine Reserves Act 1971) may occur via the Marine Reserves Act 1971 which has the purpose of preserving areas of sea and foreshore in their natural state as the habitat of marine life for scientific study.

Section 3 of the Marine Reserves Act 1971 provides for varying levels of protection to be afforded by an authorisation by the Minister of Conservation, notified in the *Gazette* or according to conditions as may be specified in the notice in addition to restrictions and regulations made via the Fisheries Act 1983. In reality, the Department of Conservation's aim is for protection to be restricted to a complete no-take zone, with the associated advantages of easy comprehension by the public, and reducing the possibility of a 'watering down' effect (Department of Conservation staff member, pers. comm., 1994). Further protection may be afforded by excluding the public where it is deemed necessary for preservation of the marine life or for the welfare in general of the reserve. This is only to be considered when necessary for the Act's purposes, the Act generally promotes freedom of access and entry to the reserves "so that they may enjoy in full measure the opportunity to study, observe, and record marine life in its natural habitat" (s3 (a-d) Marine Reserves Act 1971).

The Act is administered by the Department of Conservation, but consent by the Minister of Transport and the Minister of Fisheries is required prior to gazetting. (s5(9) Marine Reserves Act 1971). In cases where the proposed reserve lies within the jurisdiction of a harbour board, that organisation's consent is also required.

Enforcement includes seizure, imprisonment for a term not exceeding 3 months and/or a fine not exceeding $500, and $10 per day the offence continues. Penalties are due to be increased by the incoming Fisheries Bill 1995.

A high level of protection over a specified area may be provided via the Marine Reserves Act 1971. Implementation requires working through a detailed process, but once gazetted, changes are not likely.

1.4 MARINE MAMMALS PROTECTION ACT 1978

The purpose of the Marine Mammals Protection Act 1978 is to protect, conserve and manage marine mammals in New Zealand fisheries waters.

Marine Mammal Sanctuaries:

Sanctuaries can be created to provide for protection of marine mammal habitats.

Any area (within New Zealand's exclusive economic zone) may be identified by the Minister of Conservation to create a sanctuary, with the exception of any maritime or national park, any reserve within the meaning of the Reserves Act 1977, or any marine reserve. Also, where any other Minister of the Crown has control of any crown-owned land, foreshore, seabed, or waters of the sea which is declared to be a marine mammal sanctuary or which forms part of one, the consent of that Minister is required. Consultation with the Director-General of Agriculture and Fisheries, Secretary for Transport, and Secretary for the Environment is required by the Act prior to making statements of general policy for implementation of the Marine mammals protection Act 1978.

No specific criteria are issued within the legislation as to specify which areas are to be protected. A varied level of protection is possible, including permitted activities and restrictions within the sanctuary boundary specified by the Minister of Conservation. Penalties differ according to the offence, ranging from $10,000 for killing a marine mammal, $5,000 for harassment of a marine mammal, to $5,000 for purse seining and $1,000 in other cases where no penalty is provided. It is an offence to fail to comply in any respect with any notice, directions, restriction, requirement, or condition or regulation made under the Act. The potential of using this Act is high in areas containing marine mammals for which habitat protection is important.

1.5 WILDLIFE ACT 1953

Protection of wild animals, birds and their habitats on any area described in a proclamation and available for the purpose is possible via the Wildlife Act 1953. Wildlife sanctuaries, wildlife refuge's and wildlife management reserves are the three mechanisms available for protection of a specified area. The general purpose of the Wildlife Act is to absolutely protect all wildlife, except that specified in the schedules.

Wildlife Sanctuary

Section 10 - All wildlife in sanctuaries is absolutely protected (excluding those excluded from protection under the Wildlife Act 1953).

Wildlife sanctuaries provide for protection of wildlife, subject to such provisions as may be specified in the proclamation. Conditions which may be specified in the proclamation include: prohibition or restriction of entry, access, hunting or killing, or disturbing any living creature, prohibition or restriction of burning, clearing, camping, lighting fires, using boats or vehicles, making excessive noise in the vicinity, using firearms or explosives, taking or keeping of domestic animals or birds. With the consent of the landowner prohibition or restriction of, the hunting or killing of any wildlife or the possession of firearms of explosives or possession of specified pieces of wildlife and prohibition or restriction of species harmful to wildlife. In general, prohibition of the deposition of rubbish, access maintenance, pollution, and such other matters as may be necessary for the protection and wellbeing of any wildlife or vegetation therein. A very high level of protection is afforded via wildlife sanctuaries, all wildlife being absolutely protected, along with other, specified conditions within the Proclamation issued by the Governor-General. The Department of Conservation is responsible for administration of the Act via conservation management strategies and conservation management plans. The joint recommendation of the Minister of Conservation and the Minister charged with the administration of the Department of state having control of the land is required in instances where land of the crown is involved. The joint recommendation of the Minister of Conservation and Minister of Transport is required in instances where waters of the sea or any harbour within the meaning of the Harbours Act is involved. Conservation areas (within the meaning of the Conservation Act 1987) and any adjacent foreshore may be provided additional protection via the Wildlife Act 1953 and subject to such provisions, but is otherwise subject to the Conservation Act 1987. Failing to comply in any respect with any condition, restriction or prohibition is an offence with a range of penalties, from $300 to $1500 for specific instances.

Wildlife Refuge

Wildlife Refuges provide for protection of wildlife, subject to such provisions as may be specified in the proclamation and subject to the consent of the occupier in the case of any land other than unoccupied crown land.

Conditions which may be specified include prohibitions or restrictions which may be absolute or conditional and the proclamation may authorise the Minister or the Secretary to grant exceptions. Prohibitions or restrictions may be placed on: pollution, boat use, hunting, capturing, disturbing wildlife or its eggs or spawn. Firearm possession and any activity which may cause wildlife to leave the reserve may also be prohibited or restricted. The Minister of Conservation may authorise the occupier in writing regarding: normal use of the land, keeping domestic animals, destroying specified animals, and any other acts for normal use of the land.

Levels of protection differ from the wildlife sanctuary, with less prohibitions and restrictions, for example access is not prohibited or restricted. The Governor-General is responsible for gazetting wildlife refuges, which are subject to notwithstanding anything to the contrary in the Conservation Act 1987, Government Railways Act 1949, and any other Act affecting lands of the Crown. The same conditions exist for creating wildlife refuges as for wildlife sanctuaries on conservation areas and adjacent foreshore and areas of the sea or harbour subject to the Harbour's Act 1950. Enforcement (for offences involving failure to comply with any condition or doing any prohibited Act) may incur a fine not exceeding $1,500 plus $50 per head of wildlife taken or removed, to $500 for the obstruction of rangers. Likelihood of implementation is good if provisos are met.

Wildlife Management Reserve

Wildlife management reserves provide for protection of wildlife in any area described in the proclamation, subject to such provisions as may be specified, and subject to the consent of the occupier in the case of any land other than unoccupied crown land. The level of protection provided within a wildlife management reserve vary widely. Specifications may vary from the restriction of access to ... Conditions which may be imposed for a wildlife management reserve are those specified for a wildlife Sanctuary with the exception that Section 10, specifying the absolute protection of all wildlife in sanctuaries does not apply.

Wildlife management reserves are issued by proclamation from the Governor-General and are managed by the Department of Conservation. Creation of a wildlife management reserve must not be contrary to anything in the Conservation Act 1987, Government Railways Act 1949, or any other Act affecting lands of the Crown unless it is issued on the joint recommendation of the Minister of Conservation and the Minister charged with administration of the Minister of State having the control of the land. Likewise with creation of wildlife sanctuaries and wildlife refuges, the joint recommendation of the Minister of Conservation and Minister of Transport is needed in harbour areas (under the Harbours Act) or waters of the sea. Consent of the Minister of the Fish and Game council is required in circumstances in which Land owned by a Fish and Game Council is involved, and in the case of any other land other than unoccupied land of the crown, consent of the occupier is required. Land held for a public work may only be protected as a wildlife management reserve pursuant to s37 of the Public Works Amendment Act 1948. Conservation areas and adjacent foreshore shall be reserved pursuant to s18 of that Act and are subject to provisions relating to the wildlife management reserve and are still subject to the Conservation Act 1987. Enforcement is identical to conditions relating to a wildlife refuge. Likelihood is high with the required consent.

In conclusion, wildlife sanctuaries provide for a high level of protection, including restricted access where specified in the proclamation. All wildlife in a wildlife sanctuary is absolutely protected. A wildlife sanctuary may be developed without the owner's consent, compensation is provided for within the Act. A wildlife refuge provides a lower level of protection and requires consent of the occupier. Wildlife management reserves require owner/occupier consent prior to approval, and provide for the same conditions as wildlife sanctuaries except that Section 10, relating to the absolute protection of al wildlife in sanctuaries does not apply. In practise, the Department of Conservation has implemented Wildlife Sanctuaries over islands, for which restricted access has been implemented to provide a very high level of protection. The mechanism, wildlife

management reserve, as illustrated with the Whanganui Inlet reserve, has been used to provide a moderate level of protection. An important consideration for users of the Wildlife Act is the lack of required consent by the Minister of Fisheries, due to fisheries management not being part of the provisions contained within the act.

1.6 CONSERVATION ACT 1987

The Conservation Act 1987 was developed "to promote the conservation of New Zealand's natural and historic resources, and for that purpose to establish a Department of Conservation" (Conservation Act 1987). Mechanisms available for protection of land and foreshore within the Act include:

Conservation Area (s7-17) -Foreshore and crown land For conservation purposes.
Conservation Park (s18 and 19) -Conservation area To protect natural and historic resources and subject to this, facilitate public recreation and enjoyment.
Wilderness Area (s18 and 20) -Conservation area To preserve indigenous natural resources.
Ecological Area (s18 and 21) -Conservation area To protect the value for which it is held.
Sanctuary Area (s18 and 22) -Conservation area To preserve indigenous plants and animals in their natural state, and for scientific and other purposes.
Watercourse Area (s18 and 23) -Foreshore, land or reserve and adjoining lake and stream for which a conservation area has been made. To protect wild, scenic, and other natural and recreational characteristics that it has when considered with the river, lake, or stream concerned.
Stewardship Area (s25 and 26) Stewardship areas include all Conservation areas and those extended to confer additional protection, with the exception of watercourse area and marginal strip. Manage to protect natural and historic resources.

Marginal strips (s24) -20m landward from: foreshore, the normal level of the bed of any lake, or the bed of any lake or river from the sale or other disposition of any land.
To be held for conservation purposes.

Restriction of areas to foreshore and crown land provides for an area to be set aside for conservation purposes by the Minister of Conservation and the Minister responsible for control of any land or foreshore by notice in the gazette. Once an area is declared a conservation area, the Minister may, by notice in the *Gazette* declare the area to become one of the specified protected areas (with the exception of a marginal strip) noted above after public notice and rights of objection have been fulfilled. The likelihood of success is reasonable but protection is limited to the foreshore. The level of protection afforded ranges from low to high, varying with the mechanism implemented. Enforcement potential is high, with a range in fines, up to $80,000 plus $10,000 per day the offence continued for corporations breaching regulations.

1.7 RESERVES ACT 1977

The Reserves Act 1977 has the overall purpose to:

*Provide for the preservation and management for the benefit and enjoyment of the public areas possessing: Recreational use or potential, wildlife, Indigenous flora or fauna, Environmental or landscape amenity or interest, or natural , scenic, historic, cultural, archaeological, biological, geological, scientific, educational, community, or other special features or value.

*Ensure the survival of all indigenous species in their natural communities and representative ecosystems.

*Preservation of access for the public to and along the sea coast, ... and fostering and promoting the natural character of the coastal environment. (s3, Reserves Act 1977).

The Act is administered by the Department of Conservation. Information on the scenic, historic, cultural, archaeological, biological, geological, other scientific features, features of interest, indigenous flora or fauna, wildlife, recreational, and anything of natural environmental interest may be required by the Minister of Conservation before making a decision on areas in need of protection.

Seven classifications of reserve are specified in the Reserves Act 1977, listed below along with area for which they may be used, and the purpose of each. Whilst all of these provide some level of protection, some are more suited toward protection for ecological reasons.

Recreation reserve -Foreshore and Crown land Providing areas for the recreation and sporting activities and the physical welfare and enjoyment of the public, and for the protection of the natural environment and beauty of the countryside with emphasis on the retention of open spaces and on outdoor recreational activities including recreational tracks in the countryside.
Historic reserve -Foreshore and Crown land Protect and preserve places, objects, and natural features of historic, archaeological, cultural, educational, and other special interest. To illustrate the history of New Zealand.
Scenic reserve -Foreshore and Crown land Protect and preserve areas of scenic interest, beauty, or natural features or landscape desirable in the public interest for their intrinsic worth, and for the benefit, enjoyment, and use of the public. To provide suitable areas by which development and the introduction of flora will become of scenic interest or beauty that ...protection...is in the public interest. To preserve indigenous flora, fauna, ecological associations, natural environment, and beauty. For the retention and preservation of natural and scenic values.
Nature reserve -Foreshore and Crown land To protect and preserve in perpetuity indigenous flora or fauna or natural features that are of such rarity, scientific interest or importance, or so unique, that their protection and preservation are in the public interest.
Scientific reserve -Foreshore and Crown land For protecting and preserving in perpetuity: ecological associations, plant or animal communities, types of soil, geomorphological phenomena, and like matters of special interest for scientific study, research, education, and the benefit of the country.
Government purpose reserve -Foreshore and Crown land For providing and retaining areas for such government purpose as may be specified. This may be for wildlife management or for other specified wildlife purposes.
Local purpose reserve -Foreshore and Crown land For providing and retaining areas for such educational, community, social, or other local purposes as may be specified.

Conservation covenant (s77) -Private land, Crown land held under Crown lease. To preserve the natural environment, or landscape amenity, or wildlife, or freshwater life, or marine life habitat, or historical values (the purpose can be achieved without acquiring the land).
New Zealand (National) Reserve (s13) -Crown land reserve, Foreshore reserve. To protect values of national or international importance.

The mechanisms presented above provide for a range in the level of protection afforded, those with high ecological values as the purpose of protection may be given a high level of protection (eg.nature reserve and scientific reserve) whilst others, designed primarily for human use provide a minimum level of protection (e.g., recreation reserve). Others provide for a range in the level of protection provided, often determined by values present in the specific area. Enforcement includes a range of fines, being up to $1,000 and $50 per day the offence continued for a corporation which is significantly lower than that provided under the Conservation Act 1987. This may relate to the age of the Act, having been written in 1977 with no recent amendments. Classification of a reserve in done by the Minister of Conservation, and except where the land is vested in a local authority, the Minister must consult that administering body. Usage of mechanisms is restricted to foreshore and Crown land, limiting its applicability in the coastal environment surrounding New Zealand.

1.8 NATIONAL PARKS ACT 1980

This has the purpose "of preserving in perpetuity as national parks, for their intrinsic worth and for the benefit, use, and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest" (s4(1), National Parks Act 1980). The Act also provides for the preservation of national parks as far as possible in their natural state; that the native plants and animals of the parks shall as far as possible be preserved and the introduced plants and animals shall as far as possible be exterminated; that sites and objects of archaeological and historical interest shall as far as possible be preserved; that their value as soil, water, and forest conservation areas shall be maintained; that the public shall, subject to any conditions necessary to the upkeep of the park, be provided with free access to enjoy the values of national parks (s4(2)(a-e), National Parks Act 1980). Mechanisms available to provide protection include the basis national park, or, in addition to this, either of a specially protected area, wilderness area, or amenity area. The level of protection varies, but generally ranges from moderate to very high. Enforcement penalties are high, with

offences potentially incurring a fine of $25,000 plus $2,500 per day the offence continued for corporations. Application of the above mechanisms is restricted to land and foreshore, limiting its use in the coastal environment surrounding New Zealand.

National Park -Foreshore and land To preserve for intrinsic worth, benefit, use and enjoyment of the public, areas that contain scenery of distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest.
Specially Protected Area -Any area of a national park. To preserve for intrinsic worth, benefit, use and enjoyment of the public areas that contain scenery of distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest.
Wilderness Area -Any area of a national park. To set apart any area of a national part as a wilderness area.
Amenity Area -Any area of a national park. To set apart any area of a national park as an amenity area.

1.9 HISTORIC PLACES ACT 1993

Two mechanisms contained within the Historic places Act 1993, which have the potential to afford protection are outlined below. The first, heritage covenants provide for protection of the area and its surrounds where necessary. The second provides a much lower level of protection and consists of a register of areas which contain some form of historical value. The Act is administered by the Department of Conservation, but the New Zealand Historic Places Trust also has powers in relation to the creation of heritage covenants.

(A) Heritage Covenants Heritage covenants provide for protection, conservation and maintenance of a historic place, historic area or wahi tapu (place sacred to the Maori people). Protection may extend to the territorial limits of New Zealand. The level of protection afforded varies according to its tenor. Destruction or modification of the site is payable by fines of up to $100,000 and $40,000 respectively. Concurrence is required from the owner of the land prior to implementation of protection which affects the likelihood of implementation.

(B) Historic Places Register

The purpose underlying a historic places register is to inform members of the public, notify owners, and assist in protection under the Resource Management Act 1991 of historic places, historic areas, wahi tapu, and wahi tapu areas. Numerous criteria are specified for registration of these areas, including the area(s) importance to New Zealand's history, association with events, persons, or ideas of importance in New Zealand history, the potential to provide knowledge of New Zealand history, its importance to the tangata whenua, its association with the community, or public esteem, potential education value, technical and symbolic value, date, rarity, place within the wider complexity of historic places and areas, and such additional criteria consistent with the above (s23 Historic Places Act 1993). The level of protection afforded is dependent on recommendations of the New Zealand Historic Places Trust, accorded by need for protection. Concurrence from the owner is not required, but in cases of disagreement a submission may be lodged. In cases where any proposed activity that would be lawful, but for the area being registered, an application may be made to the Planning Tribunal if a refusal is given from the Heritage Protection Authority. The likelihood of success at implementation is quite high provided the criteria are met, but the level of protection may vary according to the area and level of registration.

The Historic Places Act also provides for protection of Archaeological sites but these are not considered here as they are generally very site specific and protection is granted automatically whether or not the site is recorded on the register.

2 MINISTRY OF FISHERIES (ex. Ministry of Agriculture and Fisheries)

The Ministry of Agriculture and Fisheries was established by the Ministry of Agriculture and Fisheries Act 1953. "The Ministry of Agriculture and Fisheries (MAF) mission is:

> To contribute to the Government's agricultural and fisheries objectives for enterprise development, growth and profitability, sustainability, market access and agricultural security (MAF Annual Report, 1993, 56).

In 1995, the Ministry of Agriculture and Fisheries (Restructuring) Act separated the Ministry of Agriculture and Fisheries into two separate departments of state.

The Fisheries Act 1983 consolidated and reformed "the law relating to the management

and conservation of fisheries and fishery resources within New Zealand and New Zealand fisheries waters" (Fisheries Act, 1983). The Fisheries Act 1983 combined with the Maori Fisheries Act 1989, and Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 comprise the primary statutory mechanisms administered by the Ministry of Fisheries which are included in the proposed process. Also administered by the Ministry of Fisheries is the Marine Farming Act, of which application can have an impact on protection but as this is not included as a mechanism for protection it is not considered further here.

Fishing controls in New Zealand are currently changing from a management, regulatory process to a greater reliance on property reliance and self-regulation (Pearse, 1991, 17). The Fisheries Bill, introduced to parliament on 6 December 1994 "would completely rewrite the current fisheries legislation. ... The principle purpose of the Bill is to provide for sustainable utilisation of New Zealand's fisheries resources. ... The most lengthy and complex part applies to the Quota Management System with 20% of quota for each new stock allocated to Maori under the Deed of settlement" (The Capital, 1995, 13). Provisions for mataitai (more generally via regulations) and taiapure are included within the bill.

At the time of writing (1995), the Fisheries Bill is going through its third reading in Parliament. This Bill reforms and restates the law relating to fisheries and fisheries resources within New Zealand and New Zealand fisheries waters, and recognises New Zealand's international obligations relating to fishing. The Bill also facilitates structural reform of fisheries management. All mechanisms contained in the Fisheries Act 1983 (including the Maori Fisheries Act 1989, and the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992) will either be included into the new Fisheries Act (in their amended version) or repealed. Fisheries management Areas will be removed from the legislation, with fishing controls being focused on quota management areas. The Bill, in its present state will amend the following Acts containing mechanisms which are included in the proposed process: Wildlife Act 1953, the Marine Reserves Act 1971, the Territorial Sea and Exclusive Economic Zone Act 1977 (but only as relating to definitions and section 32 which is not included in the process), and the Marine Mammals Protection Act 1978. Stronger powers of enforcement is to be given to Rangers working under the Marine Reserves Act 1971.

This study focuses on legislation currently in force at the time of writing. Amendments and the introduction of new legislation will, in all likelihood appear and affect many of the mechanisms included in the proposed process. However, the process has been

designed to incorporate changes with minimal difficulty. The process is intended as a model which may be adapted for different needs, and different statutory mechanisms for comparison of their suitability to protect the marine environment.

The following mechanisms suitable for protection are those included in the proposed process (with the exception of fishery management plans) for which the Ministry of Fisheries is responsible.

2.1 FISHERIES ACT 1983

The Fisheries Act 1983 provides for the management and conservation of fisheries and fishery resources within New Zealand. This Act has been amended numerous times since its implementation in 1983. Among these changes, the quota management system was incorporated in 1986 to provide for greater control over management of the resource in response to depleting stock levels and the slow process of fishery management plans. Other amendments have inserted a greater degree of rangitiratanga and rights of Maori under section 2 of the Treaty of Waitangi. Enforcement of the Fisheries Act includes penalties, where, if no other provisions is made not exceeding $250,000 and $1,000 for every day the offence has continued.

Several mechanisms within the Act could potentially be used for protection. These include fishery management plans, the quota management system, controlled fisheries, regulations, taiapure and mataitai reserves. Whilst these mechanisms are all theoretically available for use, their practise may be inaccessible or limited due to factors such as a slow implementation process, or the lack of any legally defined process. A brief outline of each is presented below.

(A) Fishery Management Plans

Fishery management plans initially comprised a major component of the Fisheries Act 1983, and had the purpose "to conserve, enhance, protect, allocate, and manage the fishery resources within New Zealand fisheries waters having regard to the need for -

(a) Planning, managing, controlling, and implementing such measures as may be necessary to achieve those purposes:

(b) Promoting and developing commercial and recreational fishing:

(c) Providing for optimum yields from any fishery and maintaining the quality of the yield without detrimentally affecting the fishery habitat and environment." (s4 Fisheries Act 1983).

However, these have since been disbanded pending fisheries legislation which will completely remove this provision from law.

(B) Total Allowable Catch

"Current fisheries policy in New Zealand is based on the concept of maximum sustainable yield (MSY) defined as the maximum quantity of catch that may be taken without causing a reduction in the size of the resource" (McAuley, 1993). Total allowable catch places limits of catches of specific species over specific time periods. Problems encountered with this system occur as each fisher seeks to "maximise fishing effort at the beginning of the year in order to maximise returns before the Total Allowable Catch limit is reached. This leads to a progressive reduction in the fishing season, increased competition, over-capitalisation and reduced profits" (Ministry of Agriculture and Fisheries, 1984 in McAuley, 1993).

(C) Quota Management System

The quota management system, introduced in 1986 has the objective "to provide for the conservation of fish stocks and to manage fisheries in a way which ensures maximum economic efficiency" (Ministry of Agriculture and Fisheries, 1989, 25). Individual transferable quota's are a tradable right to catch a proportion of the total allowable catch of a species recognised under the system. Alteration of the total allowable catch could provide protection to individual species if the level of fishing is proving unsustainable. The mechanism could not be used to protect fish stocks for their intrinsic values, but ensures survival of recognised species.

Only specified species are in this system, 30 in 1993 (McAuley, 1993), and 31 in January 1995. More may be added in the near future. A major recognised flaw with inception of new species occurs as individual owners strive to obtain a larger portion by overfishing when data is recorded to determine fishing rights. Reduction in the quota will ensure protection of a species, but the system does not allow total protection of an area. However, it can reduce the level of fishing in any of the ten specified management area. Problems include the limited number of species within the quota management system and the exclusion of currently non-commercial species. Current changes in the legislation will affect management of the quota management system, but is currently being worked on limiting the possibility of this mechanism for protection at the present time.

(D) Controlled fisheries

"On recommendation of the Minister [of Fisheries], after consultation with the [commission and the] Fishery Industry Board, or, as the case requires, the Minister of Conservation, the Governor-General may, from time to time, by order in Council, constitute and declare any part of fisheries waters (including any fisheries management area or part thereof) to be a controlled fishery under this Act for the purpose of the management or conservation of the fishery in that part, or the economic stability of the fishing industry" (s30(1) Fisheries Act, 1983).

The Minister of Fisheries may define the controlled fishery by reference to such matters as he thinks fit. (s30(2)(a)). Controlled fisheries may be declared for the purpose of protecting particular species, areas fished, class of fish, aquatic wildlife, and the persons who may be engaged in the fishery. Commercial fishermen may be granted licences after application, the outcome depends on; the extent the grant is necessary or desirable, the area proposed to be fished, "any policy approved by the Minister 'of Fisheries' for the conservation of any species of fish, aquatic life, or seaweed, the proper management of any controlled fishery, or for any other matter relevant to fishing or the fishing industry within the controlled fishery" (s34(b) Fisheries Act 1983). Also to be considered is the desirability of maintaining a reasonable standard of living for commercial fishermen within the controlled fishery, and to give preference to people already engaged in fishing, or from a community within the area of the controlled fishery.

Levels of protection provided in controlled fisheries may vary, ranging from protection of an area, to limiting catch of a particular species. "Controlled fisheries ... are assigned to a special management authority with strong powers to regulate fishing, including closing it altogether. Where fishing is allowed, commercial fishers require special controlled fishery licences in addition to fishing permits." (Pearse, 1991, 16). Controlled fisheries are generally created in areas with a greater need of control, and whilst include conservation as part of their purpose, implementation of this option as a conservation measure may be difficult.

(E) Closed Seasons (s89 Fisheries Act 1983)

Closed seasons provide for protection of an area within New Zealand fisheries waters for a period not exceeding three years. In practise, this term is renewable. Protection extends to any species of fish (other than sports fish), aquatic life, or seaweed. No specific criteria are issued within the legislation for designation of particular areas for application of the mechanism except by way of consultation between the Director-General, Minister of Conservation, commission and Fishing Industry Board. Long-term protection is not guaranteed through use of the mechanism, protection always being subject to reconsideration as the relatively short term period expires.

(F) Regulations

The Governor-General has the power to make regulations to regulate fishing through the use of quota's, fishing methods, number of fish on boats, taiapure and mataitai reserves. The two most applicable regulatory mechanisms which may be used for implementation of protection are taiapure and mataitai reserves which are considered in greater detail below. The Governor-General has the overall power to regulate fishing. However, regulations are unlikely to be generally used to provide full protection of fish stocks, but the mechanism provides a safeguard if the need should arise.

MAORI FISHING- VIA THE FISHERIES ACT 1983

Introduction of the quota management system resulted in a large number of small commercial operators and many recreational fishers to be excluded as a result of their inability to compete for their fair proportion of the total allowable catch during the time specified with limited resources/or limited documentation of catch records. Large numbers of small Maori operators were excluded, resulting in the 1989 Maori Fisheries Act (McAuley, 1993). This provides for "10% of the total allowable commercial catch, paid for by the Crown to assist the entry of Maori into the commercial fishing industry" (McAuley, 1993). Provision for taiapure which may be used as a protection mechanism was also granted under the 1989 Maori Fisheries Act.

In 1992, the Sealord deal, or Treaty of Waitangi (Fisheries claims) Settlement Act was passed, part of the Act's purpose being "To make better provision for Maori participation in the management and conservation of New Zealand's fisheries". Provision for mataitai reserves comprises part of this measure, to be read and interpreted within the Fisheries Act 1983, and provides a mechanism for Maori to manage and protect customary fishing areas within New Zealand fisheries waters.

2.2 MAORI FISHERIES ACT 1989 - (To be read as part of the Fisheries Act 1983)

(A) Taiapure-Local Fisheries

This has the object to make better provision for the recognition of rangatiratanga and of the right secured in relation to fisheries by article II of the Treaty of Waitangi in relation to areas of New Zealand fisheries waters (being estuarine or littoral coastal waters). Taiapure areas are to have been customarily of special significance to iwi or hapu as a source of food or for spiritual or cultural reasons. Factors involved in considering the order include: that the order will further the objective (above), is appropriate having regard to: the size of the area of NZ fisheries waters affected; the impact of the order on the general welfare of the community in the vicinity of the area to be declared; and the impact of the order on those persons having a special interest in the area that would be declared; and the impact of the area on fisheries management. (s54B Fisheries Act 1983). Species of aquatic life of particular importance or interest, and Maori, traditional, recreational, commercial, and other interests in the proposed area, and why the area has customarily been of special significance to an iwi or hapu either as a source of food or for spiritual or cultural reasons and the proposed policies and objectives are factors considered by the Director-General prior to the decision of whether to make an order in council. The area specified is to be estuarine or littoral coastal waters. Taiapure, declared by an order in council made by the governor-general require a recommendation from the Minister of Fisheries upon receipt of an application by the applicant (any person). Objections by any person will be considered prior to the decision. The level of protection provided involves the management committee (representative of the local Maori community) recommending regulations to the Minister of Fisheries, which if accepted override general fisheries regulations. If not accepted, general fisheries regulations apply within the taiapure boundaries. Hence, there is potential for using more than one mechanism for protection within the same area. Regulations may also be made under s89 of the Act ("Regulations") which over-ride past regulations and may be made for a specific taiapure or for all taiapure throughout New Zealand. However, no regulation may exclude access, or use of any taiapure-local fishery, or require any person to leave or cease to use any taiapure by reason of colour, race, or ethnic or national origins of that person or any relative of that person (s54K Fisheries Act 1983). Enforcement of regulations may involve the use of penalties described previously. The likelihood of implementation is high, although not many have been introduced to date, many are in currently undergoing the application process.

2.3 TREATY OF WAITANGI (FISHERIES CLAIMS) SETTLEMENT ACT 1992 - (To be read as part of the Fisheries Act 1983)

(A) Mataitai reserves

The provision of mataitai reserves, inserted into the Fisheries Act 1983 as part of the sealord deal (Treaty of Waitangi (Fisheries Claims) settlement Act 1992) provides for the recognition of Maori non-commercial customary food gathering anywhere in New Zealand's fisheries Zone (including tauranga ika and mahinga mataitai). Mataitai reserves are to be declared by the Minister of Fisheries, after consultation by the Minister of Fisheries and the tangata whenua with the local community and having regard to the sustainable management of the fish, aquatic life, and seaweed in the reserve. Criteria noted in the mechanism include sustainable management, local users, customary use. Levels of protection provided for by the mechanism include the making of bylaws restricting or prohibiting the taking of fish, aquatic life, or seaweed, and regulations made under s89 (Regulations). Bylaws are made by any Maori community constituted by or under the Maori Community Development Act 1962, any marae committee, or any Kaitiaki or the tangata whenua, but do not come into force until approved by the Minister of Fisheries. Penalties are as those specified for the Fisheries Act 1983 generally.

A process for the inception of mataitai reserves is currently being worked on. Creation of any mataitai reserve will not be possible until this has been completed. Mataitai reserve will be included in the incoming fisheries legislation. There is a strong likelihood of the use of the mechanism once the process is implemented. Being an integral part of the Maori Settlement claim it holds a great deal of importance to the maori people. Protection using the mechanism, having the objective to provide for customary food gathering, whilst providing a form of conservation, in respect of traditional levels of use. It is not designed to protect the industry or have a conservation objective although local Maori people may have conservation ties.

3 MINISTRY OF EXTERNAL RELATIONS AND TRADE

3.1 TERRITORIAL SEA AND EXCLUSIVE ECONOMIC ZONE ACT 1977

This has the object to provide for the exploration, exploitation, conservation and management of resources from the low water mark to 200 miles seaward. The Act is administered in the Ministry of External Relations and Trade.

TERRITORIAL SEA OF NEW ZEALAND

New Zealand's territorial sea extends from low water mark to 12 miles seaward.

(A) s8 Regulations

The Governor-General may, by order-in council make regulations for ... "Prescribing measures for the protection and preservation of the marine environment of the territorial sea" (s8B Territorial Sea and Exclusive Economic Zone Act 1977). The regulations are subject to no other provisions for the time being made by any other enactment for any such purposes. The potential of this mechanism is very broad, no criteria being specified. Levels of protection provided are dependent on the Governor-General's discretion. Consent prior to implementation of this mechanism is not required. Enforcement involves penalties for a breach of any such regulations (an offence) with a maximum fine of $10,000. Likelihood of implementation depends in large part upon other provisions having been made for the area. MAF Fisheries have divided New Zealand's sea into management areas which may have provisions specified. Also, the effect of any such regulations on the quota management system needs to be considered.

EXCLUSIVE ECONOMIC ZONE OF NEW ZEALAND

The exclusive economic zone comprises the sea, seabed and subsoil adjacent to and beyond the territorial sea to 200 miles from low water mark. Two sections of the Territorial Sea and Exclusive Economic Zone Act may be used to provide protection.

(B) s22 Fisheries Regulations.

The Governor-General may, by order in council, make regulations for ... "Prescribing measures, not inconsistent with this Act, for the conservation and management of fisheries resources within the zone (s22i) and Specifying particular types of high migratory species of fish, and regulating in a manner not inconsistent with this Act, fishing for those species within the zone, and also, in the case of New Zealand fishing craft, beyond the zone (s22j)" (s22 Territorial Sea and Exclusive Economic Zone Act 1977). No specific criteria are issued with the exception of high migratory species of fish. Interpretation of "conservation and management" may differ, reflecting policies of organisations involved. The purpose for which conservation is intended will also have an impact on its implementation and the degree of conservation, i.e., whether it be for enhancement of fish stocks or to manage stocks sustainably. The level of protection available by use of this mechanism varies from low to high, with protection being provided generally and/or for specific species. It is an offence to breach any regulation, which may incur a penalty of up to $10,000 for a licensee, owner, or master of any vessel and $1,000 for any other crew member.

(C) s27 General Regulations in Zone.

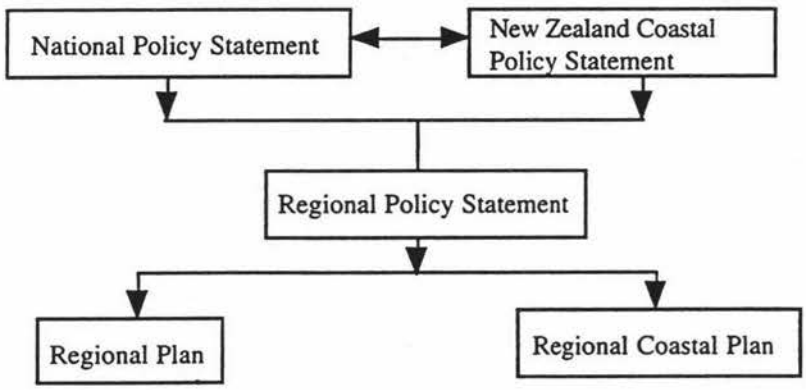
"Where no other provision is being made by any other enactment for any such purposes the Governor-General may, by order-in council, make regulations for all or any of the following purposes ... Prescribing measures for the protection and preservation of the marine environment of New Zealand." (s27 Territorial Sea and Exclusive Economic Zone Act 1977). This is an extension of s8 regulations available for the territorial sea, with no specified criteria and a varied range of protection possible. Fines are applicable for a breach of regulations, which do not exceed $10,000. Likelihood of protection is as for implementation of s8 regulations in the territorial sea zone. The Act does not specify any requirements for consent, but lying within New Zealand fisheries waters, agreement would in all likelihood be required by the Ministry of Fisheries prior to implementing protection.

Additional protection of the exclusive economic zone may occur through regulation of fishing under s 20. "Where the Minister of Fisheries, after consultation with the Minister of Foreign Affairs and Trade determines it is necessary or expedient for the proper regulation of fishing within the exclusive economic zone to do so, he may suspend any licence or for such period as he shall specify, or cancel any licence or licences or class or classes of licence" (s20(2) Territorial Sea and Exclusive Economic Zone Act 1977).

2.4 LOCAL GOVERNMENT

Local government has an important role to play in the implementation and management of the Resource Management Act, "An Act to restate and reform the law relating to the use of land, air, and water" (Resource Management Act 1991). Policies and Plans are the main vehicles through which protection may be provided, the application of protection is limited to effects based prevention of adverse impacts and regulating use of areas to minimise impacts. Generally protection implemented is at a base level, to prevent major impacts on any specified area. Mechanisms potentially able to provide protection and which are included in the proposed process are the Regional Coastal Plan (prepared and implemented by Regional Councils) and the New Zealand Coastal Policy Statement (prepared by the Department of Conservation and discussed earlier). Other policy statements and plans developed through the Resource Management Act 1991 include National Policy Statements and Regional Policy Statements (which cover any Region as determined in the Local Government Act 1974).

2.4.1 RESOURCE MANAGEMENT ACT 1991



The Resource Management Act, passed in 1991 incorporates sustainable management of natural and physical resources as its guiding principle. Sustainable management is defined within the Act as avoiding, remedying, or mitigating any adverse effects on the environment and safeguarding the life supporting capacity of air, water, soil, and ecosystems; and sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations when managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural wellbeing (Resource Management Act 1991). To this end, the effects of activities on the natural environment is a strong theme occurring throughout the Act.

(A) National Policy Statement

National policy statements state policies on matters of national significance relevant to achieving the purpose of the Resource Management Act for any area in New Zealand. Criteria provided within the Resource Management Act for consideration during preparation include: the effects of use, development, or protection, NZ's international obligations; Anything which affects an area of national significance; Anything which, because of its uniqueness, or irreversibility or potential magnitude or risk of its actual or potential effects is of significance to NZ's environment among other specified factors. Protection will be specified within the policy statement which needs to be considered separately in light of the area proposed for protection, to determine whether an adequate level is provided or not. Levels of protection are variable, the statement generally relates to protection from detrimental effects of activities. Initiating change is a time consuming process and does not potentially exclude other, less adverse activities from an area. Use of the policy statement allows for a general level of protection from detrimental effects, not excluding less harmful activities. The Minister for the environment is responsible for its implementation. Implementation includes a process involving public notification and consideration of submissions by a board of inquiry which reports to the Governor-General who may after considering recommendations from the Minister for the Environment approve any National Policy Statement. Enforcement occurs via an enforcement order which if not complied with may result in penalties.

(B) Regional Policy Statement

Regional Policy Statements, prepared by respective Regional Councils provide an overview of resource management issues for the region. Availability of the mechanism for protection will, in large part be affected by the prepared policy for the region involved and needs to be considered separately per region. A range of values are to be considered when producing a regional policy statement. Also to be considered during the development of a Regional Policy Statement are matters of national importance, and the Treaty of Waitangi.

The level of protection provided by this mechanism varies, policies will, in general be designed to provide for the minimisation of adverse effects of activities on the environment. Implementation may occur via policies and methods to implement policies. Enforcement occurs via enforcement orders which, if not complied with may then translate into a prison conviction of not more than 2 years or a fine not exceeding $200,000, and if the offence is a continuing one, a further fine not exceeding $10,000 for every day or part of a day the offence continues (s339, Resource Management Act 1991). A Regional Policy statement is prepared for each region, so this mechanism will already be in place regarding the proposed area to be protected. Further protection may be provided after a change to a rule or policy, but the time factor involved may limit the suitability of this process for any specified area in light of other legislation available.

(C) Regional Plan/Regional Coastal Plan:
These provide for implementation of the principles of the Resource Management Act 1991 in a working document, and, with respect to the Regional Coastal Plan, include guidelines specified in the *New Zealand Coastal Policy Statement* (NZCPS). Matters of national importance, other matters, and the Treaty of Waitangi are included as part of the Act's principles. The potential effect of activities on the environment are an overriding factor, and provisions may restrict detrimental activities. Whilst the Regional Plan includes land out to mean high water springs, the Coastal Plan extends from mean high water springs to 200 miles seaward. In particular circumstances both may be contained within one document. A base level of protection is provided via Regional Plans and Coastal Plans. Levels of protection are variable, including restriction of activities, and protection of habitat. It is important to note that the mechanisms do not provide for an exclusive area ban, rather provisions relate to permissable activities in an area. Also, areas of special significance and/or types of adverse activities which have an adverse effect on the coastal environment and have been identified by the *New Zealand Coastal Policy Statement* shall have their resource consents decided by the Minister of Conservation. Penalties for non-compliance against an enforcement order incur a maximum 2 year prison sentence or fine not exceeding $200,000 and a further $10,000 per day for a continuing offence. The suitability of a Regional Coastal Plan to protect any specified area will depend on the area proposed for protection, and the provisions for that area as are specified in the Plan. Generally, a base level of protection is provided, with areas of special significance being afforded higher protection.

5 QUEEN ELIZABETH NATIONAL TRUST

5.1 QUEEN ELIZABETH THE SECOND TRUST ACT 1977

The purpose of the Queen Elizabeth the Second Trust Act is to "encourage and promote the provision, protection, and enhancement of open space for the benefit and enjoyment of the people of New Zealand" (Queen Elizabeth the Second Trust Act 1977). Open space is defined in the Act as "any area of land or body of water that serves to preserve or to facilitate the preservation of any landscape of aesthetic, cultural, recreational, scenic, scientific, or social interest or value" (s2 Queen Elizabeth the Second Trust Act 1977). Although body of water is not defined within the Act, it may include any area of water which is owned or leased by a private individual. Although unusual, in certain circumstances this may include coastal waters, for example where there has been encroachment of the sea onto a land area, or where a river has moved, or possibly

estuaries. Leased Crown land may also become an open space covenant. The mechanism for protection consists of open space covenants (s22) which provide for the maintenance of open space. The Act is administered by a Trust which has the responsibility of recommending to the appropriate Department, areas of special significance which should be given special protection and the methods of such protection.

APPENDIX THREE

CRITERIA CONTAINED WITHIN STATUTORY MECHANISMS

Appendix Three contains tables illustrating the number of times criteria are contained directly (T) and indirectly (*) within the mechanisms covering the Exclusive Economic Zone, Territorial Sea, and Foreshore.

Table 32: Representation of ecological criteria within mechanisms available to protect the exclusive economic zone, territorial sea, and foreshore.

	Exclusive Economic Zone		Territorial Sea		Foreshore	
Ecological Criteria	*	T	*	T	*	T
Distinctive/Unusual landform	1	0	1	0	3	2
Unique Area	0	1	0	1	0	6
Area Significance	1	0	1	0	1	0
Representative Area	1	0	1	0	1	0
Typicalness	0	1	0	1	0	1
Character	0	0	0	2	0	2
Marine Environment	1	1	3	1	4	0
Ecosystem processes, structure, and habitat features	1	0	3	0	3	6
Ecological habitat integrity	2	0	7	0	11	1
Productivity	0	0	0	0	0	0
Sustainability	1	1	3	3	4	4
Species maintenance	3	4	8	4	13	5
Genetic diversity preservation	2	0	2	0	3	0
Rarity	1	0	1	0	2	1
Ecologically important species	1	0	1	0	2	1
Indigenous flora and fauna	1	0	1	2	7	10
Wildlife	0	0	0	3	3	3

	Exclusive Economic Zone		Territorial Sea		Foreshore	
Unique species associations	0	1	0	1	1	6
Diversity	0	0	0	0	1	0
Dependency	0	0	0	0	0	0
Naturalness	0	1	0	3	6	4
Resilience/Vulnerability	0	0	0	0	1	0
Natural features	0	1	0	3	5	13
Corridor potentiality	0	1	0	0	1	0
Size	0	0	0	0	1	0
Stock replenishment	1	0	1	0	2	0
International interest	0	0	0	1	1	2
National interest	0	1	0	2	1	8

Table 33: Representation of social-cultural criteria within mechanisms available to protect the exclusive economic zone, territorial sea, and foreshore.

	Exclusive Economic Zone		Territorial Sea		Foreshore	
Social-Cultural Criteria	*	T	*	T	*	T
Social acceptance	1	0	3	0	8	0
Community interest	0	1	1	2	5	4
Special interest	0	0	1	0	2	1
Other interest	0	0	0	0	1	1
Locality	1	0	1	3	6	3
Level of use	0	0	0	2	0	2
Need of area for activities	0	0	0	0	2	1
Potential activity impacts	0	0	2	0	2	0
Adjacent land use	0	0	0	0	0	0
Recreation	0	0	0	0	2	6

	Exclusive Economic Zone		Territorial Sea		Foreshore	
Traditional use and users	0	1	0	1	0	2
Traditional Maori food gathering	0	1	0	1	0	2
Traditional recreational fishing	0	0	0	0	1	0
Culture	0	1	0	5	0	7
Maori interest	0	1	0	5	0	6
Spiritual values	0	0	0	4	0	5
Education	1	0	2	1	2	4
Safety	0	0	0	0	0	0
Amenities	0	0	0	2	1	3
Aesthetics -scenic, visual	0	1	0	2	0	9
Species, beautiful, of interest	0	1	0	1	1	6
Intrinsic value	0	0	0	2	1	7
Archaeological -historic/heritage	0	0	0	4	4	6
Public relations and extension	0	0	1	0	4	0
Defence areas	0	0	0	0	0	0
Conflicts of interest	0	0	0	0	1	0
Enjoyment/Inspiration	0	2	0	2	1	11

Table 34: Representation of economic criteria within mechanisms available to protect the exclusive economic zone, territorial sea, and foreshore.

	Exclusive Economic Zone		Territorial Sea		Foreshore	
Economic Criteria	*	T	*	T	*	T
Shipping	0	0	0	0	0	0
Commercial fishery resources	1	2	1	1	1	2
Importance to fisheries	3	0	2	0	2	1

	Exclusive Economic Zone		Territorial Sea		Foreshore	
Biological productivity	0	0	0	0	0	0
Area importance to species	1	0	1	0	1	0
Research opportunity	1	1	3	1	3	8
Nature/Degree of threats	1	0	1	0	1	0
Suitability for activities, Potential value, Alternative use	1	0	2	0	2	0
Economic benefits	4	1	5	1	5	0
Ecodevelopment	0	0	0	0	1	0
Tourism	0	0	0	0	0	0

APPENDIX FOUR

CRITERIA IN POLLEN ISLAND'S FORESHORE

Ranking of theoretical values to those contained within Pollen Island. Reasons these levels were identified to those criteria.

Table 35: Ecological criteria within the legislation and their compatibility to values within Pollen Island's foreshore

ECOLOGICAL CRITERIA	LEVEL	REASON
Distinctive/Unusual landform	3	Geology of Pollen island-fresh water peat over 170,000 years old. = value of the Pollen island
Unique area	3	Last area in Auckland with its type of coastal vegetation
Area significance	2	Pollen Island is the "most important wildlife habitat in the Waitemata harbour."
Representative Area	2	Coastal vegetation of Pollen island represents vegetation found near Auckland in the past.
Typicalness	1	
Character	2	Distinctive character -combination of vegetation, mudflats and landform
Marine Environment	2	Feeding ground for fish and several species of wading bird. Nationally important marine vegetation.
Ecosystem processes, Structure and habitat functioning	3	Coastal/marine system interfaces. Geology-fresh water peat beneath marshlands over 170,000 years old. Diversity of habitats ->diversity of species (21-30 fish species), wide variety of invertebrates, variety of bird-life.
Ecological habitat integrity	2	Area surrounds an island. Whilst subject to pollution from sewerage pipes, there exists no adjacent developed area. Continuity between island, coast and sea - no present development
Productivity	2	Feeding ground for fish and wading birds.

ECOLOGICAL CRITERIA	LEVEL	REASON
Sustainability	1	
Species Maintenance	2	Feeding and breeding area for birds. Feeding area for fish.
Genetic diversity preservation	2	Vegetation, birds and fish are maintained by the area - retain genetic diversity.
Rarity	2	Coastal vegetation has virtually disappeared from Auckland. (Rare ant and moth species-but on island so not considered here).
Ecologically important species	1	
Indigenous flora and fauna	3	Native fish and birds.
Wildlife	3	Most important wildlife habitat in the harbour. Extensive intertidal area of mature mangroves. Specific wildlife = birds (foreshore probably has snails etc.)
Uniqueness - species and species associations	2	Unique species associations for Auckland area. Wide range of species contributing to a unique composition.
Diversity	3	Diversity of habitats, attracts variety of bird life. Mudflats are feeding grounds. (on land and foreshore). Mangroves -> very rich ecosystem.
Dependency	2	Birds dependent on the island for breeding. Many feed on the foreshore.
Naturalness	3	Natural/unmodified area
Resilience/Vulnerability	3	Fragile habitat (Land and foreshore)
Natural features	2	Geology, mangroves, unmodified island and foreshore.
Corridor potentiality	3	Migratory bird species use the island and foreshore as a resting and feeding ground. (Three hour tide difference between the Manukau and Waitemata harbour allows waders to extend their feeding time).

ECOLOGICAL CRITERIA	LEVEL	REASON
Size	2	Proposed area for protection covers the feeding area of many waders. The area does not cover the full movement of fish as, being intertidal the fish move in and out.
Stock replenishment	1	Fish do not breed in the area. Some invertebrate species may undergo metamorphosis in the sea.
International Interest	1	
National Interest	3	Nationally significant due to naturalness in close proximity to Auckland.

Note many of the values of the area are inter-related. ie. breed/nest on island, but use the foreshore and sea as a feeding area. Although protection from fishing may enhance feeding and allow for continuity of the ecological system, its main strength might lie in preventing development of the Island.

Table 36: Social-cultural criteria within the legislation and their compatibility to values within Pollen Island's foreshore

SOCIAL-CULTURAL CRITERIA	LEVEL	REASONS
Social acceptance	2	...Submissions, No. objections
Community interest	2	Papers, etc.
Special interest	1	Of interest to environmental groups, educational groups.
Other interest	1	
Locality	2	Close proximity to Auckland, but large numbers will damage the habitat.
Level of use	1	Too high a use will damage the area.
Need of area for activities	1	
Potential activity impacts	1	
Adjacent land use	1	

SOCIAL-CULTURAL CRITERIA	LEVEL	REASONS
Recreation	2	Recreation via visiting the area, but area easily disturbed.
Traditional use and users	1	
Traditional Maori food gathering	1	
Traditional recreational fishing	2	Some recreational fishing occurs in the eastern section of the proposed area. (Many fishers are polynesians who may not have been aware of the marine reserve proposal so did not represent their views.)
Culture	1	
Maori interest	1	
Spiritual values	1	
Education	2	Area may provide education on fora and fauna, but easily disturbed.
Safety	1	
Amenities	1	High degree of naturalness, no modification.
Aesthetics-scenic, visual	2	Looks 'pristine'
Species-beautiful, of interest	2	Lot of species of interest. Some of the birds may be beautiful.
Intrinsic value	2	Area has a lot of species of value.
Archaeological-Historic/Heritage	2	Fresh water peat beneath marshlands over 170,000 years old. Possibly a potential site for palaentological study.
Public relations and extension	3	Good area for interpretive programmes providing numbers managed well.
Defence area	1	
Conflicts of interest	1	
Enjoyment/Inspiration	2	The area may provide enjoyment/inspiration to natural scientists, visitors, or motorists.

Table 37: Economic criteria within the legislation and their compatibility to values within Pollen Island's foreshore

ECONOMIC CRITERIA	LEVEL	REASONS
Shipping	1	
Commercial fishery resources	1	
Importance to fisheries	1	
Biological productivity	2	Mangroves provide feeding ground for fish.
Area importance to species	2	Area important to species, but not very important to commercially important species.
Research opportunity	2	Possibly a future site for study.
Nature/Degree of threats	2	At present, Pollen Island a potential port site
Suitability for activities, Potential value, Alternative use.	1	Not suitable for recreation, leisure etc. as harmful to the environment.
Economic benefits	1	
Ecodevelopment	1	
Tourism	1	

APPENDIX FIVE

CRITERIA ON POLLEN ISLAND'S LAND MASS

Pollen Island is currently owned by Ports of Auckland Ltd. whom it was transferred to as a result of the agreed port plan. The island is being held as a potential port site, but negotiations are currently underway with Forest and Bird to lease the island in return for an agreement from the Auckland City Council and the Auckland Regional Council that development in other, currently operating ports to increase port capacity, infrastructure and facilities will be supported without limiting obligations and requirements of the Resource Management Act, 1991. At the time of writing these negotiations were still ongoing.

The Waitemata Harbour Maritime Plan proposed that the area be designated a reserve in 1975. However, Ports of Auckland Ltd. was to have priority use.
The Department of Conservation made an unsuccessful attempt to have Pollen island excluded from any port development in 1988 due to Ports of Auckland Ltd. still having control over the Island (McAuley, 1993).

Values present on the land mass and/or foreshore of Pollen Island.
Ecological values

* Unmodified, continuation of rich diversity of life - motorway prevents rodents, dogs, cats and people from visiting.
* Motorway effect on ecological values
* Geology -Fresh water peat beneath marshlands over 170,000 years old. Laid down in pleistocene era.
* Mudflats on east of Pollen island and Traherne island are important feeding areas for waders and wetland birds.
* Wrybill plovers (5,000 individuals) a nationally threatened species winter in the Waitemata.
* Nationally threatened seabirds which frequent Pollen island -Caspian tern and N.Z. dotterel (approx. 1,500 in N.Z.).
* 12 breeding pairs of native fernbird (= regionally threatened) nest on Pollen island numbering the largest and most viable population in the Auckland urban area.
* Threatened native species, banded rail breeds on Pollen island, preferring mangroves and adjacent salt marshes.
* Feeding area and roosting area for some species.
* Pied oystercatchers
  Bar-tailed godwits

Pied stilts frequent Pollen island and surrounding shellbanks, mudflats, and mangroves.

* White faced heron

  Pied shag

  Mallard and grey ducks

  Black backed gull

  Australasian harrier.

  Coastal birdlife - Variety of birdlife due to a diversity of habitats - mudflats are feeding grounds.
* Only place in Waitemata and Manukau harbours with fernbird.
* Resting place for migratory species,
* Wide variety of invertebrates including rare invertebrates.

  - four locally restricted and rare moth species. (Bactra species found nowhere else).

  -rare ant species found in two other locations in N.Z.
* Possibly a new species of psyllid, a small native insect similar to an aphid located adjacent to Traherne island, with its food source, *Olearia solandri* growing on Pollen island.
* Marine vegetation nationally important. Perhaps the best representation of the type of coastal vegetation that once existed over the Waitemata. Consists of Manuka, coastal tree daisy, swamp flax, salt marsh ribbonwood, sea rush and various sedges. Mangroves between island and motorway (provide rich habitat).
* Locality for the benchmark studies of strand(?) island stability and formation on intertidal mudflats and for palynology studies of past Waitemata Harbour vegetation.Estuary = a feeding ground for fish and several species of wading birds.
* Fish - up to 21-30 species associated with mangroves.
* Extensive intertidal area of mature mangroves.
* Unmodified - (least modified area close to Auckland).
* For the above reasons considered of national significance.
* Fragile habitat (Pollen island), Tracks from people remain for months or years (Derek Russel, Auckland University Zoological Dept.).
* Highest natural environment score of all proposed conservation reserves in a report commissioned by the Maritime Planning authority.
* Identified as the most important wildlife habitat in the Waitemata Harbour.
* Classified as a site of national significance by both the Department of Conservation, and the Auckland Regional Authority, now Auckland Regional Council.

SOCIOLOGICAL

* Motorway effect on visiting/public access
* Fishing -recreational interfered with- minimal
* Proximity to Auckland -very close but not easily accessible due to motorway
* Maori values
* Access -need for boardwalks to protect the ecological value of the area, limited parking

* Interpretation required -Higher profile if protected
  -educate public about fragile environment
* Large population at close proximity -greater level of enjoyment-but large numbers and insufficiently educated people harmful to the environment.
* Scenic value

ECONOMIC

* Fishing -commercial
* Possible future Port Development - subject to an environmental report.
  Ports of Auckland ownership of island.
* Ownership of surrounding seabed - Foreshore and Seabed Revesting Act 1991 reverted ownership to the Crown, but current lease is still valid. However, the initial validity of the lease may be questioned.
* Potential cost of boardwalks to enable access and protect the environment.
  Cost to transit to provide access and develop parking.

APPENDIX SIX

CRITERIA CONTAINED WITHIN THE WHANGANUI INLET

Ranking of theoretical values to those contained within the Whanganui inlet. A 3 is used in instances where the criteria lies within the reason for protection of the inlet. A 2 is used for criteria which are present in the area, but not the reason for protection. A 1 indicates criteria not present at Whanganui inlet. Note, that two boundaries of protection were assigned to the Whanganui inlet. Protection of the northern inlet was to protect the wildlife, with minimal human impact, eg. on fishing; while protection of the southern inlet was designed to provide absolute protection to species. Where two numbers are presented, that in brackets is for the northern inlet and that without brackets, for the southern inlet.

Table 38: Ecological criteria within the legislation and their compatibility to values within the Whanganui Inlet

ECOLOGICAL CRITERIA	LEVEL	REASON
Distinctive/Unusual landform	2	Very large inlet
Unique area	2	Large estuarine area
Area significance	3	Nationally important as large, unmodified estuarine system
Representative Area	1	Represents an estuarine habitat type
Typicalness	1	Not typical
Character	2	Distinctive character
Marine Environment	3	Feeding habitat for waders, Juvenile snapper, flounder and kahawai
Ecosystem processes, Structure and habitat functioning	3	Interface between land, coast, and sea. Surrounding land either forest, regenerating, or pasture
Ecological habitat integrity	3	Entire Inlet proposed for protection. Surrounding land relatively pristine.

ECOLOGICAL CRITERIA	LEVEL	REASON
Productivity	3	Highly productive area (many species feed/breed in the Inlet)
Sustainability	2	Area can sustain itself - as the current rate of use is limited
Species Maintenance	3	Feeding, breeding area
Genetic diversity preservation	3	Population not limited, open to the sea. Migratory species also present
Rarity	3	Threatened species present, including the banded dotterel, and South Island fernbird
Ecologically important species	3	Range of species which contribute to the maintenance of the ecosystem (including eelgrass beds)
Indigenous flora and fauna	3	Many indigenous species present
Wildlife	3	Very important wildlife habitat
Uniqueness - species and species associations	3	Unusual distribution of invertebrates (from mixing of salt and fresh water by wind). Also a range of habitat types contributes to diverse faunal assemblage
Diversity	3	Highly diverse range of habitats
Dependency	2	Species dependent on the area
Naturalness	3	Area in natural state
Resilience/Vulnerability	2	Species in the area could be damaged by overuse
Natural features	3	Large, unmodified Inlet
Corridor potentiality	1	Migratory birds present, juvenile fish feed and shelter in the area. Represents an area for shelter as not in the open sea.
Size	1	Fish move in and out of the Inlet, but size is sufficient for protection
Stock replenishment	2	Juvenile fish feed in the area
International Interest	1	

ECOLOGICAL CRITERIA	LEVEL	REASON
National Interest	3	Area of national interest, as a large, unmodified estuary with adjacent forest

Note many of the values of the area are inter-related. ie. Breed/nest on island, but use the foreshore and sea as a feeding area. Although protection from fishing may enhance feeding and allow for continuity of the ecological system, its main strength might lie in preventing development of the Island.

Table 39: Social-cultural criteria within the legislation and their compatibility to values within the Whanganui Inlet

SOCIAL-CULTURAL CRITERIA	LEVEL	REASONS
Social acceptance	2	Working party - increased public acceptance. Limited objections to marine reserve and wildlife management reserve proposals
Community interest	1	Area not being protected for community interest
Special interest	1	Not of special interest to locals for protection, but is for natural scientists.
Other interest	1	
Locality	2	Accessible, but not the primary purpose of protection
Level of use	1(2)	(2)-The area is used for fishing.
Need of area for activities	1(2)	(1)-The area is used for fishing.
Potential activity impacts	2(1)	2-Potential impacts were part of the reason for implementing protection. (1)- Fishing is to occur in the northern end.
Adjacent land use	2	The adjacent land is generally unmodified.
Recreation	2(3)	(3) The area is being protected to a level designed to incorporate fishing. 2-While recreation occurs in the proposed area it is not the purpose for protection.

SOCIAL-CULTURAL CRITERIA	LEVEL	REASONS
Traditional use and users	2	Traditional flax gathering etc., but this is not the purpose of protection. Traditionally used by locals
Traditional Maori food gathering	2	Traditional gathering of many marine, freshwater, and shellfish species by Maori
Traditional recreational fishing	2(3)	Traditional recreational fishing was provided for in the northern inlet. 2-Traditional recreational fishing was not the purpose for protection.
Culture	2	Rich Maori and European history.
Maori interest	2	Rich Maori history
Spiritual values	2	Several wahi tapu and uropa on the Inlet
Education	1	Too far from many institutions (e.g., schools) to be well used for educational purposes. Also, limited amenities
Safety	1	High winds make the area difficult for fishing at many times of the year
Amenities	1	Pristine area
Aesthetics-scenic, visual	2	Aesthetically pleasing, but this is not the primary purpose of implementing protection
Species-beautiful, of interest	3	Many species of interest to the public
Intrinsic value	2	Many species of value in the area
Archaeological-Historic/Heritage	2	Rich Maori and European history (but this is not the primary purpose of implementing protection)
Public relations and extension	1	Not likely to be used as much as other, more accessible areas
Defence area	1	Does not enhance defence requirements
Conflicts of interest	1	
Enjoyment/Inspiration	2	People gain enjoyment/Inspiration from the area

Table 40: Economic criteria within the legislation and their compatibility to values within the Whanganui Inlet

ECONOMIC CRITERIA	LEVEL	REASONS
Shipping	1	Not used for shipping
Commercial fishery resources	1	Commercial fishing not prevalent in the Inlet
Importance to fisheries	1(3)	(3)-Recreational fishing, while not the reason for protection was the main reason for a reduced level of protection in the northern inlet.
Biological productivity	2	Area is significant for breeding (but this is not the purpose of protection)
Area importance to species	3	Area is important to species. Feeding area for fish.
Research opportunity	2	Potential for research to be carried out in the Inlet
Nature/Degree of threats	2	Possibility that increased development of land may give rise to more people using the area
Suitability for activities, Potential value, Alternative use.	1(3)	(3)-Recreational fishing was specifically provided for.
Economic benefits	1	Economic benefits not the reason for protection
Ecodevelopment	1	Ecodevelopment not currently a factor
Tourism	1(2)	(2)-Recreational fishing may also include taking tourists out to fish.

APPENDIX SEVEN

Explanation of the flow chart.

The flow chart, used during stage three of the process presented in Chapter Three is designed to provide the user with a visual summary of each of the steps to be proceeded with during the assessment of statutory mechanisms. This section provides a brief summary of how the flow chart may be used.

Stage three consists of two principle parts, the formulation of strategies followed by the evaluation and selection of strategies. The formulation of strategies is intended to provide the user with a range of potentially suitable statutory mechanisms analysed in relation to specific guidelines which are indicative of potential requirements of any area proposed for protection. The second main part, the evaluation and selection of strategies involves the assessment of mechanisms to determine their suitability for an area proposed for protection. Assessment of a mechanism's suitability for an area identified as needing protection involves assessing the potential of the mechanism to provide for the requirements required by the area. These requirements have been identified as guidelines and used to analyse the statutory mechanisms to be considered.

The flow charts comprise an outline of the statutory mechanisms as analysed in relation to their suitability to provide different for different requirements of protection. Use of the flow charts involves, first identifying the requirements of the area to be protected in relation to each step, then moving down the chart through the steps to determine those statutory mechanisms most compatible with the needs of the area identified for protection. Although it is possible to accomplish this for each mechanism individually, moving through each step for all mechanisms uniformly will provide a greater comparison of the different degrees of suitability for each mechanism for each step (representing a guideline or requirement). Also, it is easier to move back to previous steps with the reconsideration of values or needs for protection. For example, the level of protection for the area may be altered, which will affect the mechanisms suitable to provide the newly required level of protection. It is possible to quickly compare all mechanisms at this step to assess those providing the level of protection required. Crosses are used to indicate where a mechanism is no longer considered to be suitable. Elimination (as represented by a cross) may occur at any step of the process, from legislative boundary to the likelihood of success at implementation. As stated previously,

it is possible to redefine suitable statutory mechanisms with a redefinition of the requirements of protection.

The use of arrows is employed to proceed with those mechanisms suitable to protect the proposed area in relation to each of the guidelines noted in the preceding box. This is intended to be done in a logical order, i.e., from the first to the last. For example, in the case of an area proposed for protection which lies in the foreshore, all mechanisms providing protection for the foreshore are continued with into the next step or guideline through the use of arrows leading down. Those mechanisms not providing protection of the foreshore are halted at this step. Refer to Figure 7 for a clearer understanding of how this works. All the steps are continued through in this manner. It is possible to backtrack to previous steps after a modification in relation to the area proposed for protection. An example may include the boundary being changed slightly, the level of protection required being altered, and other such factors.

GLOSSARY

Terminology used in this thesis which may require clarification is presented below.

ANIMAL

"means any member of the animal kingdom other than a Human being." (s2 Conservation Act, 1987).

BASELINE OF TERRITORIAL SEA

"Except as otherwise provided in section 6 of this Act, the baseline from which the breadth of the Territorial Sea is measured shall be the low water mark along the coast of NZ, including the coast of all islands." (s5 Territorial Sea and Exclusive Economic Zone Act 1977).

COASTAL WATERS

"means:

(a) All waters within the exclusive economic zone of New Zealand; and

(b) The territorial sea of New Zealand; and

(c) The internal waters of New Zealand:" (s2 Shipping and Seamen Act 1952, RS vol.4).

COASTAL ENVIRONMENT

" ...an environment in which the coast is usually a significant part or element. The coastal environment will vary from place to place depending upon the extent to which it affects or is (directly) affected by coastal processes and the management issue concerned. It includes at least three distinct, but interrelated parts:

* the coastal marine area;
* the active coastal zone; and
* the land back-drop.

The coastal environment includes at least the coastal marine area, the water, plants, animals, and the atmosphere above it; and all tidal waters and foreshore whether above or below mean high water springs, dunes, beaches, areas of coastal vegetation and coastal associated animals, areas subject to coastal erosion or flooding, salt marshes, sea cliffs, and coastal wetlands, including estuaries, and in the absence of such features (particularly in urban areas where the natural shoreline has been modified), all of the land that extends 40 metres in of mean high water springs" (Draft New Zealand Coastal Policy Statement, 1992, p 5).

COMMISSION

"means the Treaty of Waitangi Fisheries Commission established by Section 4 of the Maori Fisheries Act 1989." (Section 2, Fisheries Act 1983).

CONSERVATION

"means the preservation and protection of natural and historic resources for the purpose of maintaining their intrinsic values, providing for their appreciation and recreational enjoyment by the public, and safeguarding the options of future federations" (Section 2 Conservation Act 1987, No. 65).

CRITERIA

The term criteria refers to values or factors contributing to the importance of any area. Issues, including, for example, the importance of an area for fishing may be included as a criteria. For example, the importance of an area for commercial fishery resources is included as an economic criteria in table 4. The terms criteria and values are used interchangeably throughout the thesis.

CROWN LAND

"s. 9A. Foreshore and seabed to be land of the Crown -(1) All land that-

(a) Either-

(i) Is foreshore and seabed within the coastal marine area (within the meaning of the Resource Management Act 1991); or

(ii) Was foreshore, seabed, or both, within the coastal marine area (within the meaning of that Act) on the 1st day of October 1991 and has been reclaimed (whether lawfully or otherwise) on or after that date; and

(b) Is for the time being vested in the Crown, but for the time being is not set aside for any public purpose or held by any person in fee simple,-

Shall be land of the Crown ... and shall be administered by the Minister [of Conservation]; but the provisions of the Land Act 1948 shall not apply to such land" (Section 9A Foreshore and Seabed Endowment Revesting Act 1991, as amended by section 2(1) of 1994 No. 113).

ESTUARINE WATERS

"the waters in the tidal part of a shore, a tidal channel or the tidal mouth of a river where it nears the sea with a mix of fresh water and salt (tidal) water" (MAF, October 1991, from collins and shorter oxford dictionaries).

FORESHORE

"means such parts of the bed, shore, or banks of a tidal water as are covered and uncovered by the flow and ebb of the tide at mean spring tides" (Conservation Act 1987, No. 65).

HISTORIC AREA

"-means an area of land that -

(a) Contains an inter-related group of historic places; and

(b) Forms part of the historical and cultural heritage of New Zealand; and

(c) Lies within the territorial limits of New Zealand" (s2 Historic Places Act, 1993).

HISTORIC PLACE

"(a) Means-

(i) Any land (including an archaeological site); or

(ii) Any building or structure (including part of a building or structure); or

(iii) Any combination of land and a building or structure,-

that forms part of the historical and cultural heritage of New Zealand and lies within the territorial limits of New Zealand.

(b) Includes anything that is in or fixed to such land" (s2 Historic Places Act 1993).

INTERNAL WATERS

"include areas of the sea that are on the landward side of the baseline of the territorial sea of New Zealand" (s4, Territorial Sea and Exclusive Economic Zone Act 1977).

INTRINSIC VALUES

The recognition of things as being valuable in and of themselves and hence to avoid destruction of these things (eg. ecosystems, species, soil etc.).

LAND

"includes land covered by water and the air space above land" (s2 Historic Places Act 1993, No. 38). Note water is not specified as fresh water.

LITTORAL WATERS

"waters pertaining to the shore of the sea, with the littoral zone lying between high and low water mark" (MAF, October 1991, from collins and shorter oxford dictionaries).

LITTORAL

"Of or on the shore of the sea, ... A region lying along the shore" (1990, Concise oxford Dictionary pp 693)

MARINE MAMMAL

"includes-

(a) Any mammal which is morphologically adapted to, or which primarily inhabits, any marine environment; and

(b) All species of seal (Pinnipedia), Whale, Dolphin, and Porpoise (Cetacea), and dugong and manatee (Sirenia), and

(c) The progeny of any marine mammal; and

(d) Any part of any marine mammal (s2, Marine mammals protection Act 1978).

MAMMAL

"Any animal of the mammalia, a large class of warm-blooded vertebrates having mammary glands in the female, a thoracic diaphragm, and a four chambered heart. The class includes the whales, carnivores, rodents, bats, primates etc" (Collins English Dictionary, 3rd edn.).

NATURAL RESOURCES

"means-

(a) Plants and animals of all kinds; and

(b) The air, water, and soil in or on which any plant or animal lives or may live, and

(c) Landscape and landform; and

(d) Geological features; and

(e) Systems of interacting living organisms; and their environment;

and includes any interest in a natural resource" (s2 Conservation Act, 1987).

NEW ZEALAND FISHERIES WATERS

"means-

(a) All waters in the exclusive economic zone of New Zealand:

(b) All waters of the territorial sea of New Zealand:

(c) All internal waters of New Zealand:

(d) All other fresh or estuarine waters where fish indigenous to or acclimatised in New Zealand are found" (s2 Fisheries Act 1983).

NO TAKE

means nil extraction.

ORGANISATION

"An organisation ... has unifying characteristics, e.g.:

(i) It has imposed upon it, or is capable of defining for itself, a set of goals ultimately applicable to all its parts.

(ii) It has established means for pursuing these goals.

(iii) There is some ultimate expression of the organisation's authority as an entity. (Its internal structure is usually hierarchical, and their is a "boss" or a "board of directors").

(iv) It has a permanence which transcends its particular tasks" (Stringer, 1967).

PLANT

"means any member of the Plant Kingdom; and includes any alga, bacterium, or fungus, and any part of or seed or spore from any plant" (s2 Conservation Act, 1987).

PRESERVATION

"in relation to a resource, means the maintenance, so far as is practicable, of its intrinsic values" (s2 Conservation Act 1987, No. 65).

PROTECTION

"in relation to a resource, means its maintenance,so far as is practicable, in its current state; but includes-

(a) Its restoration to some former state

(b)Its augmentation, enhancement, or expansion" (s2 Conservation Act 1987, No. 65).

SUSTAINABLE MANAGEMENT

"means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well being and for their health and safety while-

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems, and

(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment" (s5 Resource Management Act 1991).

STATUTORY MECHANISM

A legal means of protection provided within a New Zealand Act of parliament.

STEWARDSHIP AREA

"Means a conservation area that is not -

(a) A marginal strip; or

(b) A watercourse area; or

(c) Land held under this Act for one or more of the purposes described in section 18(1) of this Act" (s2 Conservation Act 1987).

TERRITORIAL SEA

"of NZ comprises those areas of the sea having, as their inner limits, the baseline described in sections 5 and 6 of this Act, and as their outer limits, a line measured seaward from that baseline, every point of which line is distant 12 nautical miles from the nearest point of that baseline" (s6 Territorial Sea and Exclusive Economic Zone Act 1977).

WAHI TAPU

"means a place sacred to Maori in the traditional, spiritual, religious, ritual, or mythological sense" (s2 Historic Places Act 1993).

WAHI TAPU AREA

"means an area of land that contains one or more wahi tapu." (s2 Historic Places Act 1993, No. 38).

WATER

NB: includes coastal water in RMA.

"(a) means water in all its physical forms whether flowing or not and whether over or under the ground:

(b) Includes fresh water, coastal water, and geothermal water:

(c) Does not include water in any form while in any pipe, tank, or cistern" (s2 Resource Management Act 1991, No. 69).

WILDLIFE

"means any animal that is living in a wild state, and includes any such animal or egg or offspring of any such animal held or hatched or born in captivity, whether pursuant to an authority granted under this Act or otherwise; but does not include any animals of any species specified in the sixth schedule to this Act (being animals that are subject to the Wild Animal Control Act 1977)" s2 Wildlife Act 1953. Note that section 7B of the Wildlife Act 1953 states that "terrestrial and freshwater invertebrates specified in the seventh schedule to this Act are hereby declared to be animals" (s7B Wildlife Act, 1953). The seventh schedule identifies those terrestrial and freshwater invertebrates being specified species of the following classes: Insecta (insects) specifically certain wetas, grasshoppers, Beetles, and Weevils; Arachnida (Spiders), restricted to the Nelson cave spiders; and Mollusca, specifically Gastropods (Snails).