Co-operative land management in New Zealand

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Contents

Figures

Executive summary

Current policy problems in resource management include pervasive land management problems for which there is little central government financial support yet widespread concern amongst farmers. The *Resource Management Act 1991* devolves responsibilities for land management to regional councils and requires that those affected by council decisions are consulted. This requirement creates an opportunity for innovative and more participatory approaches to land management.

North American experience of local fisheries management identifies a model of co-operative management. That model involves binding legal arrangements that ensure collaboration between resource users and government agencies. This co-operative approach appears to improve resource management outcomes.

Elements of the North American co-operative management experience occur in New Zealand land management initiatives. These elements include the presence of an undeniable resource crisis, clearly defined resource user groups often based on catchment boundaries, distinct rural farming communities, and a government agency with a local mandate. Agency or land user representatives provide direction and energy for the process.

In New Zealand there is no obligation for parties to co-operate over land management although the potential for co-operative approaches exists. On the one hand there are uncertainties about the beneficial outcomes of co-management. On the other there is a distinct willingness to explore the potential for those benefits. As a first step land users (i.e. farmers) need time to develop groupings appropriate to the situation. Landcare groups that are emerging may be the pre-cursors of fully developed co-management approaches. For their part government agencies must have policies and processes which allow a meaningful response to these land user groupings.

The extent to which co-operative management between government agencies and land users can provide for the expression of third-party interests is unknown. Non-farming members of rural communities, as well as those based in urban communities, have opinions on land management issues.

Negotiation amongst rural community members and land users may produce a shared understanding of the need for particular approaches to land management problems. Responsibilities for initiating and funding such negotiation processes must be assigned.

Opportunities for input to national and regional policy statements may satisfy those wishing to express a perspective on land management problems. The policy statements may also enable the wider public to participate in defining environmental standards or "bottom-lines". Third parties often articulate concerns that become matters of public policy.

New Zealand's evolving experience with co-operative approaches to land management will require continued monitoring so that the successful processes and outcomes that emerge can be communicated to groups that may find such approaches beneficial.

Preface

Land management policies in New Zealand have had several distinct phases. The post-War drive to expand substantially pastoral production was characterised by an increased reliance on technological and chemical inputs. A publicly funded infrastructure provided farmers and rural communities with farm advisory services, subsidy programmes, and financial assistance to recover from natural disasters and adverse climatic events.

In the 1970s people began to question the wisdom of this orientation. A shift in public opinion reflected changing attitudes towards the use of natural resources and the impact of production and development on the environment. The economic restructuring and reorganisation of state agencies implemented by the fourth Labour Government in the mid-1980s resulted in a withdrawal of farm services and funding sources. The move towards market allocation of resources and fiscal restraint led to the removal or reduction of subsidies.

The change has meant some land uses are not sustainable in terms of their impact on soil resources or their economic viability. There are also parts of New Zealand where current land use problems are not confined to individual property boundaries.

The response to these problems has varied significantly. In some cases, central government has provided financial incentives to generate change or to provide short-term assistance. In other situations land users have attempted to develop productive systems that are more suited to the resource base. When crises develop, the overall response has tended to occur largely through central government initiative.

Although land management initiatives are adopted with the intention of including those experiencing land use problems, the complex interaction between physical, economic, financial, and social factors has generally been overlooked. While understanding varies with regard to physical, economic and financial factors, the role of those affected and the process of their inclusion is generally not well understood.

Economic and social impediments to change can be based on a lack of access to information. Individuals are often unaware of the source of necessary information and advice. A further constraint appears to be the inconsistent data bases that are used by different groups. Other impediments include an inability of individuals to perceive problems that occur on their own properties, social pressure to conform, short-term financial constraints, infrastructure constraints, inflexible institutional arrangements, and inadequate policy-making processes to facilitate change.

One area that warrants attention involves the breaking down of information monopolies; that is, situations where particular information regarding some natural or social phenomenon is specific to a particular social grouping. All parties are likely to benefit significantly when data gathering and analysis functions are decentralised to the most appropriate management level.

The challenge facing New Zealand land policy makers is to investigate approaches to land management where all knowledge or information about the resource is incorporated in decisions. It is hypothesised that movement towards sustainable development and management of natural resources depends on resource users being empowered to identify and resolve issues that they are associated with. There is interest in exploring approaches to land management that involve co-operation between land policy makers and those affected by policy making.

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CHAPTER 1

Trends in land management policy

1.1 Pre-1984: farmer-friendly policies

Land management practices in New Zealand have traditionally been determined by several major policy areas. Over much of the period of European settlement these policies have been closely identified with agricultural development. Agricultural products, and especially animal products, have long been New Zealand's leading exports.

First and foremost of these policies were various agricultural and land development support programmes. Land settlement policies enacted as successive Land Acts sought to increase pastoral and agricultural production by opening up unproductive or under-utilised land.[1] In the 1960s, the decline in the area of readily available land coupled with a decline in the terms of trade, saw the emphasis shift to agricultural support programmes. Under these programmes producers received substantial government assistance to increase production. These programmes continued to expand over the next 20 years. By the 1980s support programmes included production subsidies, tax deferrals, stock retention incentive payments, the Livestock Incentive Scheme, the Supplementary Minimum Price scheme, and the Land Development Encouragement Loan Scheme.[2] Much of the development took place on land that was both physically and economically marginal for agricultural purposes.

Another major land management initiative followed from the formalisation of soil conservation objectives under the *Soil Conservation and Rivers Control Act 1941*. The passage of the Act gave formal expression to a long-standing public interest in the maintenance and preservation of land resources. Essentially the legislative structure provided for centralised agencies to direct soil conservation programmes with regionally based catchment boards as delivery agencies. Under the Act early soil conservation activities were directed towards promotion, education, advice and demonstration, coupled with erosion control works for predominantly off-site benefits.[3] During the 1950s emphasis shifted towards on-farm erosion control reflecting the importance attached to increased agricultural production. An overall emphasis on soil conservation works was encouraged by central government subsidy support.

Paralleling arrangements for the achievement of soil conservation objectives were similar arrangements for the control of agricultural pests and weeds. Control of pests and weeds had been accomplished largely within the framework of problem specific legislation such as the various *Rabbit Acts* and the *Nassella Tussock Act 1946*. This legislation typically provided for control of agricultural pests and weeds through local control boards. Subsequently, comprehensive provision for the control of pests and weeds was provided through the *Noxious Plants Act 1978* and the *Agricultural Pests Destruction Act 1967*. Under the comprehensive legislation centralised agencies administered weed and pest control programmes with locally based Pest Destruction Boards and Noxious Plants Authorities as delivery agencies.

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1 W.R. Jourdain, Land Legislation and Settlement in New Zealand (1925).

2 Laurence Tyler & Ralph Lattimore, *Assistance to agriculture* in R. Sandrey & R. Reynolds (eds), Farming Without Subsidies, 60-79 (1990).

3 L.W. McCaskill, Hold This Land, 100-124 (1973).

1.2 Post-1984: user pays

By 1983 it was apparent that the level of agricultural support was unsustainable. The period after 1984 saw dramatic changes in the arrangements for the achievement of land management objectives. With a change of government in 1984 government policies were increasingly directed towards enhancing overall economic efficiency. Agricultural support programmes were either terminated or otherwise adjusted with the intention of placing agriculture and other industries on the same footing.

As part of the reforms, subsidies available for catchment works were reduced. As from 1987, government policies were directed towards encouraging regional administration and funding of water and soil conservation.[4] The shift away from farm-based soil conservation was signalled by the National Water and Soil Conservation Authority's 1987 policy that defined soil conservation as, "The management of land to maintain New Zealand's soil and water resources to provide the widest range of sustainable benefits for the needs and aspirations of present and future generations."[5] The National Water and Soil Conservation Authority was abolished shortly thereafter and responsibilities for soil conservation were transferred to catchment authorities and the Ministry for the Environment. Catchment authorities were themselves subsumed within a new regional tier of government (regional councils) in 1989.

Local and regional government also assumed greater responsibility for routine local weed and pest management services. The Noxious Plants Council and the Agricultural Pests Destruction Council were abolished in 1989 and the rôles and responsibilities for weed and pest management were transferred to regional authorities.

The net effect of the changes was that policies for land management addressed a wider range of objectives than those relating to agricultural production. The policy changes also placed more responsibility for the funding of services related to the achievement of land management objectives on the beneficiaries of those services, that is, 'user pays'.

Although government economic restructuring had a profound impact in lessening the impact of land management practices on the environment,[6] economic restructuring was not seen as an end in itself. Rather, land management policies became subsumed within policies purposely directed towards the sustainable use of natural resources.

1.3 Post-1991: sustainability rules

The latter phase of changes in land management policies coincided with a major review of resource management laws that began in 1986. The review resulted in the *Resource Management Act 1991*. Its single purpose is to promote the sustainable management of natural and physical resources.[7] The link between economic restructuring and sustainable use policies and the rights and responsibilities of the various interests in land management has remained somewhat confused.

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[4] Ron Sandrey, *The regulatory environment*, in Sandrey & Reynolds *supra* note 2 104-106.

[5] NWASCA Circular No. 1987/13, Soil conservation policy, 1 December 1987.

[6] Guy Salmon, *Balance. In*: Environment meets Economics: 1986 Debate series, Environmental Council and Ministry for the Environment 29-32 (1987).

[7] *Resource Management Act 1991* s. 5.

Under the *Resource Management Act 1991*, regional councils have specific functions including: "the establishment, implementation and review of objectives, policies and methods to achieve integrated management of the natural and physical resources of the region".[8] Specifically the Act provides for regional policy statements to achieve the purpose of the Act and details the matters to be dealt with in such statements. These include policies with respect to significant issues, the methods chosen, the monitoring of performance, and a duty to consult.[9]

Central government still retains a significant role in the achievement of land management objectives. Weeds and pests capable of causing extensive destruction of resources with national benefits are deemed to warrant central government involvement. Central government has indicated that it will meet funding responsibilities, in conjunction with regional authorities, in selected cases such as rabbit management.

Central government also has key responsibilities under the *Resource Management Act 1991*. Central government is responsible for national policy statements on resource management issues of national importance and no regional policy may be inconsistent with a national policy.[10] Moreover, the Minister for the Environment is obliged to monitor the effect and implementation of the Act.[11] In short, land management policies are now inextricably linked to the procedures and processes of the *Resource Management Act 1991*.

1.4 Discussion

Changes in land management policies can be viewed in the context of government's concern for efficiency in the provision of government services. In particular, the move away from specialised agencies and the location of land management policies within the regional planning process is intended to ensure consistency across the various dimensions of land management.

Although an objective evaluation of land management performance would be an extraordinarily difficult task, recent changes in procedures and processes allow a greater range of decision-making approaches. A limitation of the pre-1984 arrangements was that they centred on technological approaches to resolving problems in land management. Although technology has its place, the intractability of major problems in land management suggests that the issues involved are 'meta-problems'.[12] Meta-problems are distinguished by such characteristics as difficulty in reaching a consensus definition of the problem, the essential presence of multiple disciplines and perspectives, and the prerequisite to their solution being a fundamental change in social values and institutional arrangements. Arguably whatever the achievements of the earlier arrangements, they were limited in their ability to address the sorts of complex interactions contributing to meta-problems in land management.

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8 *Ibid.* s. 30.

9 *Ibid.* s. 62, First Schedule.

10 *Ibid.* ss. 45, 55.

11 *Ibid.* s. 24.

12 T. O'Riordan, Perspectives in Resource Management, 1-3 (1971).

The Ministry for the Environment now has direct responsibilities for the achievement of resource management outcomes. The Ministry has an interest, or rather an obligation, in ensuring that the methods chosen for the achievement of land management outcomes are successful. The arrangements are not straightforward. Although land management objectives are to be part of the regional planning process, it is farmers and other land users who are primarily responsible for funding the provision of land management services. In addition, the *Resource Management Act 1991* requires a wide range of interests to be consulted as part of the decision-making process.[13]

The achievement of land management outcomes under the new arrangements requires resource users and other interests to be committed to the regional planning process. It is unclear what sort of arrangements best allow for this commitment. Experience with the Rabbit and Land Management Programme, for example, has shown that without the support of land users, land management policies can be difficult to implement. The Ministry for the Environment therefore has an interest in understanding how policy processes can involve various interests in the successful implementation of land management policies.

The purpose of this research is to identify approaches that involve people in decision-making alongside government agencies to help achieve improved land management outcomes.

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13 *Resource Management Act 1991* First Schedule.

CHAPTER 2

A model of co-operative management

2.1 Involving resource users

Co-operative management implies the joint involvement of resource users and government agencies in resource management. Co-operative management or co-management is one way of giving expression to the notion of 'partnership' (between, for example, Government and the business sector) that is being advocated in some circles. Models of co-operative land management have not been analysed for the extent to which they provide for more effective involvement by resource users in resource management. Nevertheless there is a well-developed body of knowledge on the theory and practice of co-operative management in fisheries.[14] The principles underpinning co-operative management provide an analytical tool for examining the sorts of policy arrangements that could involve resource users in resolving complex land management problems.

Co-operative management, or co-management, refers to the sharing of management responsibilities between resource user groups and an administering agency.[15] In fisheries, where there is extensive co-management experience, the move towards shared responsibilities for management is relatively straight-forward. Governments have traditionally allocated harvesting rights for marine resources to resource users and retained overall management responsibility. Co-management type arrangements result when government shares some of its management functions with resource users.

In land management, the property right arrangements are generally quite different to those of fisheries. Rights to land resources are often allocated to individual property owners who have responsibilities for resource use. Nevertheless, a government stake in land management, other than direct ownership, has long been justified where management responsibilities have not been satisfactorily resolved within the scope of the existing rights.[16] That is, where all the costs of resource use are not considered in management decisions. The obvious example is the involvement of government to control the off-site effects of induced soil erosion.

Adapting principles derived from the fisheries experience with co-operative management to problems in land management will require different sorts of interaction between government agencies and resource users. The fisheries experience, however, is instructive as it represents the extreme case where the central objective of government management has been to reduce the costs of resource use.[17] What is possible in fisheries should be more than possible in land management.

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14 Evelyn Pinkerton (ed), Co-Operative Management of Local Fisheries, (1989).

15 *Ibid.* 4-5.

16 See for example Anthony Scott, Natural Resources, 137-157 (2nd ed. 1973).

17 See for example Arthur F. McEvoy, The Fisherman's Problem at 14 (1986): 'Fisheries simply provide a laboratory example of the problem of environment because they are ecologically volatile and because in most cases it is impossible to consign their husbandry to private owners as if they were cropland or stands of timber. "The fisheries" wrote one economist "present in one form or another all of the major causes of market-mechanism failure that call for public intervention." A detailed contextual analysis of one region's fisheries ... might suggest conclusions not only about fishery management per se but about modern industrial society's difficulties in sustaining its natural environment generally.'

The key lesson is in altering responsibilities so that both government agencies and resource users have a stake in reducing the costs of resource use. How government and users define their roles will determine the success of management strategies.

2.2 Social learning through negotiation

There is no one model of co-operative management in the sense of a set of clearly specified rules of organisation. The common element is not the particular rules or procedures that make up the mechanics of the agreement but rather the acknowledgement of community self-reliance and the commitment by government to involve resource users in resolving difficult management and public policy problems.

Users of North American specialised fishery resources, for example, are becoming more involved in management than they have in the past. Practice has shown that pay-offs are greater if resource users and government agencies have common interests.[18] Co-management occurs through negotiated agreements and other formal and informal arrangements between groups or communities of resource users and various levels of government.[19] These agreements allow the parties to co-operate to their mutual advantage and to share decision-making responsibility.

Negotiation provides an environment in which social learning can take place. Social learning has been described as one of the necessities for resolving complex policy controversies.[20] Social learning refers to the processes for gathering and internalising knowledge about the changing conditions of both the internal and external environment.[21] Principles of joint problem solving used in negotiation can guide the learning experience of diverse groups interacting over a common conflict. Social learning can play a role in "stubborn policy controversies that tend to be enduring, relatively immune to resolution by reference to (scientific) evidence, and seldom finally resolved".[22]

The resolution of complex policy controversies requires a "frame-shift" where policy actors reconstruct their understanding of the situation so that new, previously unseen actions become visible.[23] The mental frames held by the participants may change depending on the learning or lack of learning that has occurred. Participants "construct the problems of the problematic situation through frames in which facts, values, theories and interests are integrated. Given the multiple social realities created by conflicting frames, the participants not only disagree with one another but also disagree about the nature of their disagreements".[24]

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18 Pinkerton *supra* note 14 at 5.

19 *Ibid.* at 4.

20 Martin Rein & Donald Schon, *Frame-reflective policy discourse,* in Peter Wagner, Carol Hirschon Weiss, Bjorn Wittrock & Hellmut Wollmann (eds), Social Sciences and Modern States 262-289 (1991).

21 Norman Dale, *Getting to co-management: social learning in the redesign of fisheries management* in Pinkerton *supra* note 13 49-72.

22 Rein & Schon *supra* note 20 at 262.

23 Dale *supra* note 21 at 62.

24 Rein & Schon *supra* note 20 at 262.

According to these authors, frame-shifts result from three processes of policy discourse: the role of individual brokers in transforming conflict situations, instances where the participants allow the situation "to speak back at them" while the participants listen and change, and as the result of changes of context. In forcing a reconstruction of the policy problem through the input of resource users, co-management approaches enable these frame-shifts to occur.

2.3 North American fisheries experience

Fisheries management has long been concerned with seemingly intractable resource management issues. Co-management agreements are indicative of the difficulty of resolving these problems through conventional management systems. The agreements originate out of crises caused by rumoured or real stock depletion, or from political pressure following claims that government control is unable to cope with specific problems. Co-management-type solutions include the potential to promote conservation and enhancement of fish stocks, to improve the quality of data and data analysis, reduce excessive investments by fishers in competitive gear, make allocation of fishing opportunities more equitable, promote community economic development, and reduce conflict between government and fishers, and conflict among fisher groups.[25]

Co-management regimes work by altering the relationships among the stakeholders in the fishery. Government agents surrender some responsibilities in exchange for fishers' co-operation and assistance in management. Shared decision making sets up a management regime in which the pay-offs are greater for co-operation than for opposition and where the focus is on the common good of improved resource management outcomes.

The primary goals or benefits sought by one or all of the actors are more appropriate, more efficient and more equitable management. Secondary goals or processes are co-management as a route to community-based development, and to decentralising decisions sufficiently to address problems effectively, and co-management as a participatory process for managing the consent of resource users and reducing conflict.[26]

Co-management systems exhibit considerable diversity. The extent to which management functions are shared will vary according to the particular situation. The North American fisheries experience suggests co-management arrangements can play a role in the following management functions:[27]

(i) data gathering and analysis,

(ii) logistical harvesting decisions,

(iii) harvest allocation decisions,

(iv) habitat protection,

(v) enforcement and regulation,

(vi) enhancement and long-term planning, and

(vii) broad policy decision making.

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25 Pinkerton *supra* note 14 at 4.

26 *Ibid.*

27 *Ibid.* at 6.

2.4 Co-operation in land management

Management functions related to the use of land resources are often accomplished by a single unitary owner, whether this is a private landowner or the state. There are many situations however, where government has become involved in land management in an attempt to achieve collective benefits. The management functions here can be partly or wholly distributed between landowners and government agencies.

Under the pre-1984 arrangements government and landowners co-operated in the achievement of statutory soil conservation objectives. Changes in the institutional arrangements governing the use of land resources create an opportunity for considering the potential for co-management-type arrangements.

The inability of self-interested individuals to resolve intractable problems in resource management is well known:[28]

> "The tragedy of the commons, the prisoner's dilemma, and the logic of collective action are all closely related concepts in the models that have defined the accepted way of viewing many problems that individuals face when attempting to achieve collective benefits. At the heart of each of these models is the free-rider problem: whenever one person cannot be excluded from the benefits that others provide, each person is motivated not to contribute to the joint effort but to free-ride on the efforts of others. If all participants choose to free-ride, the collective benefit will not be produced."

In economics the problem is described in terms of externalities. An externality is a cost or benefit that any one person's actions impose on another. The economic problem is in determining ways of controlling externalities so as to reach an outcome that takes account of the relative costs and benefits. There are various ways of resolving externality problems; the respective interests can negotiate agreements, they can trade rights, or government can intervene through subsidies or regulation to achieve particular outcomes.

Although government has responsibilities where there are externality-like problems in resource management, evidence suggests that relying primarily on government intervention has limitations. Successful government solutions require centralised knowledge about the capacity of the resource, and the allocation, monitoring and enforcement of resource use. Experience has shown that the assumptions about the ability of government agencies to carry all of these management functions are unrealistic.[29]

Co-management is a strategy by which government and resource users can negotiate arrangements that lead to improved management outcomes. There are similarities between sociological assessment of co-operative management and institutional analysis of collective-action problems; that is, the problem of organising groups that would gain from collective action to act in their common

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28 Elinor Ostrom, Governing the Commons, at 6 (1990).

29 *Ibid.*

interest.[30] From an institutional perspective, resolution of collective-action problems is seldom straightforward:[31]

> "Institutions are rarely either private or public - 'the market' or 'the state'. Many successful common property resource (CPR) institutions are rich mixtures of 'private-like' and 'public-like' institutions defying classification in a sterile dichotomy. By 'successful' I mean institutions that enable individuals to achieve productive outcomes in situations where temptations to free-ride and shirk are ever present."

In New Zealand, co-operation between government agencies and users of land resources to resolve collective-action problems is nothing new.[32] However, co-operative land management has never been articulated as a policy proposition or viewed as an end in itself. The North American fisheries experience highlights the pre-conditions which favour co-management developing and what arrangements are most favourable for maintaining it.[33] A template can be derived capturing the key elements which would apply across the spectrum of resource use where co-operative arrangements are possible. This template is presented as follows:

1. **Favourable pre-conditions for co-management**

   Co-management is most likely to develop out of a real or imagined crisis in the resource base, when resource users are willing to contribute financially to the rehabilitation of the resource and/or to other management functions, and when there is an opportunity for a negotiation process and/or experimental co-management of at least one simple function. Co-management provides a mechanism that allows resource users to capture the gains from resolution of externality or collective-action type problems in resource management.

   The most favourable mechanisms and conditions supporting co-management include formalised, legal, and multi-year agreements, and where there is a mechanism for recirculating back into communities some of the wealth generated by more intensive, superior management. Co-management operates most favourably where the mechanisms for conserving and enhancing the resource can, at the same time, conserve and enhance local communities. Co-management can also be maintained where external support can be recruited from scientists or universities, for example, and where external discussion fora exist which include participants other than the predominant resource users and government officials.

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30 See for example Ostrom *supra* note 28; Elinor Ostrom, Crafting Institutions for Self-Governing Irrigation Systems (1992); Shui Yan Tang, Designing complex institutional arrangements, Western Political Science Assoc. Conf. (1991); Daniel W. Bromley & Michael M. Cerna, The management of common property natural resources, *World Bank Disc. Paper 57* (1989); Elinor Ostrom, Larry Schroeder & Susan Wynne, Institutional incentives and rural infrastructure sustainability, USAID (1990).

31 Ostrom *supra* note 28 14-15.

32 See McCaskill *supra* note 3 188-207. For less formalised co-operation between landowners and government agencies see the history of the Roxburgh Combined Conservation Group, Otago Daily Times, Dunedin, 15 February 1991 at 18.

33 Pinkerton *supra* note 14 26-30.

2. **Best scale for co-management**
The best scale for co-management is where benefits can be linked to specific geographical areas, that is, where the area is not too large. The number of resource users should allow for effective communication. Well-organised sub-groupings which communicate well with each other or have effective umbrella organisations provide the most favourable environment. Government bureaucracy needs to be small and its mandate regional or local.

3. **Groups most likely to develop co-management arrangements**
Co-management is most likely to develop with groups that already have a cohesive social system, that is, clearly defined boundaries, unambiguous membership and a common interest.

Good leadership - a dedicated person or core group applies consistent pressure to advance the process supports co-management.

4. **New interactions that can emerge in co-management**
A number of new interactions arise when working co-operatively. Successful co-management creates co-operation among individual resource users and resource user groups in planning the improvement of resource management practice. It also creates commitment among resource users to share both the costs and benefits of their efforts towards enhancing and conserving resources. It is this sharing of actual or potential benefits that gives resource users the confidence to plan for the long term.

Successful co-management enhances the position of resource users so that a more equal negotiating relationship exists between all users. Further, a willingness is created among both resource users and government officials to share data about the resource and therefore to improve understanding of the constraints to resource use.

Finally, successful co-operative management creates a higher degree of trust between resource users and government officials, and an improved ability to develop and implement policies that resource users perceive as appropriate and legitimate. It also allows for a range of self-management responsibilities to be assumed by resource users: it allows those who gain to meet those who lose.

CHAPTER 3

Assessing the co-operative management model

The first task in evaluating the potential for co-operative approaches to land management in New Zealand was to assess the template's relevance to the local situation and to everyday experience of land management. That assessment could only be carried out by people with knowledge of the operation of land management initiatives. Chapter three describes how the assessment was carried out and the results obtained.

3.1 Consulting the parties

The necessity for assessing the co-operative management model in terms of a New Zealand context identified an important role for a Consultative Group. The objective in establishing such a Group, as part of this research project, was to access a broad range of knowledge on the theory and practice of approaches to land management in New Zealand. Interaction with the Group would provide critical comment on the merits and shortfalls of the co-operative management model.

The first step was to identify potential members of the Consultative Group. Here the concern was not so much with particular individuals but with ensuring that as wide a range as possible of the interests involved in land management were represented. These interests were broadly identified as:

(i) central government,

(ii) local government,

(iii) non-government organisations,

(iv) academic interests,

(v) landowners,

(vi) tangata whenua, and

(vii) women.

Letters were then sent to selected individuals representative of these broad interest areas. The choice of individuals was selective to the extent that the intent was to target people who had a demonstrated interest in land management. Members of the Consultative Group are listed in the Acknowledgements section of this report.

Individuals invited to participate were provided with a thumb-nail sketch of co-management as applied to North American fisheries, a brief summary of the principles underpinning the approach - that it implies negotiated agreements between resource user groups or communities and local or central government to achieve improved resource management outcomes - and the summary template of the co-management model detailed at the end of chapter two.

People were asked to respond by:

(i) providing comment on the potential of co-operative management to improve land management outcomes,

(ii) assessing the applicability of the approach to a New Zealand context,

(iii) identifying aspects of policy making that are inadequately dealt with by the model, and

(iv) providing detailed comment where necessary on the co-management template.

Sixteen of the 20 people invited to participate responded to a greater or lesser extent. A synopsis of the key points in the responses is presented in Appendix 2. General comments relate to points (i) - (iii) above and other comments are grouped in terms of the co-management template ((iv) above).

3.2 Discussion

The points raised by the Consultative Group reflect something of the diverse interests in land management. There are, however, many areas of overlap. Responses from landholders were more informal and generally reflected caution about the prospects for a more co-operative approach. Responses from government agencies were more detailed. The differing types of response illustrated the difficulty of co-ordinating across interest groups given their past experience of land management.

There was some uncertainty as to what co-operative management entailed. This uncertainty probably reflected the very generalised information given to Consultative Group members. That information described the sorts of conditions that led to co-operative arrangements, not the detail of the arrangements themselves. There were also concerns over the appropriateness of applying a North American fisheries model to land management in New Zealand, particularly given the different property rights governing resource use. While most responses acknowledged the benefits of the approach, a concern was expressed that the costs of the approach had not been presented. There was particular apprehension about the ability of co-operative arrangements to take account of the national interest in land management.

In general, there was support for encouraging co-operative approaches to resolving problems in land management. These were seen as providing an opportunity for the various interests to co-operate in achieving resource management outcomes while avoiding the difficulties inherent in administrative processes (adversarial, expensive and time consuming) or legislative procedure (overly prescriptive). There was recognition of both public and private interests in land management and the need for arrangements that enabled these interests to be reconciled. Land management was not seen as simply a matter of groups with competing interests.

The initiatives taken in respect of Landcare-type organisations were seen as one approach which recognises both private and public interests. An explicit definition of these interests was left unclear and there was little indication about how these interests are reflected as rights and duties and how processes for accommodating an increased range of interests in land management link with improved outcomes.

A sense of ownership of problems and therefore commitment to their resolution was seen as essential. Better land management outcomes are likely if local communities are involved in the early stages of identifying the problem and they remain involved.

The responses also suggest that reconciling the various interests, whether local versus national or upstream versus downstream, will not be straight-forward. Co-operative management is essentially a process for involving resource users and government in joint policy making. Land management problems, on the other hand, frequently involve wider public interests and a range of agencies with statutory responsibilities. Mechanisms for ensuring that co-operative arrangements are legitimate were thought necessary. The potential for unevenness in regional outcomes was a concern.

There was general agreement that land management problems in New Zealand provide the appropriate pre-conditions for co-operative arrangements. The South Island high country situation has already led to resource user initiatives and the development of a sense of ownership of land management problems. However, current arrangements were seen as not always encouraging such initiatives and there was considerable uncertainty about the types of arrangements that would allow co-operative management to prevent the occurrence of a crisis. The point was well made that people can only act to the extent that they are aware of the implications of policy and processes.

Scale was seen as particularly important in that co-operative management should enable local solutions to local problems. Generally it was recommended that co-operative approaches were better suited to small geographic areas. The relationship with government agencies at the local level was therefore seen as central to the success of co-operative management initiatives. Government has to recognise the legitimacy of local solutions and the involvement of government agencies should be appropriate to the scale of the process.

A key concern was that government involvement be kept to a minimum. On the other hand the responses suggested that local expertise may be insufficient, problems in resource management may operate at a large scale and simply shifting responsibilities to local and regional governments does not result in agenda-free policies. Reconciling the role of government agents and land users in the achievement of resource management outcomes is seen as a major problem.

The Consultative Group emphasised the role of land user-based management groups. Community groups are seen as vital for the success of any land management initiatives. New locally-based co-operative management approaches would be best achieved by building upon or enhancing existing organisations. Leadership skills are seen as important in the operation of existing Landcare-type groups but the point was also made that such groups require help with facilitation. The objectives of community groups were seen as unclear; that is, whether they are political, social or economic.

Consultative Group responses suggested that land management initiatives involve new sorts of interactions among the interest groups. The concern was that the circumstances under which groups interact positively are not well defined and so group interaction needs to be carefully managed.

Implicit and explicit comment from the Consultative Group pointed to the need for sensitive collaboration with community representatives in undertaking this research. There was a concern that proposals that explored opportunities for co-operative management could heighten expectations or entrench cynicism. Either way, such responses would not only jeopardise the likely success of co-operative management in New Zealand but also existing land management initiatives.

The Consultative Group feedback generally supported the concept of co-operative approaches to land management. It suggested that such approaches would only succeed where local groups could participate in resource management. Further development of co-management must acknowledge and extend co-operative approaches already occurring in response to land management problems.

CHAPTER 4

Recent land management initiatives - a review

4.1 Co-operation in land management

The research project involved reviewing past and contemporary land management initiatives to identify their strengths and weaknesses and assess the potential for co-operative land management in New Zealand.

The purpose of this phase of the research was to identify whether these initiatives involved co-management practices and to learn from any particularly successful co-operative approaches. Further, it was intended to identify any recurring obstacles to the adoption of co-operative management and to resource user participation.

A template was derived from Pinkerton's model of co-management to identify when the initiatives had proceeded along co-operative lines. The template consisted of listed points under the headings of: potential management functions, pre-conditions, best scale, favourable mechanisms and conditions supporting co-management, new human relationships and tentative propositions. The points used to determine whether or not initiatives had features of co-management are listed in Appendix 1.

The New Zealand land management initiatives reviewed were the Tutira Land Use Study and proposed FARM Partnership, the Rabbit and Land Management Programme, and the Kurow-Hakataramea Resource Conservation Committee. By way of contrast to these discrete initiatives the experience with Landcare in Victoria, Australia, was also reviewed to gauge the effect of a comprehensive approach to the development of land management policy. These initiatives were chosen because they were designed to deal with pervasive land management problems that have characteristics of 'meta problems'. These problems had both a private and public interest component and the potential for a management partnership between resource users and government agencies.

Basing this review on documentary evidence imposed limitations. A particular element of co-management may be absent or the written material may simply fail to acknowledge its presence. The information available on each of the case studies varied. The reviews presented here are not intended to be comprehensive. The interviews with community commentators reported in chapter 5 attempted to address these limitations in a general way.

4.2 Tutira: restructuring farming

4.2.1 Background

The Tutira Land Use Study aims to rationalise land use on erosion-prone hill country in northern Hawke's Bay. The management of such country on the east coast of the North Island is a long-standing problem. The Taylor report (1967) noted the link between exceptionally severe land erosion and the maintenance of rural communities in the Poverty Bay - East Cape district.[34] Land erosion problems affected large sections of the rural community; population declined and land values

[34] Soil Conservation and Rivers Control Council, Report of the technical committee of enquiry into problems of the Poverty Bay-East Cape district [Taylor Report] (1967).

were depressed. The report recognised there were no quick solutions and a unified, large-scale attack was needed.

The report's major recommendation was the separation of a "pastoral foreland" from a "critical headwaters area". Catchment board policies of co-operating with farmers were to apply to foreland areas with extensive forestry plantings elsewhere. Although elements of the recommendations were adopted no comprehensive strategy eventuated.

Cyclone Bola in March 1988 emphasised the risks associated with the use of steep East Coast hill country for pastoral purposes. More particularly, Cyclone Bola demonstrated both the value of protection forestry on erosion-prone land and the large off-site costs associated with inappropriate land management practices.[35] Bola resulted in erosion to bare ground of up to 20% on some farms and up to 50% on individual slopes.[36] Scientific studies had already demonstrated that erosion can result in immediate and dramatic reductions in pasture production on steep hill country. Since forest cover was removed 150 years ago in northern Hawke's Bay various pastoral farming regimes have led to a 30% decline in potential productivity on steep hill country and a 15% decline on moderate hill country.[37]

Storm damage has generally been addressed through short-term disaster relief measures. After Bola it was recognised that these do little to resolve the major problem of inappropriate land uses.

The Tutira initiative aims to restructure farm operations so that land uses are closely aligned with land capability. The Hawke's Bay Catchment Board identified some 65,000 ha of hill country north of Napier where achieving sustainable land use is a major problem. A 2,018 ha study block (Kahika Block) within the 65,000 ha study area was chosen to test concepts of farm restructuring and sustainable land use. The aim was to rationalise land use on the basis of long-term risk. The initiative was proposed by the Catchment Board and supported in a joint project with MAF and Federated Farmers.

After land use and related studies were done it was recommended by early 1989 that the existing seven farms within the Kahika Block be restructured into four units. Pastoral land uses currently dominant over the whole area would be restricted to the easier slopes. Steeper slopes would be put into some form of forestry or reserve with the objective of reducing their susceptibility to erosion. The changes would alter the current land use (95% pastoral) to a mix of pastoral (25%), agroforestry, (25%) and production forest (45%).[38]

The Tutira study's recommendations were not implemented. This was partly due to the absence of an external funding source to facilitate change and indicates a failure to clearly define the rights and responsibilities of the respective interests. However, the procedures and processes followed during the project's formative stages allow its guiding principles to be evaluated.

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35 C. Trotter. *Cyclone Bola: the inevitable disaster*, 43 N.Z. ENGINEERING (6) 13-16 (1988).

36 *Ibid.* at 14.

37 I. Brown, R. Black & J. King, An investigation of farm restructuring and sustainable land use - Tutira region, northern Hawke's Bay. Fifth Australian Soil Conservation Conference, Perth (1990).

38 *Ibid.* at 4.

4.2.2 *Connections with co-management*

The Hawke's Bay Catchment Board's statutory objectives related to the achievement of land management outcomes within its district. On the basis of information from scientific surveys the Board was able to establish the preferred land uses. The major question, however, was how to change land use patterns from their existing state to the preferred situation. Although the preferred land uses were better suited to the capability of the resource, the existing system of pastoral farming was the only commercially viable land use. The problem therefore became one of aligning the private and public interests in land management.

It is significant that the Catchment Board sought to achieve a change in land uses through co-operation with landowners in the study area. The proposal itself was formalised and developed by the Hawke's Bay Catchment Board in conjunction with MAF and Federated Farmers. The Board committed itself at an early stage to co-operate with landholders within the study area.

Extensive social assessments were carried out as part of the study. These surveys indicated that while landowners were not unaware of the long-term benefits that would result from changes to land use, they would only support the proposals to the extent that participants would be better off as a result of change and that participation should be voluntary.[39] Indeed, farmers in a difficult financial position said they would reject the proposal if it involved regulatory rather than voluntary participation. Nevertheless achieving land use change through regulation was a technically feasible option.

From the landowners' perspective the success of initiatives directed towards land use changes depended on:[40]

(i) education and communication between government agencies and the rural community,

(ii) implementation methods that were seen to be accountable and credible, and

(iii) allowance being made for the long time frame required to facilitate changes in farming systems.

Although the project demonstrated the common interest in improved land management outcomes, it was not within the capability of the agency and landowners to implement the proposal. The difficulties surrounding implementation largely revolved around the absence of a mutually acceptable compensation package.

Notwithstanding these difficulties the scheme does illustrate elements of co-management. The initiative arose in response to the need to resolve problems of soil erosion and declining productivity. Extreme climatic events had demonstrated that in the absence of risk management strategies, current land uses were contributing to a crisis in the resource base.

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39 P. Aldwell, Socio-economic impacts of alternative land use scenarios in northern Hawke's Bay. Report to the Hawke's Bay Catchment Board (1990).

40 B. Doohan, Sustainable land use project, pers. comm. (1989).

The initiative sought to involve land holders in planning for the long-term maintenance of land resources. The rural community's support for the concept was strengthened by conditions typical of co-operative arrangements:

(i) personnel within the Hawke's Bay Catchment Board were strong and enthusiastic supporters of the initiative,

(ii) the area involved was geographically restricted with a relatively homogeneous farm-based community, and

(iii) there were effective umbrella organisations that facilitated co-ordination between government agencies and resource users.

The approach developed in the study went on to form the basis for a major government initiative aimed at improved land management outcomes. That initiative, the Facilitation, Action, Risk Management (FARM) Partnership Scheme, sought to facilitate land use change through a three-way partnership between individual land users, regional communities and central government. Individual landowners and the communities to which they belonged would retain responsibility for solving land management problems. Central government's role was to speed up the process and remove barriers to progress. Action on the FARM proposal was discontinued with a change in government at the end of 1990. Again the apparent difficulty was the absence of external funding.

4.3 Rabbit and Land Management Programme: integrated land management

4.3.1 Background

The Rabbit and Land Management Programme (R&LMP) is an outcome of a recent policy process that has focused on 'high' or 'extreme' rabbit-prone areas in the South Island. Over the past decade or so rabbit control in the semi-arid regions has largely relied on 1080 poisoning. A recognition that this poisoning has not always been effective, plus central government's decision to reduce funding of rabbit control in the early 1980s, led the Agricultural Pests Destruction Council in 1982 to call for the introduction of myxomatosis as a rabbit control measure.

The Parliamentary Commissioner for the Environment audited the environmental impact report of the proposal to introduce myxomatosis. The Commissioner concluded that approval should not be given for the myxoma virus and rabbit flea to be introduced into New Zealand at that time, and that locally-based task forces should develop an appropriate, integrated, land management package.[41]

The Rabbit and Land Management Task Force was subsequently established "to develop an integrated land management strategy as a solution to the rabbit problem in the areas of moderate to high risk of rabbit infestation, given that the government has agreed that myxomatosis will not be introduced at this time"[42].

The R&LMP is administered by MAF and is helped by an Advisory Committee comprising: the High Country branch of Federated Farmers, Landcorp, the Department of Conservation, the

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41 Parliamentary Commissioner for the Environment, Investigation of the proposal to introduce myxomatosis for rabbit control at 85 (1987). [Hereinafter PCFE 1987.]

42 Rabbit and Land Management Task Force. The report of the Rabbit and Land Management Task Force, at v. Report to the Minister of Agriculture (1988). [Hereinafter Task Force.]

Ministry for the Environment and the Otago, Canterbury and Nelson/Marlborough Regional Councils. The Programme is to run from 1989 to 1994 and is intended to "provide a 'window of opportunity' for necessary changes in land management through taxpayer and ratepayer subsidy of conventional rabbit controls, so that land use in the marginal lands could move toward a more sustainable form".[43]

The Programme links the three key elements of land degradation, management, and the control of externalities, and is based on what are termed 'property plans'. The preparation of these plans is the mechanism for encouraging farm practices that result in sustainable land use. The plan outlines the farm's physical resources and management intentions for each block of land. When the plans are approved central government funding is confirmed. This funding is disbursed through regional councils which deliver rabbit control services to farmers.[44]

4.3.2 Connections with co-management

Traditional pastoral use of South Island tussock grasslands has involved the use of burning and the grazing of sheep. Plagues of rabbits have contributed to depletion of vegetation. A diminished carrying capacity and the need to reduce stocking levels indicate a crisis in the resource base.[45] All those affected agree that there is a crisis, but they do not all agree on the nature of the problem or the means by which the problem should be addressed.

Landholders have traditionally sought to work in partnership with government agencies in overcoming intractable problems in land management. During their consultations the Task Force found support for a partnership between the landholder and the Crown[46]. The difficulty of co-ordinating collective-action has made self-management an unrealistic option. The development of property plans with regional councils assumes an input by landholders that is greater than that required under previous Soil Conservation Farm Plans.[47] Property plans are developed by the landholder and a government agent[48]. They provide an opportunity for negotiation between regional government and resource users. However, serious concerns were raised early in the Programme's history about the affordability of participation. Landholders are encouraged to contribute financially to the rehabilitation of the land resource by the expectation of a grant from the Programme to assist in a capital works programme (for rabbit eradication and control and soil conservation and protection) and pest management control[49].

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43 Parliamentary Commissioner for the Environment. Sustainable land use for the dry tussock grasslands in the South Island at 23 (1991). [Hereinafter PCFE 1991.]

44 Ministry of Agriculture and Fisheries (undated). *Rabbit and Land Management Programme Information paper*. Ministry of Agriculture and Fisheries, Lincoln.

45 PCFE 1987 *supra* note 41 32-36.

46 Task Force, *supra* note 42 at 31.

47 Taylor, Baines and Associates, Rabbit and land management social and environmental monitoring programme: scoping report at 66. Unpublished report to MAF Tech. South (1990). [Hereinafter Taylor Baines (1990a).]

48 *Ibid.* at 62.

49 See for example James Baines, The Rabbit and Land Management Programme: 12-month review, Appendix III. Report to MAF Technology, (1991).

Initially land holders did not feel that they were active partners nor did they have confidence in regional council staff to negotiate property plans.[50] The difficulties inherent in the establishment phase of regional councils did not enhance the situation. By the beginning of 1991 the process of team building had supposedly begun. At that stage the regional councils appeared to be taking most of the initiatives in terms of property plan development although landowners did not appear to identify with the programme.[51] By the middle of 1992 the majority of property plans had been submitted to MAF for approval and, according to MAF, the attitudes of many landholders had changed significantly.[52]

The co-management model suggests that the benefits of co-management are appropriately linked to catchments and that the area dealt with is best not too large. The R&LMP is a large-scale initiative involving a considerable number of landowners in the Canterbury, Otago and Marlborough regions. During the period November 1989 to May 1990 there were 99 properties eligible for participation and 14 properties whose participation in the programme was being reviewed in the Canterbury and Otago regions.[53]

Co-management tends to operate best when there is a cohesive social system. Research and a survey of farmers and the wider community carried out as part of the monitoring of the R&LMP suggests there may be differences in community formation between northern and southern parts of the Canterbury Programme area.[54] Research has also concluded that the Central Otago area is much more fragmented geographically and socially than the Canterbury area, although schools, pubs, basic services, halls, and the like do provide foci for community cohesion.

Overall, trust between landholders and central and regional government officials has been slow to emerge. Pat Garden, chairman of Federated Farmers' South Island High Country Committee articulates one perspective:[55]

> "We as lessees and land managers in the high country must take on the responsibility of drawing up our set of objectives for future land management and land use. We need to convince ourselves that we have the ability, the knowledge and the expertise to manage our land and to set in place long-term sustainable strategies - what's more, we can do it a damn sight better than the bureaucracy...
>
> "It will require a commitment and a preparedness to change which will be extremely difficult, but the alternative for us is to be locked into a system of outside experts dictating what should happen and an ever-increasing inability for us to influence our own business decisions, indeed our own destiny."

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50 Baines *supra* note 49 at 21.

51 *Ibid.* at 1.

52 Ministry of Agriculture and Fisheries, [May], Rabbit and Land Management News (1992).

53 Taylor Baines and Associates, Social and institutional monitoring and evaluation in the rabbit and land management programme at 6. Report to the Ministry of Agriculture and Fisheries (1990?). [Hereinafter Taylor Baines (1990b).]

54 Taylor Baines (1990a), *supra* note 46 40-48.

55 PCFE 1991, *supra* note 43 at 56.

At the initial stages of the implementation of the Programme, farmers were concerned at their lack of access to critical information, particularly with regard to likely costs and timing of pest control operations[56]. Landholders perceive that there is limited information available on practical field-tested techniques which can be used to facilitate land use change or the rehabilitation of degraded dry tussock grasslands. Research relating to the degradation of dry tussock grasslands is also seen as fragmented.[57]

A detailed survey of landholders carried out as part of the social and institutional monitoring and evaluation of the Programme revealed that formal sources of information offered by central and territorial government agencies were perceived as less useful overall than other sources[58].

4.4 Kurow-Hakataramea Resource Conservation Committee: self-management in action

4.4.1 Background

The Kurow-Hakataramea Valley is a geographically confined, semi-arid dryland district on the east coast of the South Island in the Waitaki River Catchment. The Hakataramea in particular is 'hard' country. The annual rainfall averages 430 mm and in some years is less than 300 mm. Soils tend to be old and weathered with pockets of loess.[59]

Notwithstanding the constraints posed by the nature of the physical resources, the Kurow-Hakataramea is fairly typical of New Zealand farmland with land use systems based dominantly on pasture rotations with some cereals. Some of the area is irrigated. As in other parts of the country, farming systems intensified during the 1970s following the government's encouragement to increase productivity. In the 1980s, however, indications were that increased productivity was causing the land to be used beyond its long-term capability.

A major drought following the winter of 1984 had a serious effect on the farming community. By early 1985 widespread failure of crops and pastures had resulted in a disaster situation. Overgrazing followed and trampling by stock removed the remaining vegetative cover and broke up soil structure. Severe windstorms during August 1985 carried away large quantities of topsoil and the area was likened to a dust bowl:[60]

> "Much of the drought-ravaged Hakataramea Valley, north-west of Oamaru, is a dustbowl, and farm management and weather conditions during the next six months will be crucial for the future of farming in affected areas."

The Kurow-Hakataramea Resource Conservation Committee (KHRCC) evolved as a community-based initiative to resolve the burgeoning problems in land management.

In response to widespread concern about the wind erosion problem a series of farmer meetings resulted in the election of an action committee (later called the KHRCC) in late August 1985. The Committee was elected to promote both short- and long-term strategies to improve the viability of

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[56] Taylor Baines (1990b), *supra* note 53 at 15.

[57] PCFE 1991, *supra* note 43 29-31.

[58] Taylor Baines (1990b), *supra* note 53 at 27.

[59] The Press, Christchurch, 13 December 1991 at 31.

[60] Otago Daily Times, Dunedin, 3 September 1985 at 5.

farming in the area. Short-term strategies centre on de-stocking of overgrazed pastures and limiting cultivation in erosion-prone areas. Long-term strategies are to provide for new dryland plants, conservation tillage, shelter planting and irrigation.

Central to the broader resource management aims of the Committee was input from Waitaki Catchment Commission personnel familiar with overseas experience with natural resource conservation programmes. The Committee's immediate objective was to access emergency aid for the district to overcome the financial difficulties resulting from the need to destock about 3,000 ha and the restrictions on cultivation.

Direct representations were made by the Committee, in association with the Waitaki Catchment Commission, to government. As a result the Minister of Works personally intervened to make government funds available for erosion relief measures. These funds were the basis of a government sponsored scheme worth $670,000 to remove stock and enable direct drilling and planting of new dryland species. Some 2,100 ha were drilled in an on-farm trial.

Accessing government funds is one matter. Providing for improved resource management outcomes is another. One of the KHRCC's ongoing tasks has been monitoring the new pastures and the management regimes under which they are utilised. Specifically the Committee's overall objective is to ensure that dryland farming is not only profitable, but sustainable.

The operation of the KHRCC has to be viewed in the context of the circumstances that led to its establishment. On the one hand were the short-term objectives directed towards alleviating the crisis caused by the drought:[61]

> "The Committee agreed that due to the combined climatic and financial environment, many farmers have passed the point where they can be reasonably expected to conduct their affairs without incurring substantial and possibly irreversible damage to the soil resource. It was therefore agreed that some form of Emergency Aid will be required for the loss of production from these wind erosion prone areas being spelled from stock and cultivation".

The KHRCC's short-term strategy was thus important in securing the technical and financial assistance to re-establish drought and wind erosion-damaged pastures. However, the Committee was interested in more than simply maintaining the status quo in land management. The experimentation with new dryland species was used as an opportunity to look beyond immediate problems to management practices that were appropriate for the long-term conservation of land resources.

The Committee's conservation objectives include establishing dryland farming on a secure footing.[62] The Committee had strong links with the local catchment board. At the time of the 1984 drought the catchment authority was reassessing its own activities and wanting to use community involvement to identify and solve land use farming problems.[63] The Committee

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61 Kurow-Hakataramea Resource Conservation Committee, unpublished file.

62 Waitaki Catchment Board, *Dealing with drought*, at 11 (Nov. 1988).

63 Warrick Coombridge, *Where we've been, where are we, where are we going?* 22 SOIL & WATER (3) 8-9 (1986).

provided an invaluable source of feedback for the catchment board on its effectiveness and was a strong influence in ensuring that the board's activities were community-driven.

The Committee soon assumed management functions beyond those created by the drought. It became a contact point between the local farming community and outside agencies, carrying a co-ordinated message of farmer's reactions and desires to those agencies. The Committee is also active in organising and encouraging participation at field days. It publishes articles on issues important to its area, promotes the use of trials to assess the performance and relevance of different species, seed coatings and insecticides. It has continued to act as a pressure group to ensure performance from the agencies involved with the rural community.[64]

The overall outcome has been a gradual change in farming practices in the Kurow-Hakataramea district. The KHRCC was at the forefront in campaigning for a change in technology and has been instrumental in gaining acceptance of alternative land management strategies. Individual farmers have experimented with a variety of species and techniques and the Committee has been active in encouraging change.

In addition to the quantifiable benefits a close rapport developed between the farming community and the local catchment authority. The catchment board was instrumental in providing the stimulus for the establishment of the group, and in co-ordinating and supporting its various activities. That rapport ensured that the government agency and the Committee were working towards a common purpose.

4.4.2 Connections with co-management

The KHRCC's operation exhibits several co-management-type characteristics. One of co-management's key propositions is that it evolves out of crises in the resource base. The disastrous situation caused by the combination of adverse climatic and economic conditions was central to the initiative taken by landholders in the Kurow-Hakataramea district to establish a group to achieve better community-based resource management outcomes. A distinct community interest was obvious in the well-defined boundaries of the Kurow-Hakataramea district. The KHRCC thus has attributes of scale and social cohesion typical of co-operative management structures.

The relationship established with the local government agency with land management responsibilities also had features typically associated with co-management-type arrangements. Agency personnel had encouraged a long-term approach to resource conservation prior to the 1984 drought through involvement in an overdrilling trial of some alternative pasture species and had introduced resource conservation techniques to landholders. Of particular interest was that the Waitaki Catchment Commission (later to become a catchment board and later still to be split between the Canterbury and Otago Regional Councils) was one of the smaller catchment authorities in New Zealand, with its responsibilities confined to the Waitaki catchment.

Catchment Commission personnel developed a close rapport with landholders in the Kurow-Hakataramea district. The initial and sustained commitment of the KHRCC can be attributed to the enthusiasm and influence of both landholder and agency representatives.[65] With restructuring of resource management agencies and changes in personnel, the influence of an enthusiastic agency

64 Waitaki Catchment Board *supra* note 62.

65 Alistair Shearer, Canterbury Regional Council, pers. comm.

co-ordinator has been lost and, reportedly, the motivation of the Committee has been difficult to maintain.[66]

However, it is in relation to the sorts of outcomes achieved that the operation of the KHRCC identifies most closely with co-management-type arrangements. The KHRCC worked to improve land management practice by creating a commitment among resource users to co-operate in ensuring the maintenance of land resources. It also co-ordinated with the responsible government agency in undertaking the management functions necessary to achieve the outcomes sought. The arrangement between landholders and the government agency acknowledged both a sense of self-reliance within the farming community and commitment by territorial government to share management functions. By one account the shift in farmer attitudes is from year-to-year management to one of long-term planning.[67]

4.5 Landcare in Victoria: seeking a common approach

4.5.1 Background

Landcare began in Victoria, Australia in November 1986 under the umbrella of the Victorian Department of Conservation, Forest and Lands. Landcare models have also emerged in other states. In Victoria the movement blossomed and by October 1990, 80 Landcare groups were operating involving 3,700 landholders and covering some 1.5 million ha of Victoria. The groups ranged in size from 45 members to 300 members with properties from 210 ha to 250,000 ha.[68]

The movement was born out of a belief that:

> "The elimination of any single problem may in fact exacerbate the remaining concerns. Obviously an integrated approach to tackling all the land protection issues in an area is likely to be a more effective solution and maintain a more sustainable land resource than concentrating on individual problems."[69]

A united approach appeared to be more appropriate than confining the approach to individual property or state boundaries. Policy makers realised that land conservation required a complex solution rather than a single production-enhancing technique. This provided a framework within which Landcare groups could emerge. Solutions to land management problems usually require a change in attitude to the management system. Whilst attitudes seem to change slowly, group dynamics can accelerate the development of new approaches and systems across the community. A group approach also makes it easier for government agencies to tackle a range of land conservation issues in an integrated, efficient and effective way.

Problems typically approached by Landcare groups are those with widespread community effects such as soil salinization and acidification, soil erosion and general land degradation, pest and weed problems, degradation of vegetation as well as the social and economic impacts of these problems on individuals, rural communities and those who live in non-farming communities. Many of these

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66 *Ibid.*

67 Waitaki Catchment Board, *supra* note 62 at 7.

68 Roger S. Lough, Landcare in Australia. Report to MAF Technology (1991).

69 H.D. Poussard, LandCare - integrating practices, people and policies. Unpublished undated manuscript.

problems are widespread in Australia, for example, soil erosion over much of the continent has risen to 10 times its natural geological rate, recreational and tourist activities are beginning to put pressure on the country's natural heritage, and air and water pollution problems are apparent with 80% of the population living in cities and major towns. In 1986 the importance of managing land resources in a more sustainable way was evident. There was also a growing awareness of the need for a co-ordinated international approach to global environmental problems and the need to demonstrate commitment to future generations.

Whilst the movement seems to have been warmly received by the farming community, its introduction was not entirely without opposition. Farmers were apprehensive that property values might decline as a result of negative publicity. Some local government agencies did not wish to see their constituencies and hence rating base diminish.[70]

Groups must satisfy specific entry and viability criteria to achieve Landcare status in Victoria. Groups must demonstrate the potential for improvement in the long-term productivity of natural resources and ability to conserve those resources. They must develop a realistic plan that addresses locally important land conservation issues. Group activities must be predominantly oriented to the care and protection of the land and its associated resources. The group must reflect a local community base with members drawn from a defined group area. Geography is the major determinant of Landcare group boundaries.. Typically, groups are formed on the basis of catchment areas, watersheds/valleys or creeks.[71] It is seen as important to ensure that a group is "as geographically homogeneous as possible" - boundaries ought to be based on "natural" lines and the problems to be addressed ought to be shared by as many members as possible. "It is the community of interest that will keep Groups motivated and operating".[72]

To be accredited with Landcare status the group applies to the appropriate state agency and is assessed on the basis of the specified criteria. Some national and state funding is available to support Landcare co-ordinators but many Landcare groups fund and employ their own co-ordinators on a part-time basis.[73]

The role of government grants in establishing and maintaining interest in Landcare groups should not be under-estimated. "There can be little doubt that the 'grant carrot at the end of the string' adds a large element of motivation to the formation of the Landcare groups".[74] On the other hand "antecedent groups" have focused people's thinking on land management issues in the past. Remnant structures of previously active groupings may help define members and the focus for new Landcare groups.

In Victoria, Landcare has a genuine community base that provides the initial impetus for most Landcare groups. Officers of the Department of Conservation, Forests and Lands "provided most of the direction, support and advice to local individuals, who in turn have taken on the running of

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[70] Lough, *supra* note 68 at 8.

[71] Research Network, Research report: an evaluation of rural community participation in the LandCare programme (1989).

[72] *Ibid.* at 16.

[73] Campbell, A. Landcare. Progress Across the Nation. First Annual Report (July 1990).

[74] *Ibid.* at 14.

the Group".[75] The ongoing support of the Department is seen as critical to the survival of Landcare in Victoria with the proviso that departmental officers should establish an appropriate level of input to the functioning of the groups.

Competent management committees and energetic co-ordinators are reported as critical to the success of the groups, along with effective communication amongst members.

Women's contribution to Landcare groups is very evident in Victoria. Women have well-developed organisational skills and tend to be aware of environmental issues. They are also often better educated than their partners and open to new ideas.[76]

4.5.2 Connections with co-management

Many of the Landcare groups seem to form around a single issue such as rabbit control but frequently broaden their focus to encompass a range of issues as they come to realise that it is inappropriate to consider land management issues in isolation.[77] A single issue is often the driving force behind a group's formation but a group is often encouraged to identify and assess the extent and severity of other relevant land protection concerns with the aim of developing a more integrated plan for future land management.[78] A "specific trigger event" is a recurring theme in the establishment of Landcare groups in Victoria. Whilst additional problems exist, and are shared by group members, "it was concern over that single problem which brought them together initially".[79] The Research Network report comments that where two or more problems exist they tend to jostle each other for prominence. Yet, Landcare group members themselves acknowledge that Landcare involves a wider context.

The co-management model implies that a multi-year formalised and binding agreement is a favourable pre-condition leading to successful co-operative approaches to problems. Whilst there is no legislative basis for Landcare in Victoria,[80] in South Australia the *South Australian Soil Conservation and LandCare Act 1989* commits the State and people to sustainable land management. It is a distinguishing feature of the South Australian approach that a "voluntary-education-awareness-self interest approach" to land degradation is considered ineffective without a legal framework.[81] Incentives are regarded as very important in the proper functioning of Landcare arrangements. They can be provided through regulation or financial and social incentives or disincentives.[82]

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[75] *Ibid* at 10.

[76] Pennicuik, M., Purnell, K., Howell, A., Vollebergh, P. and Savage, G. (Eds). Second Landcare Community Conference. Proceedings of the Cowes Conference Phillip Island, Victoria, July (1989).

[77] Lough *supra* note 67 at 1.

[78] Poussard *supra* note 69

[79] Research Network *supra* note 71 at 8.

[80] Campbell *supra* note 73 at 16.

[81] Lough *supra* note 67 at 1.

[82] Poussard *supra* note 69.

The co-management framework predicts that an energetic person is required to initiate and keep the group functioning. Landcare group co-ordinators have an important role in the Australian experience. In Victoria, this co-ordinator is ultimately funded by the group members and may be a full-time position. The co-ordinator interacts with land management agencies to extract information for group members. An official of the Department of Conservation, Forest and Lands typically identifies an enthusiastic local person or "committed individual" who is willing to act as a focus of interest. In the initial stages of group development, Landcare is promoted more by "progressive elements who find their way to the land than by traditional farmers - who it appears do not embrace the concept as quickly".[83]

Landcare groups may provide a social focus for the activities of rural communities. The model predicts that co-management may at times simultaneously conserve and enhance a cultural or social system, while conserving and enhancing the resource. Reference is often made, in literature describing Landcare arrangements, to the social benefits produced by the groups. These benefits are often created by the group co-ordinator who is generally part of the Landcare group's community and has good standing and respect in the community. "People need to trust and know the person and the co-ordinator needs to know how to handle people ".[84]

Landcare can also help bring neighbours closer together with the group becoming the focus of social contact. Landcare experience confirms that geographical boundaries that define shared problems favour group cohesion - a feature typical of co-management systems. The groups most pre-adapted to co-management are generally those that already have a cohesive social system which enables the group's membership to be clearly defined. In the Landcare experience, catchment boundaries are most effective in defining groups. "Antecedent groups" where cohesion has been created at an earlier stage also favour co-management approaches.

Government bureaucracy needs to be small and its mandate fairly regional or local to encourage co-management arrangements. The Landcare approach is still evolving but in Victoria the Department of Conservation, Forest and Lands' administration of the Landcare programme has been criticised. Most comments referred to poor administration, unco-ordinated passage of information to the groups which creates pressures and deadlines for the groups, and a general lack of understanding of what is required on the land. A lack of co-operation within the Department is seen as hindering group functioning and examples of hypocrisy are cited. These criticisms hint at the need for a cohesive, clearly focused and effective unit of government for co-management to work this may be more readily achieved if the unit is small and closely oriented toward local affairs.

Benefits of Landcare group membership, aside from access to government funds, include improved access to technical assistance, the ability to lobby and produce submissions as a group. Efforts to combat land management problems are thought to be better, because of the cumulative energies of members in approaching problems that cross individual property boundaries. There may be improved publicity and recognition of the problems due to the activities of the group and land values can increase. Members claim an improved understanding of the problems through group discussion and support. There are also the benefits of networking with other Landcare groups. A sense of involvement in local decision making may emerge, along with feelings of self determination and group independence. Landcare groups may also provide a social focus for rural community activities.

Farmers involved in Landcare who participated in the Research Network's study commented that group members put more money into group activities than they receive in grants. Their contribution

83 Research Network *supra* note 72.

84 Pennicuik *et al. supra* note 77 at 85.

is often by way of labour. There is some cynicism about the value of government input - Landcare is sometimes seen as a political ploy to present a rosy picture of the rapport between government and rural community.

Despite these comments, the benefits noted by Victorian Landcare members included increased land value at selling time, improved aesthetic appeal, increased pride and satisfaction, flow-on benefits in other parts of the catchment and gains for future generations. Members found it difficult to attach an economic value to these gains.

The staff of resource management agencies must modify their traditional relationships with land users if a partnership relationship is to operate. Agency staff must act as consultants rather than the ultimate decision maker - a role that now becomes a group function:[85]

> "Extension officers, and the policies of their organisations, will need to ... develop new strategies to help achieve community goals (using co-operative action) as well as fulfilling individual farmer goals".

Staff of these agencies need to develop new group facilitation and co-ordination skills which at first sight may not be appealing. Landcare arrangements require a different extension approach to that used traditionally in technology transfer. A critical aspect of the success of Landcare groups is that government agencies have clear, non-conflicting objectives. Confusion over the roles of the agencies can hamper progress over land management problems. Thus, the ability and willingness of the "official" party to co-manage is open to analysis. The objectives of the agencies and the skills of their staff require consideration. These skills should include the ability to:[86]

(i) demonstrate the link between individual action and community effect,

(ii) assist financial and social benefits to flow from one part of the community to another,

(iii) encourage support groups to be viable and effective through the use of group maintenance activities, and

(iv) develop new networks with non-farm community organisations and media to support the on-ground work of farmer groups.

A warning is offered by the Research Network about the production of artificial aids such as establishment kits to stimulate the evolution of Landcare groups. What is more important is that the search for suitable, capable and committed individuals be continued since without these people the group will not have the successes predicted.

Key features of Landcare groups are their preference for self-reliance and independence and informality. Agencies interacting with community groups need to respect these qualities and not place demands on the groups.

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85 Poussard *supra* note 70 at 2.

86 *Ibid.*

4.6 Discussion

The case study experience of land management initiatives suggests that land and fisheries management pose common problems for policy. The problems centre on the ability of resource management systems to capture the collective benefits of resource use co-ordination.

This common feature suggests that there may be opportunities for common strategies in overcoming or resolving structural problems. Certainly the case studies of selected land management initiatives have attributes associated with the fisheries co-management model. These attributes include the need for a management response to crises, the identification of an affected community of interest, the importance of key personnel in facilitating action, the scale of the problem, and the lack of an identifiable single solution. To a greater (as in the case of the KHRCC) or lesser (as in the case of the R&LMP) extent, land management initiatives have incorporated co-management attributes.

That existing land management initiatives incorporate co-management attributes is not to suggest that they can be taken as a likely measure of the performance of co-operative arrangements in land management. These land management initiatives reflect a variety of policy procedures and objectives, often quite unrelated to the achievement of co-management. Moreover, in New Zealand these initiatives have taken place against a background of significant government restructuring which has changed roles and responsibilities. Existing land management initiatives reflect a confusing mix of policy goals and outcomes.

Notwithstanding this confused picture, the results from the case studies indicate that there are opportunities for using co-operative approaches to enhance the performance of land management policies in New Zealand. Co-management, however, has not been an objective of management and has been unable to evolve within the constraints imposed by existing arrangements. The next two chapters explore how these arrangements might be altered to facilitate the adoption of co-management within the policy process.

CHAPTER 5

Community comment on approaches to land management

5.1 Community perspectives on land management

The outcome of the desk-top reviews of recent land management initiatives in New Zealand and Australia is, by its nature, divorced from the experience of those affected. Some subtle, social interaction aspects of the co-operative template tended not to be reflected in the formal written accounts of the initiatives.

The objective in this phase was to gain a perspective from those affected by past approaches to land management. Input was needed to gauge whether or not any aspects of co-operativeness had appeared or seemed likely to appear at the community level and among land user's.

The focus of interaction with those affected was on generic problems in land management rather than on particular land management initiatives. Feedback from the Consultative Group had highlighted the difficulty of profiling a community of interest in a meaningful way. Instead perspectives on land management initiatives were gauged from community commentators. They were identified because of their ability to offer an objective, reporter or observer perspective and provide insights into farming community processes. The community observers included:

(i) tangata whenua,[87]

(ii) women,

(iii) media,

(iv) rural bank loans officers,

(v) farm consultants,

(vi) lawyers,

(vii) local councillors,

(viii) church-based ministry,

(ix) community workers, and

(x) health counsellors.

A number of individuals were identified as observers through discussion with researchers familiar with communities in the hill and high country of the South Island. Initial contact with some of these individuals led to the identification of others whom they felt might more appropriately participate in the study.

87 The authors acknowledge that consultation with tangata whenua was limited.

Community observers were asked a series of questions on situational aspects of the co-management model. The questions were designed to yield comments about the extent to which land management problems were recognised, the type of investment farmers had made in solving the problems, and the consequences of that investment for both farmer and non-farmer relationships and other parties involved in addressing the problems.

The co-management model focuses on two parties, the resource management agencies and the land users, who participate in an arrangement leading to mutual benefits. The questions were intended to draw comment on the dynamics of the land user group. A standardised set of questions was used to ensure consistency in the interview process.

Initial contact with the observers was by telephone. During that exchange observers were able to choose how they wanted to participate in the study. Some preferred to be interviewed immediately over the phone, while others made appointments for follow-up phone calls or visits. Some participants supplied written comment on the questions.

5.2 Community of interest and land management

The results of 13 interviews with community observers are presented here as generalised trends.

Question 1 ***To what extent is there widespread recognition of land management problems in the area with which you are familiar?***

Some participants were uncertain about what was meant by land management problem. Some thought that the phrase implied that the problems were due to current land managers (i.e. farmers) and challenged this assertion. Through discussion it was explained that the term was intended to refer to pervasive problems or challenges facing all those with a responsibility for land management.

Generally, those who identified with land management problems were those directly affected by them, namely the farmers. Whilst members of the wider community and those living in small rural service towns knew of the problems, they were more removed from them. It was mentioned that in some settlements where these problems exist, the population may be somewhat transient with people moving in and out of communities because of labour demands during peak tourist seasons and harvesting times. Land management problems appear to be less of a concern to such people. It was noted that members of the wider communities were aware of the problems, to the extent that they were visible and affected the quality of the landscape.

Question 2 ***Do land users affected by this problem have a shared approach to the situation? Why do you think that this is the case? How is this evident?***

The examples given of a shared approach to resolving land management problems were site- and problem-specific. If a particular approach is not obvious, such as for *Hieracium*, then a shared approach tends not to appear. No consistent shared approach emerged, although commentators mentioned the number of farmers meeting in small groups to discuss the problems in Landcare-type arrangements. The ability of farmers to undertake shared initiatives is limited by their financial circumstances. Many observers commented that farmers were involved in a shared approach that was orchestrated by government, that is, the R&LMP. Consequently, farmers were already contributing financially through government-initiated schemes. They also contribute to particular co-operatives established to address their needs such as irrigation co-operatives.

Question 3 *What role have land users played in addressing land problems?*

- *Have they contributed financially to dealing with them, perhaps by commissioning research?*
- *Has any particular person/people taken a very active role in addressing the situation?*

Farmers' responses to these problems depend on the type of the problem and its history. Traditionally, farmers have believed that it is up to government to provide the initiative and financial support to get shared approaches to these problems underway. The justification for this has been that the scale of the problem is too great for farmers to address, even in small groups.

Financial contributions have been made to sponsor research projects to investigate land management problems. The organisations responsible for initiating the contribution of funds, however, have not necessarily had a community origin, base or focus.

There was considerable interest in the concept of Landcare-type groupings. The contribution of women to small group functioning was mentioned. Women have the communication and organisational skills required to maintain and motivate group processes. The role of a catalyst, a person displaying leadership skills, was confirmed as crucial in establishing co-operation amongst farmers. The evolution of an aware and motivated small group was critical in generating activity.

Question 4 & 5 *Have land users benefitted from any approaches to relieving the land problem? How?*

How have those benefits been "shared/distributed"? For example, have land users shared the benefits amongst themselves? Have any benefits flowed on to the wider community?

The extent of increased benefits to farmers and, as a consequence, to the community, is difficult to discern. Comments suggested that the benefits from recent land management initiatives were not obvious. Benefits are slow to be realised. Benefits may also be defined as either emerging from processes that are adopted, or as a result of the processes. The latter were distinctly less obvious to observers but the benefits of processes were commented upon. These benefits include: shared financial resources, shared human resources increasing the chance for innovation, the flow-on effects to local services, increased confidence and solidarity to face what is perceived as an onslaught, and political clout achieved by mass of numbers and cohesion.

Question 6 *How have experts played a role in the defining of the situation and the planning of action?*

Experts have played a significant role in the approaches taken to land management. At times their advice has proven to be inappropriate. Current land management problems may have been exacerbated by that advice. The rural community is often vulnerable and eager to absorb new information but unable to verify the quality of that information. Nevertheless experts are being pressured to provide solutions to contemporary problems such as *Hieracium*. Comments were made that experts are too slow to identify solutions to some problems that have been emerging for some time. Experts can disappoint, exasperate or frustrate land users.

The youth and inexperience of some experts was cited as a concern for some land users. The way in which they present information and communicate with land users is not always at a usable and digestible level. More effort is needed to bridge the communication gap between farmers and management agencies; suggestive rather than dictative communication is preferred. Some comments were received on the lack of account experts took of knowledge held by land users. They seemed inflexible and unwilling to accommodate anecdotal or on-farm information that might question their organisation's perspective or challenge mainstream knowledge.

Reorganisations of central government agencies and changes in funding arrangements for staff within these agencies have made access to experts more difficult and more expensive. There has been a lack of continuity in that staff come and go. Trust and respect for experts appears to depend on the individual expert.

Question 7 **Have parties other than land users had an input to defining these land problems and planning action? How did that happen?**

Other parties do shape the debate about pervasive land problems. Their concern tends to focus on the consequences of the problems rather than clearly articulating their definition of the problems. The provisions in the *Resource Management Act 1991* relating to consultation during decision making concern some individuals. The concern is that the potential input of other interests will lead to costs and time delays and that decisions might unduly reflect the needs of those not living on the land. It was felt that such democratic processes can be costly and distractive.

Within rural communities, non-farming individuals often find it difficult to express their views on approaches to land management problems if these are inconsistent with the prevailing land users' view. Whilst interested outside parties can express their views, those living in rural communities are more constrained by fears of ostracism or appearing disloyal. In some respects outside interests tend to polarise the views within farming communities. They are a source of information which might otherwise not receive an airing and may represent views with which non-farming community members sympathise.

Question 8 **To what extent have land users appeared willing to co-operate with these other parties? In particular, a willingness to co-operate with government at central, regional and local levels? Has it happened? How?**

Willingness to co-operate with other parties such as government at central, regional and local level appears to be widespread. Co-operation with non-government agencies is less evident. Whilst some government departments receive widespread support from rural communities, and in particular farmers, others have used up all the good faith extended by farmers. This souring of rapport appears to stem from indecision and lengthy delays in reaching agreement, overly high expectations of farmers' ability to contribute financially to schemes, inconsistent messages and contradictory signals.

Question 9 **Have land users felt more or less willing and able to participate and represent their interests equally with those expressed by officials in the process that leads to approaching land problems?**

Farmers are portrayed by observers as being well able to represent their views in relevant fora but that fora have to be convened to encourage participation. Farmers will not participate if they are suspicious or uncertain about the agendas of others present. Some key spokespeople tend to emerge in rural communities and they traditionally hold the floor. This can make it difficult for new opinions and approaches to be voiced.

Question 10 **Do land users seem to have access to all the information available on the health/condition of the resource? How has that happened? Are people willing to continue to share information and work together over these land problems? What account do "experts" appear to take of local knowledge about the resource?**

Some observers felt that they lacked the authority to comment on the availability and adequacy of information to farmers. It was mentioned that sometimes farmers may not know about things that others have access to and hence are unaware of their lack of information. Others commented that there is plenty of information but very little analysis. Instead, information from particular sources is often presented with a particular objective in mind, leaving it up to the consumers of that information to reconcile discrepancies.

Question 11 ***Has a degree of trust been established between land users and resource management agencies as a result of attempts to approach land problems?***

Trust between land users and resource management agencies appears to ebb and flow. It was reported that considerable trust had existed but that constant changes in government agencies had eroded that trust. New legislation was also testing that trust. Trust also had to be earned. Rural communities were unwilling to be too open and trusting since many personalities pass through but few stay and demonstrate their commitment.

5.3 Discussion

Community observers confirmed that land users, that is, farmers are most concerned with the problems that land management initiatives are designed to address. Wider rural community concern, at a level which motivates individuals to participate in land management initiatives, is not as heightened. Those living in rural settlements are more concerned about a weakened local economy. It was noted that land management problems may affect the aesthetic qualities of the area and hence its appeal to tourists.

These comments suggest that farmers are the key group likely to want to participate further in the design and implementation of land management initiatives. Wider community involvement is likely to be less enduring.

Shared approaches to some problems are evident where the required strategy is obvious and agreed upon. Small Landcare groups are developing throughout the South Island high country primarily for the purposes of weed and pest control, with members benefitting from group identity and support. The wider rural community is less likely to perceive these benefits from shared approaches to land management problems or to receive immediate, tangible benefits itself. Instead, there is likely to be a lag period until economic vitality returns to the region and there is a renewed interest amongst farmers in community affairs.

A shared approach depends on clear solutions to land management problems. It also relies on farmers having the financial security to adopt the appropriate solution. A key person or small group of people providing leadership and initiative to generate meetings and involve others is critical. Women may have a key role to play in facilitating this process.

Experts are viewed with scepticism. Support for their input to problem solving has suffered with recent government restructuring. Credibility can be earned if experts are willing to approach farmers on their terms.

A willingness to co-operate appears to have existed, and to continue to exist, between land users and government agencies. This is partly because clearly defined legal requirements prescribe that land users interact with these agencies over particular consents. Again, changes in local authorities and the *Resource Management Act 1991* have created uncertainty and disruption. The input of other parties is less warmly received. These parties are perceived as being an interfering and unhelpful influence on decisions that are of direct concern to land users. Non-farming local participation in defining problems in land management is constrained by the dynamics of small communities. It appears easier to participate in these issues from the relative anonymity afforded by distance.

On the basis of the community of interest consultation undertaken in this project it is difficult to determine whether non-farming individuals living in rural communities actively seek the opportunity to have an input to decisions that more directly affect the lives of farmers. It appears that they are unwilling to oppose dominant views in the rural communities. Further investigation is required to discern whether the proposed arrangement for land users and resource management agencies to work more co-operatively would benefit from the involvement of non-farming locals or indeed from the input of parties living outside the rural communities. One of Pinkerton's favourable pre-conditions for successful co-management is fora for discussion that include participants other than the predominant resource users and government officials. It may be possible to organise such fora as an adjunct to the more close-knit co-management arrangements in order to facilitate the input of non-farming locals.

The extent to which past approaches to land management problems had made information more readily available to farmers is difficult to discern. Community observers were not always aware of the quality and quantity of available information. Past interactions with officials had generated some trust but that was very much dependent on the individuals and situations involved.

Community observers suggested that a co-operative approach to land management between land users and local resource management agencies could only evolve from land user initiative. Artificial inducements which can be removed later, are viewed with mistrust.

The boundaries that define group membership reflect the geography of the area. People facing similar problems tend to live close to one another. Remnants of past organisations concerned with land management problems, such as the Rabbit Control Boards, may shape the boundaries of emerging groups.

The success of any efforts by land users to create co-operative arrangements will depend upon the reception received from official agencies. These agencies must recognise the ability of land users to contribute to management functions.

CHAPTER 6

Exploring arrangements for co-operative approaches to land management

6.1 Assembling the parts

The last phase of the research was a workshop to explore arrangements appropriate for co-operative land management. It was intended that workshop participants, including members of the consultative group, community observers, research team and the client, the Ministry for the Environment, meet to:

(i) reflect on the research process,

(ii) be briefed on a selection of research findings, and

(iii) explore the merits of a co-operative approach as it might operate in New Zealand for land management.

The workshop provided the opportunity for relevant interests to examine and criticise the implications of arrangements for co-operative management. The forum also provided a check on the genuine usefulness of, and issues raised by, co-operative arrangements at various levels: community, government (central and regional, staff and elected officials) policy making, interest group, land users.

The workshop involved a morning session in which an overview of the research project was presented along with some of the findings to that stage. The afternoon was spent with four panel members presenting their perspectives followed by group discussion.

The authors' objective was to emphasise the exploration of ideas. For the purposes of discussion, the co-management partnership suggested by the framework was considered to involve land users (i.e. farmers) and the local resource management agency (i.e. regional council).

The results are presented in this chapter as an assemblage of comments structured under three emerging issues: the incentive for groups to co-operate, the ability of co-management to accommodate various interests, and the pre-requisites for action.

6.2 Examining the issues

(i) ***the incentive for groups to co-operate?***
Participants asked about the extent of any moral commitment between the parties to co-management. The role of a binding contract in ensuring that the parties fulfil their role in a co-management partnership was seen as important to central government agencies. Such a contract would be essential if funds were to be exchanged between parties.

Some collective-action arrangements among farmers do feature a contract but do not involve the exchange of funds among group participants. Participants believed that a single interest that bound group members together may overcome the need for a formal contract within the group itself.

The role of funding in achieving group cohesion was explored. Participants noted that money is an incentive but that group survival relies upon more than money. An energetic leader and a group focus is needed.

(ii) ***the accommodation of other perspectives in a co-operative partnership between the Crown and farmers?***

Participants asked to what extent other interests may be reflected in a co-management arrangement. How might views other than those of land users and the government agency be accommodated? Mixed views were expressed about the need for and extent of this involvement and how productive wider involvement would be.

The view was expressed that the wider community perspective had a role to play in setting objectives and designing policy for land management but not in implementing processes for achieving objectives. Once an environmental "bottom-line" was agreed upon through the participation of various interests, then co-operative arrangements may be appropriate as a mechanism for working towards that objective. The need for farmers to have total decision-making authority over issues affecting their livelihood was raised. Farmers own the problems - they monitor the quality of the land and seek solutions. Land user commitment to land management policies is critical if the policies are to succeed; a sense of ownership is important. Those representing the interests of farmers at the workshop reminded the group that there is a need for co-operative arrangements to be farmer-driven if trust is to be regained with official agencies.

Yet, non-farming community members may want to participate, just as those who have views on land management outside the rural community have the prerogative to participate. Some workshop participants believed it was important that the values held by individuals outside the co-operative arrangement be reflected in decision making. Such an approach would increase the chance of commitment to and support for land management policies from those outside the co-operative partnership. Further, input from the perspectives of broader interests could help draw attention to issues which those closer to the problems do not perceive as important.

How the relative weighting to be accorded the different interests could be decided was unclear. The question of inadequately defined rights to use natural resources and inadequate legal boundaries describing effects and liability or responsibility was raised. The legal system is generally ineffective at prescribing mechanisms for dealing with externalities; that is, the off-site effects of resource use.

A national perspective on some issues challenging land managers was seen as critical. Forestry in the Mackenzie has been advocated both as an alternative land use and a threat to the landscape's aesthetic qualities. People need to be better informed and exposed to practical demonstrations of proposed solutions if prejudices are to be avoided. Much reaction can be based on suspicion and uncertainty.

(iii) ***the pre-requisites for action?***

Before co-management emerges there has to be a clear crisis as a catalyst for action. The nature of the crisis is important in that it determines whether there is clear agreement over the appropriate response. People from outside farming communities may define the problem, but there will be little action if people affected by the crisis do not agree with that definition. Action relies on the recognition and acceptance of the problem's cause and its effect. Once the solution is identified then both rural and urban-based individuals can be involved in a strategy to address the crisis.

Agreement over the problem is critical otherwise one solution is substituted for another. Reaching agreement requires negotiation skills both within the community and between the community and other parties. The difficulty is that various land management problems in New Zealand appear not to have easily identified causes compared with the definite salinization problems facing Australian land managers. Land management problems in New Zealand can vary farm by farm.

Over the years trust between farming communities and the bureaucracy has been severely eroded. In part that may be overcome by undertaking research within areas afflicted by land management problems and involving affected groups more in the process of considering management options. Participation in decision and policy making is critical if commitment is to be gained.

Education and leadership skills for farming communities were raised as important. Ways of generating ideas need to be addressed. Communication skills and the ability to transfer information about group achievements is critical if "doubters" are to be brought onside and convinced of the merits of co-operative efforts. The benefits of being involved and of proposed options need to be clearly established before people will lend their support. Those benefits have to be portrayed from the perspective of land users and must be capable of being realised in the short term.

An energetic person is often a key in catalysing action, maintaining enthusiasm, and ensuring the ongoing functioning of co-operative groups. The motivation and enthusiasm of a community can become dependent on such a person - the community's enthusiasm may "ebb and flow" as these personalities come and go. The needs of farmers, by comparison, do not "ebb and flow"; they are constant and urgent.

Mechanisms for maintaining and supporting community processes such as meeting places and regular social functions are important in providing opportunities for people to get together and establish common ground and for initiative to emerge. Yet there is a risk of government agencies pressuring rural communities to organise themselves in preparation for having a greater input to land management. People want to develop their own initiatives. Landcare-type groups cannot be staged by government agencies but signs of initiative can be nurtured. Regional councils are busy focusing on the new responsibilities in the *Resource Management Act 1991* and may be unable to commit time to initiating co-operative arrangements. Yet, councils need to support the groups if they are to be effective. Regional government's role could be focused on information sharing so that people on the ground have access to information and can take the initiative.

Government agencies cannot select agency staff to be trained as facilitators in these farming communities - facilitators cannot be taught what it means to live in and be part of these communities. There are already people who can act as facilitators and could liaise with agency staff. Regional councils could approach groups to nominate their own spokespeople or contact points.

Waiting for a crisis to emerge and be recognised before taking action is not ideal; mechanisms need to exist for detecting problems before they result in crises. Co-operative management may offer an opportunity to take a proactive approach to land management.

Land users and resource management agencies must accept the contribution that co-operative arrangements can make to addressing land management problems. Change is going to require acceptance from the official level. There needs to be a willingness to relinquish authority as well as a rising of energy and expectation from the grass roots. Landcare arrangements have reversed the power relationship between agencies and land users - this could also happen in New Zealand.

(iv) ***additional comments***
The issue facing those responsible for land management is community sustainability as well as environmental or ecological sustainability.

Problems of land management can be viewed in a wider context of challenges facing rural New Zealand's communities e.g. education issues, access to medical services, rights of women, unemployment etc. Some important issues that are broader than resource management need to be addressed.

The current generation of farmers is challenging government more than its predecessors. Today's farmers are ready for more involvement in decision making. Expectations that they will be consulted have increased. There are definite changes in the way people are approaching these issues. The important role of farming women is evident.

A trial and growth approach seems sensible. Trust will follow from successes that arise from the opportunity to act out new ways of relating to each other and learning from that experience.

6.3 Exploring arrangements

Widespread agreement emerged on the need for a co-operative approach to land management. The approach was seen as timely since those affected by policies have an increasing expectation of being consulted and involved, regional government now has responsibility for various land management functions, and the severity of problems left unresolved by past efforts necessitates action. There are differences in opinion, however, over which parties have a right to participate in the emerging co-operative partnership.

Land users and their advisors suggest that it is farmers' livelihoods that are at stake and that they need to develop a close working relationship with regional councils if real progress is to be made. The influence of outside parties is seen as detrimental to the achievement of land management objectives. Yet those representing both local farming community interests and more nationally-oriented interests claim that the partnership is too narrow - valuable information and perspectives, as well as the ability to detect problems earlier are not capitalised upon. Further, the *Resource Management Act 1991* requires regional councils to consult over their policy and plan making and in considering consent applications. They therefore have an obligation to accommodate broader perspectives. The extent to which regional councils can juggle the needs of farmers who demand a close-knit relationship and wider interests who require an input to the process remains to be seen. The input of views from local rural communities needs to be carefully managed since the dynamics of small communities can make it difficult for open expression of contrary views. Some form of mediation or facilitated negotiation may improve potentially strained community relationships and school rural communities in new ways of accommodating existing and new viewpoints.

It was suggested that the broader perspective on land management might be dealt with by involving interest groups in the setting of minimum environmental standards. Under the *Resource Management Act 1991* this process may be satisfied by the production of national policy statements. Such documents are likely to be extremely broad however, and the extent they are likely to provide genuine guidance for regional councils is uncertain. Once the environmental standards were agreed upon, the co-management partnership could be left to evolve.

Uncertainty exists over how to proceed towards co-operative arrangements. It was recognised that both parties must acknowledge the contribution of the other and must also agree upon the nature of the problem and its likely cause. Achieving this recognition will not be easy. Regional councils must be receptive to approaches by farmer groups seeking input to the process of management. They can provide information and nurture signs of self-organisation. The benefits of relinquishing some management authority to farmer groups need to be clearly communicated to regional councils.

Farmers, for their own part, want the opportunity to establish their own groupings. Government agencies and land management initiatives should not stifle or swamp grass-roots initiatives. Farmer groups will take time to evolve as members explore the benefits of co-ordinated action.

The ability to test the contribution that farmer groups may make to land management is vital - from small gains larger successes may follow. Trust is the key and it must be earned by both parties to co-management as well as by sectoral interests concerned for national issues raised by land management. Confidence in a co-operative partnership may then evolve.

6.4 Perspectives on co-management

A consultative approach was used for this research. Input to the assessment of the opportunities for co-operative approaches was sought from parties with an interest in land management. Clearly, for there to be a genuinely co-operative approach, participation at all stages of the policy-making process is critical, especially in the early problem identification stage.

When presenting the co-management model to parties for their comment there was pressure to present it in terms of the processes and practices made possible under the *Resource Management Act 1991*. For example, the parties to the co-operative arrangement naturally became described as farmers and the regional council, with the latter as the representative of the community interest, rather than resource users and the local representative of government administration. Thus, what began as a theoretical framework became an arrangement depicting actors and their potential roles more familiar to the parties from whom comment was sought. The process of fitting the co-management model into the context of the *Resource Management Act 1991* is noted as a separate and important task.

Despite these qualifications on the research findings, interaction with various parties throughout this project indicates widespread support for efforts that might broadly be described as more co-operative. Participants representing various interests at the workshop were optimistic about the benefits to be gained from such arrangements but all placed caveats on the nature of those arrangements. Since the research project was not designed to prescribe in detail the mechanics of particular co-operative arrangements, but rather to identify approaches that are appropriate for co-operative resource management, the manner in which co-management might evolve was not specified and so these caveats were noted. The generality of the information presented to study participants, however, means it would be inappropriate to make definitive conclusions about the merits or drawbacks of co-operative arrangements.

Instead, it is possible to comment on the positive and negative prospects for co-management from the perspective of three emerging groups who have an interest in the co-management partnership and the outcomes generated by such a partnership. These groups are farmer, regional council, and third party interests.

(i) ***A farming perspective***
Farmers are supportive of the opportunity to work more closely with the local regulatory authority. They have had a history of dealing with local personnel and, despite ongoing structural and administrative changes within these agencies, some trust does exist between farmers and the local agencies. Farmers recognise that there are distinct crises that require a co-ordinated response. Rabbits and *Hieracium*, erosion and drought are problems that cannot be solved by individuals. Farmers thus welcome the opportunity to build a closer working relationship with the regulatory agency representing the community as a whole.

The input of third party interests is seen as unproductive. Farmers believe their livelihoods are at stake and they have a sustained interest in solving land management problems compared to the perceived discontinuous interest of outside groups.

The issue for farmers is how to get a closer working relationship off the ground. Access points to decision-making processes are needed. Farmers do not want co-ordination to evolve from the community level. While a financial base is seen as important, there is concern that groups may arise as a result of explicit financial support and not because there is a genuine reason for the group to emerge. Farmers do not want to be caught in a dependency trap.

The farming community recognises that it has its own leaders and co-ordinators and that having an agency person thrust upon them to establish co-operative groups may not be what is needed. Farmers would like the opportunity to express their needs to the regulatory agency and to have those needs heard and acted upon.

(ii) ***A regulatory agency perspective***

Regulatory authorities are coming to terms with the requirements of the *Resource Management Act 1991* and recognise that they have a need to consult widely with the communities affected by their decisions. The requirement to consult brings with it the need for new skills in facilitation and negotiation amongst agency personnel and new networks. It also makes decision making a costly and time-consuming process. The extent to which regulatory agencies are therefore willing to enter into co-operative arrangements with farmers is unclear. It seems unlikely that they will initiate such arrangements. In the area of service delivery, however, it appears that some regional councils are giving farmers the opportunity to make their own arrangements for the provision of services such as pest control. Examples of farmer input to policy making are less evident.

Uncertainty exists about the implications of co-operative arrangements for the councils. If funds are transferred from councils to farmers, to enable them to assume some responsibilities for land management, legal contracts may need to be arranged. Councils are required to be accountable to their constituents and processes must exist which demonstrate this accountability. Outcomes must be consistent with regional policy statements and national policy statements. Regional councils are thus likely to be concerned about ensuring that the outcomes of the co-management partnership are acceptable to the wider community and are defensible nationally. Land management policies should therefore provide mechanisms for measuring consistency of outcomes with community perspectives on land management.

Regional councils appear to be somewhat sceptical of the ability of farmers to assume responsibilities for land management.

(iii) ***A third-party perspective***

Most third-party interests are a reflection of a concern for environmental quality. It is recognised that if land management policies are to work they must be owned and accepted by those affected by them and those charged with implementing them. What is of concern to those representing third-party interests is that the outcomes generated by the co-management partnership reflect the wishes of outside parties. Opportunities for input to the deliberations of co-managing parties is sought.

Various mechanisms exist for such input. At the local community level, negotiation between farmers and wider community interests may be arranged. At times it is difficult for those who live in rural communities to express opinions that are contrary to the prevailing view. The responsibility for initiating facilitation seems to lie appropriately with the regional authority. Regional councils are democratic bodies responsible for representing the community interest. Yet the extent to which this facilitation process may compromise trust between the authority and farmers should be considered. Independent facilitators may be required.

The opportunity for more nationally spread perspectives to be reflected in co-operative arrangements may be instituted through input to the preparation of national policy statements. Until examples of such policy statements are available for analysis, however, and the process by which regional policy statements are rendered consistent with these national statements has evolved, it is difficult to foresee with any certainty the robustness of this public participation opportunity. Another, but more reactive, opportunity to augment the outcomes of co-management may be through lengthy and potentially costly legal appeals. If this route is opted for the initiative will have to come from third-party interests.

CHAPTER 7

Prospects for co-operative approaches to land management

7.1 Potential for co-operative land management in New Zealand

The theme of this research has been to gain an understanding of approaches appropriate to co-operative land management.

The general thrust of land management policies that operated for some 50 years under the aegis of the *Soil Conservation and Rivers Control Act 1941* was one of co-operative arrangements between landholders and government agencies with responsibilities for the conservation and protection of water and soil resources. These co-operative arrangements were based on a cost-sharing system for implementing the objectives sought under centrally determined soil conservation policies.

New knowledge of resource use, changes in economic policy, and the restructuring of government agencies have dictated a move away from these cost-sharing arrangements. Regionally-based resource management agencies now have considerable discretion in choosing the policies and actions needed to achieve outcomes under the *Resource Management Act 1991*.

Land management policies are currently in a state of flux. Central government still retains a direct interest in land management through its statutory duties under the *Resource Management Act 1991*. It is involved in issues of national importance such as the R&LMP and the afforestation of erosion-prone land on the east coast of the North Island. Central government also retains responsibilities related to the oversight and operation of the *Resource Management Act 1991*.

At the regional level, approaches to land management have not been formalised. There is considerable interest in providing for Landcare and other community-based approaches. Under a 'user-pays' philosophy resource users are now expected to bear an increasing proportion of the costs of resource use decisions. Not unnaturally, resource users have sought a greater say in the choice of land management strategies. There is also a countervailing argument that greater legislative controls and planning approaches are necessary for the achievement of satisfactory outcomes.[88]

Experience with co-management of local fisheries in North America provides a practical model of co-operative resource management based on negotiated agreements between resource users and administering agencies. Negotiation provides opportunities for social learning and for resolving externality problems associated with stubborn policy controversies. Co-management of fishery resources has led to self-reliance in resource use and improved management of some of the pervasive problems affecting use of fishery resources. Interaction through shared decision-making assists in resolving these complex problems by improving knowledge of the physical and social circumstances of resource use.

Assessment of the co-management model suggests that it can provide a basis for new, proactive approaches to the resolution of complex problems in land management. Co-management structures have the potential to assist in defining issues and in assigning roles and responsibilities for the achievement of resource management outcomes. Furthermore, land management initiatives in New

[88] John R. Bradsen, 'Soft sticks or hard carrots': sustainable land use legislation. Paper presented at the International Conference on Sustainable Land Management, Napier, (1991).

Zealand and Australia have attributes typical of co-management structures. Conditions in most of the case-studies favour the development of co-operative arrangements. Actual outcomes show there is value in resource users and government agencies co-operating and, further, achieving resource management outcomes without such co-operation will be extraordinarily difficult.

7.2 Potential limitations/weaknesses in the New Zealand situation

A major theme that emerged during the study was the extent to which local community and wider interests reflecting concern for environmental quality could/should be involved in co-management arrangements. On the one hand, apprehension was expressed about the ability of co-operative arrangements to take account of wider interests in land management. Some believe it is important for the values held by individuals outside the co-operative arrangement to be reflected in decision making. On the other hand, some farmers argue for total decision-making authority over issues affecting their livelihood; they are concerned that the input of others might unduly reflect the needs of those not living on the land. According to this view, if people from outside farming communities define the problem there will be little action if those affected by the crisis disagree with that definition. Involving third party interests is seen as unproductive because of their perceived discontinuous interest in solving and land management problems.

Another important issue was concern as to how a co-management model might fit into the context of the *Resource Management Act 1991*. There was pressure to present what began as a theoretical framework as a model in terms of the processes and practices made possible under the Act.

A varied willingness among potential co-management parties to work co-operatively was apparent in the case studies. Those involved in the Tutira Farm Study and the FARM Partnership appeared willing to work co-operatively but the initiatives foundered through a lack of funding to implement them. Central government assistance enabled the Kurow-Hakataramea group to search for local solutions to their crisis with the full support of the local government agency. In the implementation of the Rabbit and Land Management Programme, co-operative arrangements have been slow to emerge. This could be partly attributed to the fact that the property plan option was developed in a policy process where the stakeholders were not in agreement as to the nature of the problem and how it should be addressed. The chosen option was not negotiated and the opportunity for social learning was therefore lost.

Community commentators observed that co-operation seemed to be site- and problem-specific. Land holders are willing to co-operate with government representatives although there has been some cynicism due to apparent indecision and lengthy delays in reaching agreement. Land users do not always trust government agencies; trust appears to ebb and flow. According to some land users co-operative arrangements need to be farmer driven if trust is to be regained or re-established. Clearly this issue needs to be addressed to enable new co-operative relationships to emerge. Landholders have expressed caution about the prospects for a more co-operative approach.

Co-management is practised in North America under various property right regimes. One example is where tribal fishing rights have provided the stimulus for co-management arrangements; another is where non-indigenous commercial fishers are governed by local or regional institutions. The character of the land ownership regime and the property rights governing resource use may affect the willingness of resource users/farmers to participate in negotiations with their co-management partner.

Co-management requires government agents to surrender some of their responsibilities in exchange for resource users' co-operation and assistance in management. The extent to which regulatory agencies are willing to enter into co-management arrangements with farmers is unclear. Government agencies need to be willing to relinquish some authority while recognising landusers' ability to contribute to management functions. Regional councils must be receptive to approaches by farmer groups seeking input to the management process. Study participants recognised that both parties need to acknowledge the other's contribution.

7.3 The transition to co-operative land management

Few would argue against the desirability of co-operating to achieve policy outcomes. The question that arises is whether we can develop a tentative model to help resolve complex land management problems in New Zealand, a model that acknowledges and, where possible, addresses the potential limitations referred to above. To do so a more precise definition of co-management is needed. The general level of support for the concept of co-operative approaches among those involved in this study reflects the looseness of the concept of co-management. General concepts are poor guides for policy. The challenge in assessing the relevance of the co-operative approach to land management is in defining the concept as a practical policy proposition. The problem for policy is in identifying how co-operative approaches to land management can operate within new institutional arrangements governing resource use.

It is possible to describe the development of a co-management model using three basic categories into which various meanings attached to co-management can be reduced.[89] These are: "(1) a consultative process in which (resource users) and other interest groups provide systematic advice to (central) government officials, who remain the sole decision makers; (2) the implementation and enforcement by (resource users) of government policies and regulations which are widely accepted as beneficial to fishermen: and (3) a comprehensive participation by (resource users) in (resource use) decision-making at the levels of policy formulation, acceptance and implementation".

These three definitions could be likened to the key elements forming a three phase model of co-operative management. The consultative process could be seen as the first phase in the development of a co-management model where a range of interests, including resource users, contribute information as required by decision makers. Consultation tends to dominate land management decision making at present.

The second phase, which would be represented by the category of implementation and enforcement of policies and regulations by resource users, could provide the transition to a yet to be developed third phase that would be characterised by comprehensive participation by resource users/farmers.

One of the key elements of co-management referred to in Chapter 2.4 relates to the best scale of operation for resource users. Well-organised sub-groupings that communicate well with each other or have effective umbrella organisations seem to provide the most favourable environment. The Landcare groups of Victoria are essentially community-based initiatives supported by government grants and agencies. although they are not described as co-operative arrangements they exhibit some of the pre-conditions required for co-management and some of the conditions favourable to continuing the arrangements. For example, they emerge under similar conditions (during a crisis in the resource base, for example), they operate best on a similar scale, they encourage social cohesion and rely on energetic co-ordinators.

Small Landcare groups already emerging in New Zealand could be the pre-cursors to a fully developed co-management approach. Throughout this study participants urged that any transition

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89 Kearney, J.F. *Co-management or co-optation? The ambiguities of lobster fishery management in south-west Nova Scotia.* In: Pinkerton *supra* note 14 at 85.

to fully developed co-management must acknowledge and extend co-operative approaches that are already appearing. The second or transition phase would allow Landcare groups and other community-based approaches to continue to evolve to represent the resource user partner in a co-management model. However, warnings have been expressed that such groups cannot be stimulated; artificial inducements which can be removed and leave groups vulnerable are likely to be mistrusted.

A transition phase also allows for the costs and benefits of the altered arrangements required to be investigated.

One of the major reservations with regard to the model relates to the involvement of third party/national interests. This dilemma would need to be resolved during the transition phase. Those concerned that broader interests than those of the co-management partners be reflected in decisions would undoubtedly wish to participate in the development of national environmental standards and national and regional policy statements where consultation is obligatory.

The transition phase also provides the opportunity to begin to identify categories of management function that could be performed jointly. In Chapter 2.3 several categories relevant to fisheries management were listed. During this study several categories relevant to land management were identified.

Data-gathering and analysis appears to be one such function with the following provisos. There is a need for information to be presented at a usable and digestible level. Efforts need to be made to bridge communication gaps between landholders and management agencies. Suggestive rather than dictative communication if preferred. Management agencies are advised to take account of anecdotal on-farm information. More analysis of available information would also be valued.

Another possible category of co-management function lies in the provision of services. It appears that some regional councils are giving farmers the opportunity to organise and arrange for the provision of services themselves.

Farmers are looking for access points to decision-making processes. More substantial involvement in policy making could be identified as a third potential category of management function. This study revealed few obvious demonstrations of farmer input to policy making.

The policy process itself determines the extent to which government agencies and community interests can realise these co-management opportunities. Understanding the policy process, therefore, sheds much light on how action by government agencies and communities of interest can be focused to encourage use of co-management approaches. Access points for the resource user partner can be identified by examining the distinct steps which make up the core elements of the policy process. These steps can be described as:[90]

(i) identifying problems (demands are made for government action),

(ii) formulating policy proposals (public programme proposals are initiated and developed),

(iii) legitimating policies (a proposal is selected, political support is built for it, and it is enacted in law),

(iv) implementing policies (bureaucracies are organised, payments or services are provided, and taxes levied),

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[90] T. Dye, Understanding Public Policy at 24(6th ed. 1987).

(v) evaluating policies (programmes are studied, outputs and inputs evaluated, and changes and adjustments suggested).

The policy process can be resolved into three levels of decision-making: normative, strategic and operational.[91] At the normative level decisions are made as to what ought to be done; that is, the problem identification phase. The strategic level is where decisions are made as to what can be done; that is, the formulation and legitimation phases. Operational level decisions are those that determine what is to be done; that is, the implementation and evaluation phases.

Schematically the relationship between the policy process and levels of decision-making can be represented as follows:

Phases in the policy process	Agenda-setting	Issue/problem identification	Formulation	Legitimating	Implementation	Evaluation
Phases in levels of decision making	Normative		Strategic		Operational	

Public participation occurs mainly at the operational level of policy making, that is, in the implementation and evaluation phases.[92] Certainly, this has been the strategy adopted under earlier soil conservation strategies in New Zealand. Under the model being proposed here the resource user co-management partner would be involved in the normative and strategic phases of the policy-making process as well. The wider community could also participate in the negotiation of setting objectives and designing policy for land management. The co-operative arrangements might be an appropriate mechanism for working towards implementing those objectives. Agreement requires opportunities for facilitated negotiation/mediation within the community and between the community and other non-local parties. The involvement of resource users thus outlined assumes a significant step in the final transition to their comprehensive participation in a yet to be developed model of co-operative land management.

Consideration of the social dimension to land use in New Zealand and the principles underpinning co-management, suggests that co-management is most likely to develop between resource users, the farming community, and government agencies as community representatives. Co-management thereby reconciles the external effects of land use; upstream versus downstream, polluter versus the polluted, sprayer versus sprayed and so on. An important point is the extent to which such a partnership can represent the entire spectrum of interests in land management. Successful implementation of co-management will depend on the adequacy of social choice mechanisms to determine and accommodate the wider community interests in land management.

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91 L. Graham Smith. *Mechanisms for public participation at a normative planning level in Canada.* 8 CAN. PUB. POL. 561-572 (1982).

92 Smith *supra* note 87 at 561.

7.4 Realisation of the co-management model

The phases outline in this tentative model assume differing levels of power-sharing according to Arnstein's (1969) 'ladder of citizen participation'. The ways in which government and citizens interact within decision-making processes can be many and varied, ranging from non-participation to tokenism to actual power-sharing (see Figure 7.1)[93].

Arnstein[94] contends that consultation represents a degree of tokenism; people may hear and their views heard but not necessary heeded. This approach often produces polarised positions rather than looking for better ways to manage the resource itself[95]. In this and the implementation and enforcement phases, resource users are simply assisting government in its decision-making role[96].

The progression of the co-management model to the phase of comprehensive participation can be seen to correspond with Arnstein's level of **partnership**. Resource users can "enter into a partnership that enables them to negotiate and engage in trade-offs with traditional power holders". Landcare arrangements have altered the power relationship between government agencies and land users in Australia. The nature of the partnership or co-operative management that emerges between resource management agencies and resource users requires that staff of those agencies act as consultants rather than the ultimate decision maker - a role that becomes a shared function.

Co-management, in the sense of providing for the self-reliance of resource communities, implies meaningful participation throughout the policy process. Co-management thus represents a significant departure from management systems adopted before enactment of the *Resource Management Act 1991*. The challenge for those interested in encouraging co-operative approaches to land management is in defining the processes and procedures that enable government agencies to devolve authority over resource management functions while allowing communities of interest to accept resource management responsibilities. Important questions of public policy centre on the mechanisms for involvement in the policy process and on determining the degree of power sharing required. The type of co-management model that could emerge in New Zealand will depend in large part on the willingness of those in power to share that with resource users.

7.5 Recommendations

To the Minister for the Environment:

1. That both the Kurow-Hakataramea and the FARM/Tutira initiatives be examined in detail in order to better understand the conditions and circumstances that led to the co-operative arrangements.

2. That co-operative management improving land management be formulated as a practical policy proposition for improving land management in New Zealand.

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93 Sherry R. Arnstein, *A ladder of citizen participation.* 35 J. Am Instit. Plan. 216-224 (1969).

94 Arnstein *supra* note 93 at 216.

95 Kearney *supra* note 89 at 86.

96 Kearney *supra* note 89 at 86.

3. That the New Zealand experience of co-operative land management be monitored and assessed within the framework developed in Recommendation 2.

4. That a survey of regulatory agencies be undertaken to ascertain their willingness to enter into co-operative arrangements with farmers.

To the Minister of Agriculture and Fisheries:

1. That the lessons learned in this study be applied to the problem of *Hieracium* in semi-arid lands.

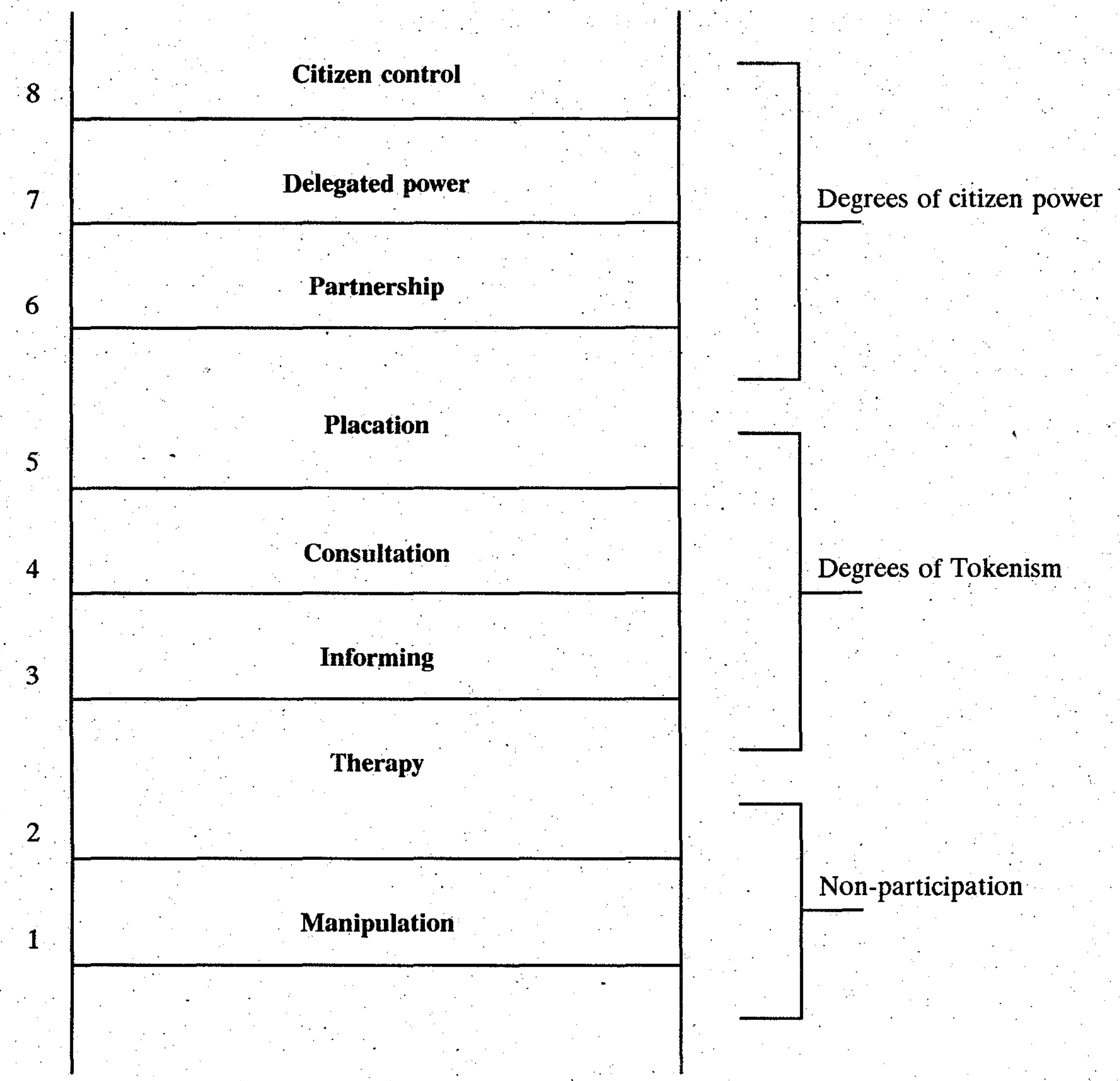

Figure 7.1 **Eight rungs on a ladder of citizen participation. Source: Arnstein, 1989, p.217**

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APPENDIX 1 Indicators of co-management (from Pinkerton, 1989).

Potential management functions

- Data gathering and analysis
- Logistical decisions to prevent over-exploitation and allow sustainability
- Allocation decisions
- Preservation of health of resource
- Enforcement of regulations or practices that address previous three functions
- Enhancement and long-term planning
- Broad policy decision making.

Pre-conditions

- Real or imagined crisis in the resource base
- Institutional crisis
- Resource users demonstrate a willingness to contribute financially to the rehabilitation of the resource and/or to other management functions
- When there is an opportunity for a negotiation process and/or experimental co-management of at least one simple function
- When there is an external event
- When there is a prolonged persistent ignoring of local needs
- Where institutional arrangements identify and confirm the rights of resource users
- Where there is an energy centre: a dedicated person or core group who applies consistent pressure to advance the process.

Best scale

- Where benefits may be linked to catchments, that is, where the area is not too large
- Number of resource users should not be too large for effective communication
- Where there are well-organised sub-groupings that communicate well with each other or have effective umbrella organisations
- Government bureaucracy needs to be small and its mandate fairly regional or local

- Groups most pre-adapted to developing co-management are those that already have a cohesive social system, particularly where a group can effectively define its boundaries so that membership is clear.

Most favourable mechanisms and conditions supporting co-management

- Formalised, legal and multi-year agreements
- Where there is a mechanism for re-circulating into communities some of the wealth generated by more intensive, superior management
- Where the mechanisms for conserving and enhancing the resource can synchronously conserve and enhance the operation of a cultural system
- Maintained where external support can be recruited from non-government scientists or universities, for example
- Where external fora of discussion that include participants other than the predominant resource users and government officials can be involved in co-management concerns.

New human relationships

- Co-operation among individual resource users and resource user groups in planning the improvement of resource management practice
- Commitment among resource users to share both the costs and benefits of their efforts towards enhancement and conservation of resources
- Enhances the position of resource users so that a more equal negotiating relationship exists between all resource users
- Willingness is created among both resource users and government officials to share data about the resource
- A higher degree of trust between resource users and government officials
- Improved ability to develop and implement successfully policies that resource users perceive as appropriate and legitimate
- Allows for a range of self-management responsibilities to be assumed by resource users.

Tentative propositions

- Higher (possibly citizens') authority can act as an appeal body on local equity questions
- More favourable where bureaucrats have direct experience in the industry, and are willing to have a hands-on working relationship with resource users
- Where more than one group of stakeholders, co-management operates best where technical concerns are separated from allocation decisions

- Where more than one group of stakeholders, favourable where there are opportunities for creative, informal problem-solving among stakeholders (possibly without government present)

- Where one large group only, best where decisions about regulations, allocations, etc. are made on the same level as that which information is collected on technical concerns such as health of resource.

Process requirements

- Institutional mechanisms provide appropriate conditions for co-operative management to develop.

APPENDIX 2 Feedback on the co-management model

General comments

(i) principle of co-operation is excellent as it works against the normal adversarial arrangement,

(ii) co-operative management should not imply mediocrity or bad compromises,

(iii) the position of co-operative management as a decentralised process and its ability to accommodate national goals and objectives are unclear,

(iv) important to look at alternatives to legislative procedures for the achievement of resource management outcomes,

(v) co-management is not strictly applicable to land management. Land users already have bundles of rights etc., it is not simply a matter of groups with competing interests,

(vi) if local communities are involved from the start, the initiative is likely to be better focused,

(vii) resource users need to be involved in decision making and management,

(viii) assumes that once groups were formed they would move towards resource management responsibilities,

(ix) important to get community groups established rather than develop co-management techniques,

(x) government is interested in working with groups to solve land management problems,

(xi) some sort of ownership of the land management problem has to be worked through,

(xii) what will encourage group consciousness to make resource users want to participate in co-operative management?

(xiii) very difficult to change land management practices,

(xiv) difficulties in applying Northern American fisheries experience to a New Zealand land use context,

(xv) costs and benefits of altered arrangements ought to be considered,

(xvi) sharp distinction between co-management and consultative approaches,

(xvii) different cultural attitudes to land,

(xviii) appears that the high country meets most of the conditions and could benefit from a co-operative approach,

(xix) not clear what is involved in a co-operative management process,

(xx) problem of reconciling grass roots support and wider community interests including statutory obligations,

(xxi) initiatives in land management are being promoted through Landcare groups which are one way of reconciling public and private interests in land management,

(xxii) much of the problem of land management revolves around questions of ownership and the rights and responsibilities granted under different tenures, and

(xxiii) to what extent is co-operative management compatible with Landcare-type organisations established under other initiatives?

Pre-conditions

(i) important to include the economic and social dimensions to problems in resource management,

(ii) distinction between those not directly involved in the issue (external support) and those who are players in the process,

(iii) in a crisis it is difficult for people affected to contribute financially,

(iv) co-management should aim to pre-empt crises,

(v) co-management should operate where conservation of a resource also conserves local communities,

(vi) crisis in high country is leading to community initiatives and sense of ownership,

(vii) co-management could be seen as arrangements that strengthen property rights by mutual agreement,

(viii) need to recognise that short-term needs tend to be acted upon before long-term considerations,

(ix) recognition of an emotional or spiritual dimension to decision making,

(x) requires excellent facilitation,

(xi) people need to be made aware of the implications of policy and processes,

(xii) less opportunity for experimental management, for recirculating wealth into communities, external support provisions should be enhanced, and

(xiii) formalised, legal, and multi-year agreements need not be the most favourable mechanisms and conditions supporting co-management.

Scale

(i) need for government to accept unique local solutions,

(ii) process is better suited to small geographic areas,

(iii) government bureaucracy should be minimised,

(iv) scale important but depends on enthusiasm of local community and devolution of control by agencies,

(v) co-management implies reasonably close linkages yet problems may be large river basin scale,

(vi) benefits of using outsiders should not be overlooked, solely local initiatives can flounder without access to expertise etc., and

(vii) high country is well defined geographically and primary users well organised.

Groups

(i) parallels with Landcare, especially Victoria,

(ii) desirable to build on existing organisations,

(iii) good leadership essential but not to the detriment of the less vocal,

(iv) easier to work with existing groups,

(v) well organised sub-groupings imply co-operation,

(vi) need for training in facilitation skills, and

(vii) both runholders and other interest groups well organised but differ as to their investment in the resource.

Interactions

(i) Maori involvement could be facilitated by the process but could conflict with cultural constraints on the use of knowledge,

(ii) experience has shown that providing opportunity for consultation and consensus improves understanding of different perspectives and hence resource management outcomes,

(iii) can lead to a sharing of costs and benefits,

(iv) can improve implementation of policies provided affected groups participate fully and the benefits target problem areas,

(v) Rabbit and Land Management Programme and South Island Forest Development Trust enable participants to gain a better understanding of each other, hence co-operation and support occurs across agencies and in the local community. Need for flexibility to allow new opportunities,

(vi) co-management internalises externalities,

(vii) need to consider the relationship between use of physical and non-physical resources within the wider economic system,

(viii) resource users fall into several groups with different aims and rights, and

(ix) any co-operative management process that focuses on users must take account of existing property rights while allowing for other uses.