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The Call To ARMs

or

why the concept of ‘avoid, remedy, or mitigate...’

is worth a closer look

A study presented in partial fulfilment of the requirements for the degree of

Master of Science in Resource Management at Lincoln University

By

Andrew Willis

Centre For Resource Management

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Executive Summary

- The Resource Management Act 1991 represents a significant shift away from the direction and control approach of the Town and Country Planning Act 1977 towards an effects-based, outcome-orientated, integrated approach with one single substantive purpose “to promote the sustainable management of natural and physical resources.”
- S5(2)(c), or the duty to ‘avoid, remedy, or mitigate adverse effects on the environment’ (ARM) ‘escaped’ much of the theoretical debate in the Resource Management Law Reform process (RMLR) as it was included within the definition of ‘sustainable management’ late in the reform process. This has meant that there has been little debate and direction on application and interpretation of s5(2)(c) or the concept of ARM.
- In examining its application and interpretation, ARM makes more sense interpreted in a two-level hierarchy with a balancing approach between ‘remedy’ and ‘mitigate’. Under this proposition, ‘avoid’ requires adverse effects to be escaped or evaded. ‘Remedy’ is something that is done after the damage has been caused, requiring adverse effects to be rectified, or corrected. ‘Mitigate’ involves something ongoing and requires adverse effects to be reduced in severity, or moderated. The way the Act reads, application of any one of these is sufficient to achieve the purpose of the Act.

- ARM contains several implications for sustainable management. Firstly, ARM provides a simplified, standardised and integrated effects-based approach allowing the community, or the resource users, to have more control over the direction of their well-being; secondly, ARM allows for the internalisation of costs to those that benefit from the resource use; thirdly, through the definition of 'environment', S5(2)(c) has an inherent balancing function where both the biophysical and the human aspects are considered concurrently; and fourthly, the tangible and encompassing nature of s5(2)(c) means that it has the potential to include s5(2)(a) and s5(2)(b) and even to act as a surrogate ethic for the Act.
- Because of these implications, ARM is extremely important for the functioning of the Act. Anything that compromises ARM therefore will compromise the achievement of sustainable management. ARM relies heavily on effects assessment. Problems with this process include interpretational concerns over what constitutes an adverse effect, and institutional concerns such as information gathering and costs, the importance of the Assessment of Environmental Effects, the skills of resource consents officers, monitoring and enforcement, policy statements and plans and condition setting - fortunately there has been much guidance provided on these matters.
- What has not been addressed by ARM is the problem of cumulative effects arising from many un-ARMed minor adverse effects. Mitigation banking is an approach that can deal with this problem by allowing many small effects to be dealt with in one go. The offsetting benefits are provided for before consent for the resource use is given.

- ARM is a critical provision within section 5 and the Resource Management Act 1991 (RMA).
It is a key means through which sustainability under the Act will be achieved. Those who work with natural and physical resources need to recognise this.

The Study Approach And Methodology

The Approach

The methodology adopted for this dissertation was qualitative as the nature of the topic area and the lack of measurable inputs and outputs excluded quantitative analysis.

A qualitative approach starts with questions directed toward defining the problem. This is followed by theory development and then information collection. Information is usually obtained through literature research, observations and interviews. Finally, analysis follows the information collection to assess the accuracy of the generated theory/s.

Problem Identification

The topic covered in this study was approached as a general area of interest initially, with the proposition that perhaps there is room for improvement in the way that Section 5 of the Resource Management Act 1991 is being interpreted and implemented. The topic was attractive as I have always had an interest in human interactions with the environment and the way that these are managed. Some early discourse soon convinced me that this would indeed be an interesting area to study, if somewhat difficult given the newness of the RMA and its key concepts to resource management.

Initially, I did not have any proposed theories, answers, or even an accurate understanding of the issues involved. This necessarily meant that questions were aimed at providing background

information. This exploratory research fits neatly within the qualitative approach adopted and allowed me to examine the existing theories about sustainability, the natural environment and our place within this environment, while developing and crystallising my own ideas.

These initial questions were aimed at examining how and if the purpose of the Resource Management Act was being achieved, and if there were any inconsistencies, flaws, or confusion between the spirit and letter of the law. Initial analysis centred around understanding the concept of sustainable management and what this meant for the management of resources and the wider community. Analysis then moved on to closely examining if and how sustainability was to be achieved through the provisions in section 5.

Author's Bias

I believe that it is important to state biases from the outset, rather than ignoring them or denying their existence. My approach to the problem investigated was necessarily directed or tainted by my beliefs, philosophies and interests. These include a keen awareness and interest in ecology or ecosystems, and a firm belief that due to society's resource dependency, the environment needs to be managed to maintain its mauri or life force. This interest in ecology is evidenced by my background which includes a BSc in zoology.

Developing The Elusive Theory

When developing a theory, I was conscious about exploring an hypothesis which led to useful findings. This was important to produce a report which was applicable to real situations, rather than producing a document simply for the sake of producing one.

When building theory, there is the problem of determining some limits or an end point to the report scope. This is especially prevalent when analysing the relatively new RMA. Anticipating future problems and potential environmental outcomes involves a degree of speculation at the best of times, but especially so when the case law has yet to be sufficiently built up, and some effects such as cumulative effects, may not be discovered until years later.

Sources of Information and Subsequent Information Collection

Information was sought from articles in journals and books, Tribunal decisions, the Act itself, reports, speeches, communication with academic advisers and interviews with people who work in key areas with the RMA. Organisations contacted included the Department of Conservation, the Ministry for the Environment, the Office of the Parliamentary Commissioner for the Environment, the Royal Forest and Bird Protection Society, the North Canterbury Fish and Game Council, and Regional Councils.

There was little published information directly related to the study area, given the age of the RMA and the specificity of the subject area. Much of the material cited therefore deals only indirectly with the topic of this study.

For the interviews, a set of questions was generated and then posted, along with a copy of the project proposal and timeline. This list contained a base set of general questions along with some tailored to the specific organisation. Respondents were also asked questions dealing with their views on the other organisations. This approach helped to generate ideas about where weaknesses might lie.

Time constraints meant that most organisations did not respond to the questions sent out, and therefore needed to be contacted again as a follow-up. In accordance with many of their wishes, it was decided to proceed with phone interviews rather than to ask for written responses.

Information Analysis

The problem with telephone interviews, as opposed to written responses, is that they necessarily depend on the context of the conversation. This means that qualitative interviewing may be too subjective to provide reliable data. Because of this problem, it is risky to base findings on such interviews unless the meaning and context is clear.

Certainly the interviews sufficed as scoping tools. They also appear robust when dealing with trends within a qualitative approach. This is fine as it was never my intention to measure peoples answers.

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Chapter One - Introduction

The Resource Management Act 1991 (RMA) has revolutionised the way we deal with resources in New Zealand, representing a significant shift away from the old approach under the Town And Country Planning Act. The structure of the RMA is complex. It is considered to be effects-based, or concerned with the adverse effects of activities on the environment, rather than the activities per se. This approach reflects the need for a realistic evaluation of the environmental costs of resource-use decision making.

The RMA is also tightly integrated, resulting from a single, overriding purpose or goal found in section 5, namely “to promote the sustainable management of natural and physical resources.” This purpose is the heart of the Act to which all other provisions are ancillary. The interpretation of its provisions therefore will be essential for the implementation of the Act and subsequent attainment of sustainable management.

The idea to include s5(2)(c), or the duty to “avoid, remedy, or mitigate adverse effects on the environment” (ARM) in the definition of ‘sustainable management’ was a late suggestion by the RM Bill Review Group (Upton, 1995a).¹ This meant that, unlike the rest of section 5, which was debated at length by two governments, s5(2)(c) ‘escaped’ much of the review process.

¹ The Review Group’s report does not explain why this was included in the purpose however. Indeed the concept appears to have come from nowhere.

Without the extensive theoretical debate associated with the other provisions in the Act, there is little information to provide direction on interpretation and application of s5(2)(c). This is especially problematic given that the concept of ARM is also alluded to in other sections. Furthermore, problems with interpretation and application is compounded by the lack of similar concepts in previous statutes and case law.

1.1 Study Objectives

In this report, I aim to investigate the concept of avoiding, remedying, or mitigating adverse effects of activities on the environment (ARM) and what it means for the sustainable management of New Zealand's natural and physical resources. In doing so, firstly I will examine the RMA and the overriding purpose of the Act as the context in which ARM arises. Secondly, I will examine the ARM provision in relation to the Act and suggest the most appropriate ways for its interpretation and application. Thirdly, I will show that this provision differs from the rest of section 5 in several important ways, and that these differences can lead to some important benefits and implications for achieving the promotion of sustainable management. Fourthly, I will outline some critical areas for the successful implementation of ARM and ultimately sustainable management. Finally, I will conclude with some recommendations for researchers and those involved in resource management to consider.

1.2 Report Outline

The report is divided up into six chapters. In chapter two, the RMA is examined along with the differing interpretations of section 5. Chapter three deals with the occurrence, interpretation and

application of the words in s5(2)(c) and the concept of ARM as a whole. Chapter four outlines some implications of ARM for sustainable management under the RMA. In chapter five, some critical areas for the implementation of ARM is outlined. Finally, chapter six contains the reports conclusions and recommendations.

Chapter Two - The RMA

2.1 Introduction

In examining the concept of ARM, it is important to examine the context in which this concept arises in the RMA. This chapter will examine the Resource Management Act, and in particular, the differing interpretations of section 5 where the first and most important reference to ARM is made.

2.2 The Resource Management Act 1991

In January 1988, Geoffrey Palmer, the Minister for the Environment, announced that the Labour Government would undertake a comprehensive review and reform of the major legislation dealing with natural resources. This reform would include an integrated review of the Town and Country Planning Act 1977, Water and Soil Conservation Act 1967, minerals legislation, and environmental assessment procedures.

The reform entailed extensive programmes of public information and consultation, including publication of discussion documents and a newsletter, numerous public meetings, and thousands of written submissions and comments by toll-free phone (Buhrs & Bartlett, 1993). After extensive drafting and reviews, the Bill was finally passed in 1991.

The Resource Management Act is considered to be holistic as it draws together into a unified management system, all controls relating to the use and development of natural and physical resources, allowing a strategic overview to be taken of their interaction and interdependency (Grant, 1995). In this way, it supersedes the previous fragmented approach under which separate controls applied to water and soil conservation, to environmental pollution and to town and country planning.²

This unified management system is reinforced by having a pre-eminent single substantive purpose - to promote the sustainable management of natural and physical resources. This is spelt out in the Act, rather than leaving it to Ministers, councils and courts to decide in policy statements and legal decisions (Grant, 1995).³ By giving sustainable management pre-eminence over resource management objectives, the Act's authors sought to set it up as a fundamental truth, a fixed (and value-laden) point from which all subsequent reasoning should proceed (Upton, 1995a). Thus, whatever the trade-offs in the circumstances of the case, a highest level trade-off in favour of sustainability had already been made in legislation in advance (Upton, 1995a).

This explicit direction differs from previous legislation where mixed and sometimes conflicting objectives governed resource allocation (Upton, 1995a). Section 4 of the Town and Country Planning Act 1977 was typical of this approach, enjoining those empowered under it to adopt as their general purpose "the wise use and management of the resources, and the direction and control of the development of .. [land] .. in such a way as will most effectively promote and

² While the approach may be more holistic than before, the Act is not institutionally holistic (Grant, 1995). There is a hierarchical management structure between central and local government and further functional splits between regional and district councils. This compartmentalism does allow for flexibility and the application of community based controls however.

³ Despite there being a single substantive purpose, this purpose is open to interpretation.

safeguard the health, safety, convenience and economic, cultural, social and general welfare of the people, and the amenities” in question.

Such a general and all-embracing description of the purpose of planning arguably provided no guidance at all (Upton, 1995a). This meant that the meaning of such an expression of purpose could only be discovered in practice, and defined in terms of the facts of each case. In the absence of some guiding principle, almost any outcome could be argued to have met the Act's purpose (Upton, 1995a).

Having only one guiding purpose has many good points:

- certainty of legislative direction and intent;
- clarity of overall philosophy;
- provision of a bottom line against which to judge resource management decisions;
- provision of a framework and clear parameters for decision making;
- a reference point for resolving conflicts;
- avoidance of judicial policy making in respect of questions which involve making choices about values that are essentially political in nature;
- provision of an overall national policy to guide regional and local decision makers;
- a clear yardstick against which the effectiveness of the legislation could be assessed;
- and, most revealingly of all,
- making a fundamental value judgement to avoid the obscure and uncertain business of weighing competing objectives.

(From Cronin, 1989)

It is notable that the RMA attempts to achieve the *promotion* of sustainable management rather than sustainable management per se. This is because we can not hope to understand all the issues inherent in sustainable management, let alone quantify them. Sustainable management is a moving target which will always continue to move ahead of us as our knowledge increases (Environmental Policy and Management Research Centre, 1995). Inherent within this concept is the notion that practice will improve our direction and steps taken.

To promote sustainable management therefore, is to describe a goal which may or may not be achieved but whose promotion will be encouraged through the application of the Act's provisions (Upton, 1995a; Harris, pers. comm., 1995).

In trying to achieve its aim, the Act is divided into fifteen parts. Part I deals with interpretation and application of the Act. Part II contains the foundation principles and purpose of the Act. Part III deals with duties and restrictions under the Act including land uses, the coastal marine area, river and lake beds, water discharges, noise and adverse effects. Part IV deals with the functions, powers and duties of central and local government. Part V deals with standards, policy statements and plans. Part VI is concerned with resource consents. Parts VII to XV deal with specific matters such as water conservation orders and subdivision.

The foundation principles dealing with the purpose of the Act are found in part II (sections 5,6,7, and 8). It is in this part (section 5) that the first and most important reference is made to the concept of ARM. It is important because section 5 is pivotal to the Act's purpose. Without a clear understanding of the meaning and relative importance of ARM and the other provisions in

section 5, the RMA will not be able to function effectively. Section 5 is discussed in detail below.

2.2.1 Section 5

Section 5 reads as follows:

“5 Purpose - (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act, ‘sustainable management’ means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while:

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations;

and

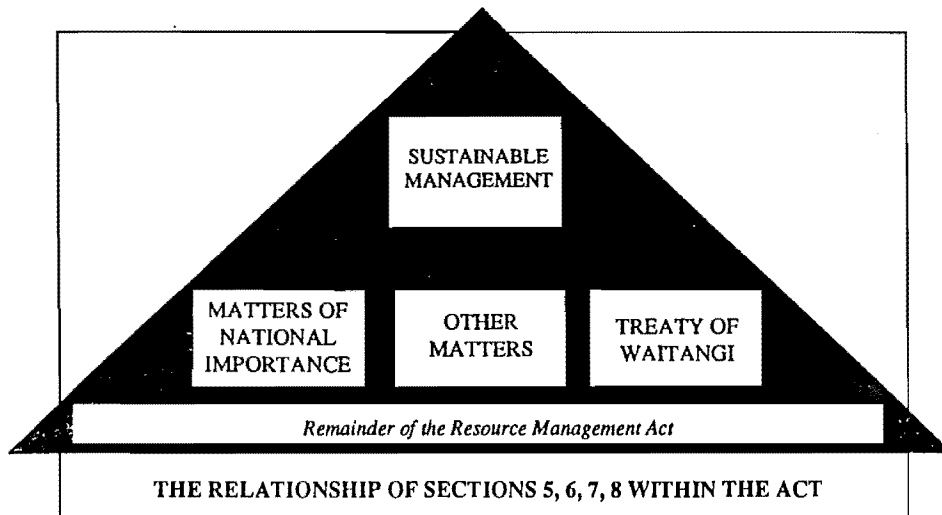
(b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and

(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment. (Emphasis added)

This section sets up the promotion of the sustainable management of natural and physical resources as the overriding purpose of the Act (hereafter referred to as sustainable management rather than the *promotion* of sustainable management). This purpose is expressed as a goal to

which all other goals are subservient (MFE, 1992a). All objectives, policies, decisions and actions formulated or taken under the RMA must seek to fulfil this purpose (see figure 1) .

Figure 1 The Relationship of Sections 5,6,7,8 Within The Act.



(MFE, (1992a) *The Resource management Act and Sustainable Management: Introduction and Key Principles Information Sheet No. 2 , p2*)

In this respect, the purpose of the RMA and therefore the concept of ARM, is imported into all National policy statements (s51(1)); National coastal policy statements (s51(1)); Regional policy statements (s61(1)); Regional plans (s5(2)(c)66(1)); District plans (74(1)); Resource consents (104(1)); Designations (s5(2)(c)171(1)); and Heritage orders (s5(2)(c)191(1)).

In essence, section 5 is the single and authoritative source for all decisions under the Act (Gow, 1995).

2.2.2 Interpretation

The Act's purpose or principle is clear. "The overriding intention of the legislation is to ensure that successive generations husband the available resources and pass them onto the next in no lesser state than was available to the donor generation."⁴ What sustainable management actually entails however is not so clear. The exhaustive debate on this is testimony to the fact that sustainable management is not a principle, or concept whose meaning is immediately self-evident. Indeed Martin Philipson of Victoria University, has already urged the Planning Tribunal to be "adventurous and attempt to tackle the clearly difficult task of finding meaning for, and then developing, the philosophical heart of the Act" (Philipson, 1994; p 92).

The Hon. Simon Upton (1995a) does not believe that it is judicial adventurousness that is required to develop the 'philosophical heart of the Act.' "Rather, what is required is careful attention to the language of section 5 and Parliament's intention in choosing the formula that it did... Section 5 was crafted with great care" (Upton, 1995a; p 5).

In examining the language, much has been made of the word 'while' contained within s5(2). Many scholars laboured over this point when the Act was introduced and still seem to be unsure as to its interpretation. Recently, the Minister for the Environment, the Hon. Simon Upton addressed the 1994 Resource Management Law Association Conference. In his address, the Minister distinguishes between a 'conservative' and a 'progressive' approach to the interpretation of section 5 (Upton, 1994).

⁴ Marlborough District Council v Southern Ocean Seafoods's Ltd. W6/1995 Planning Tribunal.

He states: “The conservative position in this debate is that section 5 is all about balancing socio-economic aspirations with environmental outcomes. The progressive view ... is that the purpose of the Act is to secure a particular environmental ethic - sustainable management” (Upton, 1994; p 3). The approach taken depends on the interpretation of the word ‘while’ (Fisher, 1991). If ‘while’ in section 5(2) invites the antecedent matters to be balanced against those that follow, there will be the conservative outcome. If however ‘while’ acts as a subordinating conjunction, the progressive view of securing sustainable management will be met, where the matters in subparagraphs (a), (b) and (c) are secured whatever the activities being contemplated (Fisher, 1991; Upton, 1995a).

The Minister supports the second interpretation arguing that “the definition of sustainable management in relation to a resource makes it clear that there are three matters (sub-paragraphs (a), (b) and (c) - author’s note) which must be secured. If it can secure them, then the use will be acceptable” (Upton, 1995a; p 7). Obviously if it can not secure all three, then the use will be unacceptable.

Milne (1992) believes that the use of ‘while’ is unusual. He argues that law drafters are skilled in the use of words and that the phrase ‘provided that’ is more common as a subordinating conjunction. Its use would have clearly established the pre-eminence of subsections a, b and c over ‘use , development and protection’. The rejection of ‘provided that’, therefore implies a balance, although not necessarily an equal balance (Milne, 1992).

Many have argued that this crucial section will not be decided upon until many more resource management cases have been dealt with by the courts. The Minister quotes three recent Planning Tribunal decisions from judge Kenderdine to support his view.

“The provisions of s5(2)(a), (b) and (c) may be considered cumulative safeguards which exist in order to ensure that the land resource is managed in such a way, or at such a rate which enables the people of the community to provide for the various aspects of their social well-being and for their health and safety. They are safeguards which must be met before the act’s purpose is fulfilled (Foxley Engineering W12/94).”

“If we find that one of the safeguards is unlikely to be achieved then the purpose of the act is not fulfilled (Plastic and Leather goods W26/94).”

“The promotion of sustainable management has to be determined therefore in the context of these qualifications which are to be accorded the same weight (Shell Oil W8/94).”

By adopting the progressive approach, there can be an integration rather than a balancing of developmental aspirations with environmental outcomes. Here development can only proceed if it is compatible with the environmental outcomes stipulated in sub-paragraphs (a), (b) and (c). As Grundy (1995a) explains:

“People and communities can provide for their social, economic and cultural well-being and for their health and safety only by ensuring that the reasonably foreseeable needs of

the future are met, the ecological base for their well-being is sustained and adverse effects of their activities are avoided, remedied or mitigated.” (Grundy, 1995b; p 1)

The Minister’s interpretation is a good starting point from which to examine the language used in section 5 more closely. While the Minister appears certain on the purpose and interpretation of section 5, there is still some ‘room for movement’. This is reinforced by a Court of Appeal decision stating that: “Notable though the Resource Management Act is for the aspirations and principles embodied in it, their very generality seems to have led in the drafting to an accumulation of words verging in places on turgidity.”⁵

Milligan (1995) argues that setting up the purpose of the RMA as an ethic opens the way for debate on the purpose and interpretation, not just from the judiciary, but from the wider community as well. He argues that as long as section 5 of the RMA is regarded as just another section in just another statute, questions concerning its meaning could safely be left for the courts to decide. However, as soon as that section is put forward as containing an ethic, the debate as to its ambit, meaning and moral force is restored to the wider community (Milligan, 1995).⁶

Perhaps this is appropriate as the RMA attempts to enable people and communities to provide for their social well-being, health and safety, rather than directing this through central and local government. The wider community should explore the various interpretations.

⁵*Auckland Regional Council v North Shore City* (1995) 3 NZLR; p 20.

⁶ Milligan (1995) notes that if the ordinary processes of judicial interpretation are allowed to run their course, it may be a long time before quite fundamental questions are answered. This is because courts can only judge on the issues parties chose to put before them; because if a case can be decided without an analysis of fundamental concepts it will be; and because courts are interpreters rather than makers of law.

2.3 Summary

The RMA aims for an integrated approach in the way that we manage natural and physical resources. This is achieved through having a strong, clear purpose which all objectives, policies, decisions and actions formulated or taken under the RMA must seek to fulfil. The promotion of the sustainable management of natural and physical resources is achieved by securing the matters in sub-paragraphs 52(a), (b) and (c), (the ‘cumulative safeguards’) whatever the activities being contemplated. Some have concluded that this is not so much a purpose, but a guiding principle or ethic.

Subsection 5(2)(c), or the requirement to avoid, remedy or mitigate any adverse effects of activities on the environment (ARM), is unusual in relation to the rest of section 5, but is one that is important for achieving the promotion of sustainable management (given its inclusion in section 5). In the next chapter, I will examine the concept in more detail.

Chapter Three - ARM And The RMA

3.1 Introduction

Through section 5, the RMA introduced a new concept, namely to avoid, remedy, or mitigate any adverse effects of activities on the environment (ARM). This concept has been described as a 'mantra' or one of the recurring themes of the Act (Edmonds, 1993). This is because it is imported throughout the Act as part of the Act's purpose or guiding principle. Further, decisions on ARMinng adverse effects are the most common kind of decision under the RMA (Gow, 1991, cited in Young, 1991).⁷

Rob Harris (pers. comm. 1995) believes that s5(2)(c) was raised almost by accident, as a provision was needed for 'avoidance' in the Act. This provision did not fit in sections 6,7,8, as it was a method rather than a principle. While it did fit within sections 30 and 32, Parliament wanted the provision to stand out (Harris, pers. comm, 1995). It was finally elevated to section 5 relatively late in the drafting process.⁸

Generally s5(2)(c) is 'lumped' together with s5(2)(a) and s5(2)(b) by authors such as Fisher (1991) as being part of the "ecological function", and by Upton (1995a) as "a bottom-line provision". This sub-section "is wholly different in character from (a) and (b)" however (Grant, 1995; p 6). Rather than being an objective or goal as the other two sub-sections are, it is a

⁷ There are two types of decisions under the RMA - allocation decisions of natural resources, and ARM decisions. Given that decisions over private property are where appropriate circumscribed and that mineral issues are the subject of another Bill, decisions on ARMinng adverse effects will be the most common ones (Gow, Cited in Young, 1991).

⁸ Indeed the concept of ARM is not present in the original drafts of the Bill.

method, or a way to achieve the others' objectives. Further, while s5(2)(a) and s5(2)(b) include future considerations, this provision is directly concerned with the present - it is ongoing.

Harris (pers. comm., 1995) believes that s5(2)(c), or the ARM concept, could be a surrogate for the Act's ethic. This is because the achievement of sustainable management could be seen to be dependent on achieving ARM. Grant (1995; p 6) goes further arguing that s5(2)(c) is "potentially so wide in its effect as to not only include but also undermine all that has gone before". In this respect, ARM prescribes an end state and a method to get there as well. It supersedes the concept of sustainable management.

The actual effect of ARM on the Act's purpose (the promotion of sustainable management), will necessarily depend on its interpretation and application. Unfortunately, without the extensive theoretical debate associated with the other provisions in the Act, there is little information to provide interpretative direction on s5(2)(c). These problems are compounded by the lack of similar concepts in previous statutes and case law.

In order to investigate the ARM concept and what it means for sustainable development, references to it in the Act and the words themselves will be examined more closely.

3.2 References To ARM

References to the concept of 'avoid, remedy, or mitigate' (ARM) explicitly appear in five places in the Act.

i. ARM appears in section 5(2)(c) in part II (as already covered).

ii. ARM appears in section 17(1) where it states that:

“Every person has a duty to avoid, remedy, or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of that person...”

ARM also is mentioned in 17(3)(b) in relation to abatement notices and enforcement orders, as a way of enforcing the duty.

iii. Section 106(2) allows a subdivision consent to be granted if the consent authority is satisfied that the effects from natural hazards such as erosion will be avoided remedied or mitigated by rules in a district plan, conditions in a resource consent or other matters including works.

iv. ARM is referred to in abatement notices (s322(1)(b) as amended by s146(1) Resource Management Amendment Act 1993). These notices provide a mechanism for the regional or territorial authority to ensure that the restrictions and duties in the Act are complied with.

v. Section 314(1)(b)(ii) & (2)(c) also cover ARM in relation to enforcement orders, which provide a mechanism for any person to ensure that the restrictions and duties in the Act are complied with.

Of these references, the most important is section 5 in part II as all other provisions are ancillary to it (Phillipson, 1994). For example, section 104 which deals with resource consents, lists a number of considerations which are all subject to part II. Section 17 also carries a strong message. Every person has a duty to ARM any adverse effect on the environment that they may cause directly or indirectly.⁹

3.3 Definitions

3.3.1 'Effects'

One key to the concept of ARM, is deciding what the adverse effects of a proposal are. In section three, the Act defines "effects" as follows:

"unless the context otherwise requires, the term 'effect' includes-

- (a) Any positive or adverse effect; and
- (b) Any temporary or permanent effect; and
- (c) Any past, present, or future effect; and
- (d) Any cumulative effect which arises over time or in combination with other effects- regardless of the scale, intensity, duration, or frequency of the effect and also includes-
- (e) Any potential effect of high probability; and
- (f) Any potential effect of low probability which has a high potential effect."

When looking into the proposed Stratford combined cycle power station, the Board of Inquiry (1995) discussed the meaning of "effects". The Board (1995) found the categories in paragraphs

⁹ A 'person' includes all private and public authorities and the government (Gow, 1995).

(a) to (c) to be very general and to require the Board to consider any effect regardless of scale. It found that paragraph (d) was included to ensure that the definition was not interpreted too narrowly to mean a single isolated effect from a particular activity. The Board (1995) took the phrase 'other effects' in paragraph (d) to mean effects resulting from other activities which in themselves may not be adverse.

From the inclusion of paragraphs (e) and (f) in the definition, the Board (1995) assumed first that the RMA does not require consideration of potential effects of low probability and low potential impact and therefore, that any interpretation as to the nature of uncertain effects must be reasonable and second, that it is the risk arising from an activity which must be considered.

Whether or not the effects are adverse may well depend on the nature of the environment of the proposed location for the activity. This was shown in *Darroch v Whangarei District Council* (A18/93), where it was found that the noise and odour associated with farm animals do not necessarily amount to adverse effects in a rural environment (Office of the Parliamentary Commissioner for the Environment (PCE), 1995).

As can be seen, the definition of 'effect' does not cover what constitutes an 'adverse effect', nor does the definition say anything about scale. Indeed the Stratford Board of Inquiry found any effect regardless of scale, had to be considered. Further, the Act refers to the terms 'significant adverse effects' and 'minor adverse effects' in a number of places without defining these terms.¹⁰

¹⁰ Significant in a scientific context, has a quantitative implication that may be beneficial in terms of defining the scale of the effects.

Edmonds *et al.* (1993) believe that the threshold of an adverse effect could be something less than a 'minor adverse effect'. This would mean that virtually any change was an adverse effect to be ARMed. They believe that this would be an unfortunate interpretation of an adverse effect, but do not explain why. Perhaps this would make development uneconomic as even minor adverse effects, such as temporary aesthetic damage, must be ARMed.

Two key questions which need to be answered therefore are, what is an 'adverse effect' and specifically, what constitutes a 'minor' or 'significant' adverse effect? Research could concentrate on quantifying or setting down guidelines to decide what a minor adverse effect is. Certainly deciding on adverse effects is dependent on the circumstances of the case, but guidelines or checklists will help to achieve some certainty in resource use, and will allow some test of reasonableness, or yardstick to measure the variables against.

3.3.2 *The Elements - 'Avoid', 'Remedy', 'Mitigate'*

The Act does not define the ARM concept, or the individual words. To aid in interpreting the meaning of the concept, the research initially consulted an English and a legal dictionary when required, before examining the policy, legislative history, and wording of the Act.

'Avoid'

The Concise Oxford Dictionary (1990) defines avoid as - *to keep away or refrain from (a thing, a person, or action), escape, evade.*

'Remedy'

The Concise Oxford Dictionary (1990) defines remedy as - *a means of counteracting or removing anything undesirable, redress, legal or other reparation.*

The Oxford Companion to Law (1980) describes a remedy as - *that which redresses, rectifies, or corrects that which has been done wrongly, or has caused injury, harm, loss, or damage.*

'Mitigate'

The Concise Oxford Dictionary (1990) defines mitigate as - *to make milder or less intense or severe, moderate.*

3.3.3 *Contextual Arguments*

There are many places where the elements of the concept appear either singularly or in combination. However, the ways in which the individual words have been used adds little to the interpretation. This is largely because there is inconsistent use of these words and combinations of these words in many places in the Act (Edmonds *et al.*, 1993).

3.3.4 *Policy And Legislative History*

Given the lack of help from the context of ARM, Edmonds *et al.* (1993) looked to the policy and legislative history to provide clues to defining these words. They believe that a legal dictionary may have been used in choosing 'mitigate' over 'ameliorate' (which was in the Bill as

introduced). They therefore inferred that the meaning of 'remedy' and 'mitigate' and how they relate to the environment, may be best understood in legal terms.

Their research concluded that there were two interpretations of 'remedy'. One was to take the situation back to what it would have been prior to the occurrence of the adverse effect. Examples of this would include recreating the landscape, soil, vegetation and other conditions that existed before the establishment of the new activity.

The other interpretation was to consider the term in a more legal sense involving other redress or environmental compensation. It need not involve taking the situation back to what it was prior to the adverse effect occurring, although it could. This is similar to the definition of 'mitigate'.

Edmonds *et al.* (1993) admit that interpreting 'remedy' in a legal sense made it difficult to decide the difference between 'mitigate' and 'remedy'. The two terms seemed synonymous, or differing only in degree. Perhaps then Parliament did not intend the legal definition to be used. This would imply the narrower interpretation of 'remedy' involving repairing or fixing damage.

There appears to be much confusion over the meaning of the terms in s5(2)(c) and therefore the concept itself. A scenario outlined in Resource Management Information Sheet Number 6 typifies this (MFE, 1991a; p 2). It reads:

"In practice this would mean that adverse effects should be avoided if at all possible (for example, no air pollution should be caused by a factory). If this is impossible, then the adverse effects should be remedied (gases are treated before release). When this is not possible,

mitigation should reduce or alleviate the severity of the adverse effects (gases released only at night, and when wind speed exceeds x m/s).”

Treating gases before release is not an example of remedying. Rather, it is either an example of avoiding the effects (if the treatment removes all the adverse effects entirely then they have been avoided), or mitigating the effects (if the adverse effects are partially reduced, or reduced in severity at the source, then they will be mitigated). Furthermore, it is not an example of remedying the effects as there are no adverse effects to repair, redress or rectify. Remedying the effects might involve cleaning off the scum on buildings for instance. In this factory scenario, remedying is not really appropriate.

Clearly there is some confusion over the meaning of the terms. The next step in examining the ARM provision and what it means for sustainable management is assessing how it is being applied. This may also provide clues as to the intended meanings of the specific terms and the concept as a whole.

3.4 How Is ARM Applied?

Directions on how ARM is to be applied have come from publications, speeches and case law.

3.4.1 Early Publications

The Minister for the Environment stated that the concept of ARM was to ensure that adverse effects of use and development are minimised to the greatest extent practicable (MFE, 1991b).

He elaborated on this saying:

“In practice this should mean that, in order of importance, potential effects are avoided. Where this is not possible, the potential damage caused by such effects is remedied, and where this is not possible, any remaining adverse effects are mitigated.” (MFE, 1991b; p 2)

In a Resource Management Information Sheet published soon after the Act was passed, this ‘order of importance’ was affirmed. “Although it does not establish a legal obligation, the terminology of section 5(2)(c) implies an order of importance” (MFE, 1991a; p 2).

More recently, when contemplating the proposed Taranaki Power Station, the Board of Inquiry regarded s5(2)(c) as a hierarchy, stating that “the duty is first to avoid, and if this is not possible then to remedy, and if neither is possible then to mitigate” (Board of Inquiry, 1995: p 106).

The conclusions from these three papers suggest that there is an order of importance that must be followed. This order of importance is effectively a hierarchical approach.

3.4.2 The Hierarchical Approach

Several questions are raised by a hierarchical approach. A key issue however, is the question of whether the hierarchy contains two levels - ‘avoid’ and then ‘remedy or mitigate’ - or three levels - ‘avoid’, then ‘remedy’, then ‘mitigate’. Edmonds *et al.* (1993) believes that there is presumably a reason why the statute uses the formulation ‘avoid, remedy, or mitigate’ rather than other formulations. The placement implies an order in which each matter should be addressed (a three

-level hierarchy). A two-level hierarchy is not implied, as if this was required, the legislation would have read 'avoid, or remedy and mitigate' (Edmonds *et al.*, 1993).

When applying a three-level hierarchy, there is a clear legal onus on a developer to justify why adverse effects can not be avoided before moving onto remedying and then on to mitigating. For example, if avoiding the adverse effects makes the development impractical or resulted in excessive costs, then a case could be made to go onto the second level in the hierarchy. When applying a two-level approach, it would not legally matter whether remedying or mitigating procedures were adopted. The end solution will likely arise from the submission and appeal process.

If there a hierarchy is considered appropriate, criteria will be needed for deciding when to move to the next level. The Act does not contain such criteria, so the courts will have to derive these if a hierarchy is intended, otherwise the Act will be unworkable. It is likely that the courts will adopt tests of reasonableness or practicality. A test of reasonableness or practicality is appropriate, as the costs of development are dependent on the severity of the effects in the particular case and the expected benefits of the development. For example, in many instances it would be unreasonable to avoid the adverse effects.

3.4.3 The Balancing Approach

A balancing approach is an alternative approach that could be adopted to interpret and apply ARM. Under a balancing approach decision-makers would weigh up all the circumstances and then opt for 'avoid', 'remedy', or 'mitigate' where appropriate. There would be no predisposition

towards any one element in the concept. Under this approach, the performance of any one of these three terms will meet the requirements of the RMA and therefore, sustainable management.

The Hon. Simon Upton in his speech to the Energy and Natural Resources Law Association of New Zealand Incorporated, (28 June, 1995; p 4) argues against a hierarchy saying: “neither is there an injunction that the words ‘avoid, remedy or mitigate’ should be read as a hierarchy so as to create a primary duty to avoid.” Further, in his decision on the Taranaki Combined Cycle Power Station, the Minister stated:

“It is my view that the Act does not envisage that ‘avoid, remedy, or mitigate’ in section 5 should be applied as a hierarchy. If this had been Parliament’s intention, it would have made it explicit. As it is drafted, section 5(2)(c) envisages that avoidance, remediation or mitigation will be options available depending on the circumstances of the particular case” (Upton, 1995b; p 12)

Quite clearly the Minister is calling for a balancing approach. This is confusing, as earlier in 1991 the Minister said that there was an order of importance and an implied hierarchy (see previous page). Certainly the Act does not give a prescription for either a balancing approach or a hierarchical approach. Which then is the most appropriate?

3.4.4 Deciding Between The Two Approaches

There are different implications in terms of the nature and costs between a hierarchical approach and a balancing approach. For example, the hierarchical approach, particularly the three-level hierarchy, is likely to be more onerous than the balancing approach. It is likely to require a much

more rigorous justification as to why each individual adverse effect should be permitted. Because of this, it is likely that in practice a professional would adopt a two-level hierarchy approach if possible (Edmonds *et al.*, 1993).

When deciding between a balancing approach and a hierarchical approach, recourse to the Act's purpose may help. If avoiding an adverse effect is considered to be more appropriate for achieving sustainable management, then perhaps there should be a hierarchy. Indeed avoidance is often expressed as more desirable than remedying or mitigation, as there may be unintended or irreversible consequences which mitigation and remediation measures are unable to resolve (McCallum, pers, comm., 1995; Delamore, pers. comm., 1995). Further, section 6 (matters of national importance) contains references to protection and preservation, both of which are better achieved through the avoidance of adverse effects. If however, the three approaches are deemed equally valid in terms of achieving the purpose of the Act, then a balancing approach, with no order of importance, is sufficient.

Given that the terms are markedly different in nature, I believe that a two-level hierarchy, with balancing between 'remedy' and 'mitigate' is an appropriate way to apply the concept. Here, effects are avoided first and then remedied, or mitigated where appropriate to the circumstances. This recognises that avoiding an effect is probably the safest approach. Indeed there is increasing global awareness that prevention, not cure, holds the key to sustainability (Stone, 1992).¹¹ A balancing approach between 'remedy' and 'mitigate' recognises that these two terms have their

¹¹ In many instances however, avoiding an effect is simply not feasible or practicable. Also given the use of 'remedy' and 'mitigate' in s5(2)(c), some environmental degradation is implicitly contemplated.

own 'niche' or place where they are appropriate to be applied. For example, some adverse effects are not able to be effectively remedied while some cannot be effectively mitigated.

The reason that balancing between 'remedy' and 'mitigate' works is because the terms have different meanings, and therefore applications. One is not necessarily more important or better than the other. For example, remedy involves repairing or remedying adverse effects which have occurred or will in the future occur (Randerson, 1991). It is something that is done after the damage has been caused.¹² In contrast to this, mitigation is ongoing, or occurs to reduce the adverse effects as they are being created or are about to be created, rather than being post resource use. As long as one of these terms is applied, sustainable management, in terms of the RMA, is being met.

Cleverly, Edmonds *et al.* (1993) ask whether it matters which approach is followed by decision-makers. In the end a hierarchy will also effectively require a balancing exercise in cases where there are a large number of adverse effects. In this case a balanced approach is likely to have the same outcome as an implied hierarchy.

3.4.5 *Where do you ARM the Adverse Effects?*

An issue faced in applying ARM is at what point the Act requires the adverse effects to be ARMed. For example, do you avoid the adverse effect at the source of the effect, at the point of the effect, or in between? For example, a noisy tavern creates a major adverse effect on the surrounding houses. There are a number of ways to ARM potential noise problems generated by

¹² Indeed this is seen in the legal definition of remedy - that which redresses, rectifies, or corrects that which has been done wrongly, or has caused injury, harm, loss, or damage (The Oxford Companion To Law, 1980).

the tavern. These include: not to have the tavern at all; locating the tavern elsewhere; relocating the houses surrounding it; providing noise mitigation measures at the tavern; providing noise mitigation measures at the houses; providing surgical ear treatment for the residents; and letting the tavern operate only during daylight hours.

Edmonds *et al.* (1993) believe that the emphasis in the Act is on the environmental effects created by existing and new activities, and that this might indicate that the emphasis is on ARMinG any adverse effects at the source. They also argue that there is no good reason why ARMinG the effect at the point of the effect, or in between, are not equally valid approaches in terms of the philosophy of the Act.

While this may be so in terms of simply addressing the effect, it may be more efficient to address the effect at the source. For instance, double glazing the residents houses does nothing to ARM the adverse effects on the rest of the environment (presumably the noise also effects other species which have no 'voice'). Further, each new house built in the area will need to have double glazing installed for as long as the tavern is operating.

Another argument for addressing the effect at the source is the idea of 'polluter pays'. Because the tavern has created the adverse effects, it should suffer the costs or inconvenience of noise mitigation measures, rather than the residents.

An interesting question to ponder here is whether the adverse effect still occurs on the environment even if the residents houses are relocated, or the residents leave? If not, the Act could be considered to be entirely anthropocentric.

3.4.6 *Creating Adverse Effects*

In ARMin some adverse environmental effects, other effects can be created. For example, maintaining sand dunes to mitigate the adverse effects of coastal erosion has adverse visual effects when views are obscured. Choices therefore, have to be made in terms of the principles of the RMA, or the policies, objectives, and rules of policy statements and plans.

If there is a possibility that adverse effects may arise in the future, the review provision and the use of contingency plans enables consent authorities to allow an activity to proceed (as long as these effects do not have a high potential effect), rather than halting an activity on speculation. Abatement notices, enforcement orders, and the ability to impose new conditions can deal with these problems when they arise. This scope for reviews and future condition setting is important as we can not hope to understand all the issues and environmental interactions in a complex environment.

3.5 Environmental Compensation

Environmental compensation is a form of payment in cash or kind to the community by the beneficiary of a consent to redress any negative impacts caused, or enhance some positive impact (Edmonds *et al.*, 1993). This type of compensation is interesting to examine in the context of this study as it may fit within the scope of ARM. Further, environmental compensation is an interesting way to increase flexibility in achieving the purposes of the Act. It has gained increasing attention recently through documents such as “Environment 2010 Strategy” (MFE, 1994a).

3.5.1 Environmental Compensation As A Financial Contribution

Environmental compensation is not referred to explicitly in the RMA. However, there is provision for it as part of financial contributions in resource consents and plans.

Section 108(9) of the Act defines a 'financial contribution' as a contribution of:

- “(a) money; or
 - (b) land including an esplanade reserve or esplanade strip, (other than in relation to a subdivision consent), but excluding Maori land within the meaning of the Maori Land Act 1993 unless that Act provides otherwise; or
 - (c) works, including (but without limitation) the protection, planting, or replanting of any tree or other vegetation or the protection, restoration, or enhancement of any natural or physical resource; or
 - (d) services-
- or any combination (of these), made for purposes specified in the plan (including the purpose of ensuring positive effects on the environment to offset any adverse effect) and which does not exceed in value the maximum amount specified in, or determined in accordance with the plan.”

It is uncertain as to what extent the definition of 'financial contribution' allows environmental compensation arrangements. Certainly, consent authorities are unable to impose conditions on consents requiring positive and ongoing actions, such as requiring a developer to establish and

maintain a camping area on the shores of a new lake created by a dam (Edmonds *et al.*, 1993).¹³

A major question which needs addressing is whether the Act adequately provides for dealing with off-site effects of new development, such as the adverse effects on a town from a ski field or dam where these effects fall within the area of an adjoining territorial or regional council. They may not be able to be the subject of a suitable financial contribution.

Another concern is to what extent a consent authority can impose a consent condition which deals with a resource or an area unrelated to a proposed activity.

3.5.2 *Environmental Compensation And ARM*

While there is no direct connection between ARM and environmental compensation, the provisions of s108(9) must sit within the purpose of the Act.¹⁴ This raises the issue of whether environmental compensation is limited by s108(9), or whether the concept of ARM allows other arrangements.

A restrictive interpretation would mean that s108(9) constrains what can be done under s5(2)(c), while a broad interpretation would allow the concept of ARM to embrace arrangements other than those specified in s108(9) (Edmonds *et al.*, 1993). Irrespective of which interpretation is followed, the definition of financial contribution in the Act is so broad it allows a wide range of

¹³ Even so s108(2), aims to preserve the widest discretion to consent authorities in imposing conditions which help to implement the objectives of the Act.

¹⁴ It is noteworthy that the concept of environmental compensation contains scope for overall enhancement or improvement in the quality of the environment. Whether this improvement is within the scope allowed under the RMA is debatable as the Act refers to 'remedy', 'mitigate' and 'offset' rather than overall improvements per se. Also, 'offset' is not part of ARM. This may limit its usefulness within the ARM provision.

arrangements. Unfortunately there are no guidelines or formal arrangements within the RMA to guide what can be done.

It has been argued that the RMA provides for primary control mechanisms and secondary control mechanisms (MFE, 1994b). In dealing with ARM and environmental compensation, there is a major difference between the use of a financial contribution to offset adverse effects, compared with a direct requirement to avoid, remedy or mitigate. Financial contributions operate at a secondary level as they do not ARM the effect directly, rather they provide some positive effect as relief or compensation.

This issue was investigated recently as part of the proposed Taranaki Combined Cycle Power Station consent. In its investigation, the Board of Inquiry (1995) questioned whether a mitigation condition requiring tree planting was sufficiently related to the adverse effects to be termed mitigation and therefore imposed by way of section 108(2), or whether it was considered a financial contribution (as described in section 108(9)) and therefore subject to a plan.

In his decision, Upton (1995b) stated that:

“for most contaminants, mitigation measures must occur at, or adjacent to, the site of the discharge to be effective. For Co2 as a contaminant however, the same level of mitigation is achieved irrespective of where it occurs. I am satisfied that the condition imposed for this contaminant is a mitigation condition rather than a financial contribution.” (Upton, 1995b; p 13)

When deciding between ARM and environmental compensation in terms of ‘relatedness’ between the adverse effect and the offsetting actions, the point of reference is important.

3.5.3 Point Of Reference

In assessing whether environmental compensation fits within the provision of ARM, or more specifically within mitigation, the level at which the adverse effect is viewed is important. I will use an example to illustrate.

When the Electricity Corporation of New Zealand (ECNZ) applied for a resource consent for water rights in the Mackenzie Basin, the Department of Compensation negotiated a \$3.2 million restoration fund from ECNZ (Close, 1993). Project River Recovery was undertaken to compensate for the adverse effects as the incurred damage could not be avoided (ie. the dams were already in place) or remedied (the dams could not be removed). Can this approach be considered environmental compensation, or is it actually mitigation?

It could be argued that this approach is compensation as the adverse effects themselves were not mitigated. The compensation allowed for a wholly different area (not damaged due to the dams) to be restored. The original adverse effects were not reduced in severity. They were not mitigated.

A contrary view would see this compensation approach as being mitigation. If the adverse effects were defined as reduced viability of black stilts, then restoring another area of river bed for the bird is addressing or mitigating the adverse effects. The severity is reduced. The problem with this line of reasoning is that on a larger scale, other less related schemes could be deemed to be mitigation, or remedying, or even avoidance, rather than compensation.

For example, using ECNZ funding to help save the kakapo could be seen as mitigating the adverse effects of reduced biodiversity caused by ECNZ elsewhere. Indeed, if the kakapo would have become extinct without the help and now will survive into the reasonably foreseeable future, the adverse effects of biodiversity loss have been avoided.¹⁵

The point of reference is therefore crucial for deciding what the adverse effects are, and what the strategy for dealing with them will be. Decisions at this level will necessarily affect the promotion of sustainable management, or the purpose of the RMA. If the adverse effects are not defined properly and therefore not ARMed, the Act's goal may be compromised.

The point of reference is also important for deciding on environmental compensation limits. For example, whether environmental compensation is limited to the same resource and site, or whether it can deal with a similar resource and span the country is view-point dependent.

While environmental compensation is similar to ARM in that it involves addressing adverse effects, I do not believe that it 'sits easily' within ARM as it does not 'avoid, remedy or mitigate' the effects per se. They still remain untreated. In this respect, environmental compensation is not an alternative to ARM. Rather it is an 'add on' option, should it be necessary. For example, where adverse effects are not capable of being directly ARMed, environmental compensation is entirely appropriate. Creating a positive effect to offset an adverse effect makes the best of a bad situation.

¹⁵ This loss of biodiversity may indeed be a future adverse effect of the Dams.

Emphasising ARM over environmental compensation makes sense in terms of the RMA and therefore sustainable management, as directly addressing the adverse effects of activities treats the effects better than indirect off-setting. Also, in a finite world there will not always be other related areas capable of being restored, enhanced or created to offset damaged areas.

3.6 Summary

ARM is an important provision in the RMA as it constitutes a recurring theme throughout the Act. Section 5(2)(c) and section 17(1) are the most important references to it in the Act.

While 'effect' is defined in the Act, there is still some confusion over what constitutes an 'adverse effect'. It is therefore important to define this to aid in achieving certainty in resource use, and to allow some test of reasonableness.

A two-level hierarchy with a balancing approach between 'remedy' and 'mitigate' is an appropriate way to apply ARM. Here effects are avoided first, and then remedied, or mitigated where appropriate to the circumstances. Under this proposition, 'avoid' requires adverse effects to be escaped or evaded. 'Remedy' is something that is done after the damage has been caused, requiring adverse effects to be rectified, or corrected. 'Mitigate' involves something ongoing and requires adverse effects to be reduced in severity, made milder or less intense.

Importantly these terms have different applications in line with their meanings. This means that 'avoid', 'remedy' and 'mitigate' are different approaches to the same end. They occur at different

times and in different situations. The way the Act reads, application of any one of these is sufficient to achieve the purposes of the Act.

Environmental compensation enables flexibility in dealing with the effects of development. It may not be intended as part of ARM however as the adverse effects per se are not treated. Even so, it makes the best of a bad situation by creating positive effects to offset adverse effects.

Now that the terms and the concept as a whole have been dissected, it is timely to assess what this concept means for the achievement of sustainable management and the overall working of the RMA.

Chapter Four - The Call to ARMs

(The Implications Of ARM For Sustainable Management)

4.1 Introduction

I will examine four implications of ARM: (a) the integrative effects-based focus of ARM; (b) the internalisation of costs through ARM; (c) ARM as a way to balance the 'environment'; (d) the tangible and encompassing nature of ARM. I have chosen to examine these four areas as they cement ARM as a key provision in the Act, and as a key provision for the Act in helping to achieve the promotion of sustainable management.

4.2 The Integrative Effects-Based Focus

The old system involving the Town and Country Planning Act 1977 allowed - indeed encouraged - almost limitless and often conflicting intervention for a host of environmental and socio-economic reasons (Upton, 1995a). This system resulted in an over-abundance of rules and other ad hoc interventions which, in many instances, achieved few clear objectives while imposing enormous costs on developments of any kind (Upton, 1995a). The duplications, overlaps, delays, and costs resulted in the call for an integrated streamlined statute with a clear purpose and focus. The RMA with its single substantive purpose and its integrative focus on effects is the result.

This shift towards an approach based on effects or outcomes, rather than the activities per se, is highlighted by the Hon Simon Upton in his third reading speech on the Bill. He notes that:

“It (The Bill) has only one purpose - to promote the sustainable management of natural and physical resources, and it does that in two ways: first, through the allocation of resources in public ownership such as the coast and geothermal energy; and second, through limiting the adverse environmental effects of the use of natural and physical resources. For the most part, decision makers operating under the Bill's provisions will be controlling adverse effects - especially in the use of private land.” (Third Reading Speech on the RM Bill, cited in Upton, 1995a; p 6) (Brackets - Authors)

It is clear that the Government saw itself, even at this stage, focusing on outcomes. A later Review Group sought to give greater emphasis to the fact that the Bill signalled a shift away from the direction and control of development to the control of effects. Indeed the concentration on effects was set up as a second main purpose of the RM Bill under the main purpose of sustainable management (Report of the Review Group, cited in Upton, 1995a).

Clearly an effects-based approach was desired by the RM Bill review group. There is some question however on the extent to which the finalised RMA is effects-driven, as this approach is not adopted under the principles in sections 6,7 and 8. Further, Grundy (1995b) argues against the common insistence that sustainable management is about focusing on the effects of resource use on the environment, saying that the Act is equally concerned with meeting the resource needs of future generations (intergenerational equity) and safeguarding the life-supporting capacity of air, water, soil and ecosystems (ecological sustainability). Certainly Planning Tribunal cases have reaffirmed the effects-based approach. For example, in *WA Mackie v Tararua District Council &*

Order of St John (W56/95, 18/05/95), Judge Treadwell stressed the 'effects based' emphasis of the legislation.

More reinforcement comes from the Office of the Parliamentary Commissioner for the Environment (1995) which states that: "The Act is focused on effects rather than on uses and is concerned with ensuring that the adverse effects of any activity on the environment are avoided, remedied or mitigated..." (PCE, 1995; p 4).

If the Act is intended or interpreted to be effects-based, ARM becomes the primary avenue for this approach. It becomes fundamental to the functioning of the Act. If the effects-based nature of the Act is deemed incorrect, inappropriate, or exaggerated, then ARM loses some of its status. This interpretation would also lessen the integrated focus ARM can achieve.

4.2.1 *Integration*

Integrated environmental management (IEM) is an approach which takes into account the complex, multi-faceted and interconnected nature of the environment (Buhrs, 1995). It recognises that the environment is an indivisible whole where events in one 'location' can have repercussions across a wide spectrum of other things (Buhrs, 1995). I believe that ARM is one method that fits within the broad approach of IEM, as ARM acts as an integrating tool for the way resources are managed. This arises through a simplified and standardised approach, which allows any resource use per se, as long as the adverse effects are able to be avoided, remedied or mitigated. In this way, ARM helps to overcome problems of fragmentation, overlaps,

inefficiencies, contradictions and gaps associated with legislation centred on controlling types of resource use.

Through the use of environmental impact assessments and public submissions input, the ARM process, with its focus on both biophysical and human well-being, can integrate a diversity of views, interpretations and knowledge as to what the 'problem' is and how it could or should be addressed. These can be considered concurrently instead of sequentially (Buhrs, 1995). For example, the adverse effects on the biophysical environment on-site, 'downstream', and in the reasonably foreseeable future, can be considered simultaneously and concurrently with adverse effects on human well-being on-site, 'downstream' and in the reasonably foreseeable future.

4.2.2 Avoiding Social Direction

The focus on effects or outcomes, and the integration of a diversity of views, interpretations and knowledge means that most decision making regarding activities and well-being remain with the community. This is a radical departure from the Town and Country Planning Act 1977 and The Water And Soil Conservation Act 1967 which allowed those who exercised powers under them to actively direct economic activity and make trade-offs in the interests of wise use (Upton, 1995a).¹⁶

Upton refers to this change in focus in his third reading speech on the RM bill where he defends clause 4 (similar to 5(2) of the RMA) saying:

¹⁶ Clause 4 of the Town and Country Planning Act deals with the wise use and management of resources - of the direction and control of the development of a region, district, or area - in order to effectively promote and safeguard health, safety, convenience, and economic, cultural, and social welfare. The Water and Soil Conservation Act deals with the promotion and control of the multiple uses of natural water and the drainage of land, and with ensuring that adequate account is taken of the needs of primary and secondary industry.

“Clause 4 enables people and communities to provide for their social, economic, and cultural wellbeing. Significantly, it is not for those exercising powers under the Bill to promote, to control, or to direct. With respect to human activities it is a much more passive formulation. People are assumed to know best what it is that they are after in pursuing their wellbeing.”

(Upton’s speech on the third reading of the RM Bill, cited in Upton, 1995a; p 8)

By concentrating on ARMing adverse effects, those working under the RMA are able to avoid controlling or directing resource decisions in terms of social, economic and cultural well-being. People are allowed to get on with their own affairs provided that the required standards are met (Upton, 1995a).

There is still some scope for direction and control to occur however. For example, ascertaining the needs of future generations requires judgements on intergenerational equity in terms of social, economic and cultural well-being. This is difficult to do and therefore, will likely involve trade-offs reached in a judicative euphoria (Upton, 1995a).

A key factor allowing the community to direct resource usage in the pursuit of well-being is the internalisation of any adverse effects resulting from that resource use.

4.3 The Internalisation Of Costs Through ARM

Under the RMA, people are given consent for controlled and discretionary activities as long as prescribed conditions are met to ARM the adverse effects. These conditions can be a way of internalising the costs of the resource use either through remedying and mitigating costs, or

through financial contributions to compensate for adverse effects. The internalisation of costs is important in achieving sustainable management in a market led economy.

The Hon Simon Upton states that there was:

“an increasing interest on the part of officials, and myself, in carrying the Review Group's emphasis on environmental effects even further. This also lay behind the new Clause 5(2) (this is not present in the RMA) which sought to introduce the idea that those responsible for adverse environmental effects should not only have to mitigate them (as provided for in Clause 4) but should also have to provide compensating benefits. The idea of net compensation benefit was in our minds, but the further we went the more we realised that an effects-based view of the statute made an internalisation principle the logical approach to resource management. If we were to discard once and for all the planning for and control of activities, our only concern should be with the internalisation of any adverse environmental effects.” (Upton's speech on the third reading of the RM Bill, cited in Upton, 1995a; p 16) (Brackets - Authors)

This view is similar to that held by Treasury, where a market driven world existed in which the Government's proper statutory concern was with the externalities of market outcomes.

This move towards internalisation is not seen in the RMA. Upton (1995a; p 17) states that “the pressing need to bring a supplementary order paper back into the House and a growing realisation that the supporting policy work had not been done to introduce a fully fledged internalisation principle saw a return to where we had started... shorn of any reference to compensating benefits.”

However, ARM represents a good beginning at internalising the costs of adverse effects resulting from resource use. This is because those who get benefits from resource use are required to pay the costs of avoiding, remedying or mitigating the adverse effects associated with that use. The removal of externalities is appropriate as the biophysical environment, future generations, and all others not receiving any benefit from the resource use should not have to live with the costs. Environmental compensation also works to remove or reduce externalities.

The funding provided by ECNZ as part of Project River Recovery is an example of internalisation. The adverse effects of the resource use on the natural environment were internalised or became a cost to the benefitter or user of the resource.

4.4 Balancing The ‘Environment’ - A Dual Focus

One main problem with the interpretation of ARM and section 5 in general, is the problem of balancing between natural and physical resources or the biophysical environment, and people and communities. Is the Act aimed at biophysical characteristics of resource use solely, or is it aimed at balancing socio-economic and biophysical aspects? There is considerable debate and confusion over this issue which may compromise the achievement of the promotion of sustainable management. Perhaps examining the context in which sustainable management arose will help to clarify this issue.

The concept of sustainable management arose as New Zealand’s response to the growing interest in sustainable development. While sustainable *development* sought to integrate ecological sustainability, social sustainability and economic sustainability, sustainable *management* covers a

much narrower field. It recognises that a sustainable and vibrant economy relies on a sustainable resource base and, with this, a sustainable environment (Gow, 1995). It does not attempt to achieve social and economic sustainability. This is evidenced in the MFE information sheet number 2 which reads:

“Nor will sustainable management achieve social or economic sustainability. Rather it supports efforts to attain sustainable development both within New Zealand and internationally by concentrating on improving environmental management” (MFE, 1992a; p 1).

This does not mean that the goals of sustainable development are not valid, but rather that the RMA (and sustainable management) is not intended to be the sole legislative vehicle by which the broader objectives of sustainable development are to be driven.

The Acting Secretary for the Environment (1995) has reiterated the biophysical focus saying that:

“The definition of sustainable management encompasses the achievement of social, economic, health and safety objectives. But the wording of the Act and in particular the use of the conjunction ‘while’ suggest that achieving social and economic, and for that matter even health and safety objectives, should not be at the expense of sustaining biophysical systems. In essence, this means that sustainable management of natural and physical resources should not be traded off for the attainment of incompatible social and economic objectives, or of incompatible health, safety and cultural objectives.” (Gow, 1995; p. 16)

This view is in contrast to those who believe that the Act is about balancing biophysical concerns with economic, social and cultural considerations. For example Grundy (1994) argues that the wording of the Act (particularly part II) is capable of a wide interpretation, encompassing social, cultural and economic concerns, as well as biophysical outcomes. Milligan (1992) interprets 'while' in section 5 as meaning 'at the same time as' or 'during the time that' rather than as a conjunction subordinating the management function to the ecological function as Fisher (1991) states.

I believe that the confusion over what the Act's focus is, is reflected in and partly driven by s5(2)(c). This comes about through the definition of the word 'environment'.

4.4.1 *The Definition Of Environment*

Within sub-paragraph 5(2)(c) the meaning of environment, as stated in Part I -Interpretations and Applications, is defined in the statute below as:

- “(a) Ecosystems and their constituent parts, including people and communities; and
- (b) All natural and physical resources; and
- (c) Amenity values; and
- (d) The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) of this definition or which are affected by those matters.”

As can be seen from this definition, s5(2)(c) clearly requires that adverse effects on people and communities must be considered when deciding whether a resource use is serving the purpose of

the Act.¹⁷ Grundy (1995a) goes further arguing that this definition requires adverse effects on the social, economic, aesthetic and cultural conditions of people and communities to be ARMed. This is in line with “Environment 2010 Strategy” (MFE, 1994a) which calls for the integration of environmental, social and economic factors into the main-stream of decision-making in all sectors, at all levels.

Upton (1994) however argues that “social and economic conditions are only part of the environment where they affect, or are affected by, the other components of the environment (ie. resources, ecosystems etc.). Social and economic conditions on their own are not part of the environment and it is therefore incorrect to say that s5(2)(c) requires adverse effects on social and economic considerations to be considered” (Upton, 1994; p8). While this may be so, s5(2)(c) must ARM adverse effects on people and their communities at the very least.

4.4.2 A Dual Focus - The Implications

This dual focus of s5(2)(c) may on the surface have some deleterious effects. I will use a fictitious case study to illustrate my point.

A small community has built up around a forest milling operation over the twenty years of its operation. Adverse effects are created on the surrounding environment during the process of logging. The company applies for a resource consent for another years cutting rights and is declined on the basis that the adverse effects are deemed to be major and that there is no sufficient way of avoiding, remedying or mitigating these effects. This seems clear cut until the

¹⁷ This somewhat refutes including s5(2)(c) as part of the ‘ecological function’ that Fisher (1991) referred to.

lawyer for the company points out that *not* to grant cutting rights would cause an adverse effect on the environment. The community, which had grown up around the logging operations would not now be sustainable.¹⁸

In this scenario, adverse effects on the environment would be caused whatever the outcome of the consent process. Is this a fatal flaw for the entire ARM process? I believe that ARM can overcome this problem as it integrates both biophysical and human concerns, and allows for the continuation of the activity while treating the effects of that activity. There will however be instances where ARM measures can not make an unsustainable activity sustainable.

This dual focus may help to overcome debate concerning the balancing function of the word 'while'.¹⁹ Through the definition of 'environment', s5(2)(c) has an inherent balancing function itself which integrates biophysical and human well-being. I believe that balancing between human concerns and the natural environment is easier here within s5(2)(c) than within section 5 as a whole, as this balancing is at a lower level and there is an integrating effects-based approach. This allows the balancing to focus on the issue of effects rather than wider issues such as morals and values. Social and economic needs can be met within the constraints designed to achieve the principally bio-physical objectives as provided by the guidance in the rest of part II.

¹⁸ This scenario is further complicated if the adverse effects of the logging operation cause unsustainability. In this situation the unsustainable logging is ultimately going to have adverse effects on the people and communities whatever the outcome of the consent process.

¹⁹ Many commentators such as Fisher (1991) and the Minister For The Environment (1994;1995) have argued that 'while' in section 5 sets up a major balancing function. The amount of research and judicial debate is testimony to the controversy surrounding it.

4.5 The Tangible And Encompassing Nature Of s5(2)(c)

Of sections 5(2)(a), 5(2)(b) and 5(2)(c), 5(2)(c) is easier to implement or strive for as it is the more tangible and measurable of the three subparagraphs (Donald *et al.*, 1995; Harris, pers. comm., 1995). Managing resources to sustain the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations and to safeguard the life-supporting capacity of air, water, soil and ecosystems, involve high levels of uncertainty, especially as these will occur in the future. While these goals are important and indeed vital as part of sustainability, to achieve these on a daily basis would require a certain amount of 'forward looking' ability, if not psychic powers. It is easier to recognise adverse effects and act accordingly.

On the ground level, it is the resource users (the public) that must outline any actual or potential adverse effects in environmental impact assessments. They are also the first 'line of defence' if unforeseen effects occur. Indeed they are being increasingly called on to monitor the effects and signal to the council if there are problems (PCE, 1995). For them the tangibility of s5(2)(c) is important. It is easier to work with than the concept of sustainability per se, or subsections 5(2)(a) and 5(2)(b).

This tangibility is due to the nature of the provision. While s5(2)(a) and s5(2)(b) are goals, s5(2)(c) is a tangible method or way to achieve these goals. This difference in nature has another important implication however. It means that s5(2)(c) necessarily encompasses s5(2)(a) and s5(2)(b), as it is through the ARM method that these two provisions are achieved.

4.5.1 *The Encompassing Nature Of ARM*

The Minister for the Environment, and the Planning Tribunal decisions he quotes to support his view, posits that sections 5(2)(a), 5(2)(b) and 5(2)(c) are environmental bottom-lines to be accorded the same weight (Upton, 1995a). Further, if one of the three safeguards is unlikely to be attained, then the purpose of the Act is not fulfilled. Similarly Grundy (1995a) argues that these subparagraphs represent three distinct but cumulative imperatives that must be secured if a resource use is to be considered sustainable.

I question these assertions. I believe that s5(2)(c) is the key provision of the three as it is a method or approach that can be followed to achieve s5(2)(a) and s5(2)(b). For example, s5(2)(a) (involving the sustainability of resources), and s5(2)(b) (involving the sustainability of the life-supporting capacity of ecosystems), are just specific examples of sustainability. ARM is an approach through which sustainability is achieved. Therefore, achieving s5(2)(c), is all that is required to achieve s5(2)(a) and s5(2)(b).

Grundy (1995b) suggests that the requirement to ARM in no substantial way addresses the imperative in s5(2)(a). He believes that these subsections represent quite different requirements which necessitates distinct approaches for their fulfilment. S5(2)(a) involves questions of allocation and scale, rather than effects, in determining how and to what extent resources are to be used to meet future needs (Grundy, 1995b).

Likewise s5(2)(b) is not exclusively determined by controlling the environmental effects of individual consent applications (Grundy, 1995). Rather, it requires a wider, more holistic view of

the development process and requires both the consideration of resource allocation and their scale of use (Grundy, 1995).²⁰

Grundy (1995b) makes some valid points. Under his reasoning s5(2)(c) is no more crucial than s5(2)(a) and s5(2)(b). However, if the RMA is interpreted as effects-based, and applied in this way, subsection 5(2)(c) must be considered a particularly strong provision.

4.5.2 Redundancy In Terminology

I believe that there is redundancy in terminology between s5(2)(a), s5(2)(b) and s5(2)(c). S5(2)(a) and s5(2)(b) are just special examples of s5(2)(c). It follows therefore that in achieving s5(2)(c), s5(2)(a) and s5(2)(b) are also necessarily achieved. Further, these two subsections could not be achieved without satisfying s5(2)(c).

While this question of redundancy probably requires a quantitative approach for a thorough examination, there is scope within this study to examine these assertions. Below is s5(2)(c) with substitutions for the terms 'effect' (from the definition of 'effect' in section 3) and 'environment' (from the definition of 'environment' in section 2(1))

Assertion 1 - s5(2)(a) and s5(2)(b) are examples of s5(2)(c).

s5(2)(c) compared to s5(2)(a)

-Avoiding, remedying or mitigating any adverse *future* effect of activities (which do not

²⁰ This consideration of allocation and scale inherent in Grundy's interpretation is contrary to the minister's advancement of the market as an allocation mechanism and arbiter of scale.

sustain potential) on *natural and physical resources* (excluding minerals) is equivalent to sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations. (Taken from Griffith, 1995)

Sustaining the potential of the environment to meet the reasonably foreseeable needs of future generations is ARMining present, permanent, cumulative or future adverse effects.

s5(2)(c) compared to s5(2)(b)

-Avoiding, remedying or mitigating any adverse effect of activities (which do not safeguard the life-supporting capacity) on *air, water, soil and ecosystems* is equivalent to safeguarding the life-supporting capacity of air, water, soil and ecosystems. (Taken from Griffith, 1995)

If adverse effects on the environment are ARMed as required, the ecosystem will necessarily retain its life-supporting capacity, ie. self-regenerating natural and physical resources will remain self-sustaining.

Assertion 2 - in achieving s5(2)(c), s5(2)(a) and s5(2)(b) are also necessarily achieved

If assertion 1 is valid, it follows that if s5(2)(c) is satisfied, subsections 5(2)(a) and 5(2)(b) must also be satisfied. Indeed there will not be a case where s5(2)(a) or s5(2)(b) are passed while s5(2)(c) is not. This means that s5(2)(a) and s5(2)(b) are redundant and that s5(2)(c) is the only bottom line provision or cumulative safeguard. Only it has to be achieved to meet all three requirements.

Clearly there is a redundancy in terminology arising from the wide definitions of 'environment' and 'effect'. Through this and its encompassing nature, ARM could be considered the means and the ends of sustainable management. Alternatively, given its potential to supersede or encompass the concept of sustainable management, ARM could be considered a surrogate for the Act's ethic.

Certainly s5(2)(c) or the ARM provision is highly important in terms of section 5, and for achieving sustainable management.

4.6 Summary

An effects based system was desired by the RMLR process and is achieved through ARM. Through this approach, there is an integration of human and biophysical aspects plus a simplified, standardised approach that concentrates on effects rather than activities per se. This allows the community, or the resource users, to have more control over the direction of their well-being. This is reinforced by the internalisation of costs that s5(2)(c) and the ARM process engenders.

S5(2)(c) has an inherent balancing function. Through the definition of 'environment', both the biophysical and the human aspects are considered. This dual focus integrates both areas of concern at a lower level and concurrently.

Section 5(2)(c) is different from sections 5(2)(a) and 5(2)(b) as it is a method or way to achieve the objectives set out in the rest of section 5. This makes the provision tangible and easy to work with as compared to sustainable management per se. The nature of s5(2)(c) means that it has the potential to include or encompass s5(2)(a) and s5(2)(b) and even to act as a surrogate ethic for the

Act. There is a redundancy in terminology between sections 5(2)(a), 5(2)(b) and 5(2)(c) showing that s5(2)(c) is the only bottom-line provision or cumulative safeguard.

Thus, ARM is extremely important for the functioning of the Act and for the achievement of sustainable management. There are some areas of concern with this provision which may need to be resolved for efficient functioning of the Act however. Perhaps the most critical area for ARM is the area of environmental effects assessment, as it is through this process that adverse effects are defined, assessed, and ARMed in the aim of achieving sustainable management. These concerns will be dealt with in chapter five.

Chapter Five -Problems For ARM: The Assessment And Management of Environmental Effects

5.1 Introduction

Upton (1995a; p 22) is concerned that “frustration with inadequate processes and mechanisms may yet undermine confidence in the goal of sustainable management. If that were to happen we would be in danger of being urged to shoot a worthy mission rather than defective mechanisms.” Given the importance of ARM as a mechanism for the RMA and for achieving sustainable management, any problems with the implementation of this provision and approach will necessarily compromise the goal of sustainability.

A fundamental factor influencing the successful implementation and operation of ARM is the area of environmental effects assessment. Indeed this area has been stressed by the PCE (1995; p 4) as being “fundamental to the operation of the RMA.” While the RMA provides a template or guidance on how to make out an assessment and to review it, through s88 and the fourth schedule, little guidance is provided as to the extent of evidence required to establish the nature and type of effect. If the effects assessment is flawed, the ARM provisions for effects management will also be flawed. I have chosen to examine the assessment of effects in terms of interpretational barriers to better practice and institutional barriers to better practice, as these are two key areas within effects assessment.²¹

²¹ The term institution covers a wide range of things that guide the process by which decisions and policies are developed, including formal and informal rules, traditions and conventions, constitutions, processes and procedures, organisations, the allocation of responsibilities and powers, mandates and guidelines (Buhrs, 1995).

5.2 Interpretational Barriers

The focus on effects emphasises that the thrust of the RMA is to ensure biophysical limits and constraints are defined and recognised (Gow, 1995). The problem is that these limits have yet to be realised. Effects and performance based rules are new and need development and trialing, while the development and application of receiving environment quality standards takes time and resources. Two critical questions which impact on ARM and the achievement of sustainable management are just what is an adverse effect, and where do you ARM these effects?

I have chosen to concentrate on biophysical adverse effects, rather than including those impacting on peoples well-being specifically, as the Act's emphasis is on biophysical concerns and there is direction and scope given in the Act (through submissions, hearings etc.) for assessing adverse effects on people and communities.

5.2.1 *What Is An 'Adverse' Effect?*

Is an adverse effect one which reduces the potential of resources to be sustained or which compromises the life-supporting capacity of the environment? Is an adverse effect still adverse if it does not compromise sustainability at the national or global level, and how can we tell if it is? Given our limited understanding of the environment, these questions are extremely difficult to answer, but must be answered if we are to give effect to the ARM process and the RMA.

An approach based on ecological concepts is therefore needed, one which recognises and measures impacts on our ecosystem and not just parts of them (Gow, 1995; Pardy, 1994).

Unfortunately the development of this approach is difficult and necessarily slow, especially as these concepts are not provided for decision makers in the RMA (due to the use of non-technical terms used to describe sustainable management in section 5).

So how do we gauge what an adverse effect is, or an effect that compromises sustainability? Pardy (1994) argues that it is only by examining how an ecosystem functions that we can gauge whether an effect will be adverse (in terms of sustainability). An ecosystem's functioning will be affected if of any of the relationships among its elements are altered, thereby affecting the systems resilience and diversity (Krebs, 1985).

This change in ecosystem functioning is either temporary or permanent. Temporary change will not affect sustainability as the change is absorbed by the system (Pardy, 1994). Indeed human populations rely on this capacity to absorb impact. For example, if fish harvests are restricted to a sustainable yield, the resource continues to be renewable.²²

Permanent change will affect sustainability. This occurs when the collective environmental impact of the human population on an ecosystem overwhelms the system's capacity for absorption (Pardy, 1994). Difficulty arises here in trying to determine whether a particular impact compromises sustainability as many impacts combine to produce the total demand on the ecosystem's capacity. Indeed while impacts in isolation may not compromise sustainability, combined or cumulative impacts can overwhelm an ecosystem's capacity for absorption.²³ The evaluation of cumulative effects has been raised by the PCE (1995) as an area requiring

²² There is however a finite level beyond which point the system will change permanently. Where this level is, is dependent on the ability of the system to absorb impact.

²³ It follows that mitigation or minimisation of one environmental impact does not necessarily ensure sustainability.

specialised and critical evaluation which must recognise that in any given region, the effects of a particular activity may be environmentally acceptable, but that the effects over time of many activities, may not be acceptable.

This issue of cumulative impacts is extremely problematic for ARM and ultimately for the achievement of sustainable management. This is because it is often difficult to determine if a cumulative impact will eventuate. Also, it may be inefficient to ARM every effect in isolation given the relatively high costs for relatively little benefit. This would make the Act unworkable, especially in terms of economic considerations, and could bring much development to a standstill.

This concern is especially problematic given that activities with acceptable or minor adverse effects are often either permitted and/or non-notified, thereby side-stepping public scrutiny. There is much pressure by applicants for non-notification of applications as time and costs are reduced through a sped up consent process (MFE, Undated 1; PCE, 1995).²⁴ Thus potential cumulative effects arising over time may go largely unchallenged.

This issue of cumulative impacts is one area that needs further attention.

5.2.2 *Where Do You ARM The Effect?*

This question is also dependent on following the correct line of inquiry. The point at which the effect is to be ARMed is dependent on what the adverse effects are, the best options available for

²⁴ Applications which should be considered notified due the significant nature of the effects may be treated as minor when pressure is placed on councils by applicants. This is problematic as decisions not to notify resource consent applications form a significant proportion of all complaints against local authorities received by the Office of the Ombudsman (PCE, 1995).

ARMing them and what these mean for the achievement of sustainability. This is shown in Upton's decision on the Stratford Combined Cycle Power Station where he stated that "for most contaminants, mitigation measures must occur at, or adjacent to, the site of the discharge to be effective (Upton, 1995b; p 13). Other measures designed to offset the adverse effects may be more indirect and therefore less effective. These measures are more likely to be considered as part of environmental compensation.

The question of point of reference is crucial to assessing whether ARM is addressing adverse effects directly, indirectly, or addressing no relevant effects at all. For example, the promotion of sustainable management can be approached through helping to save the black stilt where decreasing black stilt habitat is a proximate adverse effect of the dams. Alternatively, the promotion of sustainable management can be approached through helping to save the kakapo, where reduced biodiversity is the ultimate adverse effect of the dams.²⁵ Deciding what *the* adverse effects are that need to be ARMed in any particular case, will help to decide where they are to be ARMed and how important or adverse the impact is likely to be.

In this respect, the point of reference is also crucial for determining if activities are sustainable. For example, sustainability can only be judged in relation to scale (Anstey, pers. comm., 1995). At a local level, adverse effects may be considered highly adverse and obviously unsustainable to the local community. However at a national or global level, the adverse effects may be considered minor and not unsustainable.

²⁵ This question is addressed earlier in chapter 3, this report, and is concerned with Project River Recovery in the Mackenzie Basin.

5.3 Institutional Barriers

The RMA has devolved much authority to regional and local government through its reliance on secondary regulation such as policy statements and plans. The result of this approach is that a great deal of decision-making is at a local and incremental level (Harris, 1995). The quality of decision-making is therefore more critical as the opportunities for controlling incremental practice are inherently less reviewable than centralised practice (Harris, 1995).

At the regional and district level there are institutional barriers to better effects assessment. I have chosen to focus on the areas of: assessments of environmental effects; the skills of resource consent officers; information and costs; monitoring; policy statements and plans; and condition setting.

5.3.1 Assessments Of Environmental Effects

The resource consent process is the fundamental 'tool' by which regulatory policies are implemented (MFE, undated 2). Within this process, applicants apply for resource consents to undertake activities deemed discretionary or restricted under regional or district plans. The cornerstone of this process is the submission of environmental impact assessments (EIAs) or assessments of environmental effects (AEEs). AEE is a process whereby a conscious and systematic effort is made to assess the environmental impacts of options relevant to a proposal (MFE, 1992b). AEEs are evaluated by council staff who, depending on the severity and type of adverse effects, either reject the proposal outright, or allow the activity subject to conditions. These conditions usually aim to ARM the adverse effects so that the activity can proceed.

It appears that with large development proposals, consultants experienced in AEE are being hired resulting in a high standard of impact assessment. It is the smaller proposals however that are causing problems largely because local authorities have not had to deal with the administration of AEE procedures before (Morgan, 1994).

With proposals prepared by applicants with little or no AEE experience, assistance from the council is important to establish what an AEE is, and what is required. Morgan (1994) believes that the assistance given to applicants varies greatly between councils with many providing little help beyond the fourth schedule of the RMA.

AEEs are critical to the resource consent process and therefore the overall achievement of sustainable management, as they provide a foundation for the effects-based approach. On the basis of these assessments, the adverse effects are identified and ARMed. If the assessments are faulty or incomplete, the ARM procedures will be also. Thus the long term success of ARM and the RMA will partly depend on the effectiveness of the AEE systems established.

5.3.2 *The Skills Of Resource Consents Officers*

Council planners and resource consent officers occupy critical positions in the consents process. They are largely in sole charge of running the 'system'. The PCE (1995) emphasises the importance of councils stating that:

“the full evaluation of AEE information provided by applicants is one of the most critical aspects of the entire resource consent process. The applicant is responsible for providing a full assessment of the proposed activity, but such responsibility is meaningless unless a council

provides guidance and, where necessary, forms judgements on the adequacy of this assessment.”
(PCE, 1995; p 41).

It is obvious that much is dependent on the skills of the planners and resource consent officers. Unfortunately there are questions as to the competence of local government to maintain standards of effects assessment, given a lack of resources and skilled staff (Morgan, 1994; Harris pers. comm., 1995). Many working in the councils have a limited grasp of the issues involved, as present tasks are different from those that were done under previous legislation. This lack of council expertise is especially prevalent when dealing with the ecological emphasis of the RMA as most local authorities do not have staff with expertise in ecology (Roper-Lindsay, 1992).

In a study undertaken by the PCE (1995), the reports prepared by the councils on AEEs and consents applications were examined. The PCE report's findings indicated that there were some shortcomings in the quality of planners' reports including inadequate technical evaluation of biophysical effects and an over-reliance on applicants' information and interpretation and submitters views without checking.

The report also stated that there was an important distinction between adequacy of coverage and accuracy of content of an effects assessment (PCE, 1995). In this respect, an assessment may be quite adequate in terms of listing and covering all possible effects, but if either the information content of the assessment is erroneous or its analysis not rigorous, then the assessment may be fundamentally flawed. This finding is extremely important as this assessment of effects is crucial to the functioning of ARM and ultimately, the achievement of sustainable management.

This assessment by councils is more important when considering cumulative effects as an individual applicant is often not in a position to adequately assess the effect of one proposed activity in relation to other activities. This must be attempted by councils.

All three sequential stages of guidance to applicants, applicant's environmental assessment, and council's evaluation of the assessment are influenced by council planners inputs. This input is crucial to the usefulness of AEE in the resource consent process and is therefore crucial to ARM and the achievement of sustainable management.

5.3.3 Information And Costs

Along with the skills of those involved, information is also crucial to the outcome of assessments of environmental effects and therefore the achievement of the purpose of the RMA. Within the AEE process, information allows for the accurate assessment of effects, possible future effects and possible cumulative effects. Information is also critical at the condition imposing stage as it will help dictate the avoidance, remedying, or mitigation procedures adopted. Unfortunately, many of the decisions being made by councils are done so in the absence of sufficient information (McCallum, pers. comm., 1995). This means that there is a danger that activities are proceeding in a knowledge vacuum. McCallum (pers. comm., 1995) provides the use of pindone rabbit poison in the Waiau catchment as an example where there is insufficient information on the effects of the chemical on the soil and water.

Information is not free however. Technical expertise must be bought, along with information held by central government and other agencies. If the cost is too great, consent authorities may be

reluctant to buy information as there is pressure to avoid undue costs from the applicant and/or the ratepayers depending on the allocation of costs.²⁶ This allocation of costs is ultimately a political judgement as the RMA provides councils with flexibility to place costs either fully on the ratepayer or the consent applicant (MFE, Undated 2). Although it is easier to charge the ratepayers, 'user pays' charging brings financial accountability and responsibility into an organisation and allows for the internalisation of costs (MFE, Undated 2).

Councils usually target the more important assessments when resources are scarce. Paradoxically, it is these projects that will likely have made use of expert consultants to prepare accurate and complete AEEs. It is the less important proposals, by virtue of their sheer numbers, that have the potential to create significant change in the environment (Morgan, 1994). Unfortunately, it is also these proposals which are unlikely to be subjected to the public glare.

5.3.4 *Monitoring And Enforcement*

Compliance monitoring, which assesses whether policies, plans and rules are being implemented and given effect, is a cornerstone for councils in undertaking regulatory functions (MFE, Undated 2). Concern has been expressed by many concerning Councils' ability to monitor and enforce conditions effectively (Anstey, pers. comm., 1995; Delamore, pers. comm., 1995; PCE, pers. comm., 1995; McCallum, pers. comm., 1995). Time and resource constraints necessarily reduce the level of monitoring undertaken. When monitoring and enforcement does occur, it is usually reactive or 'complaints driven' (PCE, 1995). This reliance on a complaints driven approach compromises the ability of resource consent conditions to ARM adverse environmental effects as

²⁶ Expense is also a dominant factor in deciding when and how often to monitor adverse effects and the carrying out of conditions.

many people are reluctant to complain (PCE, 1995). Also, not all adverse effects are readily noticeable.

There exists a big difference between regions on the compliance and enforcement procedures being followed and implemented (Anstey, pers. comm., 1995). Some such as the Taranaki Regional Council, have been very diligent in their pursuit of abatement notices (McCallum, pers. comm., 1995). The strengthening of compliance monitoring in all regions will be an important priority for the councils, as this aspect of the resource consents system is crucial for building public confidence in the system as a whole (PCE, 1995).

Outcome monitoring is also important for the consents process and ARM as it assesses whether the policies or conditions are achieving the desired goals/objectives. Also, it is through this monitoring that specific ARM provisions, as part of consents, can be assessed and reviewed. Once again, time and resource constraints are the key factors influencing this.

5.3.5 Statements And Plans

While the resource consents process is important for ARM in that it involves the assessment of environmental effects and the subsequent ARMing of these through imposed conditions, statements and plans are also critical for ARM and for the achievement of sustainable management. This is because sustainable management is refined and further defined in these documents. For example regional policy statements interpret and apply Part II of the RMA to the biophysical and socio-economic situation of a particular region. They specify where the need is

for regulatory intervention such as rules or standards, and what environmental effects need ARMinG and which do not.

Within these plans there is a framework which describes the uses/effects which are:

- **permitted**, whereby no consent is required provided the effects are constrained within certain limits;
- **controlled**, whereby consents which do not generally require notification, are required to be obtained provided the effects are constrained within certain limits. Generally with this type of consent, the resource user can expect minimal bureaucratic interference. The council just wants to 'know' about the activity ;
- **discretionary**, whereby consents will be required which are generally publicly notified and may or may not be granted ²⁷; and
- **prohibited**, whereby certain more extreme effects arising from resource uses are simply not permitted (MFE, Undated 2).

Given the level of authority invested in statements and plans, they are as important at the local level as the RMA itself, in terms of what is acceptable and what is not. They have the potential to dramatically alter where and to what extent ARM is applied, not just in terms of resource consents, but also more broadly in terms of interpretation.

Of crucial importance is the issue of notification. If an activity is granted as non-notified, the wider public is not informed of the proposal and is not able to make submissions. Councils must

²⁷ The decision whether to notify or not can dramatically alter a consent outcome as interest groups and the wider community can make submissions on notified proposals.

be sure that the adverse effects will be minor if the decision is to not-notify.

5.3.6 Condition Setting

The whole effects-based approach hinges on the identification of potential adverse effects and the subsequent avoidance, remedying and mitigation of these through conditions imposed on the consent application. For genuine environmental benefits, the consent conditions must be adequate, and monitoring for compliance and enforcement must be effective.

There is a lack of any consistent guiding parameters and priorities from the regional council in terms of whether avoidance is appropriate, or mitigation or remedying is (McCallum, pers. comm., 1995). McCallum believes that the outcome is the product of the perceived nature of the effects that an activity is likely cause, as well as the quality of the consultants and legal council used by the applicant. Improvement could be achieved through the development of more consistent guidelines by regional councils on the level of effects that are permissible for an activity to be subject to either mitigation, remedying or avoidance conditions. At present such guidelines are absent, so decisions tend to be arbitrary, and handled on a case by case basis (McCallum, pers. comm., 1995).

Once decisions have been made how can we ensure that the conditions will be adequate for ARMing the adverse effects? This is especially difficult given the lack of ongoing monitoring and guides to assess the potential prowess of the avoiding, remedying and mitigating conditions imposed.

As can be seen, the assessment and subsequent management of environmental effects is a critical area for ARM and indeed the RMA. For sustainable management to be achieved, adverse effects need to be accurately identified, analysed and 'treated' by ARM, or where this is not possible, by environmental compensation arrangements. An interesting area to examine for addressing adverse environmental effects other than by simply avoiding, remedying or mitigating them is through mitigation banking.

5.4 Mitigation Banking

Mitigation banking is a method of off-site mitigation (as defined by the United States Council on Environmental Quality (CEQ)) aimed at providing compensation in advance for wetland habitat losses caused by future development projects (Howarth, 1991).²⁸ Under this approach a developer or industry develops a plan, in corroboration with the appropriate authorities, for either creating new wetlands or restoring degraded wetlands. Depending on the type of mitigation involved (in this case restoration, creation, or enhancement) credits are quantified as either a straight acre-for-acre exchange or through a process which tries to measure the functional value of the land in question (Howarth, 1991). Once quantified, credits are banked until a future mitigation need arises.

The definition of mitigation used by the CEQ is far broader than that alluded to in the RMA. In fact the CEQ definition encompasses the entire ARM concept along with environmental compensation within the one definition of mitigation.²⁹ Despite this, mitigation banking can be

²⁸ This approach need not be focused on wetlands.

²⁹ Mitigation has been defined by the CEQ as: (1) avoiding the impact altogether by not taking certain actions; (2) minimising impacts by limiting the degree or magnitude of the action and its implementation; (3) rectifying the

accommodated within the New Zealand system through a wide interpretation of ARM and the wide definition of 'financial contributions' in the Act. Whether the positive effects envisaged through mitigation banking to offset minor effects are considered environmental compensation or part of ARM is dependent on how related the offsetting actions are to the adverse effects.

There are many benefits associated with mitigation banking that simple environmental compensation does not cover. For example, instead of acting after the fact, as with Project River Recovery, mitigation banking allows restoration or enhancement to be done prior to expected damage. This helps guarantee outcomes, such that councils can assess if the measures undertaken to restore or enhance an area have worked prior to giving consent. Also, no consent would be given until there were credits available.

5.5 Summary

A fundamental factor influencing the successful implementation of ARM is the area of environmental effects assessment and subsequent management of the effects. It is often difficult to develop the necessary criteria for this without the application of some ecological theory. Cumulative impacts are difficult to predict and ARM given that they must be assessed in combination with all possible concurrent and future effects and because they can arise from often acceptable impacts. The point of reference is crucial to assessing whether ARM is addressing the adverse effects and for deciding just what the adverse effects are that need to be ARMed. It is

impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (5) compensating for the impact by replacing or providing substitute resources or environments (Howarth, 1991). Here (1) relates to avoid; (2) & (4) relate to mitigation; (3) relates to remedying; and (5) relates to environmental compensation

also important for determining if activities are sustainable in terms of scale.

AEEs, quality information, costs, and the skills of the planners and resource consent officers all shape the effects assessment process and the resulting ARM conditions. Compliance monitoring and outcome monitoring are also key ingredients in the assessment of effects process as they help to ensure enforcement and ascertain whether the policies or conditions are achieving the desired goals/objectives.

Policy statements and plans are critical for ARM and for the achievement of sustainable management as sustainable management is refined and further defined in these documents. They have the potential to dramatically alter where and to what extent ARM is applied, not just in terms of resource consents, but also more broadly in terms of interpretation.

Condition setting is how adverse effects are avoided, remedied or mitigated. For the promotion of sustainability, the consent conditions must be adequate, and monitoring for compliance and enforcement must be effective. There are few guidelines on ARM conditions and so decisions tend to be arbitrary, and handled on a case by case basis.

Mitigation banking is an approach that is not presently used in New Zealand, but is one that can be accommodated by the RMA. It may be useful as an approach to address adverse environmental effects along-side ARM or as part of environmental compensation.

Chapter Six - Conclusions And Recommendations

6.1 The Main Findings

The Resource Management Act (1991) represents a significant change in the way natural and physical resources are managed in New Zealand. This shift is due to the Act's concentration on effects rather than the activities per se, and the presence of an integrating explicit purpose representing the single and authoritative source for all decisions made under the RMA. The shift towards effects-based management, reflects the need for a realistic evaluation of the environmental costs of resource-use decision making. Because of the effects-based nature of the legislation, the requirement to 'avoid, remedy, or mitigate any adverse effects of activities on the environment' represent the most common kind of decision. Thus the ARM provision plays an important part in the way resources are managed.

Given its importance, ARM needs to be interpreted and applied appropriately in a way that aids in achieving the purpose of the Act. Given that prevention is better than cure, it makes more sense to apply ARM in a two-level hierarchy, with 'avoid' first and then balancing between 'remedy' and 'mitigate'. The terms, 'remedy' and 'mitigate' have different meanings and implications and therefore should be applied in a way appropriate to the circumstances.

There is scope for environmental compensation within the Act, either as part of financial contributions or through a wide interpretation of ARM to deal with environmental degradation when it arises. If the off-setting measures are directly related to the adverse effects, they can be considered to be mitigation. If however these measures only indirectly treat the effects, they are

better termed a financial contribution. Environmental compensation is good for achieving sustainable management as it increases flexibility when dealing with adverse effects. It is an add-on option however, rather than an alternative to ARM.

6.2 The Implications of ARM

ARM contains implications for the achievement of sustainable management. For example, the provision to avoid remedy or mitigate adverse effects on the environment is the key means through which the effects-based approach desired by the authors of the Act is implemented. This concentration on effects throughout the Act, enables ARM to have an integrating function within the broad approach of Integrated Environmental Management. This arises through a simplified and standardised approach, which allows any resource use per se, as long as the adverse effects are able to be avoided, remedied or mitigated.

Also, through the use of environmental impact assessments and public submissions input, the ARM process, with its focus on both biophysical and human well-being, can integrate a diversity of views, interpretations and knowledge as to what the 'problem' is and how it could or should be addressed. These can be considered concurrently instead of sequentially. In this way, ARM helps to overcome problems of fragmentation, contradictions and gaps associated with legislation centred on controlling types of resource use.

Another important implication of ARM through its focus on effects, is that it ensures appropriate environmental outcomes, while allowing the community to make the decisions regarding their

well-being. How the resources are used is up to the community as long as the required environmental standards are met. This reduces undue direction from the state.

This control communities or resource users have over the direction of their well-being, is reinforced through the internalisation of costs that ARM engenders. Through the requirement to ARM adverse effects, those who benefit from resource use are required to pay the costs avoiding, remedying or mitigating the adverse effects associated with that use. The removal of externalities is appropriate as the biophysical environment, future generations, and all others not receiving any benefit from the resource use should not have to live with the costs. Environmental compensation also works to reduce externalities.

Another implication of ARM for sustainable management is its dual focus on both biophysical concerns and human well-being. This dual focus may help to overcome debate concerning the balancing function of the word 'while' as through the definition of 'environment', ARM has an inherent balancing or integrating function itself, integrating both human and biophysical concerns. I believe that balancing between human concerns and the natural environment is easier here within ARM than within section 5 as a whole, as this balancing is at a lower level and there is an integrating effects-based approach. This allows the balancing to focus on the issue of effects rather than wider issues such as morals and values.

ARM is easier to understand and implement by both resource managers and the resource users than sustainable management per se, as it is a tangible method rather than an objective. Indeed it is the primary method through which sustainability is to be achieved under the effects-based RMA. Given that s5(2)(a) (involving the sustainability of resources), and s5(2)(b) (involving the

sustainability of the life-supporting capacity of ecosystems), are merely examples of sustainability, achieving s5(2)(c) is all that is required to achieve these two provisions. ARM necessarily encompasses them. Indeed this encompassing nature of ARM is reflected in the redundancy of language used in section 5 where s5(2)(a) and s5(2)(b) are merely specific examples of s5(2)(c). In this respect ARM has the capacity to encompass sustainable management and even to supersede it as the focus of the RMA.

Perhaps the major benefit of ARM is that it is compatible with both development and the biophysical environment as it allows resource use while avoiding, remedying and mitigating the adverse effects of the development. In this way it deals with the heart of the problem as it is not necessarily the resource use itself that causes the problems, rather it is the effects of that use which compromise sustainability.

6.3 Recommendations

Given the importance of ARM and its related processes, improvements in its application should be considered. Critical to the application of ARM is the definition and assessment of 'adverse effects'. This is important for defining which effects are permissible and which need to be ARMed. It is also important for deciding how and where the effects are going to be 'treated.' There is scope for improvement here, especially through more careful attention to ecological considerations, and the use of some guidelines or bottom lines from which decisions can be derived.

There are many guides on good practice for effects assessment such as those published by MFE

in the Information Paper Series and the Resource Management Ideas Series, and the recent report published by the PCE (1995). Because of this, it is not my intention to detail a raft of recommended approaches and techniques. Rather I will re-examine the issues raised earlier concerning problems when dealing with the cumulative impacts of minor adverse effects, and suggest a possible approach to ARM or off-set these effects.

Cumulative adverse effects are the combined effects, over time, of many smaller effects. In isolation, these effects may be acceptable or minor.³⁰ If the effects are acceptable or minor in isolation, then it is likely that the activities will be permitted without a requirement to ARM them. This is generally good practice as it would be inefficient to ARM every acceptable effect given the relatively high costs for relatively little benefit. This would make the Act unworkable, especially in terms of economic development and will likely create more adverse effects than it solved. One possible solution to the problem of cumulative impacts is through a variation of mitigation banking.

In terms of dealing with cumulative impacts, the scope of mitigation banking could be extended to incorporate a system whereby the credits are used to offset the cumulative effects of numerous sequential or concurrent activities by one authority or developer in one go. This type of mitigation banking would be most useful for large organisations such as councils, roading authorities (such as Transit New Zealand), Transpower, forestry and other large operators or companies who undertake many developments involving numerous similar minor effects.³¹

³⁰ The Act does not talk about minor effects per se. Some councils do differentiate between minor and significant adverse effects however.

³¹ This system would not be appropriate for cumulative effects built up by many different organisations or individuals.

These operators could make a 'deposit' in advance to offset the significant adverse cumulative effects (withdrawals) which need to be addressed.

While many cumulative effects will result from permitted activities, there may still be some interest in this approach for good public relations, as developers or authorities can be seen to be pro-active in helping the environment. Also, if the banking system is efficient and useful, councils may alter their plans to allow conditions requiring compensation or mitigation measures for activities that come within the scope of mitigation banking.

While this approach may go some way towards off-setting adverse effects, the question remains as to how useful this off-setting is in terms of sustainability. It is likely that the more closely related the compensation or mitigation measures are to the adverse effect the better it is for sustainability. Therefore it may be important to ensure that the banking is done on a region by region basis and in the same ecological area or type. This means that an organisation with operations throughout New Zealand may have a number of different bank accounts specific to the region and to the type of development. This regionalisation would also help avoid trans-jurisdictional problems.

It may be appropriate for MFE to act as a coordinating body and as a watchdog, ensuring consistency in approach between regions, ecological settings and developers, and for assessing how useful the approach is.

A problem with this approach would be determining what level of mitigation or compensation is appropriate before the activities are undertaken, as it is difficult to gauge the cumulative effects of

impacts in advance. If the 'funds' were able to be 'transferred' (ie. sold) to another developer's account however, companies would be less reserved about making large deposits, as these could be 'retrieved' if their activities ended.

Another problem with mitigation banking is the limited scope in terms of dealing with cumulative effects created by many different organisations or individuals, such as with the removal of water from a river by many different farmers. Mitigation banking will not work in this situation. Rather, it may be more appropriate to make an assessment in terms of section 3 as to whether the cumulative effects are likely to be significant and then to levy each water user a financial contribution to offset the cumulative effects when they arise.

Despite these problems, mitigation banking may be useful for increasing flexibility when trying to ARM or off-set adverse environmental effects. It allows some sense of certainty as the mitigation measures are undertaken in advance and so can be assessed as to their attainment of the desired ends. It has the potential to off-set many minor effects efficiently in one go. While this may not be as effective as 'treating' the adverse effects themselves, it is an extension which follows the same approach as ARM, albeit to a lesser degree.

6.4 Final Conclusion

I set out to examine what the concept of ARM means for the RMA and sustainable management. I have clearly shown that ARM is a vital provision for the Act in terms of dealing with the adverse effects of natural and physical resource use. There are potential limitations for ARM in the area of effects assessment. Many of these have already been dealt with in the literature.

Another limitation for ARM involves addressing cumulative impacts. These impacts can be dealt with through mitigation banking.

Put simply, the essence of sustainable management is to ensure that successive generations husband the available resources and pass them onto the next in no lesser state than was available to the donor generation. Under the RMA, this is achieved primarily through avoiding the adverse effects, remedying the adverse effects and mitigating the adverse effects of activities on the environment. The concept of ARM is indeed worth a closer look.

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