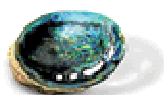


The Future of Pest Management in New Zealand: A Think Piece

AUGUST 2008



Local Government New Zealand

te pū tahi watakokiri



This report was prepared by Enfocus Ltd on behalf of, and with input and direction from, regional councils

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Preface

OECD comparisons show that New Zealand has an especially high reliance on primary sector trade for our national income. These primary, biologically based industries are at constant risk from existing and new pests. New Zealand also has biodiversity assets that are unique and place New Zealanders in a stewardship role which is greater than applies to people in most countries. We also enjoy an enviable lifestyle largely based on the quality of our outdoor environment and its relative freedom from pests that may cause significant harm to our health or general quality of life. Effective management of plant and animal pests is therefore especially important for New Zealand.

Most of the pest control that occurs in New Zealand happens voluntarily. Individuals or groups of people undertake a wide array of pest control activities as part of day-to-day life. These range from spraying fungicides on our rose gardens, to the use of sophisticated animal remedies, and from volunteer community groups clearing weeds or possums from ecologically significant areas, through to farmers or foresters controlling pests on large tracts of cereal crops or pine forests.

However, not all pest management happens in this ‘automatic’ way where sufficient incentives exist for individuals to engage in pest management. In many cases, public intervention is required to achieve community goals. After due process, people may be required to engage in or fund pest management activities to achieve economic, social, environmental or cultural outcomes that are considered important by the broader community. The focus of this ‘think-piece’ is primarily on these types of public good intervention situations where it is vital that the right processes, incentives, checks and balances exist within our systems and approaches, to ensure that pest management occurs as effectively and efficiently as possible.

This ‘think-piece’ has been prepared for regional councils because of their primary role in facilitating pest management. It describes New Zealand’s present arrangements and processes for determining pest management activities. It also sets the scene for pest management into the future by briefly describing the many pest management challenges we face. As noted, whether dealing with issues related to pest control tools, or the increasing number of pest threats associated with greater trade and travel across our borders, the overall picture is for challenges involving more complexity, greater costs and more difficult tradeoffs.

Although the ‘think-piece’ identifies some of the significant challenges facing pest management into the future as part of scene-setting, the focus of the report has not been on identifying the specific solutions to those challenges. Rather the report aims to address how well New Zealand is organized to face those challenges. It identifies important changes that are needed to present arrangements to provide a more optimal set up to more successfully address the future challenges.

When distilled, at the core of the ‘think-piece’ is the recognition that public good pest management essentially serves one or both, of just two purposes.

The first purpose is to ensure that the actions or inactions of landowners in managing pests do not cause unnecessary harm to neighbours or others in the community. Economists describe this concept as ensuring that land owners manage or internalise the costs of externalities. Regional councils deal with this

purpose across the full range of their public duties. In resource management, for example, councils and their communities are familiar with the concept of controlling pollution and polluters to the extent that is appropriate in the public interest. Part of this role is to ensure that the polluter pays concept is applied.

The second purpose of public good pest management is where public intervention and investment in pest management occurs essentially to achieve public good outcomes related to the health, environmental, social, cultural or economic aspirations of our communities. Again this concept is something that councils and the public are very familiar with. We pay taxes and rates to support the development of public good assets and outcomes that would otherwise not exist.

To progress these purposes and especially the first purpose of managing externalities in the public interest, it is essential that land tenure neutrality be introduced to the biodiversity regime. All land owners must, in practice be, and be seen to be treated fairly and equitably in respect of their responsibilities to their neighbours and the wider community.

As the largest land owner in New Zealand it is essential that the Crown is bound, as now occurs with all other land owners, to act as a good neighbour in an appropriate manner consistent with other precedents. The Government agreed to 'be a good neighbour' in principle over a decade ago, but the practice has fallen short. It is now time for a more formal commitment to occur. It is time to change New Zealand's dual approach to pest management, being presently one for Crown lands and a different one that applies to all other land. Pests and associated pest management responses do not recognise land boundaries, nor do they behave with deference to different categories of land ownership.

Secondly, in order to progress both of the fundamental purposes of pest management, it is essential that greater clarity be provided in terms of roles, responsibilities and jurisdictions over terrestrial, fresh water and marine environments. Better co-ordination and more interactive partnerships will be an essential feature of successful pest management in the future. To be successful, however, they will need to be based on individuals and organisations having better defined accountabilities than presently exist. Greater clarity is required in respect of public sector vs. private sector roles and within the public sector, between central and regional government.

Clarity of purpose and roles is an essential foundation for working more effectively and proactively in the future. Together with creating a tenure neutral pest management regime, these changes will substantially enhance the ability to capture all of the opportunities that will present from collaborative actions. Without these changes, effective pest management partnerships will become less, rather than more common as the bank of goodwill which has supported activities over the last decade is depleted. Our present fragmented dual processes, unclear roles and inequitable landowner responsibilities, will instead continue to drive non-integrated responses, response gaps and a reactive rather than proactive approach.

These, then, form the key recommendations of the 'think-piece'. There are other important recommendations related, for example, to tuning intervention tools like pest management strategies and ensuring that Crown funding is deployed in a more efficient and whole of government way, but the recommendations dealing with tenure neutrality and clarity of roles reveal the primary changes needed to take pest management in New Zealand forward to a different level.

Interestingly, none of the recommendations in the report are dramatically new. Nor do they involve major surgery. New Zealand does not need a new set of regulatory instruments. More or new organisations are also not required to improve pest management. That noted, a number of recommendations will require legislative amendment, changes to existing practices and strong executive and political leadership to capture the opportunities that these changes will promote.

In commending the report, the work of the Regional Councils Steering Group that aided the development of the report is acknowledged, as is the expert assistance of Mr. Gerard Willis, from Enfocus, in bringing the ‘think-piece’ together.

Basil Chamberlain

Convenor
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Executive Summary

This report has been prepared in response to regional council concern that, despite efforts by MAF Biosecurity, there remain major issues with the effectiveness and sustainability of the current pest management regime.

The report aims to foster constructive discussion of the issues between regional councils, central government agencies and other parties. To do this the report articulates a collective overview statement on: (a) the pest management challenges facing New Zealand as seen by regional councils; (b) the present and future issues with the current regime; and (c) responses required to best address those challenges.

The views and opinions expressed in this report have been derived from a review of existing published and unpublished information and by discussions with regional council representatives.

Challenges

The pest management challenges facing New Zealand in the years ahead may be organised around seven themes.

The first is greater *pest threats* and, despite much more sophisticated pre border and border control, the likelihood of a growing number of “successful” incursions and the extensions to the range of many existing pests. These changes will be driven by increased trade and tourism and by climatic changes and will increase the size of the pest management challenge.

Second is the continued evolution in the strategic direction of pest management at the regional level. The traditional driver of protecting primary production is giving way to a principal concern for the impact of pests on environmental quality (particularly *indigenous biodiversity*). This in turn is changing the business of pest management from a focus on single species management to *multi-pest*, site-led management requiring a different set of management and operational skills.

Third is the *changing nature of local government*. Regional councils have a much broader mandate than in the past. They also have a more urban representation. Where once regional councils were tightly constrained in what they could do, they are now under pressure to fund a broader range of regional scale community infrastructure. Collectively regional councils have increased pest management funding by 30% since 2001 but it may be difficult to sustain increases in the future given a growing list of regional priorities.

Fourth is the special risk associated with *marine and freshwater pests*. These are likely to grow in line with other pest incursions but will be more difficult to detect and to eradicate or control. Difficulties are compounded by the highly complex jurisdictional arrangements of management agencies in marine and freshwater environments.

Fifth, *land use change* will alter the pest-scape. Although it is difficult to predict what change will occur it seems likely that revegetation of marginal land (through exotic forestry and native vegetation reversion) and further rural population/intensification will create both new pathways and new vulnerabilities. In addition, continued expansion of the Crown *conservation estate* will increase pressure on Crown contributions. Further land acquisitions over recent years have not been

accompanied with consequential budgetary increase to allow management agencies to meet responsible landowner obligations. A growing public estate will also increase the *duality* of the current system with, effectively, two separate pest management systems operating according to land ownership with the challenges for strategic integration that that entails.

Sixth, management agencies may face more *limited pest control tools*. Community resistance is building against some traditional pest control methods while the range and effectiveness of some existing biological agents (such as RCD) are in decline with implications for rabbit control (in particular) and future management options and costs.

Lastly, the *Tb vector control programme* is potentially winding down having successfully eradicated Tb from herds in several parts of the country and reduced infection rates in other parts. The Tb vector programme represents 50% of the current off-conservation estate public pest expenditure. The obvious challenge from a pest management perspective is how to maintain, where warranted, the biodiversity gains achieved through the Tb Strategy. At significant cost, the Crown is likely to have achieved highly valuable national “assets” in the form of low pest areas that, fortuitously, represent an outcome entirely consistent with its own national Biodiversity Strategy. If these windfall assets are not assessed and managed wisely over the coming years and they will be almost certainly be lost, and it is unlikely the funding will be available regionally to reclaim those biodiversity benefits in the future. (Certainly gains made by the AHB have come at a cost way in excess of regional budgets).

In summary, the public good benefit of pest control to an increasingly eco-savvy population will push regional councils in new directions. At a conceptual level, the problem for regional councils is that many of the pests will be *orphan pests* in the sense that their impacts will not be specific to a particular sector and no one will take ownership of the problem.

Furthermore, the problem is not just about recent incursions it is about continuing to deal with *legacy pests* on an on-going basis. This will require careful prioritisation and the integration of ecological capability into the pest management function. Access to effective tools will require on-going commitment to research and investment in social marketing programmes. The national approach of species led, single purpose pest control will need to be revisited if hard won biodiversity gains are to be maintained.

The overall picture is for more complexity, harder trade-offs and more cost.

Existing funding and institutional arrangements

- *Public expenditure*

Information on precisely how the *pest management burden* falls on public authorities is difficult to obtain. It is clear that the Department of Conservation spends approximately \$73.5 million per year on or around public conservation estate in a combination of pest-led and site-led pest control. Vote Biosecurity allocates \$29.5 million as a non departmental (AHB) expenditure for Tb vector control. MAF also spends approximately \$3.2 million on pest policy work and “national interest” pest eradication and \$1.4 million on containing *didymo*. (This is, of course, in addition to the \$34 million budgeted for surveillance and incursion response).

Tb vector management aside, the vast majority of public expenditure on post incursion response pest management off the conservation estate comes from regional councils which collectively spend around \$31 million on public good pest management (in addition to funds expended under contract to the AHB).

- *Roles and responsibilities*

The current funding balance *reflects roles and responsibilities* asserted or assumed by public agencies. The pattern of roles and responsibilities presents a complex web with uncertain boundaries. According to Cabinet direction, MAF Biosecurity has the so called “end to end” responsibility for the biosecurity system but this has not been interpreted to include responsibility for long term (post incursion response) pest management except in limited (and not altogether clear) circumstances.

Under various legislation, the Department of Conservation has the mandatory role of managing pests to safeguard values on the conservation estate, for the control of certain “wild animals” (being animals that are to be managed to accommodate their recreational and commercial hunting value as well as to contain their impact on conservation values) both on and off the public estate and for the control of pest fish.

Regional councils have no mandatory pest management function but have all assumed a role consistent with national and community desired outcomes and to further statutory responsibilities for the maintenance of indigenous biodiversity.

- *Biosecurity Act*

The Biosecurity Act (BSA) is a product of a time when the state looked to intervene as least as possible, and to shed responsibilities to others with perceived stronger incentives (including stronger local mandates). The tool box approach of the Biosecurity Act aims to enable anyone to use powers (notably pest management strategies) necessary to take action against pests when it is in their interest to do so.

This approach necessitated that the Act include detailed and numerous safeguards to ensure only efficient interventions were made and coercive powers exercised only after extensive scrutiny. It also meant that the Act tends to anticipate single pest led strategies for a user defined purpose and period.

No public agency is required to engage in pest management under the Act and it can only be assumed that the prevailing view at the time was that there would be sufficiently strong incentives for regional councils and third parties to undertake pest management such that the national interests were optimised.

While the theory has a certain attraction, the promise does not seem to have been entirely borne out by reality. Two outcomes of this approach are obvious. Firstly there has been very little use of the BSA tools by third parties (i.e. industry or community groups). That has left regional councils, who have been motivated to voluntarily engage, to grapple with statutory provisions designed, it seems, with a different user in mind. The provisions of the Act are unhelpful and at times plainly obstructive and regional councils have tended to operate in spite of the Act not because of it.

The pest management system is not defined by the BSA. Indeed consistent with various legislation (including, notably for regional councils, the Local Government Act) pest management activity can and does occur quite independently of the BSA

and tools prepared under that Act. In practice the BSA merely adds an ability for regional councils to regulate to force landowners to take action against established pests. While regional councils could engage in pest management independent of the BSA, they have all chosen to prepare RPMSs under that Act to provide broader regulatory powers.

Key findings

This paper reviews the existing funding and institutional arrangements for the biosecurity regime with a number of defining characteristics identified. It then critiques the characteristics of the system against critical success attributes.

While the report identifies a host of issues with the current system, two related issues stand out above all others.

- First, the estate management obligations on the Department of Conservation under various Acts coupled with the Crown's exemption from regional pest management strategies under the Biosecurity Act tends to establish a *dual pest management system*. That is, there is one system for the Crown and another that applies to all other land (determined largely through pest management strategies prepared by regional councils).
- Second, the current regime lacks a clear distinction between *public good pest management* (i.e. pest management carried out to achieve an outcome for the public generally that would not otherwise be provided) and *good neighbour pest management* (being pest management undertaken to internalise externalities of land management/mismanagement).

Regional councils strive to ensure that such a distinction is made in the design and implementation of RPMSs and that "good neighbour" obligations are imposed. However, these do not, of course, apply to Crown land. The Crown's resistance to the notion that it should be subject to RPMSs does not seem well grounded. Taken together, the two attributes discussed above create a confused regime where inconsistent application of the principle of *internalisation of externalities* (central to other parts of the national environmental management system) undermines effectiveness and credibility.

- *Tenure neutrality*

Regional councils are of the clear view that a prerequisite for an effective pest management system is *tenure neutrality* such that Crown and other land is treated similarly, in much the same way as currently occurs under the Resource Management Act. This would not mean that regional councils control the Crown's core conservation activity but it does mean regional councils could oblige (though not enforce) the Crown to internalise externalities of land ownership and management (i.e. act as a good neighbour).

- *Internalisation of externalities*

In addition, regional councils believe that tenure neutrality should be combined with a much clearer *statutory duty* on land owners/occupiers to internalise externalities associated with pests.

Other issues with the current regime include:

- A heavy reliance on the *goodwill* of regional councils. (With no mandatory obligations, regional effort and expenditure has been driven largely by the simple desire to “do the right thing”).
- Highly *fragmented* institutional arrangements. The legal framework consists of the Biosecurity Act and a suite of other ad hoc legislation most of which come from quite different eras and philosophical bases and which collectively provide a complex and inconsistent approach pest management. There is little relationship between these statutes and in some cases some apparent conflicts and duplication.
- An inconsistent approach to *risk* when compared to other parts of the national environmental management system. The system in place to manage physical and chemical contamination leaves much less to chance than does the system to manage biological contamination (i.e. the pest management system) even though environmental risks are at least a critical. Statutory ambivalence as to whether a contamination risk is addressed is not, for example, a feature of the RMA.
- Lack of *coordination and alignment of contributions* of the multiple parties engaged in pest management at the regional level to achieve community outcome through public good pest management
- Lack of clarity about when a pest issue is a *national versus a regional responsibility*. Currently there is considerable uncertainty about when the Crown ought to assume full or partial responsibility for long term management of a pest. While an attempt has been made to set out a policy, clarity continues to be elusive.
- *Unclear boundaries* between the phases of pest management. Crown asserts that its competitive advantage is in incursion response when there is a window of opportunity that a pest can be eradicated but has signalled that it is unlikely to assume a role should incursion response be unsuccessful. It is unclear why a pest can present a nationally important risk when there is an opportunity to eradicate it but not when longer term management options are required. While MAF Biosecurity has not closed the door entirely on involvement in longer term management, how this decision will be made is far from clear. Further, the incentives created by a system that sees responsibility change as the nature of required management changes seem less than ideal.
- There is an over *reliance on partnership* arrangements to bridge fundamental system deficiencies.
- Challenges with *marine pests*. Marine pests pose a particular challenge because of the complexity of rights, interests and responsibilities in the coastal marine area. The Crown is the legal owner of the seabed and has retained regulatory responsibility for the on-going use and protection of marine resources in recognition of its ownership interests in the seabed (and in some marine animals). This has not, however, translated into a fundamental acceptance of responsibility for marine pests. Misplaced expectations by the Crown, community groups and the public generally about regional councils’ responsibility in event of new marine incursions remain and will give rise to on-going frustration.

- *Benefits of tenure neutrality*

Tenure neutrality and a clear *statutory duty to internalise externalities* is considered central to the regional council position since it would assist in resolving several of the issues highlighted in this report. In particular it would:

- Create a stronger incentive for Crown agencies and regional councils to take a more coordinated and integrated approach and to collaborate on operational matters at the regional level.
- Resolve some of the lack of clarity around marine and freshwater (where the Crown's role as owner of land - being sea, lake and river beds - would bring with it much clearer responsibilities).
- Represent a more consistent approach to *risk*.
- Create stronger incentives to *drive appropriate behaviour* through other interdependent parts of the biosecurity system.
- Reduce the reliance on goodwill and strengthen the potential for effective partnerships between the Crown and regional councils.

- *Other critical success factors lacking*

Other factors considered critical to a successful pest management regime are:

- A *clear purpose and strategic leadership* guiding multiple agencies towards a common purpose (albeit with multiple desired outcomes). The system currently *lacks direction* in the form of clearly articulated outcomes to be achieved. The BSA has no values based purpose clause and links between national policies and the objectives of companion legislative regimes (such as the RMA) are not made in a way that supports and guides regional prioritisation and decision-making. Furthermore, the approach creates a vacuum within which it is largely impossible to monitor system effectiveness.
- Mechanisms and incentives to promote and facilitate private *club responses* to pest issues (to free up public resource for public good management). The fact that very few club responses have materialised under the BSA suggests there are significant obstacles that need to be examined and overcome.
- Appropriate intervention tools for public sector interventions that provide *flexibility* to respond to new pest threats. This means having intervention tools available that can be used and adapted at short notice. RPMSs have proved to be rather inflexible and their development is associated with complex tests that do not differentiate between regional councils and third party, private sector groups.
- A *proactive* rather than reactive approach to management such that effort is expended on scanning and scoping emerging pest issues, risk assessment and contingency planning to enhance preparedness and minimise need for crisis driven responses. Furthermore, good systems need to be in place to ensure timely communication between MAF Biosecurity and regional councils. Research and development of measures for long term management needs to take place concurrent with incursion response. Experience has shown that these actions are sometimes lacking.
- A mechanism that *allocates scarce public funding* so as to:

- achieve maximum results for dollars spent
- recognise *multiple* outcomes (and allow some rational and transparent prioritisation between outcomes)
- ensure programmes take a *sustainable development* approach by advancing multiple national outcomes where synergies are possible
- ensure achievements gained by publicly funded programmes are durable and *sustained* over time.

Current funding arrangements do not take account of the potential of programmes to achieve multiple outcomes and hence some benefits may not be sustained over time. Furthermore, some of the practices used by Crown agencies do not appear to promote least cost pest control operations.

- A means of achieving *inter-regional consistency* in risk assessment and regulation when this is necessary for effective management. Problems with inconsistent regulation at the regional scale continue to put regional outcomes at risk and undermine regional investment.
- Clarity in the demarcation of *national and regional roles* and responsibilities. Lack of clarity about, in particular, responsibility for long term pest management is an unfortunate feature of the system.

Recommendations

To address this situation, regional councils suggest a series of short term and medium term measures.

Short term measures

1. Crown landowner responsibilities

Ensure that Crown agencies are funded to fully meet obligations consistent with those that fall on other landowners under regional level regulation to internalise the cost of their pest externalities (i.e. act as good neighbours).

2. Tb Control programme

- a. **Demonstrate what coincidental gains have been achieved by the AHB Tb vector control programme in terms of the Crown's national biodiversity objectives (as articulated in the NZ Biodiversity Strategy and work undertaken in accordance with that strategy).**
- b. **Provide national funding assistance to ensure that biodiversity gains achieved through the Tb vector control programme (as identified in accordance with Recommendation 2a) are secured beyond the life of the current Tb vector control programme.**

Medium term measures

3. Tenure neutrality

Introduce *tenure neutrality* to the biosecurity regime by amending section 87 of the BSA to bind the Crown to act as a *good neighbour* by making:

- a. Crown land subject to the rules of (redesigned) regional council pest management strategies; except that
- b. land administered by the Department of Conservation on behalf of the Crown should be exempt where pest management is being undertaken in accordance with conservation management strategies and plans, *provided* there are no significant effects/risk from pests beyond the boundary of the conservation estate. (The amendment would need to make clear that to the extent that there is risk of pest damage beyond the boundary of conservation estate then rules of RPMSs would apply).

Note that this will bind the Crown to be a good neighbour but will not mandate regional council intervention in the Crown's core conservation management business. In other words, it will ensure the Crown is responsible for externalities and will bring the Biosecurity Act into line with the requirements of the Resource Management Act.

4. Internalisation of externalities

In addition, and consistent with the approach proposed in recommendation 3, promote within the BSA the principle of land owner/occupier responsibility for internalisation of pest externalities as a *statutory duty* applying to all land owners/occupiers.

5. Biosecurity purpose and strategic direction:

Establish a *statutory purpose* and matters of national importance for pest management taking into account of:

- a. The need to ensure the internalisation of externalities; and (separately)
- b. The desire to pursue a full range of public outcomes potentially at risk from pests.

6. Clarification of roles and responsibilities

Clarify the mandatory and discretionary roles and responsibilities of key players, notably MAF Biosecurity, the Department of Conservation and regional councils in pest management in terrestrial, freshwater and marine environments including how those roles and responsibilities are expected to change as the response to a pest issue changes over time.

7. Marine pests

As part of the response to recommendation 6 above, develop a framework for allocating responsibility for pest management in the coastal marine area that, in the first instance, takes into account (amongst other things):

- a. the responsibility of:
 - i. the party or industry sector responsible for the incursion
 - ii. the party or sector that stands to benefit most from the eradication or control of the pest
- b. the Crown's responsibility:
 - i. as owner of the seabed and foreshore
 - ii. as regulatory manager under existing statutes for the on-going utilisation and protection of marine species.

8. Intervention tools

Consider redesigning regional pest management strategies so that:

- a. There is a distinction between the intervention tool available to regional councils and that available to private sector parties (the process for developing the tools should reflect the different interests and incentives that exist)
- b. The regional intervention tool available to regional councils
 - relates only to regulatory powers with the funding of control programmes left to be addressed under the local government legislation.
 - Provide greater flexibility to respond rapidly to new pest threats.

9. Crown funding framework and efficient deployment of Crown resources

Develop a coherent and efficient *Crown funding system* for public good pest management which:

- a. Takes place within a clear outcome framework that:
 - i. Takes account of the full range of national outcomes at risk from pests
 - ii. Recognises the potential for programmes to advance multiple outcomes
 - iii. Ensures that on-going commitment to funding maintains gains against all nationally important outcomes achieved by previous public expenditure.
- b. Promotes the adoption of funding *principles and practices* that ensures Crown funding is deployed to achieve maximum pest control for investment made (through the use, for example, of competitive tendering methods for operational services).
- c. Reinvests any funding made available from the wind down of the Tb programme in long term management of pests to promote national objectives (including in particular biodiversity outcomes.)

10. Facilitate club responses

Investigate further the reasons for a low level of private sector (“club”) responses to pest issues and take such action as required to improve likelihood of future club responses to pest issues.

11. Operating guidelines

Development by MAF Biosecurity of much clearer guidelines and policies about how it will exercise its functions and responsibilities, including guidelines relating to:

- a. The nationally important outcomes to be sought through pest management (building on the statutory purpose referred to in recommendation 5)
- b. The steps to be taken at the time of discovery of any pest incursion. These should focus on:
 - i. informing the relevant regional council of the incursion and of the assistance, if any, that may be requested.
 - ii. initiating necessary and prudent investigation into likely medium and long term management options that may need to be employed by Crown agencies and /or regional councils in the event of incursion response being unsuccessful.
- c. The principle that, in addition to meeting landowner obligations to internalise pest externalities, the Crown ought to take responsibility (though not necessarily sole responsibility) for post incursion response pest management where the pest of concern is:
 - i. a legacy pest of national significance
 - ii. a significant risk to a nationally important outcome.

1 Introduction

For some time regional councils have expressed a level of concern about New Zealand's pest management system, including its purpose, underpinning assumptions and, ultimately, its sustainability. The development and subsequent release of the *New Zealand Biosecurity Strategy* marked a high point in regional council comment on the system and culminated in MAF Biosecurity committing to an extensive programme to address many identified concerns.

Despite that response, four years on regional councils remain concerned that their perspective continues to be poorly understood and that substantive progress to respond to the many pressing issues is difficult to identify.

This paper has been prepared in response to that situation. It aims to foster constructive discussion of the issues between regional councils and central government agencies. To do this the paper articulates a collective overview statement on (a) the pest management challenges facing New Zealand as they are seen by regional councils; (b) the present and future issues with the current regime; and (c) responses required to best meet those challenges.

2 Report structure and methodology

2.1 Structure of report

This report is set out in six main parts.

- Chapter 3 describes the future pest management challenges facing New Zealand over the next two decades. It attempts to provide an overview of the changing political, cultural and environmental landscape with which pests will need to be managed;
- Chapter 4 describes the present framework, structures and arrangements that constitute the existing pest management regime;
- Chapter 5 discusses the main characteristics of the biosecurity regime;
- Chapter 6 evaluates the current management regime in terms of critical success factors;
- Chapter 7 presents possible solutions, both short term and long term along with accompanying justification.

2.2 Methodology

This report has been prepared on the basis of:

- A review of published and unpublished material;
- Two workshops held with regional council chief executives;
- Interviews with selected regional council biosecurity managers; and
- Interviews and telephone conversations with other public sector personnel working in biosecurity/pest management (including staff at MAF Biosecurity and the Department of Conservation).

A draft report was prepared and circulated to regional council chief executives who provided feedback. That feedback was incorporated in the preparation of a final draft.

The development of the report was guided by a regional council steering group comprising:

Basil Chamberlain, Chief Executive, Taranaki Regional Council (Convenor)
Peter Winder, Chief Executive, Auckland Regional Council
Harry Wilson, Chief Executive, Environment Waikato
Bill Bayfield, Chief Executive, Environment Bay of Plenty
Rob Phillips, Director Operations, T RC & Convenor, Regional Biosecurity Managers Group
Michael McCartney, Chief Executive, Horizons Regional Council
Wayne O'Donnell, Biosecurity Manager, Greater Wellington Regional Council
Steve Hix (for part), Biosecurity Manager, Environment Canterbury
Graeme Martin, Chief Executive, Otago Regional Council.

3 Challenges for pest management in New Zealand: the next twenty years

The concept of a pest is surprisingly difficult to define. For most people a pest is an organism that is not wanted.

Yet one person's pest can be another's resource. An organism's value to the individual or community is associated with perceived utility (benefit) relative to the perceived harm it may cause (cost).

This perception of *net value* of an organism (and therefore whether it is a pest or a resource) will depend on:

- The *context or location* in which the organism is present (for example, some tree species, such as Douglas Fir, are a resource when present in commercial forest but a pest in, for example, the South Island high country).
- The completeness of our *knowledge* and understanding of benefits and costs which can change over time as experience is gained and/or science improves (possums and rabbits are an obvious example);
- The *values* we attach (individually and collectively) to the resources affected by the organism (a wild deer for example will not be considered a pest if the habitat it occupies is not appreciated for the values that may be lost because of the deer's presence).

Pest management is a challenge because of these characteristics. In short, whether an organism is a pest depends on whether it will undermine attainment of an *outcome sought* at a particular time and place (which may be at individual, local, regional or national scale).

The outcomes sought may relate to a wide range of social, economic and environmental objectives: human health, primary production, nuisance, damage to property, loss of biodiversity. Over time the outcomes collectively sought have changed, our knowledge of organisms (and how they can affect our desired outcomes) has changed and the values we hold about our environment have also changed. Hence the pest-scape we have to manage has changed too.

In the past two decades we have progressed from a focus on nuisance and primary production, with single purpose agencies focused on single animal pests and separate agencies focusing on noxious plants. We now have a more holistic view of pests with implications for our approach to management; for our need to prioritise ruthlessly; our need to be clear about outcomes sought and about where responsibility for those outcomes lies; and on the management tools required. The nature of a pest in 2008 is very different to what it was in 1993 and in 15 years hence is it likely to be different again.

While it is always dangerous to suggest that the future can be known with any great certainty, in the pest management arena there do seem to be some fundamental social and scientific truths that provide a reasonably clear, high level picture of the pest management challenges that lie ahead.

For simplicity these may be organised around the following themes:

- Exposure to new incursions
- Community priorities for pest management and the rise of biodiversity

- Changing nature of local government
- Land use change
- Social attitudes to pest control measures
- Tb vector control “success”

3.1 Exposure to new incursions

One of the most obvious challenges that lies ahead is that New Zealand’s border will be faced with ever more pest threats from overseas and this will almost certainly translate to increased incursions notwithstanding MAF Biosecurity’s best pre border and border efforts.

3.1.1 Trends underpinning heightened incursion risk

This increased threat will be driven by two underpinning trends:

- Growing international *trade and tourism* means broader pathways in terms of air passengers and cargo, as well as sea cargo, imported products, containers, ballast, cruise ships and recreational (and other) vessels.
- *Climate change* also increases the risk as changing conditions potentially create opportunities for a new range of pests to establish in New Zealand (and for established pests to alter their range and potential impact). In particular, we can expect plant species previously confined to the warmer conditions in the north of the North Island to extend southwards.

The Minister of Biosecurity recently reiterated¹ that “*there will never be a time when we [MAF Biosecurity] can promise one hundred percent secure defences against biosecurity incursions. And sometimes when there are pest incursions, we will have to manage them rather than eradicate them*”.

That is, not only can we expect more incursions (notwithstanding, it must be acknowledged, world class pre and border and border systems) we cannot rely on all incursion responses being successful. Inevitably more organisms will fall to be dealt with as established “pests” many of which will require on-going management.

Any realistic assessment of our pest future would plan for the issues to grow rather than diminish over time. While there will undoubtedly be many successes in terms of eradication (in incursion and post incursion phases) these species will inevitably be replaced by new pests and new challenges. The challenges that lie ahead for those agencies charged with managing pests will be how to:

- Sustain effort across what may be an ever growing list of pests; prioritise these pests for management; and manage resources to provide *on-going* management rather than short term efforts on eradication.
- Manage community expectations about the need for on-going management control (as opposed to eradication), about the need to manage and accept some level of change in the landscape and the need to walk away from pests where management efforts would be futile.

¹ *Biosecurity is the work of the whole community*, Address to the New Zealand Biosecurity Institute, National Education & Training Seminar, Wellington, July 2007.

3.1.2 Non anthropogenic aided pathways

Quite apart from anthropogenic aided pathways, New Zealand's borders are likely to be increasingly breached by *self introductions* (something that has been happening over millennia).

Further, as the climate changes, the ranges of indigenous species will alter (and are in fact already altering) creating difficult management decisions for conservation managers. Pest managers will be asked to consider whether resources should be expended keeping indigenous species to their "natural" distributions at some nominal point in time.

3.2 Community priorities for pest management: the rise of biodiversity

3.2.1 Historical pest management by regional councils

The pest management history of regional councils (i.e. under legislation that preceded the Biosecurity Act) is rooted in rabbits, weed control and vector management. The underlying purpose of such control was firmly focused around managing risks to *primary production* (particularly agricultural systems). To a large extent, that focus continued during the early years of the Biosecurity Act.

In this mode, regional councils managed *single* pests with an emphasis on the *landowners* as the client.

In most parts of New Zealand that emphasis has changed fundamentally. The new emphasis is *biodiversity and landscape ecology*.

3.2.2 New focus on biodiversity

A number of factors are driving this change. The first is clearly a community attitudinal change pushed along by popular media which in turn is driven by international profile and commitment through (for example) the Convention of Biological Diversity and corresponding domestic initiatives including (and derived from) the NZ Biodiversity Strategy 2002. The Biodiversity Strategy reflects and responds to a more widespread interest in New Zealand's unique biodiversity and in the threats to it. This is evidenced by a surge in community restoration groups and similar bottom up initiatives at local and regional levels.

The trend away from pest control to protect primary production towards pest control to promote environmental (particularly biodiversity) outcomes is reinforced at regional level by the 2003 amendment to the Resource Management Act which gave regional councils the express function of "*the establishment, implementation and review of objectives, policies, and methods for maintaining indigenous biological diversity*". This is a function that cannot be delivered (containing as it does an ambitious objective) without an increased focus on pest management. (The relationship between biosecurity and biodiversity is outlined in Appendix 2).

The change is evidenced in many regional councils by a discernable transfer of funding from production pests to the promotion of biodiversity and sustainable land management outcomes. In Environment Canterbury, for example, pest management funding directed specifically at biodiversity protection rose from essentially nil in 2001 to over \$1 million in 2007. The evolution caused at least one regional council chief executive to suggest that regional councils would not so readily agree to contribute to the national Tb vector control today as they did just a few years ago.

3.2.3 Implications of the change in direction: site based, multi-pest approaches

The change in emphasis is manifesting itself in three ways.

- First, regional councils increasingly need to manage a different range of pests than in the past (i.e. that is a move away from a relatively narrow range of production pests towards a much more diverse range of pests that pose a threat to natural systems and processes).
- Secondly, the traditional focus on managing a particular pest (pest-led strategies) being complemented with the desire to manage particular *sites* (i.e. sites of actual or potential *ecological significance*)
- Thirdly, and perhaps most significantly, hand in hand with an emphasis on managing sites is the need for *multi-pest* strategies in defined locations or in particular ecosystems (site-led strategies).

This is a fundamental shift for regional councils and relocates landowners from being the client of regional council provided pest management to being, in many cases, target of intervention.

Given the societal and legislative drivers the pressure to adopt site led, multi-pest strategies looks set to intensify.

All this suggests that pest management of the future will be much more complex for regional councils than it was in the past. It will require a new set of skills and new management practices both in policy and operational contexts. It also relocates pest management from a separately mandated function to an implementation method to achieve a wide range of community (and government promoted) outcomes.

3.3 Local government pressures and priorities

The nature of local government is changing and will continue to change with implications for pest management thanks to two significant amendments to the local government legislative framework.

3.3.1 Changing nature of political representation

First, the Local Electoral Act 2001 redefined how regional councils must set the boundaries of their constituencies to ensure *fair representation*. Essentially this means that the boundaries of constituencies must be set on a *population* basis (ensuring that each constituency has a broadly equal voting population). What this means, in effect, is that urban voters (being in most regions the majority) have a greater say over who is elected to council than in the past. This has tended to deliver councils with lower representation of rural landowners/primary producers. This move reinforces the move away from a focus on protecting rural production discussed above but it also has implications for the priorities placed on local authority resources generally – particularly when coupled with the broader mandate given to local government by the Local Government Act 2002 (LGA 2002).

3.3.2 Broader mandate and new funding pressures

The LGA 2002 substantially broadened the mandate of regional councils well beyond the previous focus on environmental management and transport and emergency management planning. Prior to 2002, regional councils had been prohibited from participating in a wider range of social and economic roles, most were prohibited from owning or acquiring parks/reserve land, and could not

financially contribute to regional social or economic development projects (such as community infrastructure) without special legislation.

The removal of those prohibitions has placed regional councils under greater funding pressure. Pest and other environmental expenditure must now compete against a broader range of popular projects. In many cases this has contributed to the inability of regional councils to keep rates increases down to levels similar to the rate of inflation.

This has had political and electoral implications. Communities are becoming more sensitive to rates increases particularly when the rural sector (dairying sector excluded) faces challenging market conditions. These pressures have driven the local government funding review and its search for new revenue streams to fund local government.

In this environment regional councils have to make hard decisions about what is funded and what is not. Naturally, regional councils will focus first and foremost on mandatory functions putting at risk functions seen to be discretionary.

The statistics show that between 2000/01 and 2007/08 regional council expenditure on pest management increased 33%. Total expenditure, however, increased by an even greater margin.

Unless the local government funding review can identify and enable new funding mechanisms it seems inevitable the discretionary items like pest management will continue to be squeezed.

3.4 Land use and land ownership change

Land use patterns have changed steadily since humans first arrived on these islands and will continue to change in the future having implications for pests and pest management.

While preferred land use over the next two decades will be dependant on many factors, two trends seem likely given foreseeable market and policy conditions.

3.4.1 Revegetation

The first of these is revegetation of hill country and other marginal land. This seems likely as a result of (a) poor returns and a negative market outlook for most current land uses; and (b) climate change policy that incentivises indigenous revegetation (through the permanent sinks initiative) and forestry planting through the carbon credit/afforestation grants regimes.

Land use change of any kind alters the pest risk profile since it introduces both potential new pathways for introductions/spread of existing and new pests and new areas of vulnerability. Revegetation may well provide increased opportunity for the spread of pests.

Furthermore, pests represent a significant threat to government objectives furthered by this revegetation. In particular, pests may undermine carbon sequestration/sink objectives, water quality and sustainable land management objectives and, as already mentioned, biodiversity objectives.

3.4.2 Rural repopulation

The second trend is the repopulation of many rural areas driven by rural land use intensification (including the dairy industry expansion) and demand for lifestyle opportunities.

Further settlement in rural areas will bring with it heightened chance of new plant pests as a result of garden escapes (which already account for 70% of new ecological weed problems).

3.4.3 Maori land ownership and conflicting values

Maori are an increasingly significant land owner. Treaty settlements have in many cases greatly increased the Maori land estate and that looks likely to continue on the basis of current settlement negotiations. Maori land has traditionally posed challenging pest management issues not least because of frequent difficulties with the nature of the terrain (and access) and because of complex tenure arrangements.

Related to this is the different value set that Maori/iwi can bring to pest issues. Perceptions of whether an organism is a pest can be strongly coloured by cultural values. Obligations under the Treaty of Waitangi to protect toanga can complicate pest management; a recent experience with the eradication of kiore (regarded by local iwi as a toanga) from Hauturu/Little Barrier island is a case in point. In many rural communities Maori may be argued to be disproportionately disadvantaged by proposals to control animals that constitute wild food sources.

The need (and desire) to respect cultural values and Treaty principles may add a further challenge to pest management in the future.

3.4.4 Growing Crown estate

A related issue is the growth in the size of public estate. In recent years, the amount of land administered by the Department of Conservation has grown, on average, by over 120,000 hectares per year² as a result of acquisitions and the land tenure review process.

While the completion of the tenure review process will see this rate of accumulation decline, the Crown will continue to acquire more land where criteria are met and appropriate opportunities arise.

Although some additional funding has been made available to address “good neighbour” responsibilities for land brought into the conservation estate by way of tender review, this has tended to be short term only. More importantly, however, there has been no *overall* increase in the funding to meet “good landowner” pest management responsibilities for many years despite the Crown estate growing significantly³.

3.5 Marine and freshwater pests

Marine and freshwater pests present a special category of risk. The rate of incursions of marine and freshwater pests is likely to increase in line with the

² Based on an increase of 370,000 hectares between 2004 and 2007 as reported in the New Zealand State of the Environment Report 2007.

³ Crown exacerbator funding is discussed in section 4.5.6 of this report

incurison rate generally as discussed above. However aquatic pests are more problematic.

For a start, surveillance is usually more difficult (and expensive) than for terrestrial pests meaning that aquatic pests may be well established before they are detected. Moreover, once detected, aquatic pests are much more difficult (and expensive) to control or eradicate.

Recent experience with didymo and undaria highlight the issues and risks.

Compounding the difficulties is the often complex jurisdictional arrangements in both marine and freshwater environments. The Crown is the owner of seabed while inside 12 nautical miles resource management responsibility rests largely with regional councils. MAF Biosecurity also has responsibility for import health standards for vessels/ballast entering NZ waters. The Department of Conservation, however, also has roles both in the marine environment and, in the case of pest fish, in freshwater environments. The Minister of Fisheries has a role in the transfer of freshwater fish. MAF has responsibility for the eradication of two specific pest fish species. As discussed later in this report the complex web of responsibilities pose particular challenges for managing aquatic pests.

3.6 Pest control methods

Looking forward, it is also clear that access to pest control *tools* will also change significantly in the coming years.

3.6.1 A future with more limited pest control tools?

Public pressure may lead to greater constraints on the use of certain control methods. This trend is, of course, not new. Traditional methods of controlling animal pests such as leg traps have lost favour over the years as a result of concern about animal welfare. New regulations have recently been made under the Animal Welfare Act 1999 place further restrictions on the sale and use of such devices.

The use of chemical methods of pest control has caused significant public reaction as evidenced by ERMA's recent reassessment of 1080⁴. It is likely that some substances may not be available in the future or at least their use further restricted. The public's tolerance for aerial spraying of organic insecticides like (Btk) may, notwithstanding programme success, continue to diminish.

In the two decades ahead, it seems likely that control of certain pests will transition from chemical pesticides to the use of biological controls to *integrated pest management*.⁵

Threat of *trade barriers* may be another pressure driving change in pest management practices. Trade consideration will certainly influence other aspects of biosecurity

⁴ The 1080 application took 5 years to prepare and attracted 500 submissions. The assessment process took six months. ERMA reapproved the substance but imposed tighter mandatory controls. From 1 January 2008 all aerial operations using 1080 will be actively monitored by ERMA New Zealand. ERMA New Zealand is also urging that further research be undertaken into alternative methods of possum control and into some of the effects of 1080.

⁵ Integrated pest management an ecological approach that can significantly reduce or eliminate the use of pesticides by employing a full array of complementary methods: natural predators and parasites, pest-resistant varieties, cultural practices, biological controls, various physical techniques.

including the allocation of public resources to manage border risks that could otherwise trigger trade protection measures.

3.6.2 Declining effectiveness in some existing biocontrols

At the same time, it also seems likely that the range and effectiveness of some existing control tools (i.e. biological agents such as RCD) will continue to decline.

In parts of the South Island the decline in effectiveness of RCD (i.e. increased rates of immunity) has meant that rabbits are re-establishing as the primary animal pest (with agricultural production, sustainable land management and biodiversity implications).

Although recent years have seen low levels of landowner investment in rabbit control due to the success of RCD, this is changing with a return to traditional control measures including large scale poisoning programmes.

The implications for future pest management are clear. There needs to be a strong and on-going commitment to good science to underpin effective pest management responses. There also needs to be investment in social marketing programmes to better inform the public about the importance of control measures, to increase tolerance of those measures and condition expectations about the actions required in the event of an incursion of a high risk pest.

Without this, pest managers will face an increasing difficulty (and potentially more cost) meeting pest management objectives.

3.7 TB vector control – funding withdrawal

No review of future pest management challenges would be complete without reference to the Animal Health Board's TB Vector control programme (part of the Bovine Tb National Pests Management Strategy).

The principal objective of the Bovine Tb Strategy is to reduce the numbers of infected cattle and deer herds to 0.2% annual period prevalence by 2012/13.

To achieve that objective the AHB spends between \$50-60 million per annum on vector control - mostly the killing of possums (and mustelids) in Tb infected areas.

The strategy has been effective at meeting its three year targets and is on track to meet the programme objective by 2012/13.

Under current funding plans, expenditure on vector control will begin to reduce from around 2011 and will end in 2013 if, as expected, the target is met. Already the programme has ceased operations in parts of the country previously receiving sustained possum control (because localised Tb eradication has been achieved).

The extent of funding, if any, post 2013, is currently under review. A number of options are being considered. None of those options, however, would involve maintaining possum populations at their new low levels in areas where Tb has been eradicated (unless of course there was a reintroduction of Tb).

While little research has been undertaken, intuitively it is likely that an incidental benefit of the Tb strategy will have been the conservation/biodiversity gains (in at least some areas) resulting from reduced possum numbers. Regional councils are currently analysing the relationship between areas of high biodiversity value with areas where Tb vector control operations have, or will shortly be, terminated. This will illustrate the key areas of risk.

The obvious challenge from a pest management perspective is how to maintain the biodiversity gains achieved through the Tb Strategy. At significant cost, the Crown is very likely to have achieved highly valuable national “assets” in the form of low pest areas that, fortuitously, represent an outcome entirely consistent with its own national Biodiversity Strategy. If these assets are not managed wisely over the coming years they will be almost certainly be lost and it is unlikely the funding will be available regionally to reclaim those biodiversity benefits.

3.8 Overview

From regional council’s perspective, the pest issues they will need to confront in the coming years will be very different to those they face today.

The near future, as best we can predict it, will be one with more pest incursions and an increasing need to accept that not everything can be eradicated. That leaves more organisms to slip through the biosecurity net and into the pool of pests to be potentially managed (under current arrangements) by individuals, particular sector interests or, by regional councils. At the same time regional councils will face stronger legislative and community drivers to take a *spatial* rather than *species* approach to pest management. Indeed this may be the only realistic prospect depending on the number and nature of pests that arrive. And all this at a time when newly empowered regional councils face severe budgetary demands.

It is difficult to predict how land use change will affect this pest–scape other than to say that change will certainly result meaning strategies will need constant revision with an emphasis on effective surveillance.

These challenges may well be compounded by a reduction in the tools available or by the need to use more costly management tools in the future in response to community and international trade concerns. Improved science and development of new and novel control methods will need to be a priority.

The public good benefit of pest control to an increasingly eco-savvy population will push regional councils in new directions. At a conceptual level, the problem for regional councils is that many of the pests will be *orphan pests* in the sense that their impacts will not be specific to particular sector and no one will take ownership of the problem.

Furthermore, the problem is not just about new incursions it is about continuing to deal with *legacy pests* on an on-going basis.

A growing public estate will increase the *duality* of the current system with, effectively, two separate pest management systems operating according to land ownership with the challenges for strategic integration that that entails.

The overall picture is for more complexity, harder trade-offs and more cost.

4 New Zealand's pest management system: An overview

4.1 The national biosecurity system

The national biosecurity system may be generally divided into three parts: *pre-border*, *border* and *post border*.

4.1.1 Pre border/border control

Pre-border/border activities are those activities that prevent harmful organisms from crossing New Zealand's borders and establishing while ensuring trade is maintained. The main regulatory tool used in pre-border management is the import health standard (IHS). These regulations essentially set standards that must be met before goods can enter the country. Border activities are the screening and checking of passengers and cargo at ports of entry.

Only accidental, inadvertent or illegal (e.g. smuggled) introductions of new organisms are controlled through the biosecurity system. The deliberate introduction of organisms (including genetically modified organisms) to New Zealand is subject to a separate process governed by the Hazardous Substances and New Organisms Act (HSNO Act) administered by the Environmental Risk Management Authority (ERMA).

Regional councils acknowledge the importance of the pre border and border control aspects of the wider biosecurity business. These areas rightly receive significant emphasis by MAF Biosecurity. Regional councils support the view that it is better to stop organisms reaching our borders than to have to deal with them once they are here. We also acknowledge the leading edge systems and procedures in place to manage pre border and border risks. Any concerns and criticisms of the pest management regime expressed in this think piece do not derogate from that support and an acceptance of relative priorities.

4.1.2 Post border control

Post border activities are sometimes referred to, in a non technical context, as “pest management” since they deal with organisms that have arrived, or are suspected to have arrived, in the country.

However, under the Biosecurity Act (see below), post border activities are further divided into: *surveillance*; *incursion response*; and *pest management*.

- *Surveillance*

Surveillance is a self explanatory term which simply refers to the (ideally) systematic monitoring of the environment to determine the presence and distribution of pest diseases and other unwanted organisms. It can involve a range of activities including surveys, research and other forms of data collection and analysis.

- *Incursion response*

The term “incursion response” refers to the actions taken on discovery of a risk organism. The response will typically involve a number of stages initially involving

efforts to stop or restrict the spread of the organism, followed by an assessment and implementation of management options (i.e. control or eradication).

▪ *Pest management*

Pest management is the activity undertaken to manage the risk of organisms (plants, animal or diseases) present in New Zealand as a result of:

- (a) introductions prior to the establishment of a formal biosecurity regime;
- (b) past poor biosecurity decisions; and/or
- (c) a failure of the current biosecurity (pre border, border) measures to exclude risk organisms, and a subsequent (i) failure to eradicate those organisms in the early stages of incursion; or (ii) decision not to proceed with, or to abandon, attempts at eradication taking account of technical considerations and/or benefit cost analysis.

Pest management activities may include both *reactive* measures (such as population reduction or eradication programmes) or *prevention* initiatives (e.g. measures to ensure pests are not spread and distributions do not increase).

Under the Biosecurity Act, pest management is a very specific term. It means the management of organisms that are declared to be a pest by a pest management strategy. Technically speaking, if there were no pest management strategies there would be no “pests”.

However, even in the context of NZ’s biosecurity regime the term pest management is used variably to describe activities to manage risk organisms present in New Zealand whether they have been present for decades or days.

At a conceptual level, pests generally fall into two categories: pests that present a risk to a specific sector of the economy and for which there is a clear incentive for someone to take responsibility; and *orphan* pests that present a risk that no specific party can or will take responsibility for (in a way that will safeguard public values).

Pests can also be categorised as *legacy* pests (being pests that have been present for decades and which are present due to past poor biosecurity decisions rather than contemporary system failures); and new pests which have evaded current border controls and defeated incursion response.

In a practical sense, pest management involves:

- The prioritisation of pests to be managed (since (i) the number of pests will likely exceed the ability to pay; and (ii) not all organisms present equal risk)
- Determination of the best means to (a) avoid spread; and/or (b) control or eradicate populations
- Determination of who should bear the costs of taking the required action.
- Undertake pest control or require others to undertake pest control.

4.1.3 Significance of pest management in the biosecurity system

It is important to acknowledge that pest management is just one component of the broader biosecurity system. Through Vote Biosecurity and Vote Conservation the Government has budgeted to spend around \$240 million on biosecurity in the 2007/8 financial year (being 0.3% of total government expenditure). It is difficult to determine the exact proportion of the budget that addresses pest management

as several outputs (such as biosecurity policy, enforcement and standards) cross the whole biosecurity system. However, major components of the post border component investment are:

- \$34.2 million (Vote Biosecurity) for surveillance and incursion response
- \$29.5 million (Vote Biosecurity) contribution funding to the AHB;
- \$3.2 million (Vote Biosecurity) for national coordination (policy work, including eradication programme for national interest pests)
- \$1.4 million (Vote Biosecurity) for managing containment of *Didymo*
- \$71.5 million (Vote Conservation) for pest control to advance the government's conservation objectives (including both pest led and site led initiatives⁶): and
- \$2 million (Vote Conservation) for the costs of meeting “responsible landowner” obligations (i.e. managing costs as a pest exacerbator).

In addition, the Biosecurity Science Strategy reports that annually an estimated \$37 million is invested in biosecurity science, of which the Public Good Science and Technology Fund provides around 60% (\$22 million). A 2002 review of biosecurity research⁷ found that 88% of biosecurity expenditure is focused on post border research.

Note, however, that aside from the non departmental (AHB) funding there is little specific allocation for pest management within Vote Biosecurity. The budget explanation of the “*Biosecurity surveillance and incursion response*” output refers only to responses to *new* organisms⁸. In a practical sense, the Government investment in pest management is now delivered through Vote Conservation. (This is committed almost entirely to furthering conservation objectives on public conservation lands).

Regional council annual plans show budgeted expenditure of around \$73.3 million on pest management for the 2007/08 year. Around \$42 million of this total expenditure is funded by contracts to deliver AHB Tb Vector control programmes meaning that regional rates (and other regional income streams) fund around \$31.3 million.

Figure 1 shows the apportionment of current pest management (post incursion response) funding between government agencies and regional councils⁹.

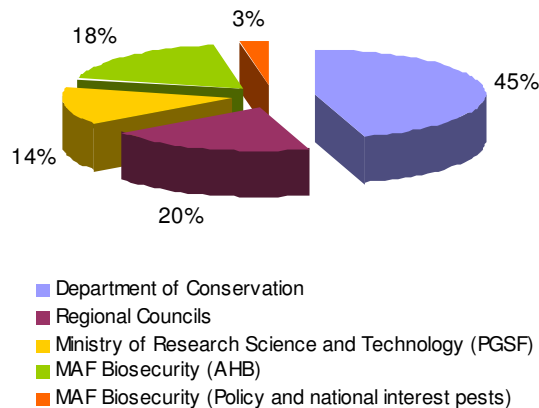
⁶ See section 4.5.6 for further explanation

⁷ Green, W. 2001. *Review of Current Biosecurity Research in New Zealand*.

⁸ It is expected that the output class description is not entirely accurate and that MAF Biosecurity does fund a level of pest management through vote biosecurity. However as this is not identified as a separate output class it is not possible to report the level of expenditure.

⁹ Note that the PGSF data is based on an estimate of 88% of current biosecurity research funding.

Figure 1 - Public funding of pest management



Industry groups and individual landowners also contribute substantially although the quantum is difficult to assess. One estimate by Taranaki Regional Council of spending to achieve biodiversity outcomes alone put this as high as \$10 dollars for every \$1 spent by local authorities.

Of course, there is a huge amount of effort and expense by the private sector on controlling pest organisms that have not technically been declared pests under the Biosecurity Act. This includes a wide range of activity including everything from efforts to minimise crop and vegetable patch damage, managing parasites on farm animals and household pets, controlling back yard weeds, and ridding households of domestic vermin and nuisance bugs. Viewed in this wider context, publicly funded pest control is a small part of the overall pest management activity.

4.1.4 Expenditure against outcomes

Unfortunately insufficient information is available to be able to report expenditure in terms of allocation to particular outcomes sought. However, it is reasonably apparent that, research funding aside, total public investment on pest management is roughly split 30% in the pursuit of production outcomes and 70% in the promotion of natural heritage/biodiversity outcomes.

4.2 Biosecurity Act

New Zealand's biosecurity system is defined by the institutional arrangements. There are a number of statutes that combine to create the system we have. Most significant amongst these is, arguably, the Biosecurity Act 1993 ("the BSA"). Other significant statutes are described in section 4.3 of this report.

4.2.1 Underlying philosophical basis on legislation

The BSA is a product of the early 1990s - an era when hard questions were asked about the role of the state in intervention of any kind. The prevailing philosophy was that the state should intervene (through regulation or public funding) only when absolutely necessary and that, if there are incentives on others to act, then those incentives should be exploited in preference to state intervention.

Furthermore, regulation needed to be strictly justified on a cost benefit basis and designed and targeted in ways that minimised economic impact and retained

flexibility for economic activity to find least cost means of compliance. Under this paradigm costs should fall on exacerbators (externalities should be internalised) and/or specific beneficiaries rather than being socialised.

Self regulation was also favoured (where feasible) and devolution of responsibilities (according to the principle of *subsidiarity*) characterised much policy reform. As noted above, the principle of subsidiarity (being the tenet that an issue ought to be managed closest the community of interest most affected) led to devolution from central to local government and also from government generally to particular sector groups where such interests stood to benefit directly from regulation (with the community affected only indirectly).

The prevailing philosophy manifested itself in various ways in a suite of new legislation enacted throughout the early 1990s. Examples familiar to local government are:

- The Building Act and Building Code with its initial emphasis on competition in compliance certification and the performance based approach to building standards (with the ability to choose between code endorsed *acceptable solutions* or alternative, applicant designed solutions)
- The Resource Management Act (RMA) with its devolution of responsibility to local government, early emphasis on regulating effects (not activities), emphasis on benefit cost tests for national and local regulation and user pays approach to cost recovery.
- The Biosecurity Act (as discussed)

4.2.2 The tool box approach

At least in so far as pest management is concerned, the Biosecurity Act is often referred to as constituting a “*tool box*” approach since it enables/empowers responses to incursions or to existing pests but does not oblige the Government or others to respond to any given threat.

The lack of specific duties and responsibilities (other than to administer processes) seems linked to desire for the Government to avoid imposing costs on others (given that the government may not be in the best position to determine whether the cost is worth paying) and reliance on others (either specific sector groups or individuals directly affected by a pest) to identify and accept the benefit of taking action (using tools provided by the BSA if necessary).

The absence of mandatory functions for regional councils is justified on a similar basis with the decision on when and how much to intervene left to the “regional community” to determine on the basis that it is the regional community that will bear the costs.

The specific features of the regime are set out in the following sections.

4.2.3 Unwanted organisms and incursion response

The BSA contains various administrative powers that create a framework within which various parties (including regional councils) can (should they desire) identify and respond to pest threats. In addition to the pest management strategy tool discussed later, the basic framework includes the concepts of unwanted and notifiable organisms and, powers for incursion responses.

- *Unwanted organisms*

The BSA allows a Chief Technical Officer (being a person appointed by the CE of a department to undertake specific functions under the Act) to declare an organism an “unwanted organism” if they believe the organism capable of causing unwanted harm to any natural and physical resources or human health.

An unwanted organism may also be any new organism that the Environmental Risk Management Authority (ERMA) has declined approval to import, or any organism specified in the Second Schedule of the Hazardous Substances and New Organisms Act (HSNO)1996.

MAF Biosecurity keeps a schedule of unwanted organisms which currently holds over 15,000 records. Some of these organisms are already present in New Zealand. Some are not.

For the purposes of the BSA, an unwanted organism is not a “pest” and the fact that an organism is identified as an unwanted organism of itself imparts few duties on management agencies (or on individuals).

The main obligations are: (a) no person may spread an unwanted organism; (b) no person may offer an unwanted organism for sale; and (c) MAF must be satisfied that goods or organisms given biosecurity clearance show no signs of harbouring unwanted organisms.

- *Incursion responses*

Consistent with its general philosophy, the BSA uses the status of “unwanted organism” as a trigger *enabling* the exercise of certain powers by certain persons. These powers include a broad suite of administrative powers under Part VI of the BSA (power of entry/inspection/seizure and disposal, other powers necessary for effective surveillance or incursion response).

There is no obligation to initiate an incursion response nor are their criteria for assisting in determining when an incursion response is warranted.

MAF Biosecurity is, however, currently working on non statutory policies to guide decision-making¹⁰.

- *Small scale incursion responses*

Section 100 of the BSA provides for regional councils to take small-scale management of unwanted organisms without a pest management strategy. Before it does so it must be satisfied that a number of conditions exist. These being:

- ☒ An unwanted organism is present and could cause serious adverse and unintended effects unless early action is taken
- ☒ The organism can be eradicated or controlled within 3 years
- ☒ The cost of action is going to cost less than an amount prescribed by order in Council

¹⁰ Policy for Responding to Risk Organisms, Draft for Consultation September 2007; and Joint Decision-making and Resourcing for Readiness and Incursion Responses, Surveillance and Incursion Response Working Group MAF Biosecurity New Zealand Discussion Paper No: 2007/02.

- The taking of measures is unlikely to result in significant monetary loss to any person (other than the person responsible for the presence or spread of the organism).

Regional council have made little use of small scale incursion response under section 100.

- *Notifiable organisms*

A responsible Minister may (through the order in council process) declare organisms to be *notifiable organisms*. This may be done nationally or regionally. There are currently 241 notified organisms on the MAF Biosecurity register.

Declaring an organism to be a notifiable organism is primarily part of the surveillance system since the status imposes a duty on anyone who becomes aware of the presence of such an organism to notify the presence of the organism to the chief technical officer.

- *Summary of post border activities*

In summary, the main characteristics of the pest management system “up chain” of pest management strategies is that it is discretionary, with little compulsion on either management agencies or individuals to take responsibility, action or even to prepare to take action.

Judgments about the appropriate responses are exercised essentially on a case by case basis taking account of likely impact and potential cost. Regional councils are tightly constrained about when they can exercise powers in the absence of a pest management strategy.

4.2.4 National pest management strategies – law and theory

A government minister, or any person, may prepare a national pest management strategy (NPMS).

The purpose and function of an NPMS is not specified in the Act. However section 57 (2) seems to suggest that whether an NPMS is appropriate depends, for organisms not yet in NZ or which have a restricted distribution, on the significance of the potential loss (environmental or economic), and for pests that are widespread, on whether effective action would be impracticable without a NPMS.

The Act provides for “any other person” to prepare such a strategy on the basis that other entities (being representative of those most at risk or directly affected by a pest) may have the greatest incentive to take action against a pest and ought to bear the cost).

The Minister may require that the proponent pay all or part of the cost of processing the proposal. In addition, before the Minister notifies a NPMS he or she must be satisfied that a range of tests are met. These include the test that:

- the benefits of the strategy exceed the costs;
- national intervention would be less costly than regional intervention
- the people who must directly meet costs under the strategy are those who contribute to the creation of continuance of the problem and that the benefits to that group of people will exceed the cost.

- that the pest is capable of causing serious damage to New Zealand economy, environment, or the health of the population.
- The implementation of the strategy would not be contrary to New Zealand's international obligations.

A proposal for a NPMS must contain a range of matters including (in addition to obvious information about the organism to be controlled, the agency responsible and duration of the strategy etc):

- *Alternative measures* to the NPMS and the reasons for preferring the NPMS
- The scope of *rules*¹¹
- The actual or potential *effects*, beneficial or detrimental that the NPMS might have on Maori, the environment and the marketing of overseas products
- An analysis of the *benefits and costs* of the NPMS
- The anticipated *costs of implementing* the strategy
- The basis, if any, on which *compensation* is to be paid.

The process of deciding whether any proposal for a NPMS ought to be approved generally involves:

- Notification of a proposal and a call for public submission
- Preparation of a summary of submissions
- Hearing held by a board of inquiry
- Preparation of a report with recommendations
- Ministerial decision on the board of inquiry report

The NPMS is made by Order in Council which is then laid before the House of Representatives.

In 2000, the Biosecurity Council issued a policy statement on the development of NPMSs. That policy statement sets out process expectations and highlights the prerequisites that must exist before any department proposes an NPMS. Significantly, the policy statement also sets the “single species” tone for NPMS when it says that:

NPMS may contain one or a number of pests. Where a number of pests are included, the pests should:

- a. Be of a similar kind or description; or*
- b. Require similar actions to be taken; or*
- c. Affect a similar range of organisms or other natural resources; or*
- d. Cause a similar effect on organisms or other natural resources*

The theory behind the approach set out in law (and developed by the former Biosecurity Council) is that (a) national intervention need not be instigated by a government agency but in fact another group may have stronger and more direct

¹¹ A NPMS must include a range of information (similar to the proposal) and may include rules. Rules may take many different forms including requirements to take certain action, keep records, or prohibit or regulate specified activities

incentives to intervene at the national level; and (b) appropriate safeguards need to be in place to avoid over regulation or the imposition of unfair cost.

Although the Act seems to imply that other mechanisms, including regional strategies ought to be preferred ahead of national strategies it does provide for national strategies (prepared by sector groups or government agencies). The inference being that there will be circumstances (i.e. certain pest issues) that warrant national level intervention either because of a specific sectoral interest or a wider public interest. Importantly, however, consistent with the general tool box approach described above, under no circumstance is anyone *required* to prepare a NPMS.

4.2.5 National pest management strategies: the practice

In reality only three NPMSs have been developed in the nearly 15 years the Biosecurity Act has been in affect.

The NPMSs are:

- The American foulbrood (AFB) NPMS which has been in place since 1998. The AFB NPMS includes administrative and operational activities such as levy collection, a Disease Elimination Conformity Agreement scheme, AFB recognition courses, maintaining and updating the apiary register, and producing and mailing Annual Disease Returns. The management agency responsible is the National Beekeepers Association.
- The Varroa NPMS which has been in place since 2005. The NPMS puts in place (a) movement controls throughout New Zealand for bees, beehives, bee products and equipment; (b) information programmes throughout New Zealand on varroa to encourage compliance with this strategy; and a varroa surveillance programme in the South Island. The NPMS took four years from inception to approval. The Varroa NPMS has not, however been successful and the programme is about to be terminated.
- Bovine TB NPMS was approved in 1998 and amended in 2004. The Animal Health Board (AHB) is responsible for the Bovine TB NPMS. The main measures included in the NPMS are (a) surveillance for TB in cattle and deer herds and wildlife vectors; (b) testing of cattle for Tb, (c) controls on the movement of cattle; and (d) control of Tb infected wildlife vector populations. The new primary objective of the strategy is to achieve official Tb freedom by 2013 (less than 0.2% herds infected on a period prevalence basis). Regional councils currently provide 10% funding of the Vector control. (Industry contributes 40% and the Crown 50%).

Significantly, all three of the existing NPMSs are industry led¹². MAF Biosecurity has advised that it is unlikely that it will prepare NPMSs in the future as they are regarded as slow and expensive to produce.

Furthermore, the marginal benefit of a NPMS is often not sufficient to warrant the cost. Since any pest likely to be subject to a NPMS will very likely also be an unwanted organism, the Part VI (Administrative) powers (such as powers to enter property and destroy organisms) are available to government agencies. Similarly,

¹² A number of industries have taken initiatives to control or eradicate pests considered important to them outside of the NPMS framework (For example, the Pork industry council introduced a programme that successfully eradicated aujeszki's disease from pigs).

the restrictions on the spread, propagation/breeding or sale of such organisms would also apply. The only additional coercive powers conferred by a NPMS relate to:

- *rules* that may be imposed on landowners to undertake specific pest management activity. Given that all regional councils already have in place *regional* pest management strategies with rules in place for established pests that have significant impact, it seems unlikely that national level rules will be forthcoming for any established pest; and
- the ability to impose a *levy* on the group or sector benefiting from the NPMS. This is also challenging given the cross cutting nature of benefits of much pest management and the difficulty of capturing all potential free-riders.
- *Response programmes for national interest pests*

Although there is no national programme of NPMS development, MAF Biosecurity has developed a *national pest management programme*. Pest management programmes are relatively new initiatives (instigated since MAF Biosecurity assumed responsibility for managing “national interest pests” in 2005). The response programme for national interest pest identifies eleven national pests and has developed new response programmes for each of these¹³. All 11 national interest pests are declared *unwanted organisms* under the Act. They are pests that cause both production losses¹⁴ and biodiversity threats.

The development of the list of eleven national interest pests involved a range of stakeholders (MAF Biosecurity, regional councils DoC, LINZ, MOH and MFish) in an evaluation/prioritisation process.

The response programmes are *operational plans* involving *eradication*, often in collaboration with regional councils (or in some cases with DoC). MAF Biosecurity is funded for the implementation of the response programmes.

In summary, the response programmes for national interest pests are programmes that recognise that there are a range of pests for which no single party has a strong enough incentive to pursue a pest management strategy and that a national level public response may be necessary to address the threat.

- *National Plant Pest Accord*

Another national level measure in place in addition to NPMSs and National Interest Pest Programmes is the National Plant Pest Accord (“the Accord”).

The Accord is a joint initiative between Government agencies with biosecurity responsibilities (primarily MAF and DoC), regional councils and the Nursery and Garden Association.

The Accord is a *preventative* pest measure. It is an agreement for regional councils to undertake compliance work to prevent the commercial sale and distribution of the 127 plants listed in the Accord. All plants listed in the Accord are declared unwanted organisms and therefore under sections 52 and 53 of the BSA may not be spread, bred/propagated or offered for sale. In the absence of the Accord,

¹³ Ten operational plans have been endorsed and work is underway on most of these. One plan is yet to be finalised.

¹⁴ Including electricity production losses since several affect the efficiency of hydro dams.

responsibility for enforcing these sections would fall on MAF Biosecurity if the species were not subject to a rule in a RPMS¹⁵.

4.2.6 Regional pest management strategies – theory and law

Section 77 of the BSA states that regional councils, or any other person, may prepare a proposal for a *regional pest management strategy* (RPMS).

- *Process of preparing a RPMS*

The process for preparing a RPMS is similar to that required for NPMSs. The tests that must be demonstrated before a regional council can notify a proposal for a RPMS are largely the same as those outlined in respect of NPMSs but apply at the regional scale (with the same emphasis on demonstrating benefits exceed costs).

Consultation with stakeholders and tangata whenua must occur. A regional council must notify a proposed RPMS and that proposal must contain information similar to that described in respect of NPMSs (being 18 separate items including statements about actual and potential effects on cultural, environmental and international market factors; benefits and costs, including why the strategy is more appropriate than relying on voluntary actions, anticipated costs of funding the strategy and how those costs are to be funded).

Submissions must be called for, a summary prepared and notified and an inquiry held with hearings presided over by a hearing commissioner. Following a hearing and consideration of relevant matters, the regional council must issue a report setting out its decisions and reasons. That decision is then publicly notified. The regional council's decisions may then be appealed to the Environment Court by any person who made a submission.

- *Contents of a RPMS*

An RPMS must specify a range of matters including the pests to be managed, objectives, the period for which the strategy is in force, powers to be used for small scale incursions, rules (if any), the basis for compensation (if any), source of funding for implementation, and the actions to be taken by local authorities.

The scope of rules is specified in the Act but is reasonably broad.

An RPMS cannot be inconsistent with a NPMS or the regional council's Regional Policy Statement (RPS) prepared under the RMA.

- *Effect of a RPMS*

A proposed RPMS has no effect until it has progressed through the entire process, including having all appeals resolved. (Although an RPMS that is being reviewed continues to have effect until the review is completed).

There is very limited opportunity to change a RPMS without initiating a full review and proceeding through the whole process described above. Minor changes are

¹⁵ If there was no Accord, regional councils may list the plants in their strategies. However, there may be legal difficulty in doing so in some instances since not all species could be justified in all regions.

allowed but not if the change will have “significant effect on the rights and obligations or any person”.

As noted earlier it is an offence to fail to comply with a strategy. Further, there is provision for a regional council to issue a notice requiring work to be undertaken in accordance with a RPMS and, if that notice is not complied with, to undertake the work itself and recover the costs from the offending party.

- *Operational and annual plans*

Regional councils must prepare operational plans for the implementation of RPMSs. Reports on operational plans must be prepared annually (this may be part of a council’s annual report required under the Local Government Act)

- *Funding of RPMSs*

The BSA includes provisions that provide for funding by way of a levy. However, regional councils may use rates to fund strategy implementation (subject to detailed provisions within the BSA about matters the councils should have regard to in determining how the rates burden should fall).

The theory behind RPMS is similar to that discussed with respect to NPMSs namely:

- ❑ Parties other than regional councils might have a stronger incentive to act and should have access to tools to enable them to act (provided the need is justified)¹⁶.
- ❑ Organisms should not be declared pests unless a public process has been followed and communities have agreed to accept the costs of appropriate management.
- ❑ Even when others do not act, regional councils should only intervene at the regional level when it is clear that individual (voluntary) action will not achieve the desired outcome¹⁷.
- ❑ Where regional councils do intervene they should ensure that costs fall in ways that reflect who *benefits* (and/or who exacerbates).
- ❑ Any intervention should be dependent on demonstrating that benefit will exceed cost.

On the other hand, the fact the RPMSs are provided for is an acknowledgement that there will be instances when *collective* (as opposed individual landowner) response is advantageous at a sub national level. This might be, for example, when the service delivered represents a *public good* (that is people cannot be excluded from pest management benefits), or where individual action can be easily undermined by the inaction of others *and* this issue is not nationally homogenous.

However, by including requirements for operational plans and reports (in addition to annual plans and reports required of local authorities under local government legislation) the BSA includes a stronger emphasis on *accountability* than exists in the case of NPMS.

¹⁶ In economic terms this means biosecurity should be facilitated as a *club good* where possible

¹⁷ In economic terms, biodiversity should be facilitated as a *private good* insofar as possible.

Finally, the BSA's RPMS provisions seem to imply three expectations.

- First, it appears that the BSA is written in anticipation that there will be multiple pest-specific strategies (potentially initiated by a range of management agencies) that will run for a defined period of time before achieving their objectives and being withdrawn.
- Second, and reinforcing the first point, the BSA's anticipates species-based approach to pest management. That is, the BSA is formulated in such a way as to assume that individual pests will be managed largely independent of each other, in a consistent way across a region.
- Third, that there will be regional variation in the need for, and content of, RPMSs and that provision for regional variation reflects different pest issues and different willingness to pay regionally and that this, in turn, justifies regional intervention ahead of national intervention.

Practice, as discussed below, would seem to cast doubt on the validity of each of these expectations.

4.2.7 Regional pest management strategies – practice

As at March 2008 there were 20 regional pest management strategies. Three regional councils elected to produce separate strategies for plant and animal pests. Two unitary authorities (Tasman and Nelson) have produced a joint strategy.

Two RPMSs have been produced in conjunction with an industry group: Nelson's (former) *Fire Blight Pest Management Strategy* (for which ENZA was the responsible management agency¹⁸) and Hawke's Bay's *Phytosanitary Pest Management Strategy* (proposed by Pipfruit NZ Inc, although Hawke's Bay Regional Council is the responsible management agency).

Most of these RPMSs are new or have recently been reviewed. Although a comprehensive review of multi-pest RPMSs has not been undertaken as part of this project, a preliminary review suggests a high commonality in the pests identified in regional strategies (albeit the design and structure of the strategies is variable and the choice of management response also varies to some extent).

It is also apparent that the majority of pests addressed by RPMSs are identified as requiring long term (indefinite) management rather than being the subject of a short, defined period of intervention.

■ *Nature of RPMSs*

As noted above most regions have a single multi-pest RPMS although three have distinguished between plant and animal pests.

The approaches taken in these strategies all differ but the common approach is to classify pests into at least three groups. Common groups are:

- pests to be *eradicated*;
- pests to be *controlled*; and
- potential pests/pests to be subject to *surveillance*.

¹⁸ The ENZA Fire Blight RPMS has ceased to exist. Fire Blight is now dealt with in the joint Tasman/Nelson RPMS.

Typically, one or more of three management responses are then identified in respect of each pest. Again there is variation in the way RPMSs are structured but the main responses may be grouped in three:

- education and advice
- rules
- direct regional council control programmes

In most RPMSs there is strong correlation between pests to be eradicated and commitment to regional council-led control programmes and between pests to be controlled and rules/enforcement (i.e. landowner-led programmes).

The rules within RPMSs generally relate to requirement for land owners to (a) not release a pest; or (b) destroy the pest if present on their property (or if directed by the council). Some RPMSs repeat the BSA's prohibition on the sale or release/spread of unwanted organisms as rules.

Two of the key trends in RPMSs are for:

- RPMS to signal that regional councils will take responsibility for control or eradication of pests in areas of *high conservation value*. (This represents a departure from the otherwise "species led" approach to pest management and the emergence of a "site led" approach); and
- A move away from the use of targeted rates towards greater use of general rates in recognition that the biodiversity outcomes (increasingly the dominant objectives of RPMSs) benefit the wider regional community rather than specified easily targeted groups.

4.3 Other legislation

While the BSA is critical to the overall biosecurity regime, it is by no means the only statute defining the system. Other statutes illustrate that the system is complex and to some extent remains fragmented and un-integrated.

4.3.1 Conservation legislation

- *Estate management*

The Conservation Act states that the Department of Conservation must administer and manage all conservation land in accordance with statements of general policy and conservation management strategies, conservation management plans and freshwater fisheries management plans.

The Conservation General Policy sets out a framework of principles, policies and priorities for how individual management strategies and management plans must address biosecurity and pest management. Individual management strategies and plans are prepared through a public process.

Pest management operations on conservation estate are then carried out in accordance with management strategies and plans.

Furthermore, it is an offence under the Conservation Act for any person to:

- Cause or allow any cattle, sheep, horse, or other animal of any kind whatever to enter on any conservation area; or

- Plant any plant, or sow or scatter the seed of any plant, or, knowing that it is likely to be injurious to plants or animals, introduces any substance, in or on any conservation area.

As discussed in Appendix 1 of this report, the Crown is not bound by regional pest management strategies (unless it chooses to be bound).

The obligation to manage conservation lands by, amongst other things, controlling pests is also implicit in the purpose of the legislation under which conservation land is held. For example, section 4 of the National Parks Act requires national parks to be managed in a state so that native plants and animals are preserved “*and introduced plants and animals shall as far as possible be exterminated*”.

- *Freshwater fisheries*

The Conservation Act (s 26ZM) and the Freshwater Fisheries Regulations 1983 control the *transfer of aquatic life* (both indigenous and introduced) between (a) sites where species already exist and to and from fish farms (designed to control the spread of disease), and (b) from a site where a species already exists to a site where that species does not already exist (designed to manage risk to aquatic biodiversity).

Approval must be gained from the Minister of Fisheries for type (a) transfers, while approval must be gained from the Minister of Conservation for type (b) transfers.

This regime is fraught since the provisions of the Act and the regulations are duplicative and to some extent contradictory.

The Freshwater Fisheries Regulations also schedule nine species of *noxious fish* and make it an offence to breed or possess those fish. Further, the regulations regulate the fishing of European or Japanese Koi carp (being noxious fish). This includes the creation of a containment area (in the Waikato) with a prohibition on commercial fishing outside that area

Koi carp have also been declared an unwanted organism under the BSA which has further complicated management (particularly with respect to the commercial fishing of the species inside the designated containment area).

- *Wildlife Act*

The Wildlife Act essentially establishes the *status* of fauna in New Zealand (e.g. “game”, “absolutely protected”, “partially protected”, “able to be hunted”, “not protected”) and regulates game shooting seasons.

The Act defines “wildlife” as any animal¹⁹ living in a *wild state* (including in fisheries waters) but excludes animals subject to the Wild Animals Control Act (such as deer, possums and wild goats). All wildlife (other than wildlife “not protected”) is vested in the Crown although ownership passes to anyone who lawfully kills it. The Act does not impose any obligation or liability on the Crown in respect of damage done by any wildlife.

The Wildlife Act does not establish a pest management regime although the status conferred by the Wildlife Act does trigger different requirements in terms of authorisations required from DoC for a species to be held, collected or released.

¹⁹ Defined to include mammal, bird, reptile, amphibian, terrestrial or freshwater invertebrate.

The Wildlife Act also takes precedence over the Biosecurity Act so that, for example, a species classified as protected cannot be declared a pest.

Schedule 8 of the Wildlife Act lists “*wildlife not protected but may be kept, bred, or farmed in captivity pursuant to regulations*”. This category applies to all mustelids (ferrets stoats, weasels) and there are specific regulations made under the Wildlife Act relating to farming, breeding and sale of ferrets. As ferrets are also an unwanted organism, permission to farm them would also be required from a Chief Technical Officer under the BSA.

Although the Act is not fundamentally about controlling pests it is possible that, depending on the status of the animal, agencies (or individuals) engaged in managing a pest might need authorisation from DoC or Fish and Game (in the case of any animal classified as “game”).

Furthermore, the Wildlife Act allows DoC to authorise the hunting, killing or capture of any wildlife (whether protected or not) causing damage to people, stock, crops or other wildlife.

Under section 41 of the Act the Minister has the power to:

- coordinate the policies and activities of departments of state, local authorities, and public bodies in relation to the protection, management, control and conservation of wildlife and the eradication of harmful species of wildlife; and
- prepare and issue plans and publications for the advancement, conservation, management, and control of wildlife and the eradication of harmful species of wildlife”.

4.3.2 Wild Animals Control Act

Like the Wildlife Act, the Wild Animals Control Act (WACA) is not designed specifically as a pest management statute but it does have a significant role in the management of some species that might be regarded as pests in pest management strategies.

Under the WACA, the Department of Conservation has various powers to control wild animals (defined to include thar, possums, deer, goats, pigs chamois and possums) and eradicate such animals locally. The WACA applies to all land (i.e. not just conservation estate).

The WACA exists to (a) manage the harmful impacts of certain wild animals; and (b) to recognise that the community places recreational value on certain species and that there need to be a mechanisms to allow and manage “use” of those species.

DoC’s principal role under the WACA is to control the feral range of wild animals and to control population size. Section 5 of the Act gives the Minister of Conservation the powers to:

- co-ordinate the policies and activities of Departments of State, local authorities, land owners and occupiers, Boards, and public bodies in relation to the control, and (where necessary) eradication, of any species of wild animals:
- prepare wild animal control plans and publications relating to wild animals and their control

The Department has prepared and implemented wild animal control plans for thar and possums. A national feral goat control plan is also near to completion and a

national deer control plan is also being developed. These plans set out the strategic approach for the effective control of introduced animals.

The primary means by which control is exercised is by authorising, carrying out and co-ordinating animal destruction and through the control of commercial and recreational hunting or, if necessary, by publicly funded population control or eradication programmes.

Furthermore, it is an offence under the WACA to release wild animals. Other powers are available to manage spread (including, for example, power to enter private land to eradicate wild animals which may have been illegally released, control the boundary fencing requirements of deer farms, and identify areas where deer farms and safari parks are regulated or prohibited).

Importantly, the WACA takes precedence over the Biosecurity Act (in most instances) meaning that, if a regional councils choose to control one of the species managed under the WACA (for reasons other than vector control) outside of its own land, it would technically require the consent of the Department of Conservation. The rationale being that wild animals (as defined by the WACA) are not just considered pests but are recognised as having recreational and commercial value by some parts of the community.

Although the Department of Conservation maintains that the WACA is “not a pest management statute”, it is hard to deny that it does mandate DoC’s control of a select number of species both on and off conservation estate. The fact that it does so is recognition that the Crown has two desired outcomes associated with those pests (being maintenance of a recreational and commercial hunting industry) and containment of ecosystem damage).

4.3.3 Resource Management Act

- *Mitigating effects on ecosystems*

One of the effects managed via the RMA is the effect on ecosystems (and biodiversity). When an applicant proposes to undertake an activity that might impact on a natural ecosystem, it is possible for the consent agency (i.e. either a territorial or regional council) to impose a condition on a consent requiring that pest management be carried out as a means of *mitigating* the overall adverse effect. (This is usually required by way of a management/restoration plan for the affected site).

- *Avoiding effects on ecosystems*

Similarly, the Courts have previously upheld, in principle, that conditions may be placed on resource consents to *avoid* certain effects on native ecosystems.

For example, residential development in certain areas can be conditional on occupiers not keeping certain animals that may be a pest in the location of the development (including domestic dogs and cats)²⁰.

²⁰ The willingness of the courts to uphold such condition relates to the practicality of the imposition in the context.

The same principle has been applied to pest risks associated with aquaculture with conditions placed on the operation of marine farms to minimise risk of organisms being spread by the transfer of fish and equipment from place to place.

Some district plans require consent for the farming of certain animals (e.g. goats). Others go further by prohibiting the keeping or farming of species set out in a list of plant and animal pests.

- *Authorisation of control method*

The RMA also has the incidental role of regulating the use of some pest control methods. For example, the application of 1080 may require a resource consent from a regional council (since it involves the discharge of a contaminant to land in a manner that may enter water).

4.3.4 Hazardous Substances and New Organisms Act

As noted earlier, under the HSNO Act, any person wanting to introduce a new organism into New Zealand needs to have that organism approved by the Environmental Risk Management Agency (ERMA).

HSNO also contains a list of species that are banned. (That list includes snakes and any venomous reptile, beavers, gerbils, prairie dogs, moles and cane toads as well as a number of plants).

The new organisms provisions of the HSNO Act deal with those who want to introduce new organism lawfully.

The enforcement of the HSNO regime has an obvious overlap with that of the biosecurity regime and therefore MAF Biosecurity undertakes enforcement of both the BSA and the new organisms provisions of HSNO Act.

Like the RMA, the HSNO Act also has an important role in regulating control methods that fall within the Act's definition of a hazardous substance.

4.3.5 The Health Act

Under the Health Act 1956 territorial authorities have responsibility to manage "nuisance" including nuisance species such as rats, mice and wasps. The Public Health Act also addresses the issue of border health protection (the control of people arriving or leaving NZ where there is possible source of infection from the introduction of a communicable disease).

A Public Health Bill is currently before the House. That Bill continues (but modernises) and to some extent, extends the provisions of the 1956 Act.

4.4 Biosecurity Strategy

In an attempt to bring greater direction and coherency to the biosecurity system, the (former) Biosecurity Council published a Biosecurity Strategy ("the Strategy") in 2003. This was subsequently endorsed by the Government.

The Strategy includes high level visions and goals and some 57 "expectations" of the system.

The Strategy emphasises clearer accountabilities, integration across stakeholders, effective capability, clear risk profiling and prioritisation and use of key performance indicators to measure progress.

Some of the key recommendations of the strategy relate to governance and responsibilities (see below).

Expectations are set for each part of the biosecurity system. Expectations for pest management are:

- *That there is clear and effective national leadership and coordination of pest management activities within central government, local government and the private sector.*
- *That there are transparent and effective performance measures to monitor and forecast the establishment of pest and weed impacts and pathways*
- *That the Crown meets its obligations as a landowner*
- *That there is a routine programme of national and regional communication and coordination including assessment and review of both individual programmes and the overall system.*

Importantly, the Strategy acknowledges the *multi-purpose* role of biosecurity (something that is not apparent on the face of the statute) and highlighted the public value of biosecurity (something else lost in the BSA's emphasis on process).

However, the Strategy remains a high level document that focuses (usefully) on system redesign but says little about system *implementation*. The Strategy is very much written *for government* and there is little in it to guide the exercise or functions (in terms of use of powers and functions, priority setting, or the pursuit of specific outcomes) for those involved in day to day biosecurity work.

That is, the Strategy, while an important first step has no particular role (nor utility) in pest management decision making by regional councils or other parties.

4.5 Governance, roles and responsibilities

4.5.1 Overall responsibility

The Biosecurity Strategy led to a review of governance arrangements. One of the most significant being that MAF should be accountable for overall management of the whole biosecurity system (so called end-to-end responsibility). This aims to overcome the highly fragmented nature of the system which had previously involved several other government agencies having primary responsibility depending on the issue and the nature of the potential impact.

MAF undertakes this responsibility through a separate agency within MAF now known as MAF Biosecurity NZ.

More specifically, MAF:

- administers the Biosecurity Act
- creates most biosecurity regulations and import standards
- provides assurances for exported primary products
- manages biosecurity risks at the border (including enforcing the new organisms provisions of the HSNO Act)
- provides diagnostics for suspect pests and diseases
- carries out incursion responses to nationally significant pests and diseases (e.g. moth eradication programmes in Auckland)

■ has a new leadership role in relation to national-scale pest management (Except in the case of wild animals, as defined by the WACA, and pest fish for which DoC retains national responsibility in accordance with relevant legislation²¹).

4.5.2 Independent advice

Arising from the Strategy, the former Biosecurity Council was reconstituted as a *Biosecurity Ministerial Advisory Committee*.

The Ministerial Advisory Committee exists to provide the Minister for Biosecurity with independent advice on the overall biosecurity system (including strategies, policies and capability). The Committee is made up of 13 members representing the full range of stakeholders (e.g. producer groups, researchers, regional councils, environmental groups etc). Government agencies provide input through a separate forum.

4.5.3 Central Government monitoring and oversight

A Biosecurity Chief Executives Forum (CEs Forum) comprises chief executives from MAF, DoC, MoH, MFish and Te Puni Kokiri provide advice to the Director-General of MAF. The CEs' Forum monitors the system from a government perspective looking at clarity of roles and accountabilities.

4.5.4 Central / regional communication and coordination

A Biosecurity Central/Regional Government Forum exists to promote coordination across central biosecurity agencies and regional government.

The Central/Regional Forum is chaired by the Director-General of MAF and includes the chief executives of all regional councils, the Department of Conservation, the Ministry of Health, the Ministry of Fisheries, and Land Information New Zealand.

In addition, there is a Biosecurity Coordinating Group of departmental officials and regional council biosecurity managers.

4.5.5 Regional Councils

As noted earlier, regional councils are empowered to prepare and implement RPMSs. They all do so.

This involves prioritising pests for management purposes, establishing and enforcing rules at the regional level and carrying (or contracting) out pest management programmes in accordance with the strategy. It also involves regional level pest surveillance, community education and information dissemination (“social marketing”).

Most regional councils provide Tb vector control management services. That is, they design, carry (or contract) out and monitor possum and ferret control programmes on behalf of the AHB.

Regional councils also have responsibilities under the RMA relating to (amongst other things) land, water and biodiversity management. All these functions are

²¹ Except that, as a further complication MAF Biosecurity retains responsibility for the eradication of marron and gudgeon being species previously allowed to be introduced by MAF for the purpose of commercial fish farming but subsequently declared to present too great a biosecurity risk.

affected by the presence of pests and therefore pest management is an integral part of broader regional council functions.

A 2004 study found that 12 out of 16 regional councils had contestable funds available for landowner and community group biodiversity initiatives (including, but not limited to, pest management programmes).

Some regional councils also have responsibility for pest control as *landowners* and as managers of regional parks. In at least one case this includes intensive pest control on regional parkland to create a mainland island.

4.5.6 Crown estate management

The Department of Conservation carries out pest management on the Crown Conservation Estate (in accordance with strategies and management plans as discussed in section 4.3.1). DoC is also involved in some pest management on private land where a lack of management would compromise estate management objectives.

Pest management on the Crown estate falls into one of two categories:

- Pest management associated with *core business* (i.e. conservation management); and
- Pest management carried out to meet “*good landowner*” responsibilities. While the Crown is not statutorily bound to address its role as an actual or potential *exacerbator*, as an owner of land the Crown has a moral obligation to ensure that its land management does not cause harm to others. This obligation was recognised early in the establishment of the current biosecurity regime (see Cabinet (CIE (95) M 14/5) and confirmed more recently in Biosecurity Strategy (see section 4.4 above). This issue is discussed at length in Appendix 1 of this report.

■ *Core business pest management*

In the 2006/07 year the Department of Conservation spent an estimated \$70.4 million on pest management associated with core conservation business. This includes \$48.7 million on species led pest control as detailed in Table 1.

Table 1 - DoC core business pest-led management expenditure 2006-2007

Pest	Expenditure (000)
Possoms	14,963
Deer	1,734
Goats	6,944
Other terrestrial pests	6,171
Other aquatic pests	1,132
Weeds	17,762
Total	\$48,706

Source: DoC Annual Plans and SJ Owen (pers comm)

Most of the additional \$22 million was spent on pest control associated with species recovery and mainland islands (i.e. site based management).

- *Good landowner pest management on conservation estate*

The Vote Conservation budget for “Crown exacerbator costs” has fallen from \$2.373 million in 2000/01 in to \$2.059 million for the 2007/08 financial year. Actual expenditure has fluctuated within a \$1.9 million - \$2.2 band since 2000²².

- *Other Crown agencies*

LINZ is responsible for managing Crown land on its balance sheet in accordance with the national regulatory framework. While LINZ land enjoys the same exemption as Department of Conservation land, LINZ is similarly morally responsible for “good owner” pest control on land and on Crown owned river and lakebeds. LINZ does not, however, identify pest management as a specific output class for budgetary purposes and it is therefore not possible to easily identify the level of contribution made.

The New Zealand Defence Forces also carry out pest management on land they hold on behalf of the Crown but, as with LINZ, the extent of this investment is not known.

4.5.7 Other roles other Government agencies

The Department of Conservation, Ministry of Health and Ministry for Fisheries can all appoint chief technical officers and declare species to be unwanted organisms and exercise powers under Part VI of the BSA.

These agencies generally also provide technical input to MAF Biosecurity’s risk analyses and import health standards as appropriate to their particular area of responsibility.

In addition to pest control as part of its estate management, DoC’s roles include:

- Ad hoc technical advice on species risk and management
- Operational support for surveillance and during incursion response (particularly in the form of protecting high conservation value areas)
- Administration of:
 - the Biodiversity Advice and Condition Funds. (Since 2001, these funds have provided \$6.3 million for pest management on private land).
 - The Nga Whenua Rahui programme which funds biodiversity programmes on Maori land (including considerable pest management).
- Lead responsibility for wild animal control under the WACA and management of pest fish (as discussed in section 4.3).

4.5.8 Other “on the ground” pest management

In addition to Crown-led national interest pest eradication and regional pest eradication or control programmes, pest management is undertaken by individuals (when it is in their interest to do so), by non governmental organisations and community groups (where there are community values at risk from pests) and by territorial authorities.

²² Note that the Department of Conservation suggests that a portion of conservation management pest control would also qualify as exacerbator expenditure.

Most territorial authorities are involved in pest management either as landowners and/or because they have one or more community outcomes (under the Local Government Act 2002) identified that can only be achieved through involvement in pest management. At least one territorial authority has a district level, non statutory animal pest strategy²³. Some of the larger territorial authorities provide basic information on pests and on landowner responsibilities as part of their general environmental management and/or environmental health mandates.

As noted in section 4.3.3, some pest animals are also managed by territorial authorities through their district plans prepared under the RMA.

²³ See Waitakere Animal Pest Strategy, July 2006

5 Discussion

The review of the biosecurity system highlights a number of defining characteristics and associated issues. These are discussed further below.

5.1 Overall scheme of the biosecurity system

In an overall sense, the national pest management regime works at two levels.

5.1.1 Pest management without pest management strategies under the BSA

First, there is the pest management that can be undertaken *without* a pest management strategy. In the absence of a pest management strategy management is largely limited to (a) stopping people doing things - like distributing, breeding, offering specified organisms for sale; (b) publicly funding pest eradication or population control or; (c) reliance on the self motivated, voluntary actions of individuals and community groups carrying out pest control on public or private land (using private funds but often supported by public funding from Crown agencies and/or regional councils).

- The unwanted organisms provisions of the BSA can be used to limit the spread or a range of organisms for which a *prima facie* case exists that they are high risk (i.e. are considered to be potential pests).
- The WACA and the freshwater fisheries frameworks can be used to control population size and distribution of defined “wild animals” and stop the spread of noxious fish.
- The conservation framework mandates the investment of public funds to manage risks to the Crown conservation estate
- The Local Government and Resource Management Acts mandate the investment of public funds to achieve desired community outcomes and to maintain biological diversity.
- The Government, through MAF Biosecurity can also fund pest management (as well as incursion response) without a pest management strategy although the mandate for doing so is less clear.

5.1.2 Pest management with pest management strategies under the BSA

Second, the biosecurity regime seeks to *enable* population eradication or control through the undertaking of direct (collective) control programmes (i.e. pest destruction) or by forcing landowners (or other potentially responsible parties) to take action themselves. This form of intervention involves imposing unavoidable cost on individuals or on communities and therefore:

- (a) is not mandatory for any party to undertake (regardless of the consequences); and
- (b) may be exercised only after demonstrating benefits exceed costs and only after a lengthy public process.

In the absence of such a process no person is responsible for managing pests, and no regulation can be imposed to avoid persons allowing pests to damage the environment - including those parts of the environment for which the offending party has no property right.

Strangely, in legislation seemingly designed, at least in part, to minimise the exposure of the state to responsibility, there is no general duty on individuals to avoid, remedy or mitigate the effects of pests.

Also puzzling is the limitation placed by the BSA on expenditure on pest control. Insofar as these restrictions relate to public expenditure that are clearly superfluous since regional councils can, and do, fund pest control through normal LGA rating/planning processes – which contain their own checks and balances. The reality is that regional councils do not need to prepare RPMSs in order to fund pest management. Indeed, the onerous tests of the BSA create a disincentive to do so.

5.2 Defining characteristics

The principles in the BSA relating to the need to justify regulation (both through public process and analytical means) and about ensuring that entities/individuals other than the state intervene and/or bear the cost where they stand to benefit (rather than the public generally) remain valid in contemporary public policy development and design.

However, it is fair to say that in other legislative arenas regimes have moved on in many other respects²⁴. It is not clear that the BSA has been jolted out of its original conception by hard analysis of whether the adopted approach has produced the desired outcomes.

5.2.1 The Biosecurity Act's incentive based intervention model

On the surface at least, the theory that those with the greatest incentive to act will act, has been limited in success if judged by the use of the BSA powers by third parties. There have been just three single-pest NPMSs and two RPMSs motivated in this way over 15 years.

Although there has been considerable and growing voluntary effort by community groups, experience suggests that the legal and social barriers to more formal “clubbing” to use coercive powers to respond to common pest threats are significant. Where such coercive powers are necessary to achieve desired outcomes it seems public intervention needs to play a dominant role.

In short, reliance on voluntary action by all parties assumes incentives will exist to motivate action (and expenditure) and that the amount of action so motivated will be optimal for New Zealand.

There is little evidence to support a conclusion as to whether this has been achieved or not. This view is supported by the recent detailed review of the Biodiversity Strategy²⁵ where, having considered available data, the authors' noted that they were “*not in a position to judge if the current efforts in pest and weed management*

²⁴ The RMA, for example, has been amended on many occasions to reduce barriers to effective regulation (including a lowering of the benefits cost test, clearer articulation of mandatory functions, the imposition of additional matters of national importance). Furthermore the devolved system has been partly pulled back to the centre through a programme of national instruments that assert a strong national interest influence.

²⁵ *Turning the Tide? A Review of the First Five Years of the New Zealand Biodiversity Strategy: The Synthesis Report*, Clarkson, B and Green, W.

will be sufficient to assure long-term protection of indigenous species and to minimise the risks of extinction of threatened species”.

In summary, the BSA seems designed for, and complicated by, a form of private intervention that has proved to be the exception rather than the rule.

5.2.2 A dual system

The estate management obligations on the Department of Conservation under various statutes coupled with the exemption from regional pest management strategies under the Biosecurity Act tends to establish a *dual* pest management system. The system that applies to Crown land is determined through processes set out in conservation legislation. The system that applies to all other land is determined largely through pest management strategies prepared by regional councils (or potentially other parties) as discussed earlier in this report.

5.2.3 Fragmentation

The system is fragmented. The legal framework consists of the Biosecurity Act and a suite of other ad hoc legislation most of which come from quite different eras and philosophical bases and which collectively provide a complex and inconsistent approach pest management. There is little relationship between these statutes and in some cases some apparent conflicts and duplication.

5.2.4 Desired outcomes

In some respects lack of analysis of system performance in terms of outcomes achieved is understandable since the desired outcomes are not apparent from the face of the statute. The other defining characteristic of the BSA is, of course, the absence of any *purpose* statement.

Logic would suggest that governments legislate to achieve an outcome. Yet with the BSA it is almost as though *end* has been lost in an almost obsessive fear about possible misuse of the *means*.

It is tempting to suggest that the BSA promotes a pest management regime that is designed to protect individuals (or individual sectors) more so than the environment.

While the Biosecurity Strategy attempts to address this issue, its vision and objectives remain high level and, sitting outside of the legislative framework, add little value for regional level policy or operational decision-makers.

There is little in either the BSA or the Strategy that can guide prioritisation, assist with making trade-offs or otherwise support, and assist in the defence of, RPMSs.

5.2.5 Approach to risk

Regional councils do not view pest management simply as a function of biosecurity as if biosecurity is a self-justifying activity. Rather, pest management is viewed as a function of the broader field of *sustainability* (as defined by the Local Government Act) and *environmental management*²⁶.

²⁶ Noting that regional councils’ view of the “environment” is shaped by the RMA’s definition of “ecosystems and their constituent parts including people and communities; and (b) all natural and physical resources; and amenity values; and (d) the social, economic, aesthetic, and cultural conditions which affect the matters stated in items (a) to (d) or which are affected by those matters. Noting also that for the purposes of the “environment” natural and physical resources is defined to

Viewed in that context, biosecurity sits oddly alongside other environmental management regimes, and RPMSs sit similarly oddly alongside other environmental management tools.

In the simplest of terms, there is a glaring inconsistency in the approach taken to managing *risk*. That is, the regime established to manage the risk associated with *physical and chemical contamination* of the environment is fundamentally different to the regime established to manage the risks associated with *biological contamination* (i.e. establishment of pest species).

The prospect of physical and chemical contamination (and consequential risk to natural and physical resources and human health) has given rise to nationally promoted management regimes with:

- Clear values-based outcome statement/objective(s) and principles (i.e. The government has been prepared to state what it is that it expects to achieve through the exercise of functions and has established principles and priorities in law to guide and justify the exercise of powers)
- Specific duties on individuals (including the duty to avoid, remedy or mitigate effects on the environment)
- Mandatory functions for management agencies (such as regulation making responsibilities)
- Sophisticated enforcement powers and responsibilities (including third party enforcement opportunities and infringement notices (instant fines).
- A commitment to strategic national leadership through:
 - Development of national level policies, standards and guidelines (to set direction) and support effective intervention
 - Good practice development, dissemination and sector capacity building initiatives
 - Financial support to address “orphan” issues (such as funding of orphan contaminated site clean up²⁷)
 - Monitoring of regime implementation and outcomes (including the state of the environment) and reporting
- A healthy relationship between central and local government based on the principle of partnership.

The risks associated with biological contamination are at least as potentially damaging as other forms of contamination. However, the features described above are, by and large, much less developed in the pest management regime and in some instances appear to be absent entirely.

include “all forms of plants and animals (whether native to New Zealand or introduced)”. The concept of environmental management is therefore broad and encompasses concern for production systems and native ecosystems.

²⁷ Orphan sites being sites that for which no private entity can be now held responsible and for which clean up is required to avoid on-going environmental effect. Crown contributions acknowledge the need to take action and the fact that the activities that caused contamination were often authorised by former Crown agencies.

5.2.6 Emphasis on cost benefit

Cost benefit analysis is an important part of any proposed intervention. Regional councils broadly support the imposition of obligations to undertake cost benefit analysis before committing to pest management noting that it forms an important check against overly ambitious but ultimately futile interventions.

However, it is important that the level of cost benefit analysis required is reasonable and realistic. As discussed elsewhere, we have a system where regional councils (or any one else) have no obligation to intervene and to put in place too high or too complex barriers to discretionary intervention does risk deterring even necessary and appropriate action.

In this regard three points are noted. First, regional councils' expenditure is already subject to the LGA 2002 which requires a form of cost benefit analysis and public scrutiny of expenditure. Regional councils ought not to be subject to unnecessary duplication.

Second, a qualitative approach to the identification and weighing of costs and benefits must be permissible. This is particularly important in the context of intervention to protect biodiversity, the benefits of which cannot be easily quantified/ monetised.

As noted earlier, in other areas of environmental management, the benefit cost evaluation required has been re-defined to lower barriers to regulation for local authorities. Some distinction should perhaps be made in the biosecurity context between regional councils (which are subject to LGA 2002 and electoral accountabilities) and third parties who are not subject to such constraints.

It is also noted that in the resource management context, the Environment Court has asserted that the need for cost benefit analysis is greatly reduced when the outcome to be targeted is a matter of national importance. Because there are no matters of national importance articulated in the BSA, it is difficult to promote that important principle.

5.2.7 RPMS as strategic documents

In the policy context, the purpose of a *strategy* is generally given as providing for a consistent approach to issues across an organisation (or *between* multiple organisations). This is achieved by providing a framework for action that is embedded the short and long term goals and the practices of the organisation(s) and its/their employees.

A strategy provides a basis for decision-makers to assess strategic and operational situations similarly, discuss the alternatives in a common language and decide on actions based on a shared set of values and understandings.

In short, a strategy is about encouraging unity of commitment across multiple players who have an interest in attaining a common objective.

RPMSs, on the other hand, tend to be simple regulatory codes that set out formulaic rules for listed pests. They are limited in their *strategic* value as they have few of the characteristics described above. This approach reflects the narrow and confined prescription for RPMSs set out in the BSA.

The approach taken to RPMSs contrasts with other strategic planning documents produced by regional councils such as land transport strategies and civil defence emergency management group plans.

5.2.8 Clarity of responsibilities

Despite the attempt to clarifying roles and responsibilities in the wake of the Biosecurity Strategy, roles remain unclear and responsibilities vary depending on the circumstances of the case.

The key issues centre on when a pest ought to be the subject of national intervention as opposed to regional intervention.

As noted earlier, the pest management (post incursion response) regime of the BSA seems to promote a decision-making tree that sees individual intervention (or collective non public sector intervention) as first preference, regional council intervention as second preference and national intervention as last preference.

In the broader context MAF Biosecurity's policy (based on published policy documents) seems to be as follows²⁸.

■ *Incursion response* should be MAF Biosecurity's responsibility where quick eradication is possible and the pest is *nationally significant* and subject to normal intervention criteria (benefits exceed costs, eradication is technical feasible, the need to take account of other priorities etc).

Except that:

- assuming lead responsibility does not mean that MAF Biosecurity will be solely responsible. There may be cases when a whole of government response is warranted. Similarly there may be cases where an organism is nationally significant but its distribution or impacts are such that a local response is appropriate. In such cases MAF will work with other parties to identify the most appropriate organisation to respond.

Where a pest is of *regional significance*, and quick eradication is possible then responsibility should lie with regional councils (using section 100 powers).

Except that:

- Even when an incursion falls to be dealt with by a party other than MAF Biosecurity (i.e. regional councils or some affected group), MAF Biosecurity may contribute (this will be assessed on a case by case basis).

■ *Pest management* (i.e. long term management beyond the transition out of incursion response) will only be undertaken by MAF Biosecurity in relation to pests of *national interest* (determined on a case by case basis) and only when net benefits of national intervention outweighs the net benefits of regional intervention.

The implication of this policy is that no pests other than "national interest" pests will be managed by public agency (other than DoC in its conservation manager capacity) unless regional councils elect to manage them. (And, the Crown has no particular view on whether regional councils do so or not).

While this policy is an attempt to add clarity it leaves many questions unanswered. In particular, the terms *nationally significant* and *regionally significant* are open to wide and divergent interpretation.

Similarly, the term *national interest* is not defined although it seems clear from the identification of national interest pests to date that this is interpreted narrowly.

²⁸ Paraphrased from *Policy for Responding to Pests and Diseases (Risk Organisms)*, September 2007

5.2.9 Boundaries between phases of pest management

A related problem is the issue of when incursion response ends and pest management begins and how the transition is managed.

Clearly this is a significant issue for regional councils as, in accordance with current policy and practice, MAF Biosecurity is likely to lead incursion response but is unlikely to have a role in long term pest management.

The decision to terminate an incursion response (i.e. an attempt to eradicate an organism), due to practicality or cost, and transition to pest management is therefore a very often a proxy for the transfer of responsibilities between central and regional government.

There does seem something odd with a regime that implies that an organism can pose a significant enough threat as to warrant central government intervention in an attempt to eradicate (after incursion detection) but that if that eradication fails, the threat suddenly ceases to be nationally significant and falls to be picked up by others.

Similarly, the incentives created by the current regime seem less than ideal bearing in mind that MAF Biosecurity's failure becomes somebody else's problem.

The current approach is justified by MAF Biosecurity on the basis that its organisational *competitive advantage* is in short term responses that might be possible during a "window of opportunity" that exists before a pest becomes fully naturalised (i.e. where its distribution is contained). MAF Biosecurity claims to have no organisational capability in long term management and asserts that others are better suited to that role.

The question then arises that if not MAF Biosecurity then who at central government level ought to take responsibility for long term management of nationally significant pest threats? Does this represent a gap in the system or are we prepared to accept that there are no (and never will be) pests requiring long term management (off the conservation estate) that are of national significance? .

While existing MAF Biosecurity policy does not close the door entirely on the prospect of nationally funded long term intervention there is every indication that the "lack of competitive advantage", "not nationally significant" and "insufficient benefit over cost" hurdles will conspire to erect a convenient and insurmountable barrier to any significant national involvement in long term management.

Table 2 shows how roles for post border biosecurity are currently fall in practice and the level of activity undertaken in each area by the main functionaries.

Table 2- Current division of roles and responsibilities for *post border* biosecurity

	Incursion response	Post incursion response	
	Eradication (or attempted eradication) of pests not previously detected	Eradication (short term management)	Population / distribution control (long term management)
National (MAF BNZ)	If nationally significant If eradication feasible and benefits outweigh costs Major (lead)role	If a "national interest" pest Current low level of activity	Possible though unlikely role. Possible contributor if national significant – e.g. Tb
National (Dept of Conservation)	If pest major risk to conservation possible contributor though MAF	If feasible and consistent with conservation objectives for a	In accordance to conservation strategies and plans and consistent

	BNZ likely to lead Minor role	reserve/area. On conservation estate only Moderate level of activity on conservation estate	containment objectives associated with WACA and freshwater fish framework Significant level of activity on conservation estate and moderate activity off conservation estate for limited range of pests
Regional Councils	If small scale and only of regional significance Unlikely given constraints	If regionally significant and mandated by public process Moderate level of activity	If regionally significant and mandated by public process Significant level of activity
Others (sector/community groups, individuals)	Possible funding contributor	Possible funding contributor Low level of activity	Possible funding contributor Low level of activity

5.2.10 Reliance on goodwill

There is little doubt that the national pest management system is heavily reliant on the *goodwill* of regional councils.

It is important to recall that:

- regional councils are not required to act by statute (there is no “top down” push);
- Although there is growing interest in the biodiversity outcomes pest management can deliver (and a growing level of community based initiatives) the extent of “bottom up” push for non targeted public good pest management is highly variable. ;
- the law is not helpful, and in some cases plainly obstructive, both in terms of threshold tests and in the strategic approach taken to site based pest management. Regional councils have had to be creative to circumvent unhelpful statutory provisions. This has caused some in regional councils to observe that regional pest management has occurred “despite the law and not because of it”.

This situation has led regional councils to postulate that the national pest management system would have collapsed had it not been for the goodwill of regional councils. Nothing else has sustained regional effort and investment except a desire amongst individuals and organisations to do the “right thing”.

While all human systems rely, to some extent, on an element of goodwill for efficient and collaborative functioning, the almost complete dependence of the pest management (off conservation estate) regime on regional council goodwill does not seem a durable basis to address an issue as significant to the long term ecological and economic health of New Zealand as pest management.

5.2.11 Partnerships

Partnership has become a much used term in policy discussions in recent years. Local government, in particular, has emphasised the importance of partnerships in achieving outcomes desired by local and regional communities. Indeed, the LGA 2002 places considerable emphasis on the identification of community outcomes and, recognising the importance of other parties to the realisation of those

outcomes, encourages local authorities to partner with central agencies to ensure delivery.

However, the concept of partnership is also open to misapplication.

A partnership is a relationship between parties which encourages them to act in mutually supportive and, mutually beneficial ways. Partnerships are often about extracting efficiencies and synergies that would be lost if parties acted independently.

Partnership agreements are sometimes defined through instruments such as protocols or memoranda of understanding. Sometimes they are sustained simply through close personal or professional relationships between individuals.

From the regional council perspective, there is no doubt that the pest management arena is one that relies heavily on good partnerships between a range of parties – regional councils, government agencies, landowners, industry, community groups and territorial authorities to name the obvious.

These are not necessarily hierarchal relationships but ones characterised by mutual interest.

It is acknowledged that MAF Biosecurity has put considerable effort into building partnerships recognising the importance of other players in the system. The Central Regional Forum is a case in point. Those efforts are to be commended.

However, partnerships in the policy context should not exist to compensate for poorly designed institutional frameworks. Partnership arrangements exist to extract the best out of the system acknowledging the multiple roles of multiple players. They ought not be necessary for the very existence of an effective system.

The design of institutional arrangements is instrumental in promoting effective partnerships or consigning them to failure. The issues with the institutional arrangements identified above, (lack of strategic direction, fragmentation, lack of clarity of duties and responsibilities etc) are too fundamental to be bridged by partnership agreements and it is a misapplication of the notion to expect them to do so.

Successful, mutually beneficial partnerships are possible (and indeed essential) in pest management but they will only flourish when the fundamental system issues are addressed.

The distinction is more than semantic. It is the difference between, on the one hand, accepting responsibility but seeking assistance from others and, on the other, abrogating responsibility and expecting others to “fill the gap” in the spirit of so called “partnership”.

Regional councils are of the view that too often the only reason that an MoU is needed is because central government wants regions to do something they otherwise would not have to do.

5.2.12 Pest management in the coastal marine area

As noted earlier, rights and interests in the coastal marine area (CMA) are complex and in some cases overlapping. Far from being the theoretic “commons” within which there are no property rights, the CMA today is characterised by a plethora of rights and interests. Effective management is not hampered by an absence of private and public rights (or of a means of granting and defending rights) but by an

absence of mechanisms to reconcile these over-lapping, and sometimes conflicting, interests.

In regional councils' experience any management issue in the CMA is fraught with challenges. There are strong commercial interests and equally strong recreational, conservation and cultural interests. Some of these interests are spatially bound, others are non spatial.

The Crown has a multifaceted role in the coast. Since the enactment of the Foreshore and Seabed Act 2004, the Crown has an unequivocal *ownership interest* in the foreshore and the seabed – most of which is deemed to be “Crown land”. The Crown also retains the discretion to declare any marine organism to be an “animal” under the Wildlife Act thereby claiming ownership of those species (some species are owned and protected by the Crown in this way).] The Crown manages marine species for *utilisation while ensuring sustainability*. To that end, it allocates fishing rights in terms of bringing species within the quota management system (QMS). It also applies regulatory controls over the methods of fishing. . . Department of Conservation manages the taking of, and access to, marine mammals.

Private entities and individuals have specific ownership interests in the CMA. Marine farmers, mooring holders, ports companies, oil and gas exploration and production companies, owners of undersea cables (and a variety of others) all have exclusive occupation rights over the CMA for defined periods (and in some cases in perpetuity). Others such as the maritime industry have preferential rights over shipping lanes. Holders of individual transferable quota (ITQ)/ and its annual derivate Annual Catch Entitlement (ACE), recreational and customary fishers (who receive an allocation of the Total Allowable Catch (TAC) all have rights to harvest prescribed volumes of fish within areas that include the CMA. Marine tourism operators have non-extractive rights to “access” marine mammals.

By comparison regional councils' interests in the CMA are minor. They have no direct ownership rights (although some have an indirect interest as shareholders in port companies). They hold or manage no part of sea bed as marine protected area. Regional councils' role in the CMA is restricted to that of regulatory body with responsibilities for environmental management, health and safety. These include responsibilities for navigation and safety functions under the Local Government Act, and for marine oil spill response under the Maritime Transport Act 1994. Under the RMA regions have responsibilities for managing activities (such as discharges and reclamations) that may have adverse environmental effects as well as allocating, on behalf of Crown as owner, rights to occupy the CMA.

Regions have no specific function for pest management in the CMA although, consistent with the approach on land, they could assume a role if they wished. The key issue is why would they, or why should they? Unlike land, regions cannot levy a rate in the CMA. Therefore the cost of taking public action cannot be targeted to those who may have caused or exacerbated the pest issue or those who might benefit from the pest management response²⁹.

²⁹ While regions can levy coastal occupation charges on occupiers of coastal marine space, it has not been practice to do so for reasons to do with uncertainty about the appropriate basis for levying such charges and uncertainty about the purposes to which revenue gathered can be applied.

Nor does regional councils' general environmental management responsibility justify a role in pest management in the CMA. In the resource management context, the Crown maintains ultimate responsibility for environmental management in the coast through the Department/Minister of Conservation's role in (a) approving regional coastal plans; and (b) determining "restricted coastal activities". This over-riding role is justified on the grounds of "protecting the Crown's ownership interest in the coast". The Crown cannot have it both ways. If it asserts the rights of landowner in the CMA, it seems to regional councils that it must also accept the responsibilities. Furthermore, as noted earlier, responsibility for managing impacts on the potential utilisation and sustainability of marine species is actually addressed through specific, Crown implemented, legislation (the Fisheries Acts and the Conservation Act) under which regions have no functions. While the RMA does require regional councils to take account of effects on marine ecosystems (except for effects relating to fishing), those effects relate to activities of people using CMA not the effects of pests that may arrive as a result of an activity not directly controlled by the RMA (e.g. marine transport).

Applying the regional councils' view that responsibility for pest management should begin with the landowner who has the primary duty of care, any debate about responsibility for pest management in marine areas must begin with the Crown as landowner in the CMA accepting initial responsibility to manage negative externalities.

That is not to say that that is where the issue ends. Clearly it is more complex than simply the landowner taking sole responsibility regardless of the circumstances. How responsibility plays out in practice will depend on many variables. Including the extent to which pest incursions are attributable to particular actions or activities, who authorised those activities, whether all conditions of such authorities were followed, and what interests are particularly at risk from the incursion.

More work is needed to develop a framework for allocating responsibility for pest management in the CMA. It is possible that regional councils will, under certain circumstances, have a role to play as a supportive partner. But that role ought not to be based on a misconceived assertion that it is a regional responsibility to do so. The party responsible for the incursion/exacerbation, the seabed owner, the regulatory authority that authorised the activity giving rise to the pest incursion, the public agency responsible for the protection of the species/resource at risk from the pest will all be well above regional councils on the list of parties with a potential responsibility.

6 Evaluation of the pest management system

6.1 First principles: justification for intervention

In public policy terms the basic problem requiring intervention (by way of a national pest management regime) is that people do not meet the full cost of their actions or inactions.

The nature of this problem is pest specific but in general terms, not managing a plant or animal pest on your property increases the likelihood that others will incur cost even if they are appropriately managing pests on their own properties. Plants and animals do not respect property boundaries.

In other words, in the absence of intervention, the externalities associated with land ownership are not being internalised. That is, the cost is not just borne by the land owner whose action or inaction allows the pest to establish and spread. Rather, the cost potentially spreads to many others who must suffer loss of production or enjoyment of their properties.

While landowners may have some incentive to undertake pest management on their own land that incentive may be a relatively weak (or even entirely absent) compared to the incentive they would have should they be forced to pay the full cost of their poor land management.

Complexities arise because whether the externality occurs depends on the individual circumstances. An organism that is benign or even beneficial to one person may be a serious pest to another. (For example, gorse can provide a nursery canopy for someone motivated to restore vegetation but is a problem for an adjacent pastoralist).

Leaving the courts to sort out this issue under common law remedies is not practical since the transaction costs are likely to be prohibitive given the potential frequency of incidence and the difficulty in proving where pests originate from (and who is ultimately to blame) since the pest environment is dynamic (pests may spring board from one property to another in a short space of time). Furthermore the costs of pests fall not just on individuals but also on the broader national community.

Similarly, in the context of new pest incursions, the cost of undertaking an effective response will often be so high that it far outweighs the ability of any perpetrator (even if identified) to pay.

In public policy terms a secondary problem exists because pest management (or a pest free environment) can be either a public, private or club good. People cannot be excluded from some of the benefits of a pest free environment (e.g. everyone benefits from biodiversity being maintained) but some forms of pest management can benefit only a select few (e.g. only a select group of growers benefit from control of a particular horticultural pest in a particular locality).

The provision of private goods seldom justifies intervention since incentives exist for individual responses. Similarly, incentives exist for club responses to provide club goods. However, some intervention may be required to ensure clubs function effectively and the “free rider” problem can be dealt with (including ensuring, where necessary, coercive tools are available).

The provision of public goods requires rather greater intervention since, if benefits cannot be fully captured, there is no incentive for private or club action. The primary issues for the design of a pest management regime is how to provide for the supply of public good pest management while ensuring (a) the private benefits are not subsidised by the wider community (avoiding the classic “free rider” problem); and (b) landowners (or others responsible for pests) are not excused from taking responsibility for managing the externalities of their land/resource ownership and management (or mis-management).

That general conundrum together with the future pest management challenges discussed in section 2 of this report is considered in the following evaluation.

6.2 Attributes of success in provision of public good pest management

A pest management system that delivers public good pest management in an effective, efficient and equitable manner will have the following attributes.

6.2.1 Clarity of purpose and strategic leadership in the pursuit of that purpose

If there is to be intervention to achieve public good pest management, a seemingly obvious prerequisite is clarity about the public good outcomes to be achieved by intervention. This includes the *purpose* of taking action and the specific *outcomes* to be pursued.

Related to this attribute is the need for *strategic leadership* in the sense of some agency taking a national interest in the achievement of nationally important outcomes by directing resources to achieve (or contribute to) those outcomes through the pest management system. This will also involve integrating pest management into the wider national environmental management regime. Promoting a collective understanding of the role pest management plays in the broader system is essential.

▪ *Current regime*

The current regime is weak in this regard. It relies on individual parties determining their own outcomes and priorities based on their understanding of local or sectoral issues and priorities. The approach rather assumes that there are no national interests to be promoted.

Yet it is quite clear that there are national interests very much affected by pests (actual and potential). Some of these interests are already well articulated in existing strategies such as the Biodiversity Strategy.

The “national strategy” implied by the current system is, as it applies off the conservation estate at least, for those with access to pest management tools to work out what’s important to them, if anything, and manage pests to promote those outcomes if they want to.

Given the significance of pests to the welfare and identity of New Zealand, it is almost inconceivable that that could really represent the sum total of the national interest in pest management.

- *Possible remedy*

It is recognised that MAF Biosecurity has begun work on developing a purpose for the Biosecurity Act. That should be a priority and should provide an aspirational goal and a statement on matters of national importance.

An obvious complement to a statutory purpose would be the articulation of a aspirational goal and set of desired outcomes in a non statutory guideline or national pest strategy. That may develop, and give greater specificity, to the statutory purpose and associated statutory matters of importance. Fundamentally though, a statutory purpose with clearly articulated matters of national importance (outcomes) is the only means of providing the durable platform for action required.

6.2.2 Individual and club responses are facilitated

Pest management ought to be, first and foremost, the responsibility of the individuals and/or groups that gain exclusive benefit from pest management.

Governments central or regional should engage only when there are nationally or regionally important outcomes not being provided by individual or club responses.

In a world of limited resources, only by avoiding effort and expenditure on managing pests that ought to be managed by those directly affected by those pests can efforts on public good pest management be maximised.

Successful public good pest management therefore begins by ensuring club responses are effectively promoted and facilitated.

- *Current regime*

As discussed earlier, the scheme of the BSA does provide tools (NPMSs and RPMSs) for club responses. In fact it seems the tools were designed first and foremost with club responses in mind rather than for use by public sector (local/central government) agencies³⁰. Further, the BSA expresses preference for individual responses over regional and national responses.

However, as noted in section 5.2.1, the reality is that there have been very few club responses to pest issues. The reasons for that are not clear but are likely related to the following.

- The boundaries between private benefit, group benefit and public benefit are seldom clear or universally accepted. There is a natural incentive for potential “payers” to seek to identify benefits broader than the obvious target group. Any chance to “fee-ride” or “ride cheap” is exploited leading to protracted and sometimes insolvable debates about the appropriate level of contribution.
- Those at risk from pest incursions (inter or intra national) often fail to appreciate the risk they face and/or believe that someone else (usually regional or central government) will come to their rescue should an incursion occur or should existing populations reach a point where action is required. A lack of understanding and acceptance that they carry the risk leads to irrational behaviour and insufficient incentive to explore collective (club) preventative or management action.

³⁰ As discussed in section 5.2.6, the detailed process requirements and cost benefit constraints seem designed specifically with private sector players in mind.

- Adding to the above problems is the lengthy and onerous processes and obligations associated with the preparing and administering tools available (NPMSs and RPMSs) to take effective club responses.

In the absence of club responses, regional councils have needed to apply targeted rates regimes to fund pest control programmes in specific areas. That is, regional councils have effectively acted as the “club secretariat”. The approach of targeted rates has its limitations. For example, there are difficulties targeting rates to particular land uses and targeted rates are not administratively efficient to apply to small areas. In short, targeted rates, though a useful funding tool, are not an effective substitute for genuine club responses.

Clearly there is a strong national interest in getting club responses happening and happening effectively. The “provide a tool and leave them to it” approach patently does not work and tends to have resourcing and political implications for regional councils (in particular).

Part of the answer to this conundrum may be to confirm in law where the responsibility for pest management lies, to the extent perhaps that certain outcomes (such as primary production) are associated with private and club responses, and others (such as biodiversity) with public responses. There may also be a need to design new and additional tools to compel participation and to determine relative contributions.

Although specific remedies for the lack of club responses have not been identified here, regional councils do recommend the issue of facilitating club responses for further investigation.

6.2.3 Landowner responsibility for internalisation of externalities (exacerbation)

Public good pest management will clearly fall into one of two categories.

The first is *exacerbator responsibility* – otherwise described as “good landowner” or “good neighbour” responsibility. That is, even if it is not in the interest of the landowner to manage pests on their property (i.e. there is little or no private good benefit) there is a responsibility to ensure that pests are contained (in so far as possible) on an owner’s property and do not spill onto neighbouring properties or into the wider environment. As noted earlier, a fundamental principle of public good pest management is that landowners should internalise the externalities of their land management or mis-management.

Even though the service required might be described as public good pest management (on the basis that there is no private benefit) the cost of delivering that service ought not to fall on the public purse (unless of course the public happens to be the landowner).

The second category of public good pest management relates to the achievement of specific *public good outcomes* (such as biodiversity or public health protection) that might require a type or level of management that exceeds (a) the private benefit gained by individual landowners; and (b) what could be construed as reasonable exacerbator responsibility.

In other words, a pest management regime needs to include the clear principle, and a mechanism that ensures that landowners take responsibility for pests on their own land where there is risk of pests spreading to the wider environment. The principle ought, correspondingly, to ensure that public investment is only made

where individual good neighbour action is insufficient to deliver a desired public good outcome.

Such a clearly established principle will help determine what is achieved by *regulation* and what is achieved through *publicly funded* pest programmes.

- *Current regime*

The current regime does not include this distinction at present (although it is reflected in most RPMSs). Indeed the exclusion of Crown land from the control of regional pest management strategies and the reluctance of the Crown to fully fund good neighbour pest management on the basis that it already invests heavily in pest management tends to obfuscate this fundamental principle.

Similarly, the Crown's reluctance to accept that pests occupying Crown owned seabed or river or lake beds ought to be first and foremost regarded as the responsibility of the landowner actively conflicts with the principle discussed.

On the other hand, as discussed earlier, the Biosecurity Act does imply that landowner responsibility ought to be preferred over intervention by way of pest RPMSs.

The difference in legislative intent and Crown practice is hard to reconcile.

- *Possible remedy*

One approach to addressing this issue is to more clearly establish principles and duties in the legislation. This would include a duty on all persons to manage land in such a way as to minimise the risks of pests spreading beyond the boundary of properties or (at least in the case of sea, lake and river beds) spreading beyond the established range of a pest.

Such an amendment to the BSA would also assist in addressing the issue of lack of acceptance of private risk and responsibility and consequent low levels of club responses as discussed in section 6.2.1.

In addition to the specification of a statutory duty, *tenure neutrality* should be introduced to the BSA such that the Crown faces good neighbour obligations in the same way as other parties face good neighbour obligations. That is not to say that the Crown ought to be fully bound by RPMSs. As discussed at length in Appendix 1, a more sophisticated approach to the Crown is possible and has precedent in the RMA.

Such an approach would clearly distinguish between good neighbour responsibilities (the management of externalities) and responsibility for delivering other public good outcomes (such as good conservation management). In terms of Crown land, the former ought to be controlled by RPMSs and later need not (although synergies in management by multiple parties ought to be exploited as discussed in the following section).

The solution would involve amendment to section 87 of the BSA so that Crown land was subject to rules of RPMSs except that land administered by the Department of Conservation on behalf of the Crown is exempt *provided* (a) pest management carried out in accordance with management plans *and* (b) there are no significant effects/risk from pests beyond the boundary of the conservation estate. The amendment would need to make clear that to the extent that there is risk of pest damage beyond the boundary of conservation estate then rules of RPMSs

could apply. Equally, the amendment would make clear that the regional council has no authority (nor does it have an interest) in controlling the business of conservation management – or the prioritisation of pest management to further that outcome on public conservation estate.

For the avoidance of doubt, Crown land held by agencies other than the Department of Conservation ought to be fully bound by rules of RPMSs. For the avoidance of doubt, and consistent with the discussion in section 5.2.11, this would include the marine environment (with the Crown the legal owner of most foreshore and seabed).

6.2.4 Appropriate intervention tools for public responses

Public intervention is required to deliver public good pest management. The tools of intervention need to be appropriate to the task.

In particular, the process for developing the tool:

- (a) needs to include safeguards against poor interventions but should not so onerous as to deter use of the tool
- (b) should be time and cost efficient to use (not duplicate the processes/tests that are already required by statute).

Furthermore, the tool itself should be flexible enough to enable regional councils to respond rapidly to new pest threats.

▪ *Current system*

Regional councils believe that RPMSs fail the tests outlined above. They have proved to be an intervention tool that is not particularly well suited to either the private sector or regional councils.

The authorisation of funding role that RPMSs purport to provide is unnecessary since regional councils can fund pest management independently of an RPMS. The onerous process obligations aimed particularly at potential private sector users are out of step with the obligations that ought to apply to publicly accountable bodies such as regional councils.

Furthermore, RPMSs are inflexible. The fact that regional councils are unable to respond (through regulatory means at least) to pest threats unless the organism is listed in an existing operative RPMS has been raised on many previous occasions. However two specific issues are apparent.

First, RPMSs have no effect until they are finalised and all appeals resolved by the Environment Court. This contrasts with plans prepared under the RMA, for example, which (a) can take effect as soon as they are publicly notified; and (b) can become operative *in part* (even when specific provisions are subject to appeal).

Second, the BSA makes no provision for substantive changes to be made to RPMSs between reviews. If the pest-scape changes and new rules are required, the RPMS needs to be reviewed in full. Again, this contrasts with plans prepared under the RMA which can be changed at any time (subject to a public process). In fact anyone can seek a change to a regional or district plan (i.e. individuals or industry groups can apply to have a plan changed). The BSA contains no such flexibility for RPMSs.

Although there are powers to address small scale incursions under section 100, these are of limited value for long term management.

- *Possible remedy*

Regional councils believe that the “one size fits all” approach of the current RPMS provisions of the BSA ought to be amended.

The tool to be used by regional councils should be different both in process and in content to that available for use by private sector parties (clubs).

A redesigned pest management intervention tool for regional councils should address powers of *regulation only*. The question of funding pest management programmes should be left to be authorised, as any other council activity, under the LGA 2002. Regional councils should, however, retain the ability to include programmes within regional strategies but those programmes ought not be challengeable through the Biosecurity Act.

Such a (redesigned) RPMS would adopt a more sophisticated approach to regulation enabling greater flexibility to amend strategies (and even perhaps accept private requests for changes by “clubs”). In other words, rules could be changed between reviews; rules may become operative once notified (and do not have to wait until submitters are heard and appeals are resolved); RPMSs could become operative in part; and third party enforcement rights are available.

As suggested in section 6.2.1 above, a separate tool for private sector interventions will be required.

6.2.5 Co-ordination and alignment of pest management activity

As noted above, at a regional scale there are many parties involved in pest management. An efficient pest management regime would ensure that contributions towards common goals are aligned and coordinated. This includes both the programmes of public agencies and of other community led initiatives.

More specifically, regional scale pest management would:

- integrate the pest management activity across the landscape and not be artificially constrained by land tenure (i.e. be “tenure neutral”)
- align and coordinate the actions of all parties in a functional, temporal and spatial sense.
- foster and encourage community led initiatives (so as not to crowd out voluntary efforts).
- be collaboratively designed and collaboratively implemented.

- *Current system*

The current system does not promote a strategic regional approach to pest management. As noted in 5.2.7, due to the requirements and constraints of the BSA, RPMSs are not strategic documents and they do not represent a collective, collaborative direction for pest management across a region.

Furthermore, as previously highlighted, the national pest management regime is characterised by duality: pest management on public conservation lands is determined by conservation legislation and priority setting and pest management off conservation estate determined by RPMSs prepared under the BSA.

While many regions have achieved a level of collaboration with DoC in terms of programme delivery, this has generally been outside of the formal RPMS framework.

- *Possible remedy*

The most important element to resolve this issue is the introduction of tenure neutrality as discussed in section 6.2.3 above. Tenure neutrality will ensure that land owners (whether public or private sector) assume responsibility for off-site effects. However, tenure neutrality will also provide the opportunity and incentives to the Crown and other parties to co-ordinate management and capitalise on possible synergies.

If the Crown has to control pests at the boundary to a certain level there is a clear incentive to work together with other parties (regional councils and private landowners) to ensure such requirements can be satisfied cost effectively

6.2.6 Proactive rather than reactive management

An effective pest management system will be strategic and proactive as opposed to being crisis driven.

This means that it will have plans in place to manage the risk of international as well as inter and intra regional pest incursions (and other pest risks) before those incursions occur. This in turn requires commitment to:

- preventative actions (including social marketing that educates the public about risk behaviours and about the potential need for control responses)
- risk analysis (to ensure we understand the risks and can plan for them)
- quality surveillance
- clarity of roles and responsibilities in the event of new incursions (including inter-regional) incursions
- contingency planning including well developed and tested systems for decision-making and communication.

- *Current system*

While MAF Biosecurity has contingency plans in place to deal with extreme impact incursions such as foot and mouth disease, there seems to be much less readiness to address events of lesser significance.

Although most report that New Zealand is better prepared than it has been in the past, recent events with brown mussel incursion in Marlborough cast doubt on whether there are appropriate decision-making and communication systems in place at the national level to avert avoidable incursions and maintain effective central regional partnerships. In that case permission was given for a foreign vessel to clean its hull inside territorial waters when it should not have been and brown mussels were dislodged as a consequence. The key point though is that there was a failure to report the event to the appropriate local authority with jurisdiction for the area. The lack of communication with the regional council (which might in fact be in a position to assist) is not an isolated case.

At the sub national level pest management is largely about “what’s there now”. There is little or no regional level contingency planning about what will happen if a new pest arrives from another region.

One notable exception is the arrangement made for *Didymo* which involve MAF Biosecurity in an incursion response should *Didymo* be detected in a North Island waterway.

Overall, however, there would seem to be a need for better communication and co-ordination around incursion response. Regional councils generally believe that:

- As matter of course, they ought to be advised at the time an incursion is discovered
- They have resources that might be of assistance for incursion responses (especially given MAF Biosecurity’s understandably limited “stand by” resources); and
- Except where eradication is obviously feasible, research and development of management options (for long term management) should begin concurrent with early eradication efforts and not be left to be explored only after the decision is taken to transition to long term management.

- *Possible remedy*

Many changes are required to continue to move the system from reactive mode to proactive mode. At the national level it seems *better systems* need to be put in place, better training, more commitment to surveillance, risk assessment (in terms of scoping current and emerging risks) and (ultimately) increased funding for national involvement post incursion response.

At the regional scale, there may be value in ensuring that RPMSs include contingency planning for inter-regional incursions of potential high impact, including clear articulation of roles and responsibilities (of national and regional agencies) and systems and processes for decision-making and communication around international and interregional incursions.

Similarly, MAF Biosecurity needs to amend its operating protocols to ensure better communication with regional councils at the time of incursion detection and more timely investigation and development of long term management tools and practices.

6.2.7 Application of scarce Crown funding to achieve most benefit

Given that public funds will always be scarce, there needs to be a means of ensuring that resource allocated nationally to achieving public good outcomes via pest management delivers the maximum amount of that desired outcome for the investment made. In other words, an ideal system would ensure the most pest “bang” is achieved for the public “buck” invested.

Moreover, it would ensure that public investment in pest management is not wasted through untimely termination of programmes or the failure to capitalise of potential synergies.

- *Current regime*

The existing system allocates funding to departments through the annual Crown budget process.

Crown agencies generally do have sound means of prioritising pest expenditure *within their areas of responsibility*. However, pest management programmes (such as the Tb programme) can and do have benefits across multiple outcomes (involving multiple departmental and regional council interests). There is currently no framework to ensure that, to the extent that synergies are possible, they are exploited and the investment is not wasted as non target outcomes go unrecognised with any gains made subsequently lost.

Furthermore, some of the practices used by Crown agencies do not appear to promote least cost pest control operations. In contrast to regional councils' use of external contractors tendering on a competitive basis for cost operations, Department of Conservation practices would seem to raise questions about whether scarce resources could be deployed to extract greater benefit.

- *Possible remedy*

In the short term the Tb Vector issue can be dealt with on a one off basis with the Crown ensuring that the full range of benefits of Crown expenditure is recognised and funding continued as and where “non target” benefits promote nationally significant outcomes.

However, to the extent that the issue highlighted by the Tb Vector experience is symptomatic of a more fundamental problem with the way Crown resources are allocated to pest management, some form of Crown funding framework could be devised.

The main feature of such a framework would be funding criteria that ensure that the full suite of potential outcomes from a control programme are recognised at the outset, synergies are promoted where feasible and decisions about on-going funding recognise and protect non target outcomes achieved by previous expenditure. The promotion of best practice operational funding methods would also seem appropriate.

6.2.8 National (or multi region) consistency when sub national variation would undermine outcomes

Any system that relies on “enabled devolution” of responsibility to the sub national level also needs to provide a means of achieving national or multi-region consistency when that is required.

Inconsistency of approach can lead to the legitimate efforts of one regional council being undermined by pests crossing boundaries from regions which have adopted a more relaxed regulatory approach. Examples are many. Recently Environment Waikato has become aware of silage being transported from Northland to the Waikato to provide supplementary feed during the current drought. The silage has been found to contain alligator weed - a plant pest considered one of the world's worst and listed for eradication the Waikato but not identified as a pest in Northland.

Unless there are complex and economically inefficient rules controlling the distribution of fodder between regions (for example) regional variation in the management of certain plant pests will lead to the undermining of regionally significant outcomes.

Similarly inter-regional inconsistency can lead to *regulatory flight* as the sale of species prohibited in one region transfers to another. So that someone wanting, for

example, a pet that they cannot lawfully buy where they live, simply purchases one from an adjacent region where its sale is not banned.

- *Current system*

The current system partially addresses this issue through the unwanted organisms mechanism (which introduces national control of sale) and, for plant pests, through the national plant pest accord.

However, the current approach relies on those lists being accurate and up to date. Furthermore, the current approach does not deal with the issue of inadvertent spread of plant pest seed/viable plant material as in the case of alligator weed discussed above.

It is possible for RPMSs to contain rules prohibiting the movement of pests from one place to another. It is also possible for an area to be declared a *controlled area* under section 131 of the BSA enabling movement of pest, goods or material into or within or from that controlled area. However for such rules to be justified, a regional council needs to be able to predict specific risks. Furthermore the use of that approach relies on the region of origin taking the measure. The region at risk has no ability to declare another region a controlled area. A regional council can make a submission on an adjacent region's proposed RPMS and appeal decisions to the Environment Court if necessary but that approach is generally regarded as undesirable and largely ineffective.

Other than the submission/appeal process there is no formal mechanism to promote a consistent approach between RPMSs although some efforts are currently made through the Biosecurity Managers and Generic Guidelines groups. Again, this is in contrast with the RMA which provides for national instruments (such as national policy statement and national environmental standards) to achieve multi region consistency in the management of environmental risk. Similarly, there are no national guidelines on the management of specific cross boundary pest risks.

- *Possible remedy*

Addressing the need to achieve inter region regulatory consistency poses one of the more difficult challenges. Regional councils generally do not support heavy handed, top-down direction on the content of regional strategies (in any policy arena). A national standard for pest management issued by MAF Biosecurity would not be a welcome addition to the regime.

An alternative approach that might be more constructive would involve regular MAF Biosecurity-sponsored multi region forums involving adjacent regions with similar bioclimatic conditions which operate to identify and resolve cross boundary regional issues. Such forums would have the task of identifying "bottomlines" in terms of acceptable pest risk, and promoting greater consistency in regional scale regulation. MAF Biosecurity could have a facilitation role and a role in providing information to assist decision-making.

The development of a more strategic and integrated approach to operational activities could also assist.

6.2.9 Demarcation of national and regional responsibility

Any system that defines a role for two separate levels of government needs to be very clear about where roles and responsibilities begin and end. If there is not

clarity it is likely that there will be duplication or, more likely when expenditure is involved, a stand off with the result that issues fall through the cracks.

- *Current system*

As discussed in section 5.2.8 despite attempts at clarifying the respective roles of MAF Biosecurity and regional councils the situation remains unclear. The result is on-going frustration.

- *Possible remedy*

Part of the necessary response to the issue is to distinguish between *roles* and *responsibilities*. It is possible for an agency to take responsibility for an issue but decide not to assume a particular role depending on the circumstances.

Regional councils suggest that the Crown should, and arguably does, take responsibility for pest management in the general sense. This can be justified on the basis that:

- The Crown should be responsible for all responses to incursions over the national border (since it manages the border and without responsibility for incursion response incentives and liabilities would not fall appropriately)
- The Crown should be responsible for incursion response to all other pests (including inter-regional pest incursions) on the basis that pests are present in NZ because of the failure of the Crown agency to keep them out or to eradicate them through an incursion response.

However, it is important to note that regional councils accept it is legitimate for the Crown to accept *responsibility* but decide, for any particular pest or particular locality, not to take action. It is regional councils' view that the Crown ought to assume a *role* in public good pest management when:

- The presence, population size, or inter-regional spread of a pest poses a significant risk to one or more *nationally significant outcomes* as expressed in legislation or government strategies/policies (including but limited to a national pest management strategy). Again, there is some evidence that this principle is already accepted in part (in the form of funding for biodiversity protection on public conservation estate and in the assumed role in eradicating national interest pests).
- Pests with actual or potential impact on national or regional outcomes are present because of poor biosecurity decisions of national agencies past and present ("legacy" pests³¹). (There seems to be implied acceptance of this principle through, for example, the Crown accepting the responsibility for certain pest fish).
- Consistent with the principle discussed section 6.2.3, when the Crown is the owner of land (including Crown owned seabed and beds of lakes and rivers), and action is necessary to meet reasonable landowner responsibilities (i.e. stop a pest's spread and affect on others – including others' interests in the marine environment).

³¹ As opposed to pests present despite the best efforts by MAF biosecurity to keep them out and eradicate them once detected.

The Crown need not assume a role when there are clear incentives on others to act (because pest management would constitute a private or club good). However the Crown ought to contribute to the extent that public good pest management outcomes can be achieved by private action (This principle is already accepted in part in terms of Crown contributions to the Tb Vector control programme).

It is also important to note that assuming a role in pest management does not necessarily mean taking a hands-on role but it does mean funding activity in whole or part.

While it is a fact of public intervention that some form of cost benefit test will need to apply to ration scarce resources, it is not, in regional councils' view, valid to refer to costs and benefits as if these things can be assessed in a vacuum. The magnitude of costs and benefits are determined by the value placed on certain outcomes. The benefit of intervention will be much higher if a nationally important outcome is protected as opposed to outcomes that are not nationally significant. It makes a mockery of public intervention to identify nationally important outcomes but argue that the benefit of protecting them by way of reasonable public expenditure is not justified.

Regional councils, on the other hand, ought to engage in pest management that supports regionally significant outcomes. To the extent that regionally significant outcomes coincide with nationally significant outcomes (as inevitably they will) both parties should contribute.

Principles broadly consistent with the above need to be articulated in legislation and/or a national policy framework that is developed in accordance with the recommendations of this report.

6.2.10 Drive appropriate behaviour "up system"

Finally, a good pest management system would be designed to ensure that those with responsibility for other parts of the system (pre border, border and incursion response) are subject to incentives to make appropriate decisions and take timely and effective management responses.

- *Current system*

As discussed at length in this report, the current system makes central government responsible for end to end biosecurity but in practice only in exceptional circumstances does the Crown accept a role in long term pest management.

This approach clearly creates the potential for an "all care no responsibility" approach to biosecurity. The consequences of failure fall not on those taking risk management decisions but on regional councils (and others).

- *Possible remedy*

The suggested remedy to this critical issue is linked to defining regional and national responsibilities much more clearly.

Should the Crown's responsibility for pests that establish through poor decision-making be more firmly entrenched, we might expect rather different incentives on "up system" behaviour.

There is precedent for this approach. For example, the Crown's recent support for action in response to declining Lake Taupo water quality is linked to acceptance

that it was the Crown's encouragement of land development in sensitive catchments that contributed to a decline in water quality.

7 Conclusions and recommendations

It is difficult to assess the overall effectiveness of the current system because:

- (a) the desired outcomes are not clear; and
- (b) nobody is monitoring, collating or evaluating “results” at the national scale. At this point at least, conventional system evaluation is not possible.

Design of the system seems to imply that each region should do only what it wants to do in light of other statutory obligations and non statutory objectives. If that is the case then the system can be supposed to be effective. However, it is difficult to accept that that can really be the only nationally desired outcome.

Tool box approaches to policy issues work when people are prepared to pick up the tools and use them skilfully. To do this they also need, in addition to the tools themselves, a work bench, a manual and a good idea of who is going to turn up to help with the work. These things provide the framework and basic infrastructure that supports and guides the use of tools and the delivery of a product out the other end. Metaphors aside, those parts of the system appear weak within the current pest management regime.

The current pest management regime gives rise to a number of issues that cast doubt over the ability to address the emerging national pest-scape.

In summary, the system is fragmented. At the core of the system the BSA is heroic in its assumptions about the extent to which parties other than Crown agencies will be motivated to act; and about the extent to which the system can rely on the goodwill of regional councils. Attempts to resolve issues with partnership agreements, although well intentioned, are ultimately misguided since the deficiencies are too fundamental for “patch up” solutions.

Although a conventional assessment of the effectiveness of the current system is difficult, it is clear that the system does not rate well when compared against attributes considered by regional councils to be critical success factors for an effective, efficient and equitable pest management system.

In particular, the system appears to lack:

- clarity of purpose and strategic direction in the pursuit of that purpose
- appropriate facilitation of private sector (“club”) responses
- appropriate tools that for public sector intervention (particularly tools that provide flexibility to respond rapidly to new inter-regional pest threats)
- clear articulation of the duties and responsibilities of *landowners*, particularly with regard to the internalisation of externalities
- co-ordination and alignment of effort by multiple players (integrated management both across functions and across the community)
- a proactive (as opposed to a reactive) approach to address new pest risks
- a means to ensure that public funds are allocated to maximise the benefit from funds invested
- a mechanism to promote national or multi-regional consistency

- incentives to drive appropriate behaviour by those responsible for other parts of the biosecurity system.

For all these reasons, we conclude that as it stands the pest management system *will not deliver on national outcomes over the long term* (however and wherever they might be articulated).

To address this situation, regional councils suggest the following measures.

Short term measures

1. Crown landowner responsibilities

Ensure that Crown agencies are funded to fully meet obligations consistent with those that fall on other landowners under regional level regulation to internalise the cost of their pest externalities (i.e. act as good neighbours).

2. Tb Control programme

- a. Demonstrate what coincidental gains have been achieved by the AHB Tb vector control programme in terms of the Crown's national biodiversity objectives (as articulated in the NZ Biodiversity Strategy and work undertaken in accordance with that strategy).
- b. Provide national funding assistance to ensure that biodiversity gains achieved through the Tb vector control programme (as identified in accordance with Recommendation 2a) are secured beyond the life of the current Tb vector control programme.

Medium term measures

3. Tenure neutrality

Introduce *tenure neutrality* to the biosecurity regime by amending section 87 of the BSA to bind the Crown to act as a *good neighbour* by making:

- a. Crown land subject to the rules of (redesigned) regional council pest management strategies; except that
- b. land administered by the Department of Conservation on behalf of the Crown should be exempt where pest management is being undertaken in accordance with conservation management strategies and plans, *provided* there are no significant effects/risk from pests beyond the boundary of the conservation estate. (The amendment would need to make clear that to the extent that there is risk of pest damage beyond the boundary of conservation estate then rules of RPMSs would apply).

Note that this will bind the Crown to be a good neighbour but will not mandate regional council intervention in the Crown's core conservation management business. In other words, it will ensure the Crown is responsible for externalities and will bring the Biosecurity Act into line with the requirements of the Resource Management Act.

4. Internalisation of externalities

In addition, and consistent with the approach proposed in recommendation 3, promote within the BSA the principle of land owner/occupier responsibility for internalisation of pest externalities as a *statutory duty* applying to all land owners/occupiers.

5. Biosecurity purpose and strategic direction:

Establish a *statutory purpose* and matters of national importance for pest management taking into account of:

- a. The need to ensure the internalisation of externalities; and (separately)
- b. The desire to pursue a full range of public outcomes potentially at risk from pests.

6. Clarification of roles and responsibilities

Clarify the mandatory and discretionary roles and responsibilities of key players, notably MAF Biosecurity, the Department of Conservation and regional councils in pest management in terrestrial, freshwater and marine environments including how those roles and responsibilities are expected to change as the response to a pest issue changes over time.

7. Marine pests

As part of the response to recommendation 6 above, develop a framework for allocating responsibility for pest management in the coastal marine area that, in the first instance, takes into account (amongst other things):

- a. the responsibility of:
 - i. the party or industry sector responsible for the incursion
 - ii. the party or sector that stands to benefit most from the eradication or control of the pest
- b. the Crown's responsibility:
 - i. as owner of the seabed and foreshore
 - ii. as regulatory manager under existing statutes for the on-going utilisation and protection of marine species.

8. Intervention tools

Consider redesigning regional pest management strategies so that:

- a. There is a distinction between the intervention tool available to regional councils and that available to private sector parties (the process for developing the tools should reflect the different interests and incentives that exist)
- b. The regional intervention tool available to regional councils

- relates only to regulatory powers with the funding of control programmes left to be addressed under the local government legislation.
- Provide greater flexibility to respond rapidly to new pest threats.

9. Crown funding framework and efficient deployment of Crown resources

Develop a coherent and efficient *Crown funding system* for public good pest management which:

- a. Takes place within a clear outcome framework that:
 - i. Takes account of the full range of national outcomes at risk from pests
 - ii. Recognises the potential for programmes to advance multiple outcomes
 - iii. Ensures that on-going commitment to funding maintains gains against all nationally important outcomes achieved by previous public expenditure.
- b. Promotes the adoption of funding *principles and practices* that ensures Crown funding is deployed to achieve maximum pest control for investment made (through the use, for example, of competitive tendering methods for operational services).
- c. Reinvests any funding made available from the wind down of the Tb programme in long term management of pests to promote national objectives (including in particular biodiversity outcomes.)

10. Facilitate club responses

Investigate further the reasons for a low level of private sector (“club”) responses to pest issues and take such action as required to improve likelihood of future club responses to pest issues.

11. Operating guidelines

Development by MAF Biosecurity of much clearer guidelines and policies about how it will exercise its functions and responsibilities, including guidelines relating to:

- a. The nationally important outcomes to be sought through pest management (building on the statutory purpose referred to in recommendation 5)
- b. The steps to be taken at the time of discovery of any pest incursion. These should focus on:
 - i. informing the relevant regional council of the incursion and of the assistance, if any, that may be requested.
 - ii. initiating necessary and prudent investigation into likely medium and long term management options that may need to be employed by Crown agencies and /or regional

councils in the event of incursion response being unsuccessful.

- c. The principle that, in addition to meeting landowner obligations to internalise pest externalities, the Crown ought to take responsibility (though not necessarily sole responsibility) for post incursion response pest management where the pest of concern is:
 - i. a legacy pest of national significance
 - ii. a significant risk to a nationally important outcome.

Appendix 1 - Crown contributions to implementation of RPMSs

1. Biosecurity Act exemption

In accordance with section 87 of the Biosecurity Act, the Crown is not subject to any cost or obligation imposed by a Regional Pest Management Strategy³². As the Crown owns more than 30% of land area nationally (and a higher proportion in some regions) this has implications for the effectiveness of RPMSs and for the level of support for RPMSs in some regional communities. Regional councils have expressed concern about this situation over many years because of the potential for the Crown to be a significant exacerbator – that is, impose cost on other parties. (Note that regional councils distinguish between exacerbator responsibility and responsibility for public good outcomes as discussed in section 6.2.3.)

MAF Biosecurity's position is that it is appropriate for the Crown not to be bound under legislation, *"to protect its interests, because the Crown cannot vote in regional council elections"*³³.

With respect, that argument lacks rigor and simplifies and misapplies an important public policy principle.

While it would be valid to argue that the Crown ought not to be subject to impositions by regional council where:

- it does not have fair and reasonable opportunity to put forward its own case as to what, as a landowner, it should and should not be subject to (and what it can reasonably commit to); and
- regional councils do not have flexibility to distinguish in the way they impose obligations on land in different ownership (taking into account different constraints, burdens and compensatory actions).
- any dispute ensues as a result of the independent commissioner's decision on the content of a RPMS, take the matter to the Courts to resolve.

That is, of course, the opportunity that already exists for any landowner in provisions of the Biosecurity Act.

The view expressed by MAF Biosecurity may be an attempt to apply the old axiom "no taxation without representation", which is also sometimes translated to "no regulation without representation". It is useful to distinguish, for the purpose of this discussion, between taxation and regulation.

2. Taxation

Two points need to be made in relation to taxation.

First, the Crown is, of course, exempt from (most) rates levied under the Local Government Rating Act (LGRA). While it would be possible to argue that the

³² The Governor General may, by Order in Council, approve the application of a RPMS to the Crown but this has never occurred to date.

³³ BNZ, A Framework for pest management in the future: Working paper, July 2007

exemption from payments made to implement an RPMS is consistent with the exemption under the LGRA, there are important differences.

Most importantly, contributions to RPMSs (either by levy or targeted rate) are not regarded as general revenue but are more akin to:

- a user charge (since they relate to payment for a particular service of which the Crown is a direct beneficiary); and/or
- a financial contribution under the RMA (to offset/address an actual or potential environmental effect – in the sense that the Crown may be an exacerbator).

2.1 Crown pays targeted rates for services received

In contexts other than biosecurity, the Crown does pay *user charges* to territorial authorities (such as a water supply or wastewater charge). Under the Local Government Rating Act, both fully exempt and 50% exempt properties, as listed in Schedule one (which include Crown lands) are fully liable for *targeted rates* for water supply, sewage disposal and refuse collection *where the property receives those services*. Such a cost is simply the cost of doing business. Just as pest control ought to be regarded as a cost of owning land.

2.2 Crown liability for financial contributions under RMA

The Crown is also liable for *financial contributions* under the RMA under certain circumstances. The liability of the Crown to make financial contributions has been the subject of significant debate over the years. The current situation is as follows:

- If a Crown agency/entity makes a *resource consent* application to use land in accordance with a district plan then that agency (like anyone else) is liable to pay any financial contribution as specified in that district plan (this will typically be a contribution to transport infrastructure, reserves, or community facilities but may be broader in scope³⁴).
- If a Crown agency/entity makes a resource consent application to use land, water, air or the coast in accordance with a regional plan then that agency is liable to pay any financial contribution as specified in the relevant regional plan.
- If a land use activity undertaken by a Crown agency/entity is authorised by way of a *designation* (a particular type of authorisation under the Act available for certain works) then financial contributions cannot be imposed. (Note, however, that a designation may only authorise the use of land by Crown agencies, it does not authorise the use of air, water, coastal space being matters controlled by regional councils)³⁵

³⁴ Financial contributions under the RMA mean a contribution of land and/or money made for the purpose specified in a plan (ensuring the purpose of ensuring positive effects on the environment offset any negative effect). Over time the Courts have provided guidance on how and what financial contribution may be imposed.

³⁵ It is also relevant to note:

(a) that the Crown has access to designation powers for a particular work (and hence, amongst other things, the ability to avoid paying financial contributions) only where a Minister has *financial responsibility* for that work.

(b) ability to use designation is not limited to the Crown but also available to network utilities (telecommunications, electricity transmission etc) on the basis that they, arguably, provided public good.

Hence any suggestion that the Crown ought not, as a matter of principle (and law), contribute funds to local authorities (i.e. be in some way taxed because it does not vote) is not universally reflected in other existing regimes.

It is clear from existing law that two relevant principles apply to Crown funding contributions:

- If the Crown uses/benefits from a service provided by the local authority then it is liable to contribute to the cost of that service. The principle is rooted in the notions of *beneficiary or user pays* which in turn is derived from concern about *equity*.
- If the action of the Crown creates or may create an adverse effect on the environment then local authorities ought to have the ability to seek financial contribution to avoid, remedy or mitigate that effect though this need not apply if the action relates to a local land use issues (and not an issue controlled by regional councils). That principle is rooted in the notion of *degrader pays* often expressed as *internalisation of externalities* (i.e. if your activity – land ownership and management regime – creates a cost on the environment then you should meet the cost).

The second point is that, in any event, RPMSs are not about imposing charges and indeed can only levy parties by way of Order in Council (and therefore with government support). In practice, where regional councils require financial contributions to fund aspects of a RPMS they tend to do so by negotiation or through general and/or targeted rates (to which the Crown cannot currently be subject). Hence compliance with a RPMS does not coerce the Crown into paying any “tax” or levy. (Although it is accepted that compliance with rules a RPMS may have the effect of imposing cost).

Accordingly, the suggestion that the Crown ought to be bound by RPMSs (as sought by regional councils) does not imply that the Crown will be forced to pay a “tax” to a body it does not vote for.

2.3 Local government rates inquiry

On this point, it is also relevant to note that the question of Crown liability for local rates was canvassed by the Local Government Rates Inquiry which reported to the Government in August 2007³⁶.

The Inquiry noted: “*The original need or justification for exemptions [from rates liability] is not clear. Crown land exemptions probably reflected the historic perspective that the Crown was not bound by the law and the old common law concept that the Crown should not have to pay tax on the land it owns*”.

The question of “who gets to vote” was not identified as an issue. The inquiry also observed that in the UK the Crown is no longer exempt from the local tax and that although the Crown is exempt in Australia and Canada, Federal governments make payments in lieu of rates in both countries.

The Inquiry went on to conclude that:

³⁶ Funding Local Government, Report of the Local Government Rates Inquiry, August 2007

“a strong case can be made to exempt Crown land from rates where land involves a nationally important public good, provides clear net national benefits, and where a reasonable valuation of the land is difficult to establish”.

However, it made very clear that the exemption “right” is not cast in stone and that broad historic exemptions ought to be revisited.

While these observations were made in the context of exemptions from the LGRA the principles are broadly applicable to the financial obligations arising from the Biosecurity Act. Furthermore the arguments are relevant to the policy options discussed below.

3. Regulation

The other, more significant, component of the debate relates to *regulation* and whether the Crown ought to be exempt from complying with rules set out in a RPMS.

This argument seems even more difficult to justify since it has little or no precedent in any other regulatory regime.

3.1 The Crown and local and regional regulation under the RMA

The RMA binds the Crown. This means that Crown agencies wanting to use land and other resources must comply with the provisions of the Act and with rules set down by regional councils and territorial authorities.

No exemptions are made where the Crown activity relates to discharges of a contaminant to air, land or water, abstraction, damming or diverting or water or geothermal heat, activities in the beds of lakes and rivers or occupation of coastal space. (That is, activities that may have significant, potentially inter-generational, consequences on the biophysical environment and human health).

However exemptions from *land use* restrictions do exist where:

- the Minister of Defence declares the use necessary for *national security*; or
- where work is carried out on land managed by the Department of Conservation and that work is consistent with a conservation management strategy, conservation management plans or management plan prepared under the Conservation Act *and* where the activity does not have a significant effect beyond the boundary of the conservation land³⁷

In other words the exemptions available to the Crown under the RMA are extremely limited. In essence, just two agencies of the Crown are exempt from complying with rules that are designed principally to manage aesthetic/amenity issues but they not exempt from controls designed to maintain environmental health.

³⁷ A further complication is that while exempt from land use control imposed by a territorial authority the Department of Conservation must still, in all cases, comply with land use control imposed by a regional council (regional councils may control land to protect water quality or for soil conservation purposes for example). Reference to work being carried out in accordance with conservation management plans etc recognise that such plans have been subject to public scrutiny and debate and that it would not add value to re-litigate the same or similar issues within the RMA context.

It should be pointed out that there is no opportunity to legally *require* the Crown to comply with the Act (enforcement proceedings are specifically excluded) but the *moral* obligation is very clear.

3.2 Other local government administered legislation

Under the Local Government Act 2002 (LGA) the Crown (although exempt from some provisions) is not exempt from territorial authority bylaws relating to trade wastes, solid wastes, water supply, stormwater and drainage and fires in the open air. The Building Act, also administered by territorial authorities, is another example of de-centralised/devolved control imposed on Crown agencies. Again the principle implicit in the RMA seems obvious: where there may be significant consequences for environmental or human health and safety from activities potentially carried out by Crown agencies the Crown is bound by sub national regulation.

The inference is quite clear: the Crown ought not to be exempt from regulatory controls designed to protect against significant risk to the environment and/or public health. The omission of biosecurity regulation from this ambit does seem a glaringly obvious inconsistency given its similar objectives.

Of course the Crown is not exempt from the necessary but onerous regulation by national (Crown) agencies. Employment law, occupational health and safety law, and the Hazardous Substances and New Organisms legislation are just some examples of regulatory regimes designed to address risk to people and the environment with which the Crown must comply.

In other words there is no precedent for the Crown being exempt from regulation (national or sub national) simply because it is “the Crown”.

That ought to be no great surprise. Current Cabinet Office guidelines state that *“the Crown should be bound by Acts unless the application of a particular Act to the Crown would impair the efficient functioning of the Government”*³⁸

Interestingly, that approach reverses what had been the convention in the past. That is, that no Act binds the Crown unless it expressly says it does. Indeed that convention remains enshrined in law³⁹. The change in emphasis in recent years, however, recognises that the principle of fairness requires the Crown to be subject to the law of the land. Respect for the State, compliance by others and effective management of contemporary issues are all dependent on a “one law for all” approach.

4. Options

Given the anomaly that the biosecurity regime represents, there would seem to be a strong argument for change notwithstanding MAF Biosecurity’s expressed position on this issue.

Clearly the Crown position vis-à-vis both local taxation and local regulation is changing internationally and domestically.

³⁸ Cabinet Office Circular CO (02) 4, “Acts Binding the Crown: Procedures for Cabinet Decisions”, 13 March 2002.

³⁹ Law Commission, *To Bind Their Kings in Chains: An advisory Report to the Ministry of Justice*, Study Paper 6, Wellington, December 2000, para 4. Current is section 27 of the Interpretation Act 1999.

4.1 A case of differentiation?

An obvious remedy would be to substantially amend section 87 of the Biosecurity Act such that the Crown is bound by RPMSs just as it is by national pest management strategies.

The question is whether there something special about the Crown that it should not be obliged to internalise its externalities. We have seen already that there is no real precedent for this in other regulatory regimes.

Certainly the Crown is the single biggest landowner in New Zealand and so it will have a sizeable exacerbator contribution. However, the Crown would be exposed to hardship far less than many other landowners on fixed incomes who are expected to ensure they do not impose costs on others. In short the scale of the estate is not a compelling reason for justification

Certainly Crown agencies need to receive additional funding to ensure a obligation can be translated into action. To date that additional funding has not been forthcoming. However, it may well make it easier for funding to be secured through future budget processes if there was a legal obligation to comply with RPMSs (although it may not be reasonable to expect full obligations to be taken on “overnight”).

A case of special treatment is also sometimes made on the basis that the Crown makes a sizeable contribution to pest management in others ways (for example in research and in funding the Bovine TB/possum control strategy). In the view of regional councils, that argument is entirely without foundation. It fails to acknowledge the fundamental difference between pest management to internalise externalities (avoid imposing cost on others) and pest management to achieve public good outcomes. Engaging in the later does not excuse the Crown from the former. In other words, however important and welcomed contributions towards national pest management outcomes may be, they do not alleviate the obligation of the Crown as a *landowner*.

Regional councils understand that the Crown might be concerned that mandatory compliance with RPMSs would expose it to potential “gouging” behaviour as the Crown may be seen to have deep pockets such that, under pressure from local landowners and ratepayers, it might be asked to do more than its fair share. There is, however an opportunity for the Crown to challenge decisions on the content of RPMS and therefore avoid such exposure. Again, the case for differentiation is weak.

On the basis on arguments examined in this paper it seems difficult to conclude that the basic principle that *if the Crown owns land it should comply with the same rules that it, and local government, apply to other landowners* ought not apply. That does not mean that regional councils should be able to dictate what and how much pest management the Department of Conservation undertakes in terms of its core conservation management. That is rightly a matter for the Department alone (taking into account its management plans and strategies). However, the pest externalities arising from the conservation estate is a matter that should be rightly addressed by regional regulation. The options discussed below sketch out some ways in which the Crown might be brought into the RPMS regime.

4.2 Guidelines

Representatives from Crown agencies (DoC, LINZ and MAF) and regional councils have recently developed a draft guideline for how the Crown contributes to RPMS implementation.

The draft guideline applies only to DoC and Land Information NZ (LINZ). It addresses (a) how Crown agencies and regional councils will work to align respective pest management programmes and (b) the extent to which Crown agencies will contribute to RPMSs as both a beneficiary and exacerbator. Essentially the guideline leaves the level of contribution (if any) to the discretion of Crown agencies but does act as an expression of good faith. While it does state that Crown agencies will comply with RPMSs where the Crown is an exacerbator, there is a rather large qualifier that compliance is dependent on funding being available. In essence the guideline describes the status quo⁴⁰.

While the guidelines are a useful step, they do not address the fundamental issue that the RPMS sits as an anomaly in terms of sub national environmental regulation. Nor in fact are they accurately described as guidelines since virtually all matters are left to discretion and/or are heavily qualified they provide very little guidance at all. The document is more a statement of “best intention” and as such provides no certainty. While the commitment that is implicit in the guideline is undoubtedly genuine, it is not durable over time. New personal advising future governments could choose to apply the guidelines in ways that differ for the spirit of cooperation with which the guideline may have been developed. For that reason the guidelines alone are not considered an appropriate response to the issues identified.

4.3 Remove enforceability

The first realistic option would be to follow the example of the RMA in so far as the Crown would be bound by RPMSs, however, regional councils would not be able to take enforcement action against the Crown for non compliance. The Crown then has a strong moral obligation to comply but is not exposed to risk of prosecution should it be unable to comply due to national funding constraints.

This should be able to be achieved by simple amendment to the enforcement provisions of the Biosecurity Act.

4.4 Reverse presumption

The second option would be to reverse the current presumption in the Biosecurity Act. Currently the Crown is not bound unless it decides to wants to be bound (which it achieved by order in Council). It has the option of being bound to the extent it so desires.

The alternative to this approach is for the Crown to be bound unless it specifically opts out. A more transparent approach might, for example, involve a process whereby the Crown must issue by public notice (in a local newspaper), at the time and RPMS is made operative, of its intention to opt out of compliance with a specific RPMS in whole, or part, and the reasons for that intention. It could

⁴⁰ DoC already has informal agreements with some regional councils to make contributions that specifically target animal and plant pest problems on the conservation estate which exacerbate pest problems on neighbouring privately owned land. As discussed earlier the national funding allocation is around \$2 million. This equates to an average \$125,000 per region.

public invite comment on that proposal before making a final decision. Such an approach would improve accountability and ensure the public was informed of the approach taken to the management of public lands and the implications that would have on pest management in the region.

4.5 Distinguish between conservation and other Crown lands

A more straightforward option might involve distinguishing between Crown lands managed under the Conservation Act 1987 (or any other Acts specified in Schedule 1⁴¹ to that Act) and *other lands* held by the Crown.

Under this model, Crown land managed by the Department of Conservation would continue to be exempt from RPMSs, while other lands would not.

The justification for this distinction would be that conservation land is managed for conservation purposes and the Department of Conservation has a single statutory objective that represents appropriate incentive for best possible pest management given available resources. Other lands are managed for other purposes and management agencies are directed by diverse objectives.

As a sub-option, it might also be possible to qualify this exemption such that RPMSs do not apply to (a) conservation land being managed in accordance with the pest management provisions of conservation management strategies, conservation management plans or management plans; and (b) there are no significant effects from pests present on conservation land beyond the boundary of that land.

4.6 Transition

Another approach would be to simply transition the Crown into compliance with RPMSs over a period of time. This would give Crown agencies time to secure budget and/or reprioritise other expenditure. Signalling future landowner obligations well in advance should lower adjustment costs and perceived risk for the Crown

A transition could set a different timetable that brought Crown land into RPMS compliance at different times depending on the issues and constraints faced by Crown agencies.

One option, for example, might be to have RPMSs apply to all Crown land other the land administered by the Department of Conservation within 3-4 years with Conservation land needing to comply within (say) 8 years.

4.7 Targeted rates

The options outlined above refer to the Crown's obligations to comply with rules set down in an RPMS.

As well as, or perhaps instead of, compliance with RPMS rules, the Crown could be required to pay a targeted pest management rate where it is determined that a collective pest management programme to manage pests on the property boundaries, including Crown land, is warranted.

⁴¹ This would include Acts administered by the Department of Conservation including, in particular, the National Parks Act and Reserves Act.

If necessary some additional test could be added to allay concern that the tool would be overly or unfairly applied and that proper regard was had to the Crown's conservation objectives for the land.

In the technical sense, such a change would merely require amendment to the Local Government Rating Act to include "pest management" alongside other local authority services for which the Crown may be required to pay for by way of a targeted rate.

4. Discussion

It is difficult to sustain an argument that the Crown's obligations with respect to RPMSs should be materially different from Crown obligations with respect to regional plans prepared under the RMA (or district plans for that matter which do, as discussed, provided form of preferential position for the some Crown land).

For that reason regional councils are of the view that the formula used in the RMA ought to apply (with necessary modification) to pests.

That approach includes several of the elements discussed above and would involve:

- (a) The Crown being bound to RPMSs as a matter of principle
- (b) The Department of Conservation being exempt if:
 - (i) pest management was undertaken in accordance with relevant conservation management plans and strategies (this would ensure the regional councils could not interfere with the priorities of core conservation management
 - (ii) there were no significant effects (or significant risk of effects) of pests beyond the conservation estate boundary (this would ensure regional councils could regulate for externalities)
- (c) Regional councils being unable to take enforcement action against the Crown in the event of non compliance.

Appendix 2 – The biodiversity/biosecurity relationship

Regional councils have as one of their functions under section 30 of the Resource Management Act the *establishment, implementation, and review of objectives, policies, and methods for maintaining indigenous biological diversity*. District councils have the function of *controlling the effects of land use for the purpose of ...the maintenance of indigenous biodiversity*.

Because of the potential overlap of responsibilities, regional councils, in their regional policy statements, must state *the local authority responsible in whole or part of the region for specifying objectives, policies, and methods for the control of the use of land ...to maintain indigenous biological diversity*.

Regional councils' involvement in the maintenance of biological diversity can be, and in many cases is, also mandated through the Local Government Act's LTCCP process and through the identification of community outcomes.

Regional councils' role in biodiversity protection is broad. The exercise of many of their functions under the RMA (and other statutes) has implications for the state of biodiversity. For example, regional councils' responsibilities for:

- water quality and quantity (managing abstractions and discharges), and for damming and diversion water have obvious implications for the quality and availability of aquatic habitat; and
- land and soil management have implications for the maintenance of vegetation in water catchments and for the extent (and contamination) of sedimentation in marine areas.
- as noted above, regional councils may even choose to control land use directly to protect habitat.

In practice many of the programmes promoted or supported by regional councils (such as land care and stream care groups, and funding programmes) contribute to biodiversity protection as a primary or incidental outcome. Many regional policy statements set out criteria for the identification of high value conservation areas and general policies seeking protection of such areas. These policies are often promoted through advocacy with district councils and/or through specific regional programmes.

Some regional councils have developed *regional biodiversity strategies* as a means of stocktaking and co-ordinating what they do to promote the maintenance of biodiversity.

Biosecurity, or more particularly pest management programmes centred on specific high value sites, will be part of that strategy but it is just one of many strands of a regional response to promoting biodiversity outcomes.