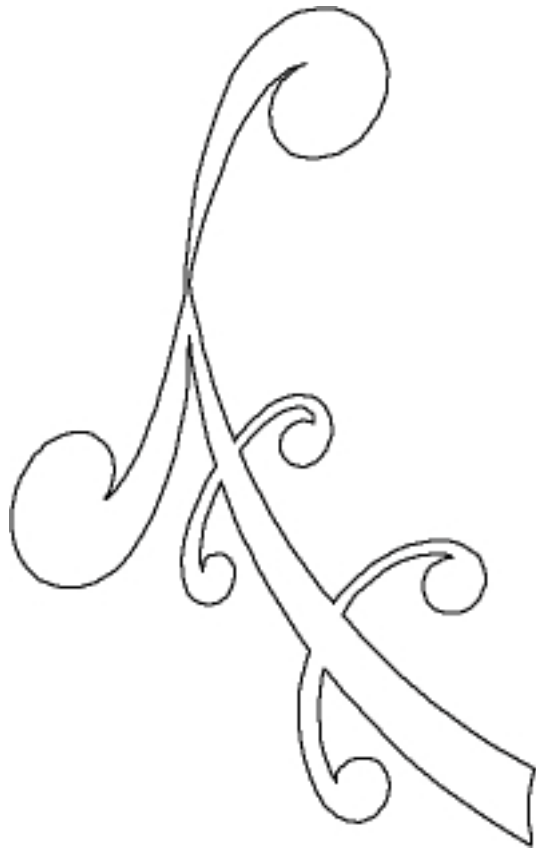


# **New Zealand's Biosecurity Programme**



## **Current State and Future Challenges**

**BACKGROUND PAPER - December 2002**

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# 1 Introduction

During the course of consultation over the Biosecurity Strategy, a large number of comments and proposals were made which, although valuable, were difficult to incorporate in the Strategy. Many of those comments are consistent with the Strategy and should be able to be implemented, many of them at an operational level. This report draws on a large number of submissions, particularly in response to the “Issues Paper, September 2001. Developing a biosecurity strategy for New Zealand”, and presents recommendations intended for implementation.

Planners and managers of biosecurity services are encouraged to give serious consideration to the recommendations in this report as potential means of improving New Zealand’s biosecurity. Although it is anticipated that these recommendations will be considered during the implementation of the Strategy, many of them are not dependent upon it.

Biosecurity is achieved through “programme design” and five main operational programmes:

- pre-border;
- border;
- post-border surveillance;
- incursion response, and
- pest management activities.

These are supported by:

- research and other science inputs;
- awareness building and education of stakeholders and the public, and
- enforcement activities.

These programme components and support activities will be used as a framework for this report.

## **2 Programme Design**

### **2.1 SCOPE**

The scope of biosecurity is summarised in the definition proposed by the Biosecurity Council in 2000. That is “Protection from the risks posed by organisms to the economy, environment and people’s health through exclusion, eradication and control”. The scope of planning is all of those planning functions directed toward achieving the goal of biosecurity. The current scope of operational aspects of current biosecurity programmes, is however, less broad. This is because, for many years, biosecurity has been directed at protection of New Zealand’s primary industry production base and there is not a clear mandate for extension to cover all sectors and all risks envisaged in the Biosecurity Council definition. Recently there has been some extension of biosecurity programmes to other sectors, in which most of the work is in the planning stages and for which the full scope of biosecurity goals and operations should be clarified with the publication and acceptance of the Biosecurity Strategy.

### **2.2 DESIRED OUTCOME**

The desired outcome is for the tools available for achievement of biosecurity to be implemented in the most cost-effective means to achieve the most desirable outcome for the people of New Zealand.

### **2.3 CURRENT SITUATION**

#### **2.3.1 Responsibilities**

The “top end” issues of governance and strategic planning of biosecurity are addressed in the Biosecurity Strategy. At the operational level, planning of biosecurity measures are, substantially, the responsibility of the Ministry of Agriculture and Forestry (MAF) (pests of animals, plants and forests and environmental pests), the Ministry of Fisheries (MFish) (marine organisms) the Ministry of Health (MOH) (mosquitoes which have potential to act as vectors of human diseases) and Regional Councils (pest species established in New Zealand). The roles that MAF takes with respect to organisms with potential to damage native flora and fauna are based on a Memorandum of Understanding between MAF and the Department of Conservation (DOC). These responsibilities are not determined by statute but have evolved with influences from past practices under previous, more prescriptive, legislation.

Within Ministries, Chief Technical Officers (CTO) appointed under the Biosecurity Act have responsibilities for planning biosecurity programmes relevant to the sectors for which they have authority. Generally, the staff reporting to MAF’s CTOs are responsible for risk analyses for imported goods, issuing of import health standards, development of plans and contracts for surveillance activities, development of plans and contracts for responses to incursions of exotic organisms and management of responses. Contracts for support services are specific to the CTO responsibilities. The MAF Quarantine Service (MQS) is able to provide border security services covering all sectors.

Management of pest species established in New Zealand is largely left to national pest management agencies (bovine tuberculosis and american foulbrood of bees) and to regional councils with little input from central government

### **2.3.1 Marine environment**

The marine environment is one of the sectors for which a pro-active biosecurity programme has only recently begun. A major priority is seen as definition of the current range of flora and fauna as a baseline against which “incursions” can be determined. Although some biosecurity measures are in place (border security through management of ballast water in ships and a basic surveillance programme), the major focus is on establishing a rational approach to marine biosecurity and marine surveillance programmes. There is recognition that biosecurity in the marine environment is a difficult challenge. Prevention of entry of organisms in ballast water or as part of the fouling flora/fauna on ships may not be possible. Surveillance can be targeted at high-risk areas but there is little international experience to give confidence that an incursion can be met by an effective eradication response. It is probable that most incursions of marine organisms will result in programmes to minimise their impact. Planning is proceeding.

### **2.3.2 Balance of application of biosecurity measures**

Biosecurity measures directed at protection of the primary industries in New Zealand are relatively well developed. The primary bases for biosecurity are pre-border and border protection procedures. A range of surveillance measures and response plans are in place. The operational programmes have developed with little reference to one another. Over the past ten years there has been a ten-fold increase in funding for border security services while funding for surveillance has significantly declined. Much of that investment in border security has been in inspection of incoming mail and the baggage of incoming passengers. This appears to be more the result of public perceptions of risk, and the relative ease of inspection in those pathways, than the result of a systematic assessment of the most appropriate balance of measures to obtain cost-effective prevention of entry and establishment of the pests of concern.

Scientific methodologies have been developed and applied to risk analyses to form the basis of import health standards, and major reviews have contributed to the development of border security measures second to none in the world. The same rigor has not been applied to optimising the balance of biosecurity measures to:

- decrease the probability that risk organisms will reach our shores (pre-border measures);
- prevent the entry of organisms that do reach ports of arrival (border security);
- detect pest organisms that evade pre-border and border measures sufficiently early to allow cost-effective eradication (surveillance), and
- have the systems and resources in place to allow pest organisms to be eradicated following their detection (response planning).

### **2.3.3 Biosecurity priorities**

A small number of very high-risk biosecurity threats have been identified. These include Foot and Mouth Disease (FMD) to animals, fruit fly to horticulture, asian gypsy moth to forest species and a small number of species likely to be serious pests in the marine environment. There has been no systematic assessment of the priorities of pests within or between sectors that could form the basis for decisions on assignment of resources. Nor has there been a systematic analysis of the relevant priorities that should be afforded to exclusion of exotic pests and management of established pest species.

### **2.3.4 Quality systems**

The National Centre for Disease Investigation (NCDI) and MQS (both units within MAF Operations) operate within quality systems that are accredited to ISO 17020. The National Plant Pest Reference Laboratory (NPPRL) does not have certification or accreditation of its

quality system. Contracts for biosecurity services from supplier organisations generally specify that the organisation should have a quality system comparable to (or based on, or similar to) that required by one of the international standards. Certification or accreditation of the quality system is not required. Well-developed quality systems, based on sound service specifications, will afford increased confidence that the required services are being provided and allow improved definition of areas for improvement in biosecurity measures in the event of any suspected failure.

### **2.3.5 Consultation with stakeholders**

The effectiveness of biosecurity programmes is greatly influenced by support from stakeholders and the public. This is evident from the support required to ensure border security is effective, the large number of incursions which have been identified through notifications from members of the public, and support required when response procedures affect stakeholders and the broader public. There is stakeholder representation on the Biosecurity Council and there are a number of processes during which MAF meets directly with stakeholders to discuss biosecurity issues. In addition, a large number of biosecurity issues on which comments are invited are notified through the publication “*Biosecurity*” and through the MAF website.

Biosecurity-related fora and committees within which MAF consults with stakeholders include:

#### **The Biosecurity Consultative Forum**

Membership is open to any group interested in biosecurity, and includes:

- environmental groups;
- primary production industry groups;
- scientific organisations;
- MAF Biosecurity Authority;
- Department of Conservation;
- Ministry of Fisheries, and
- Ministry of Health.

#### **The Animal Biosecurity Consultative Committee**

With membership including:

- Biopharmaceutical industry;
- Department of Conservation;
- Federated Farmers of New Zealand (Dairy Section);
- Federated Farmers of New Zealand (Meat and Wool Section);
- Livestock Improvement Corporation;
- Meat New Zealand;
- New Zealand Wool Board;
- Ministry of Fisheries;
- Ministry of Health;
- National Beekeepers’ Association of New Zealand;
- New Zealand Deer Farmers Association;
- New Zealand Pork Industry Board;
- New Zealand Salmon Farmers Association;
- New Zealand Stock and Station Agents Association;
- New Zealand Thoroughbred Breeders Association (Inc);
- New Zealand Veterinary Association;
- Poultry Industry Association of New Zealand, and
- Royal Agricultural Society.

**The Plant Biosecurity Consultative Committee**

With membership including:

- Associated Bulb Growers of New Zealand;
- New Zealand Apple and Pear Marketing Board;
- New Zealand Berryfruit Growers Federation;
- New Zealand Citrus Growers Incorporated;
- New Zealand Flower Exporters Association;
- New Zealand Fruit Growers Federation;
- New Zealand Grain and Seed Trade Association (Inc);
- New Zealand Grape Growers Council;
- New Zealand Summerfruit Export Council Ltd;
- New Zealand Vegetable and Potato Growers Federation (Inc);
- Nursery and Garden Industry Association (Inc);
- Pipfruit Growers New Zealand Incorporated, and
- Zespri International Ltd.

**The Fresh Produce Importers' Group**

With membership including:

- Australian Trade Commission;
- Carter & Spencer;
- Delmonte;
- Freshmax;
- MAF Quarantine Service;
- MG Marketing;
- Paragon Produce;
- Primor Produce;
- South Pacific Trade Commission, and
- Turners & Growers.

**The Shipping Advisory and Consultative Committee**

With membership including:

- Customs Brokers and Freight Forwarders;
- Freight Forwarders;
- Importers Institute;
- New Zealand Association Shipping Agents;
- New Zealand Fruit Growers Federation;
- New Zealand Shipping Council;
- New Zealand Stevedoring Employers Association;
- New Zealand Timber Importers;
- NYK (Nippon Yusen Kaisha);
- P&O Nedlloyd;
- Port Companies, and
- Ports of Auckland.

Biosecurity-related Ministerial advisory committees include:

**The Biosecurity Council**

- an independent chair;
- Ministry of Agriculture and Forestry;
- Ministry of Fisheries;
- Ministry of Health;
- Ministry for the Environment;
- Ministry of Research, Science and Technology;
- Department of Conservation;
- Environmental Risk Management Authority, and
- a representative of regional councils.

**The Pest Management Strategy Advisory Committee**

- six representatives of regional councils;
- Animal Health Board;
- National Beekeepers' Association;
- Ministry of Agriculture and Forestry, and
- Department of Conservation.

**Forest Biosecurity Advisory Committee**

- Department of Conservation;
- Forest Research;
- Local Government Association;
- New Zealand Farm Forestry Association;
- New Zealand Forest Nursery Growers' Association;
- New Zealand Forest Owners' Association;
- New Zealand Timber Importers' Association, and
- Shipping Advisory Consultative Committee.

**The Dutch Elm Disease Control Advisory Committee**

- Auckland City Council;
- Department of Conservation;
- Farm Forestry Association;
- Forest Research;
- HortResearch;
- Institute of Forestry;
- Manukau City Council;
- North Shore City Council;
- Tree Council (Auckland) Inc, and
- Waitakere City Council.

In addition there are numerous committees and consultative fora for consideration of specific issues including each response to an incursion of an exotic species.

## 2.4 SUBMISSIONS

At least 15 submissions identified consultation with stakeholders as a significant issue. One of these called for caution in consultation because some stakeholders have a vested interest in making importation easier. All others called for increased consultation with stakeholders of various categories including Maori, primary industries, importers, tourism operators, Regional Councils and environmental groups. Submissions, variously, advocated:

- consultation prior to entering into international agreements;
- improved feedback following consultation, with explanations of the reasons for decisions;
- improved listening;
- inclusion of a Regional Council representative from the commencement of planning any response to an incursion;
- processes to gain increased community / industry ownership of decisions, and
- use of more effective consultation as a means of improving the quality of decision-making.

The comments in one submission seem a good summary of the views expressed by a number of others – “Consultation has been used to pay lip service to (stakeholder) groups... The statement (in the “Issues paper”) that biosecurity agencies believe that consultation is time consuming and expensive is a clear indication of this. The cost and time of not involving stakeholders and the public and taking account of their views can be greater... by participating in decision-making stakeholders will take more ownership of those decisions and actions needed to implement the subsequent programmes.”

Other submissions advocated an increased integration of the planning of pre-border, border, surveillance and response measures.

## 2.5 RECOMMENDATIONS

- Consultation processes should be reviewed with a view to identifying reasons for dissatisfaction. Clearly, there is a great deal of consultation with stakeholders but this is not being perceived as allowing effective input into decision-making. Reasons for this dissatisfaction should be explored and where opportunities for improvement in the quality of communication are identified, these should be given serious consideration.
- Information strategies should include an objective of improving stakeholder and public understanding of consultation processes and the opportunities open to them.
- Planning should include systematic analyses of the priorities that should be assigned to pests and risk pathways as a basis for planning the application of biosecurity measures.
- Planning of biosecurity measures should include technical evaluations of the optimal balance of the application of specific pre-border, border, surveillance and response procedures to ensure prevention of entry, early detection post-entry and cost-effective eradication of potential pest organisms. Planning should result in the development of optimal procedures to ensure security against the organisms that present greatest risk. Similar planning processes should be followed for the main classes of organisms and risk pathways against which protection is required.
- Optimal use should be made of available scientific resources to ensure high technical standards of biosecurity measures.
- Providers of biosecurity services should be required to operate within formally recognised quality systems (generally, certification to ISO 9001, 2000 or accreditation to either ISO 17020 or ISO 17025). Government biosecurity agencies should also give serious consideration to the development of quality systems within which to plan and operate biosecurity systems.

## 3 Operational and support programmes

### 3.1 PRE-BORDER

#### 3.1.1 Scope

Pre-border biosecurity measures are all of those measures designed to prevent threats to New Zealand's biosecurity reaching our borders. They include:

- Procedures for the identification of risk goods and the definition of procedures which will minimise the associated risks prior to arrival of the goods at ports of entry to New Zealand - these are determined through processes of risk analysis, the development of import health standards (IHS) and the statement of conditions of import on import permits.
- Processes for ensuring that the conditions on import permits are met. Conditions might relate to the health status of source countries, quality systems used in production or inspection and testing of the goods prior to dispatch. Commonly, certification that the requirements have been met ("official assurance") is required from the government of the country of origin. In other situations, staff of the MQS inspect goods prior to shipping and provide "pre-clearances".
- Assisting potential supplier countries establish plant or animal health status that allows legal exportation to New Zealand, thus reducing the threat of entry of pests in either illegal or legal imports.
- Using international fora to inform others of New Zealand's biosecurity status and requirements.
- Using international fora to influence the establishment of international standards and to have those standards recognise New Zealand's requirements.

#### 3.1.2 Desired outcome

The desired outcome from pre-border biosecurity measures is that goods reaching New Zealand shores are free of biosecurity threats.

#### 3.1.3 Current situation, major issues

When carried out effectively, pre-border measures can significantly reduce the levels of biosecurity risk arriving at New Zealand's border. This in turn can reduce the pressure on border control programmes, and facilitate movement of goods and people. Pre-border activities are therefore an important component of New Zealand's biosecurity system.

Pre-border activities can be categorised into several areas:

- contributions to international fora;
- regional co-operation;
- risk analyses and import health standards;
- official assurances from supplier countries, and
- pre-clearance by New Zealand inspectors operating offshore and other certification from manufacturers or shippers.

##### *3.1.3.1 Contributions to international fora*

As a member of the World Trade Organisation (WTO) and a signatory to the Sanitary Phytosanitary Agreement (SPS), New Zealand participates in a number of international and regional fora and biosecurity initiatives. Active participation in international organisations such as the International Plant Protection Convention (IPPC), the Office International des Epizooties (OIE), Codex Alimentarius and the International Maritime Organisation (IMO) ensures that New Zealand is well informed on international developments relevant to biosecurity and have allowed it to have significant impact on

international standards. This participation has also provided New Zealand with a reputation for excellence in the application of science to the development of biosecurity measures. Regional activities range from active involvement in regional organisations (e.g. Regional Plant Protection Organisations established under the IPPC), to regular bilateral meetings with biosecurity authorities in other countries. New Zealand maintains close relationships with Australia in particular, and officials meet regularly to discuss biosecurity matters of common concern. Regular meetings are held with the combined group of Australia, the USA, Canada and New Zealand and with South East Asian countries to discuss biosecurity issues of common interest.

#### **3.1.3.2 Regional cooperation**

New Zealand provides assistance on biosecurity matters to less developed countries, primarily around the Pacific. Overseas development funds, usually provided by the Ministry of Foreign Affairs and Trade, are used for such things as training, capacity building and research. As well as improving the biosecurity systems in developing countries, this investment in regional biosecurity has direct spin-off benefits to New Zealand as it helps to keep new pests and diseases out of the Pacific region and it improves the understanding, within supported countries, of the basis of New Zealand's biosecurity standards.

#### **3.1.3.3 Risk analyses and import health standards**

A process of risk analysis and development of import health standards (IHS) provides a sound technical basis for import permits, which allow importation of risk goods with minimal hazard. The processes of risk analysis used by MAF are recognised internationally as being of very high standard. There is, however, a large backlog of risk analyses and IHS being sought by potential importers. This is causing frustration to MAF staff and importers. For a large range of products (particularly animal-derived biological products) this is managed through the issuing of import permits and requirements that many of the biological products must be held in approved transitional facilities. Costs of establishment, approval, maintenance and inspection of transitional facilities, together with the costs of annual permits, being carried by users may be found to be unnecessary if risk analyses are completed. The backlog of risk analyses also increases the risk of illegal importations and breaches in New Zealand biosecurity.

#### **3.1.3.4 Official assurances from supplier countries**

Keeping biosecurity risks offshore is the first line of biosecurity defence. Obtaining assurances from the government authorities of countries of origin is recognised internationally as an effective means of quality assurance. This may involve exporting countries applying pre-export measures to mitigate certain biosecurity risks. For example, New Zealand might require inspection, testing and/or treatment of animals, plants or produce. It might require products to be processed in specified ways or it might require assurance that areas of origin are free of particular pests and diseases. The official assurances relating to these measures are provided by the government of the exporting country through its national biosecurity authority or organisation.

Official assurances are most applicable to commercial consignments of plants, animals and their products. Production, processing and exporting organisations associated with these are parts of an infrastructure that can be held accountable for ensuring that the required measures are applied. For other risk pathways (such as passengers, containers, mail and used vehicles), there are fewer opportunities for supply countries to intervene prior to the border or provide the necessary assurances. Some countries don't have

jurisdiction to issue official assurances in some situations to particular types of products e.g. Japan will not provide assurances of the state of cleanliness of second-hand cars.

Planning is underway for systems of official assurances of the nature of the contents of shipping containers. This is intended as an anti-terrorism security measure which will require electronic certification from the exporting country as to the types of material in shipping countries being moved internationally.

### ***3.1.3.5 Pre-clearance by New Zealand inspectors operating offshore and other certification from manufacturers or shippers***

Pre-clearance commonly involves MQS inspectors carrying out physical inspections and providing biosecurity clearance for consignments of risk goods in the country of origin or prior to their arrival in New Zealand. These inspections are equivalent to the inspection process undertaken in New Zealand and may be in addition to the provision of an official assurance by the country of origin. Pre-clearances are usually carried out to facilitate the rapid entry of consignments into New Zealand but they also act to keep some risks offshore. They are often driven by commercial needs, and importers meet all associated costs.

Examples of major pre-shipment clearance programmes include:

#### ***Grapes***

Quarantine weed seeds are sometimes associated with table grapes imported from the USA, Australia and Mexico. Because there is no recognised decontamination treatment available, the detection of weed seeds on grapes at the New Zealand border would result in the consignment being re-shipped or destroyed. It is more cost-effective for importers to have consignments inspected and cleared in the country of origin (or rejected and left behind), than run the risk of rejection in New Zealand.

#### ***Used vehicles***

Whilst it is not a mandatory requirement, some importers of used vehicles from Japan choose to have their vehicles inspected, decontaminated if required, and cleared at Japanese ports while they are being stored awaiting shipment. This enables rapid access to the New Zealand market once the vehicles arrive in New Zealand. It also reduces pressure on New Zealand border control systems and port operations.

#### ***Cruise ships***

Passengers and crew disembarking from cruise vessels are often cleared prior to arrival at their first port of arrival in New Zealand by a biosecurity inspector who joins the vessel at the last port of call. This reduces the need for time consuming passenger clearance processes on arrival.

#### ***Troops***

New Zealand troops and equipment are cleared prior to departure from East Timor. The pre-clearance operations ensure that all risk goods (including personal effects) are identified, treated and cleared prior to arrival in New Zealand.

Pre-clearance of risk goods is much more than a useful means for facilitating the rapid entry of goods and people into New Zealand. This procedure also decreases risk through ensuring that, as far as possible, risk organisms do not get to arrival points in New Zealand. There are constraints to the use of this tool. These include the high direct costs of sending inspectors offshore, human resource issues associated with redirecting

staff to offshore activities, co-ordination and planning difficulties, and potential sovereignty issues within the exporting country.

### **3.1.4 Submissions**

Many submissions expressed strong support for the use of pre-border biosecurity measures. There was little support, however, for the concept that adequate pre-border measures should allow reductions in border security measures, surveillance or response preparedness. It was proposed that pre-border inspection of goods must be supported by:

- an ability to ensure that biosecurity status of goods is maintained from the time of offshore inspection until arrival in New Zealand;
- inspections to ensure compliance when goods arrive in New Zealand, and
- more stringent import health standards to ensure safety in the event of only partial compliance with the off-shore requirements.

#### ***3.1.4.1 Contributions to international fora***

Increased international exchange of biosecurity-related research information and data on potential biosecurity threats with other countries and the development of joint strategies with other countries, to control the flow of undesirable organisms were advocated by submitters.

#### ***3.1.4.2 Regional cooperation***

Submissions advocated the development of a biosecurity partnership with Australia. There was also support for the provision of assistance to New Zealand trading partners (particularly, the island nations of the Pacific) in ways which would contribute, either directly or indirectly, to New Zealand's biosecurity. Suggestions included: aid measures which improved the plant or animal health status of those countries, and provision of advice on how to implement more effective pre-border (pre-New Zealand border) measures.

#### ***3.1.4.3 Risk analyses and import health standards***

Concerns were expressed over lengthy delays in the completion of risk analyses and the development of IHS. MAF's proposal to move toward carrying out risk analyses for plant imports on a genus basis was supported.

Recommendations included consideration of the following factors in risk analyses and the establishment of IHS:

- the ability of New Zealand surveillance systems to detect incursions of risk organisms before the organisms have become widely established;
- the ease with which incursions of organisms might be eradicated;
- consideration of the impact on the economy, the environment, biodiversity and human health, and
- an objective of no incursions.

It was suggested that pre-border measures to ensure plant health include a requirement for imported plant material to have been bred in approved facilities.

#### ***3.1.4.4 Official assurances from supplier countries***

Although requirements for pre-border biosecurity measures were supported in many submissions, most included conditions of caution and back-up. There was concern that there would not be a full understanding, by those based in other countries, of the value placed on biosecurity in New Zealand and that they might not be fully committed to

meeting stated requirements. These submissions, variously, advocated that pre-border measures must be supported by:

- confidence that the providers of off-shore services will ensure that products meet New Zealand import health standards, and
- audits of services and service providers in the countries of origin.

#### ***3.1.4.5 Pre-clearance by New Zealand inspectors operating offshore and other certification from manufacturers or shippers***

Numerous submissions supported the use of pre-border biosecurity measures and advocated an increase in their use. Some proposed that all goods to be imported should be inspected offshore. Products for which offshore inspections received particular mention included:

- used cars;
- used car parts;
- used tyres;
- machinery, and
- seeds and grain.

Stringent requirements for cleaning used cars, car parts, tyres, and machinery were advocated, together with strict enforcement of procedures and penalties for those not complying with stipulated requirements.

#### ***3.1.4.6 Marine organisms***

Pre-border risk management measures were advocated for marine biosecurity risks, particularly because of the difficulties in effective eradication once organisms have entered the New Zealand marine environment.

#### ***3.1.4.7 Pre-border education of travellers***

A number of submissions advocated increased education directed at encouraging travellers to support New Zealand biosecurity measures. Suggestions included:

- use of border security videos on aircraft departing from New Zealand to provide early education for those who will be returning;
- involvement of the travel and tourism industries in providing information and advice to prospective visitors to New Zealand, and
- ensuring that biosecurity messages are provided in an appropriate range of languages.

### **3.1.5 Recommendations**

#### ***3.1.5.1 Recommendations - Contributions to international fora***

New Zealand's active contributions to international fora should be maintained.

#### ***3.1.5.2 Recommendations - Regional cooperation***

New Zealand should maintain its practice of developing strategic relationships and prioritise its effort appropriately. Regional and bilateral biosecurity relationships should be continued. This will involve exploring new opportunities (for example, in relation to marine biosecurity, where international relationships are likely to be critical in the development of effective biosecurity measures), as well as reviewing existing relationships to ensure that they are well targeted to meet New Zealand's needs.

### **3.1.5.3 Recommendations - Risk analyses and import health standards**

- Facilitating the contracting of risk analyses should be given serious consideration.
- Conducting risk analyses for plant imports on a “genus” basis is supported subject to technical soundness. Methods must be found to reduce the backlog of risk analyses for plant imports.
- Risk analysis processes directed at management of the risks of importation of environmental pests should be extended.

### **3.1.5.4 Recommendations - Official assurances from supplier countries**

- The use of official assurances as a means of pre-border biosecurity is supported subject to assurance (through audits and inspections) that providers will meet New Zealand standards.
- Efforts should be made to extend the proposed electronic certification of the nature of contents of shipping containers to cover assurances related to biosecurity risks.

### **3.1.5.5 Recommendations - Pre-clearance by New Zealand inspectors operating offshore**

- Increased use of pre-clearance of goods for importation should be considered, particularly where track record identifies higher risk pathways.
- New Zealand’s preferred means of moving biosecurity risks offshore should remain its ability to work with exporting countries to implement risk-mitigating measures as part of official assurance programmes. However, where there is history of goods of a particular type, arriving in New Zealand in a condition not meeting New Zealand biosecurity requirements, pre-clearance should be considered as the alternative means of managing the risk.

### **3.1.5.6 Recommendations - Pre-border education of travellers**

Planning of biosecurity information strategies should include consideration of:

- use of border security videos on aircraft departing from New Zealand to provide early education for those who will be returning;
- involvement of the travel and tourism industries in providing information and advice to prospective visitors to New Zealand, and
- ensuring that biosecurity messages are provided in an appropriate range of languages.

## 3.2 BORDER

### 3.2.1 Scope

Border security measures include all those measures, applied to goods arriving at the New Zealand border, which are aimed at preventing organisms that present biosecurity risks entering beyond the nominal border. These measures include:

- requiring declarations regarding biosecurity risks by importers (including passengers with baggage);
- inspection of incoming goods, including passengers' baggage, mail items, air freight, stores on ships and aircraft, commercial sea freight and shipping containers;
- requirements for animals, plants or goods to be held in secure locations for varying periods of time (plants and animals in quarantine, goods to be held in transitional facilities), and
- testing of some imports for specific risk organisms (e.g. plants and animals in quarantine and pork and salmon prior to release).

Border management is complemented by pre-border measures but the responsibility for ensuring that the pre-border measures have been carried out rests, initially, with MQS at the border.

### 3.2.2 Desired outcome

The purpose of biosecurity border management is to prevent, as far as practicable, the entry of potential pests through the border into New Zealand.

### 3.2.3 Current situation and issues

New Zealand's biosecurity border management systems are generally recognised as being amongst the most secure in the world. However, these systems are under constant pressure from changing risk profiles and increasing volumes of goods and people moving across our borders.

It is impossible to eliminate completely the risks of harmful pests and diseases entering New Zealand, and New Zealand has therefore adopted a risk management approach to its biosecurity. Its biosecurity border management programme is based on the existence or not of a Hazardous Substances and New Organisms Act (HSNO) approval for new organisms, and import health standards issued under the Biosecurity Act.

HSNO approval is required for the deliberate importation of "new organisms". New organisms are defined in the HSNO Act to include organisms that were not previously present in New Zealand (or have been eradicated) including genetically modified organisms. Approvals to import new organisms are granted by the Environmental Risk Management Authority (ERMA) based on criteria set out in the HSNO Act.

Import health standards prescribe the conditions for entry for "risk goods", which are defined broadly in the Act as goods that it is reasonable to suspect are themselves organisms, or contain organisms, that could cause unwanted harm. All risk goods entering New Zealand must do so in compliance with a relevant import health standard. Import health standards are approved by the Director-General of MAF on the recommendation of a CTO. The process for developing import health standards includes risk analysis and consultation with interested parties. Although CTOs from any government department can recommend an import health standard, in practice CTOs in MAF have developed all current import health standards.

Operational border clearance services are provided by MQS, a business unit of MAF. All people, baggage, cargo, mail and craft entering New Zealand must do so at places approved as ‘ports of first arrival’ under the Biosecurity Act. These places include sea-ports, airports, and the international mail centre. MQS inspectors will not give a biosecurity clearance for any goods unless satisfied that the goods are not risk goods, or that they comply with a relevant import health standard. Clearance can be given at the port, or alternatively risk goods or organisms may be directed to a transitional or containment facility for a period of quarantine. The conditions of the quarantine will vary depending on the identified risks, but will generally involve intensive inspection, specialist testing and treatment. Transitional and containment facilities are approved under the Biosecurity Act, and standards are set jointly by ERMA and MAF.

### ***3.2.3.1 People and their baggage entering New Zealand***

International passengers arrive in New Zealand both on air and sea craft. Over recent years the risks associated with this pathway have increased. As well as the general growth in passenger numbers, regional airports have been opened up for international travel, and the cruise ship market has burgeoned.

In response to this, MQS has implemented new risk management strategies at international airports (which account for some 99% of all passenger arrivals). The introductions of x-ray machines and detector dogs in the mid-1990s were significant measures. A 1998 review showed that after x-ray machines and detector dogs were introduced at Auckland International Airport, detection levels increased from approximately 55% to 85-95% depending on the product type. This detection level was based on x-raying the baggage of approximately 50% of arriving passengers. Since that time, x-ray machines and detector dogs have been introduced at other international airports, and the percentage of baggage screened has been increased to close to 100%. In addition, quarantine information for arriving passengers has been improved, and an infringement notice (instant fine) policy has been implemented for those making erroneous declarations.

### ***3.2.3.2 Cargo entering New Zealand***

As with passengers, cargo can be imported into New Zealand via air or sea. Although most imported cargo arrives via sea, air cargo includes high-risk goods such as fresh produce. Cargo (including containers), whether air or sea, is considered a major biosecurity risk pathway, particularly for environmental pests.

Harmful pests and diseases can be associated with the imported goods themselves (e.g. fruit flies in fresh produce), the packaging used (e.g. wood-boring insects in wooden pallets), or as contaminants on the surfaces of containers (e.g. gypsy moth egg masses). A range of measures is implemented to manage the biosecurity risks from these pathways. For some cargo, New Zealand requires official assurances from the exporting country that risk goods meet New Zealand import health standards. In such cases, an inspector carries out compliance checks on official documentation, inspects the consignment, and issues a biosecurity clearance if satisfied that the standard has been met. MQS also uses a combination of intelligence-based targeting and random sampling to select a percentage of imported cargo for inspection. Inspectors may check the contents of containers, inspect cargo in a ship’s hold before it is unloaded, or inspect cargo on the wharf or at an approved transitional facility. Where contamination is detected, options include treatment (e.g. fumigation), quarantine, re-export or destruction.

### **3.2.3.3 Containers entering New Zealand**

The containers that carry cargo to New Zealand are a source of biosecurity risk in their own right. Some 400,000 sea containers enter New Zealand every year, and both their external and internal surfaces present biosecurity risks. Containers can be contaminated with insects, egg masses, soils and the residues from previous cargoes. It is not practicable to inspect the external and internal surfaces of all imported containers, and a percentage is therefore selected for inspection. Options for decontaminating containers include cleaning and fumigation. Shipping containers, of which only around 20% are inspected in any way, are widely considered to be the least well-controlled risk pathway for entry of pest organisms (particularly environmental pests) to New Zealand.

### **3.2.3.4 Sea and air craft entering New Zealand**

Craft entering New Zealand by sea present considerable biosecurity risks. The risks associated with cargo, garbage, dunnage or contamination of deck or internal areas are manageable in ways comparable to those for other pathways for terrestrial pests. The risks of entry of marine organisms in ballast water and as hull fouling present different challenges. Currently risks from contaminated ballast water are reduced through requirements that ships exchange ballast water outside New Zealand territorial waters. There are no effective controls for organisms entering New Zealand as part of the flora and fauna on the external surface of hulls beneath the water line.

Aircraft entering New Zealand present risks but they are more readily managed. Disposal of garbage and surplus food is controlled and the interiors are treated for insects. Aircraft visit fewer locations and do not present the same complexity of hull, containers, dunnage etc to be controlled. All air and sea craft entering New Zealand must be inspected and cleared by MQS inspectors.

### **3.2.3.5 Mail entering New Zealand**

All international mail entering New Zealand (excluding that carried by private courier companies) does so through the Auckland international mail centre. A large number of biosecurity risk goods are detected in this pathway, including seeds, nursery stock, fruit fly host material, bee products, dairy products, and meat and poultry products. Over recent years New Zealand has significantly improved its management of this risk pathway through the introduction of x-ray technology and quarantine detector dogs.

Mail and packages carried by private courier companies is not subject to the same scrutiny as other mail and is becoming recognised as a relatively high-risk pathway.

### **3.2.3.6 Diagnostic capabilities**

The ability to diagnose pests intercepted at the border is critical for determining any follow-up actions, and for justifying these actions to trading partners. The delivery of diagnostic services is currently managed through a mix of in-house expertise (MQS inspectors and MAF-owned laboratories) and contestable external contracts (mainly with Crown Research Institutes (CRIs)). Expertise in MAF laboratories has decreased through periods of repeated restructuring, and competencies in research organisations have been disseminated across CRIs. Efforts to create a fully contestable market for border and post-entry quarantine diagnostic work over recent years have largely failed because of the small size of the market and the limited amount of work available.

### 3.2.4 Submissions

#### 3.2.4.1 Programme design

The balance of the application of border security measures to mail, passengers' baggage and sea freight containers should be reviewed.

#### 3.2.4.2 Submissions – People and their baggage entering New Zealand

There was considerable advocacy for increased information dissemination to tourists and others prior to entry to New Zealand. Particular opportunities and improvements that were advocated included:

- improved communications to people without English as a first language including:
  - research to ensure most effective communications with in-bound passengers of various ethnicity and language, and
  - the use of a wider range of languages in information sheets on aircraft.
- use of biosecurity videos on aircraft departing from New Zealand to provide early education for those who will be returning;
- a suggestion that stakeholder organisations could assist with compilation and dissemination of information and that they could “impose” voluntary standards on their members e.g. sections of the tourism industry could provide guidance to visitors on what to bring, or not to bring with them and could provide risk information to their clients; and
- an improvement in information dissemination to cruise ships, particularly where pre-clearances are provided. Information provided should include processes for disposal of ships wastes (chemicals, food, garbage, water, sewage, ballast water), as well as that on requirements of passengers;
- a suggestion that passengers' baggage be screened by x-ray at ports of embarkation, and
- a proposal that x-ray inspection of baggage be carried out prior to delivery to the baggage hall in New Zealand.

#### 3.2.4.3 Submissions – Shipping containers

There was awareness amongst submitters that only a small proportion of shipping containers are inspected for biosecurity risks and there was concern over the biosecurity risks they posed. Particular risks identified and recommendations for managing them included:

- More thorough inspection of a higher proportion of containers before they leave port environs (including a suggestion that all containers be subject to a six-sided external examination).
- There is concern that household effects are commonly packed under considerable time and emotional pressure and there may be associated increased probabilities of inclusion of risk goods and potential pest organisms. It was proposed that all containers of household effects should be inspected as they are unloaded. An alternative proposal was that people who are to unload containers should be asked to be particularly watchful for insects or spiders that may have been included in the container and they be advised of procedures that can provide ready reporting and identification if such organisms are found.
- Many containers are unpacked at locations where there are no MQS staff. There should be an active programme to encourage people regularly involved in de-vanning containers to be alert to the possibility of exotic organisms (especially insects and spiders) and to immediately report findings of organisms which might have been imported in containers. This theme is repeated with respect to

surveillance where submissions advocated special surveillance efforts around entry points.

- It was suggested that potential for insects in containers to escape to the environment could be decreased by unpacking containers in buildings with curtains over doorways.
- One submission identified concern that containers presented a risk pathway for potential vectors of human pathogens and for species poisonous to humans. There was concern that container facilities could present human health risks and that public health authorities should be consulted in the process of determining standards and locations for transitional facilities.

#### ***3.2.4.4 Submissions - Locations for inspection and treatment of risk material***

Inspection and treatment of high-risk cargo at the point of entry rather than in transitional facilities was advocated. It was proposed that this would ensure that potential biosecurity and public health risks are identified and eliminated with minimal impact on the community.

#### ***3.2.4.5 Submissions - Training of MQS staff***

Submissions suggested that the skill base of MQS staff should be improved by:

- an increase in the number of staff who are competent in a range of languages, and
- training of inspectors to higher levels of technical competency in biology, taxonomy and chemistry.

#### ***3.2.4.6 Submissions - Identification of organisms intercepted***

A number of submissions included suggestions for greater emphasis to be placed on the rapid identification of organisms found at the border. Points made included:

- There should be rapid identification of all unknown organisms that arrived in New Zealand whether dead or alive. This helps define higher risk incursion pathways. (Some submissions along this line made specific reference to possible pests of forests and the programme previously operated by the Ministry of Forestry.) Others expressed an opposing view, to the effect that dead organisms are dead organisms and there is no need to worry about them.
- Border Services staff should receive additional training in the identification of intercepted organisms:
  - they should have improved abilities to identify organisms and good access to specialist assistance. A suggestion was made that with advancing technologies becoming available, these might be used at the border, and
  - there should be a process for validation of the identity of all seeds, plants and animals being imported.
- Specific reference was made to requirements for Border Services staff to have improved competence in the identification of marine organisms on the hulls and in the anchor lockers of ships and boats.

#### ***3.2.4.7 Submissions - Quarantine of plant material***

Concern was expressed over availability of plant quarantine facilities and conditions of quarantine. Proposals included:

- the development of a centrally located plant quarantine facility operated by MAF (or privately) to make such a facility more readily accessible to both users and inspectors;

- the use of experienced plant growers as inspectors - such inspectors would be more familiar with the plants being inspected and would be less expensive;
- an increase in quarantine periods for plants - this recommendation came from an importer who had observed the development of insect populations on plants during extended quarantine periods imposed because of detection of bacterial or fungal disease;
- a requirement that importers without appropriate facilities use nurseries with appropriate level two or level three quarantine facilities, and
- accreditation of importing nurseries to ensure that only “bona-fide growers” are importing plant material.

#### **3.2.4.8 Submissions - Marine organisms**

There were a number of submissions that expressed concern over the ease of entry of marine organisms, particularly in ballast water and amongst fouling on hulls of ships and boats. Suggestions for improving security of these pathways included:

- non-specific calls for increased security of ballast water;
- provision of treatment facilities for ballast water;
- prevention or control of defouling of visiting boats, and
- imposition of management interventions (not specified) to control risks from ballast water, hull fouling and ships cargo, based on risk profiles of individual ships.

### **3.2.5 Recommendations**

#### **3.2.5.1 Programme design**

The balance of the application of border security measures to incoming mail, passengers’ baggage, sea freight containers and other potential risk pathways should be reviewed with a view to ensuring optimal cost-effective use of available resources.

#### **3.2.5.2 Recommendations - People and their baggage entering New Zealand**

- Systems to communicate biosecurity messages to incoming passengers should be kept under review.
- Languages used in brochures and available on videos should be matched with the language profile of people visiting New Zealand.
- Increased use of tourism companies to convey messages to tourists before they leave for New Zealand should be investigated.

#### **3.2.5.3 Recommendations – Shipping containers entering New Zealand**

- Changes in the management of biosecurity risks associated with shipping containers should be made in the light of the major container review that has been undertaken. Suggestions from submitters (see 3.2.4.2 above) should be considered during that review.
- Information on the contents of containers which will become available with the provision of assurances from originating countries (see para 3.1.3.4) should be used to improve the clearance of containers and the targeting of inspections.

#### **3.2.5.4 Recommendations - Locations for inspection and treatment of risk material**

- Containers and other cargo should be inspected as close as possible to the port of arrival.
- Transitional facilities should be located in areas of minimal risk for spread of pests to the surrounding environment and should not be near environments of high conservation or primary production value.

- Transitional facilities, and other locations through which large numbers of containers pass, should be required to meet specified standards of “hygiene” e.g. freedom from vegetation and other potential habitat for environmental pests and other exotic organisms.
- Containment of exotic organisms should be considered in the location and design of transitional facilities.

#### ***3.2.5.5 Recommendations – Identification of organisms intercepted***

The value of the identification of dead insects found on containers and/or elsewhere in cargo as a means of monitoring risk associated with those pathways should be reviewed. Capability and procedures for identification of intercepted organisms should be reviewed. Resources should be available for rapid, reliable identification, particularly if there is a possibility that all are not contained at the border.

#### ***3.2.5.6 Recommendations – Quarantine of plant material***

Industry and MAF should work together to find a solution to the apparent lack of suitable plant quarantine facilities.

#### ***3.2.5.7 Recommendations – Boats and ships entering New Zealand***

The Ministry of Fisheries should continue its investigations of most appropriate biosecurity measures. Note should be taken of the comments in submissions – notably, calls for:

- increased security of ballast water;
- provision of treatment facilities for ballast water;
- prevention or control of defouling of visiting boats, and
- management interventions to control risks from ballast water, hull fouling and ships’ cargo, based on risk profiles of individual ships.

### 3.3 POST-BORDER SURVEILLIANCE

#### 3.3.1 Scope

Post-border biosecurity surveillance programmes aim to monitor pest and disease status (apart from organisms exclusively causing human disease) and detect changes. Surveillance programmes include systems for the confirmation of the absence of specific pests and disease from New Zealand, the detection of organisms new to New Zealand and the monitoring of established pests in order to detect change.

#### 3.3.2 Desired outcome

The desired outcomes from New Zealand pest and disease surveillance systems are:

- detection of significant organisms new to New Zealand sufficiently early to allow cost-effective eradication responses to be mounted;
- detection of changes in the behaviour and/or distribution of established pest species with sufficient sensitivity to allow cost-effective management procedures to be implemented if required, and
- acceptance by our trading partners of official assurances about New Zealand's pest and disease status.

#### 3.3.3 Current situation and major issues

Recently an independent review of biosecurity surveillance systems was completed. The major focus of that review was to contribute to the development of the Biosecurity Strategy. Many of the findings of the review did however, have an “operational” context and response to those findings need not wait on the completion of the development of the strategy. The surveillance review team found that the first of the outcomes described in 3.3.2 above was achieved with moderate success; achievements were less notable for the second.

Despite the relative success of New Zealand's disease and pest surveillance systems, the recent independent review identified a number of areas for improvement.

##### *3.3.3.1 Surveillance for organisms new to New Zealand*

Surveillance for organisms new to New Zealand is carried out primarily by government agencies. Responsibilities are split between agencies on a sector or ecosystems basis, but are influenced also by administrative boundaries.

MAF operates the majority of new organisms surveillance, focussing on trade access and threats to the productive forestry, horticulture, agriculture (crops and livestock), and beekeeping sectors. MAF surveillance systems also provide information of benefit to DOC and MoH in relation to exotic species affecting conservation values or human health. MoH operates a surveillance programme for exotic mosquitoes of public health significance.

MFish operates surveillance systems in the marine environment. Surveillance in the marine environment is a developing activity. Presently the focus is on collecting baseline information on the pest status and biodiversity of high-risk locations, namely ports of arrival, and ongoing surveillance of these locations for pest incursions. Additional targeted, species-based surveillance is undertaken near ports and marinas, and education material supports general, public surveillance in all areas.

The public makes a major contribution to new organisms surveillance. Many incursions are first reported by members of the public e.g. white-spotted tussock moth, painted apple moth, *Undaria* seaweed, red imported fire ant and southern saltmarsh mosquito.

The surveillance review team reported:

“In the absence of clearly defined strategies and objectives, an assessment of performance is difficult. We reviewed a sample of incursions detected in New Zealand over the past 15 years. About 65% of these were detected soon enough to allow response decisions to be made. The rest were well established and in some cases had been present for years before they were found. Given the resources applied this is probably a good result but we believe it needs to be improved.”

### ***3.3.3.2 Monitoring the behaviour and distribution of established pests***

Several organisations are involved in monitoring the behaviour and distribution of established pests. Examples of such programmes and their purpose include:

- New Zealand Food Safety Authority (NZFSA) monitoring the distribution of toxic dinoflagellates to ensure toxic marine food does not enter the local or exported human food supply;
- DOC monitoring the spread of pest plants and of vertebrate pests to enable rapid responses when threats to native flora or fauna in highly valued areas are recognised, and
- regional councils monitoring local pests and weeds to meet regional objectives.

The surveillance review team reported:

- In the absence of clearly defined strategies and objectives for most programmes assessment of performance is again difficult. However, the toxic dinoflagellate programme stands out as one with clear objectives, involving coordination of several agencies and organisations, which is highly effective;
- It seems likely that in fact there is a substantial amount of information about the distribution of pests and weeds within New Zealand and some information on spatial and temporal trends but this information is not readily available in any comprehensive system, and
- The recent freshwater pest fish survey has established a sound base for future monitoring of freshwater habitats and the current and planned marine baseline surveys should provide the same for the marine environment.

### ***3.3.3.3 Verifying existing plant and animal health status***

Surveillance of the current health status of New Zealand’s plant and animal populations is carried out primarily to satisfy overseas authorities that assurances about national or regional freedom from pests are true. Such assurances are required to enable access for New Zealand products to overseas markets, and are provided as part of New Zealand’s obligations as a member of the World Trade Organisation. This surveillance also provides background information for use in developing import health standards under the Biosecurity Act.

MAF is the primary agency involved in this work. NZFSA takes responsibility for food safety assurances and MAF Biosecurity is responsible for zoo- and phyto-sanitary assurances.

The surveillance review team reported:

- Statements by CTOs, on the basis of information from existing surveillance processes, that New Zealand is free from specific pests and diseases are widely accepted and rarely challenged.
- Existing surveillance processes (i.e. prior to the introduction of the bovine spongiform encephalopathy (BSE) Trade Risk Mitigation Programme) were regarded as unacceptable by the European Union for the purposes of demonstration of national freedom from BSE. It is thought probable that a similar situation will arise with respect to Scrapie. It is also thought probable that there will be increased demands, particularly from the European Union, for improved levels of evidence to support claims of national freedom from some other diseases (as yet unidentified).

### 3.3.4 Submissions

A large number of submissions proposed that improvements are required in surveillance systems and that they should receive increased allocation of resources. Most of these submissions referred to surveillance for introduced species. Some addressed surveillance issues with respect to established species, particularly pest (or potential pest) plants. One called for improved coordination between plant and forest surveillance programmes.

#### 3.3.4.1 Submissions - Surveillance for organisms new to New Zealand

Submitters proposed that current surveillance systems are inadequate. Chalk brood, and Varroa were two examples cited supporting this contention. Guava moth, potato spindle and western flower thrip could be said to fall into the same category (i.e. organisms detected at a stage when an eradication response was not considered feasible). A common theme in these submissions was the need for surveillance to be more targeted at high-risk pathways and locations – included in these were:

- ports (half of forest-related pest incursions have been detected in port environs);
- urban areas around ports;
- sites with large volumes of container traffic;
- container storage sites;
- Hobsonville Air Force Base (for siam weed ex Timor with returning soldiers);
- plant nurseries receiving imported stock;
- crops being grown from imported seeds, and
- high-risk marine areas such as ports and moorings.

Other suggestions of priority surveillance targets were high-value conservation areas and areas with modified habitat.

Involvement of a wider range of people was proposed, including:

- the training of staff involved in handling imported freight to observe and report the presence of organisms which might be new to New Zealand;
- the identification of high-risk industry groups and the training of those working in them in observation and reporting requirements (e.g. the training of appropriate people in the recognition of leaf miners on beans and cucurbits), and
- the education of the general public (but particularly those in high-risk areas) to be observant and to report unusual findings.

#### 3.3.4.2 Submissions - Monitoring the behaviour and distribution of established pests

Submissions included proposals for a shift in emphasis toward monitoring for changes in the behaviour of established species in the New Zealand environment. Such programmes need to take the process of naturalisation of plant species into account.

Surveillance should be maintained over species which are recent arrivals, but which it has been decided can not be eradicated.

#### **3.3.4.3 Submissions - Information systems**

There were a number of calls for improvements in information systems for both terrestrial and marine organisms. Collectively, a number of these submissions called for the establishment of a national database of species recognised in New Zealand, whether they be endemic organisms or incursions. Records should include the basis of identifications and should preferably include samples so that identifications can be validated if there are later changes in taxonomy and classification systems. The database(s) should include data on introductions, establishment and interceptions and should be readily available nationally and internationally.

#### **3.3.4.4 Submissions - Resources**

Along with suggestions for increased efforts to recruit the support of the public in detection of suspect incursions, or changes in distribution of pests species, there was advocacy for a “one stop shop” contact point for people with biosecurity concerns and the ready availability of a free identification service for suspect pests.

The development of multi-pheromone traps for use in surveillance was advocated as was the return to the use of trained inspectors in surveillance activities such as inspections of bee hives, nurseries and woodlots.

Concerns were expressed over shortages of scientific resources available to support surveillance programmes. Short-term contestable contracts and the repeated restructuring of MAF / AgriQuality plant laboratories and research organisations were considered to have had detrimental effects on the availability of taxonomy and virology expertise.

### **3.3.5 Recommendations**

#### **3.3.5.1 Recommendations - Surveillance for organisms new to New Zealand**

The recommendation from the surveillance review team is consistent with the thrust of many of those who made submissions on this topic:

“Increased emphasis should be placed on the technical soundness of surveillance processes, including both risk assessment and key technical aspects of programme design. The latter includes the choice of the most appropriate surveillance mechanisms and the targeting of higher-risk entry pathways.”

Design and implementation of programmes to increase public awareness of the contribution they can make to surveillance through observation and reporting of “the unusual” was supported by both the surveillance review and submissions on the “Issues” paper.

#### **3.3.5.2 Recommendations - Monitoring the behaviour and distribution of established pests**

The recommendations of the review team are consistent with proposals in a number of submissions:

- the absence of any programmes to temporally or spatially monitor syndromic changes in plants, animals or indigenous species is a significant weakness that should be addressed;

- there needs to be better coordination of monitoring objectives between Government agencies and regional councils; and
- as a matter of high priority, database coordination should be undertaken to provide higher quality access to known information on the distribution of pests and weeds in New Zealand.”

### **3.3.5.3 Recommendations - Verifying existing plant and animal health status**

Submissions in response to the “Issues Paper” did not address this aspect of surveillance but the recommendation of the review team was that “Increased attention should be paid to the technical standards of surveillance processes intended to support claims of national freedom from specific pests and diseases.”

## 3.4 INCURSION RESPONSE

### 3.4.1 Scope

Incursion responses are activated when previously exotic organisms are suspected to have passed through New Zealand's border security systems. A response to a suspected incursion includes all those processes that contribute to identification of the suspect pest, decisions on response procedures and implementation of control or eradication strategies. The response is completed when it is decided that no further action should be taken, reviews have been completed and reports written.

### 3.4.2 Desired outcome

The desired outcome from a response to an incursion of an organism new to New Zealand is the most cost-effective eradication or control of the organism.

This outcome allows for:

- eradication of organisms which have the potential to become pests;
- control of organisms which might become pests but for which eradication is assessed as not cost-effective, and
- acceptance of the incursions of organisms for which cost-effective control is not feasible (one scenario leading to this decision is assessment that the organism will not have negative effects).

### 3.4.3 Current situation

Effective responses may require rapid decision-making, often with limited knowledge of the invading organism's biology or potential impacts. Actions carried out during incursion responses are frequently high profile, expensive, and intrusive on local communities. The costs of failure may be considerable.

Approximately 50 incursions of unwanted organisms are discovered within New Zealand each year (MAF comments to the Parliamentary Commissioner for the Environment (PCE) 10 November 2000). The Biosecurity Act 1993 provides a legal basis for responding to these incursions, but it does not actually require that the Government or any other agency make a response. It is generally agreed however, that incursion response is a central government function. The Government funds biosecurity agencies, in particular MAF, to maintain a capability—standards, procedures and service arrangements—for investigating and responding to all suspected incursions. Each biosecurity agency chief executive has appointed CTOs with sector responsibilities under the Biosecurity Act to manage incursion response and other biosecurity processes.

The Government considers whether and how it will respond to new incursions on a case-by-case basis. Current agreements between biosecurity agencies provide that:

- MAF will take the lead for organisms affecting the terrestrial and freshwater environments (most incursions are likely to be in these environments);
- MFish will take the lead for organisms affecting the marine environment;
- MoH will take the lead for exotic mosquitoes of public health significance, and
- DoC will provide support to lead departments in relation to any potential impacts on indigenous flora and fauna.

Decisions on the level and type of response are made by the relevant CTO or—in cases where additional funding is required, or the organism has the potential to cause adverse effects of national significance—by the Cabinet. Decisions are typically informed by an

estimate of the extent of the infestation (abundance and spread), an assessment of the feasibility of eradication, and analyses of the costs and benefits of various response options. Affected and interested parties are consulted as part of the decision-making process.

Where powers in the Biosecurity Act are exercised for the purpose of managing or eradicating an organism, and this results in verifiable losses, full compensation is payable under the Act. An example of this would be the destruction of livestock as part of an exotic disease response. Compensation is not payable, however, for losses caused directly by an organism (for example damage caused by termites to the interior of a house).

In September 2001, the Biosecurity Council approved a “Policy Statement on Responding to an Exotic Organism Incursion”. The policy sets out a generic approach to decision-making, and is intended to guide departments in the development of consistent and transparent response programmes. It also serves to inform stakeholders about the Government’s approach to decision-making, and their opportunities for involvement in the process. The policy has two distinct phases:

- initial response phase, and
- decision-making and responding beyond the initial phase.

#### ***3.4.3.1 Initial response phase***

Actions during the initial response phase for an incursion can range from simply collecting information, through to a full-scale containment, management or eradication programme. At a minimum, initial responses will usually involve identifying the organism, and carrying out a “delimiting” survey to determine how far it has spread. Decisions on the level of initial response are taken by the relevant CTO.

For incursions where containment, management or eradication are likely options, the CTO establishes a technical advisory group (TAG) to provide expert advice on scientific, operational and community issues. The CTO also consults with and keeps informed ministers, government departments, local authorities, industries and other interested parties as the response develops.

The initial response phase is completed once the CTO is satisfied that:

- the suspected organism is not exotic;
- the suspected organism is exotic, but “unwanted organism” status under the Biosecurity Act is not warranted;
- no further response action is appropriate (e.g. because the organism has been eradicated), and
- arrangements are in place to sustain an appropriate level of response until decisions about a longer-term response are made.

#### ***3.4.3.2 Decision-making and responding beyond the initial phase***

When determining whether and how to respond to an incursion beyond the initial phase, it is necessary to reconsider the roles, responsibilities and interests of government, affected industries, communities and other parties. It may be appropriate for the Government to continue leading the response through one of its biosecurity agencies. On the other hand, a better outcome may be achieved by the Government assisting or encouraging others to make their own longer-term arrangements.

The relevant CTO makes recommendations to Chief Executives, Ministers and Cabinet as appropriate on the basis of:

- an organism impact assessment;
- a response options analysis;
- cost benefit analysis;
- identifying the need for human resources and priority relative to other biosecurity needs, and
- analysis of how any ongoing response should be funded.

If it is decided to proceed with a government-led response, the CTO develops operational plans, lets contracts for service based on detailed specifications, and monitors operational delivery to ensure compliance. If at any time it appears that the programme is substantially failing to meet its objectives, the CTO is expected to initiate a full and rapid review.

MAF does not, currently, have planned access to sufficient resources to cope with a major pest or disease emergency. An outbreak only a fraction of the size of the recent UK FMD outbreak would exhaust identified resources. MAF is participating in discussions on “whole of government” responses to emergencies and these discussions include contributions from other ministries, the police and the armed forces. An international agreement is in place for limited assistance from veterinary resources in the UK, USA, Canada and Australia in the event of an FMD outbreak.

#### ***3.4.3.3 Contingency planning and operational management of responses***

Contingency planning and operational management of responses to incursions are the responsibility of each of the CTOs. Within the bounds of the Biosecurity Council policy statement of responses to incursions, CTOs, with their staff, develop contingency plans for their sector and contract the resources required for response management and operations. Diagnostic support is available from the Animal Health Reference Laboratory (AHRL), the NPPRL and other science centres. A response planning and management team is established at NCDI but this group has been used only for responses to incursions of animal diseases and environmental pests. AgriQuality is the primary contractor for maintenance of response capabilities and provision of field staff to support responses for plant, forest, animal and environmental pests and diseases. MoH and District Health Boards contract a private company to manage the response to southern salt marsh mosquito.

Experience with recent incursion responses (such as varroa bee mite, painted apple moth, red imported fire ant, and southern saltmarsh mosquito) suggests that there are large differences in the way responses are currently managed. Although the implementation of the Biosecurity Council’s “Policy Statement on Responding to an Exotic Organism Incursion” should improve consistency, a number of management and funding issues remain. Weaknesses and concerns have been identified in relation to:

- incursion response capabilities;
- role of CTOs;
- project management;
- management oversight;
- funding arrangements;
- compensation policy and procedures, and
- responses in urban environments.

Contracting processes used, and the extent of the capability maintained, varies between sectors, agencies, and groups within agencies. New Zealand currently has limited capability to respond to incursions of marine organisms (although MFish is currently developing such a capacity), and capability for responding to terrestrial organisms is managed independently by the separate animals, plants and forest biosecurity groups within MAF, and the MoH in relation to exotic mosquitoes.

#### 3.4.4 Submissions

Many submissions called for more rapid and effective responses to detections of new organisms. Some suggested an “act now, investigate and consult later” approach to incursion responses. Suggestions, which were seen as contributing to this, included:

- improvements in coordination and clear lines of accountability;
- establishment of a group within MAF with “response” as their core function;
- availability of a “ready reaction” science task force with good research facilities;
- a database of specialists so that necessary skills can be assembled rapidly, and
- the prior preparation of response plans.

The general view seemed to be that all new incursions should be met by a response which attempted to eradicate the organism. Speed was seen as being especially critical for responses to marine organisms. One submitter expressed dissatisfaction with what they considered to be a common MAF response to findings of plant pests: “The pest is here – there is nothing we can do about it. It’s your problem to manage.” Examples provided were western flower thrip, guava moth and potato spindle. Another proposed that a more conservative approach should be taken with organisms which arrive in New Zealand without the assistance of human intervention (e.g. by flight, wind or sea current).

Recommendations for pre-prepared response plans covered a range of options including:

- general proposals that the targets of plans be based on assessment of the risk of the organisms reaching New Zealand;
- contingency plans targeting different types of organisms, and
- a specific plan for response to FMD and a generic plan for other organisms.

Comments were made supporting improved communication and cooperation between regional councils and MAF in the planning and executing of responses to incursions of exotic organisms. It was suggested that such consultation and cooperation might have avoided some of the difficulties encountered with implementation of spraying programmes for painted apple moth.

#### 3.4.5 Recommendations

- Agreement on “whole of government” responses to biosecurity emergencies should be reached as rapidly as possible.
- The policy on incursion responses should be supported by a checklist to guide CTOs, and their immediate staff, in the process of implementing incursion responses. Generic terms of reference for Technical Advisory Groups (TAGs) should be established to assist CTOs in the planning of responses.
- A group should be established within MAF with response preparedness and response management as their core functions. This could be modelled on the current NCDI group, which has those functions, but is restricted to animal diseases and environmental pests. The unit should be structured and operate on the basis of generic principles of emergency management, complimented by key technical resources required to plan and deal with responses to biosecurity incursions.

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- Response plans should be prepared to deal with identified high priority risks and for generic responses.
  - Communication with regional councils and territorial authorities, in areas which might be affected by incursion responses, should be established early in the response process. This should apply generally but is particularly important where large numbers of people might be affected or where actions might have impact on Resource Management Act issues.
  - Key scientists (both within New Zealand and internationally) with knowledge of high priority biosecurity risk organisms or groups of organisms should be identified and contact details maintained to ensure rapid contact in the event of an incursion response requiring support from such experts.
  - Contracts for maintenance of response capability should be coordinated to ensure the most cost-effective use of available incident management skills, contingency planning and simulation exercises.

## 3.5 PEST MANAGEMENT

### 3.5.1 Scope

This section deals with the management of pests and diseases which have become established in New Zealand. The scope is restricted to those organisms for which some form of “community” management action is deemed advantageous.

### 3.5.2 Desired outcome

The desired outcome is cost-effective management of established pests and diseases for which group action is warranted.

### 3.5.3 Current situation

#### 3.5.3.1 *National pest management strategies (NPMS)*

Procedures and requirements for the establishment of national pest management strategies (NPMS) are contained in the Biosecurity Act 1993. No NPMS are in place for pests that have yet to establish in New Zealand. There are however, two NPMS in place for established pests: “bovine tuberculosis” and “american foulbrood” of bees. Each is managed by an agency whose membership is determined by members of funding organisations (industries).

Internal boundaries are used in some instances to restrict the movement of pest organisms. This has been a long-term part of the NPMS for bovine tuberculosis, has been used in the management of varroa and was used to prevent aujeszky’s disease gaining entry to the South Island pig population.

#### 3.5.3.2 *Regional pest management*

Most regional councils have prepared a Regional Pest Management Strategies (RPMS) for pests and/or diseases of significance in their region. There are currently 24 RPMS in place, covering both animal and weed pests. The one RPMS not managed by a regional council relates to fire blight in the Nelson area, and this is managed by ENZA New Zealand International.

Regional councils coordinate their respective pest management activities through a Biosecurity Manager’s Group. This group develops pest management policies and guidelines for use by all regional councils. Despite this, regional inconsistencies in the management of some pests remain. A recent initiative has seen government biosecurity agencies and regional councils develop a National Pest Plant Accord (NPPA). Over 70% of New Zealand’s invasive weeds were originally garden plants. Under the Pest Plant Accord, most regional councils have agreed to undertake surveillance for, and enforce restrictions against, the sale or propagation of specified pest plants to help prevent new weeds emerging.

The provisions of the Biosecurity Act, for declaration of an organism as “unwanted”, result in the organisms having that status throughout the country. This creates difficulties when an organism is seen as a serious threat in one part of the country but is accepted as endemic in another.

#### 3.5.3.3 *Pest management on public conservation lands*

DOC manages eight million hectares of native forests, tussocklands, alpine areas, wetlands, dunelands, estuaries, lakes and many islands. This represents about 30% of

New Zealand's total land area. DOC is responsible for preserving and protecting these areas, including managing threats from invasive pests and weeds. Introduced animals such as possums, goats and deer are eating indigenous vegetation, while weeds such as wild ginger and mist-flower are replacing it. Rats, stoats and other predators are destroying native fauna.

DOC's pest management programmes are a significant part of New Zealand's overall pest management. Their success is essential to achieving our national biodiversity goals. DOC's strategy is to prioritise pest species and sites for active management. Localised pest species (for example new weeds) may be subject to specific eradication or control measures to prevent them becoming a major problem. Alternatively, priority areas of high conservation value may be managed for all pests in site-led programmes. DOC's pest management work occurs within a broader context of central and local government, community and individual pest management efforts. As a major landholder, DOC works closely with regional councils in the development and implementation of their RPMS.

#### **3.5.3.4 Industry pest management programmes**

A number of industries have taken the initiative to control or eradicate pests considered important to them. Such initiatives include:

- a successful programme to eradicate aujeszky's disease from New Zealand pigs, initiated by the Pork Industry Council;
- a current programme aimed at eradication of enzootic bovine leucosis by the dairy industry;
- community efforts to exclude phytophthora from the grape-growing areas in the Wairarapa;
- development of a National Pest Management Strategy for equine influenza (an exotic disease) by the combined equine industries;
- company-managed serological surveillance programmes for exotic diseases in the poultry industry, and
- forms of quarantine of susceptible stock in intensive production systems in the horticulture, pig and poultry industries.

#### **3.5.4 Submissions**

A number of submitters proposed that "biosecurity" be defined to include only defensive measures - pre-border, border, surveillance, and incursion response. It was suggested that: management of pests which have become established in New Zealand should be regarded as a separate activity.

Several submissions expressed concern over the level of communication and cooperation between regional councils and between councils and MAF on the management of pests established in New Zealand or pests which MAF considered had reached a stage where a national response was not warranted. Suggestions included:

- Improved coordination of the management plans for pests that occur in a number of regions. There was concern that some pest plants, which are subject to management strategies in one region, are being planted in neighbouring councils. For some widespread pests, regional pest management strategies are *de facto* national pest management strategies yet there are inconsistencies between the plans of the various councils.
- An increased focus on pest species established in New Zealand but not yet disseminated to their potential range. An example is that of potential weed pests which are established

in New Zealand but which have not yet naturalised and become distributed across their potential habitat range.

- Use of Cook Strait, or other geographic features as “borders” for quarantining pest species with restricted distribution.
- There is a need to manage the transition between regional and national management of pests, e.g. where a number of regions have management plans for a particular pest, assistance from a national organisation to improve coordination would be of value.
- If establishment of an organism is accepted there should be an effective system of communication between MAF, regions and industry. Support should be provided to industry if it is interested in managing the organism. Any acceptance should be supported by a comprehensive report made available to stakeholders before MAF declares that it will not take action or stop existing action. (At times) the focus seems to be on getting the new pest off MAF’s books.

### 3.5.5 Recommendations

- National biosecurity agencies should provide leadership and facilitation roles in the planning of the management of pests, where that management is likely to be more effective if based on a common approach.
- The development of NPMS as a means of managing pest species which have restricted distribution should be explored.
- Those regional councils that have not committed to the National Pest Plant Accord should be encouraged to do so.
- Neighbouring regional councils should work to ensure common approaches to management of pests unless there is sound justification for differences.
- Consideration should be given to greater use of internal “borders” particularly Cook Strait for the restriction of movement of pest species. NB: It is not recommended that border security at Cook Strait mimic that at our international border. Less draconian measures should be considered as part of the array of management tools which might be used for specific pests.
- MAF should review communication processes used in arriving at and communicating decisions that national responses to biosecurity incursions are to be terminated. There must be support for industries or regional councils wishing to consider the development of industry or council pest management strategies to deal with the new organisms.
- The full range of provisions of the Biosecurity Act which might be used in pest management should be explored, including the ability to declare organisms to be notifiable within RPMS—this would mean organisms not present in the region were required to be notified if they were found within its boundary.

## 3.6 ENFORCEMENT

### 3.6.1. Scope

“Enforcement” includes all those measures used to ensure that people comply with the requirements of the Biosecurity Act 1993, any of its amendments and the rules of any pest management strategy.

### 3.6.2. Desired outcome

The desired outcome from enforcement of biosecurity legislation and rules is future compliance by the individual against whom enforcement measures are taken and ongoing compliance by others.

### 3.6.3 Current situation

#### 3.6.3.1 *Relevant legislation*

The two main pieces of legislation relevant to biosecurity are the Biosecurity Act 1993 and the Hazardous Substances and New Organisms Act 1996 (HSNO).

The Biosecurity Act provides for the exclusion and effective management of pests and unwanted organisms. MAF is responsible for enforcing the exclusion aspects of the Biosecurity Act. MQS checks for compliance with import health standards at the border, and carries out enforcement of the conditions of importation applicable to organisms in containment. MQS has an enforcement unit that can instigate legal action, and MAF also has a Special Investigation Group (SPIG) that responds to serious breaches of the Biosecurity Act and other MAF legislation.

Regional councils and other pest management agencies are responsible for enforcing the requirements of pest management strategies. Pest management strategies are legally binding, and can place obligations on persons to do certain things. Pest management agencies are able to bring prosecutions under the Biosecurity Act against persons who fail to comply with pest management strategy requirements.

The HSNO Act operates alongside the Biosecurity Act in providing for the exclusion of harmful new organisms. Whereas the Biosecurity Act’s exclusion powers relate to the unintentional or illegal importation of new organisms, HSNO controls the intentional importation of new organisms (including genetically modified organisms). MQS provides investigation services under HSNO as part of its border functions, and will not allow the release of new organisms that do not have HSNO approval.

#### 3.6.3.2 *Burden of proof*

There are perceptions that the burden of evidence to achieve successful prosecution under the Biosecurity Act is too high. Few successful prosecutions have been taken, and there is potential for compliance levels to be undermined if alleged offences with a high public profile are not prosecuted. There are also perceptions that penalties for breaches are relatively light when weighed against the financial gains some people are seeking (e.g. through the smuggling of endangered species).

The majority of the serious offences under the Act are full *mens rea* offences, and require a high threshold of proof. To secure a conviction, the prosecution has to prove not only that the offence was committed, but also that the offender intended to commit

the crime. *Mens rea* offences contrast with ‘strict liability’ offences, where the prosecution is not required to prove guilty knowledge.

An example of a full *mens rea* offence under the Biosecurity Act is possessing unauthorised goods knowing them to be unauthorised. Heavy fines—up to \$100,000 for an individual—and/or a jail term of up to five years can be imposed. An example of a strict liability offence is the recently introduced system of instant fines for erroneous declarations at the border. An enforcement officer does not need to show that the person receiving the fine intended to make a false declaration, only that the declaration they made was inaccurate. The fine is \$200.

### **3.6.3.3 *Responsibility and liability***

Many risk situations are the result of actions or inactions by persons in other countries. Legal action against these people is seldom feasible.

### **3.6.4 Submissions**

Relatively few submissions contained comment on enforcement. Those that did comment proposed that there be higher penalties for breaches of biosecurity laws.

### **3.6.5 Recommendations**

- It is recommended that clear enforcement policies be developed for all biosecurity activities, including pest management. These policies should indicate who is responsible for biosecurity enforcement, and how enforcement policies will be integrated with broader risk management measures.
- The goals of biosecurity-related education programmes should include improved knowledge of legal requirements and personal commitment to compliance. Specific target audiences for these components should be identified.

## 3.7 SCIENCE AS A RESOURCE

### 3.7.1 Scope

This section comments on the application of science to biosecurity operations. The application of science and research to strategic development of biosecurity will be addressed in the Biosecurity Strategy.

### 3.7.2 Desired outcome

The desired outcome is the ongoing availability of sufficient numbers of trained scientists to ensure the application of sound science to the planning and implementation of biosecurity services. This requires access—through employment, long-term contracts, short-term contracts, or overseas contracts—to a wide spectrum of scientific knowledge and expertise.

### 3.7.3 Current situation

#### 3.7.3.1 Employment

National and regional biosecurity agencies employ substantial numbers of people with science training in management, planning and operational roles. Key scientific roles are present in Wellington offices of Ministries, MAF's NCDI at Upper Hutt, NPPRL at Auckland and Lincoln. DOC and MFish employ scientists who contribute to biosecurity-related research and operations. Regional Councils employ biosecurity officers and support staff with scientific training. Scientific resources are contracted for the supply of many biosecurity services. These include diagnostic laboratories and CRIs for the provision of organism identification services (border interceptions) and implementation of surveillance programmes.

Most of New Zealand's other biosecurity-related scientific expertise and research capability is dispersed between:

- six CRIs (Landcare Research, HortResearch, AgResearch, Crop & Food Research, Forest Research, and National Institute of Water and Atmospheric Research Ltd (NIWA));
- the Cawthron Institute, and
- four universities (Otago, Lincoln, Massey and Auckland).

These resources are called upon on an “as required” basis.

Investment in biosecurity research over recent years has been at a level of around \$25 million per year. The main funding source is the Foundation for Research Science and Technology (FRST) with additional funding (mainly for applied and operational research) from DOC (natural environment), MAF (biosecurity operations), MFish (marine), MoH (mosquitoes), Animal Health Board (possums/bovine Tb), and local authorities (pest management).

Most research effort has been directed toward pest management issues. There have been recent projects directed at pre-border (hull-fouling, potential marine risk species, ballast water; fruit-fly and fruit import issues; and *Salmonella*), border (Risk pathways—particularly marine pathways, containers, contaminated soils—interception techniques, wood pathogens, invasive moths, hull cleaning, and ballast water) and post-border measures (mostly in areas of pest management but with some investment in risk assessment, risk management and biodiversity impacts).

### 3.7.3.2 *Major issues*

The Biosecurity Strategy will propose the development of a science strategy to support New Zealand biosecurity. That is beyond the scope of this document.

Scientific skills are available to support most biosecurity operational needs at the present time but there are some significant weaknesses:

- There are difficulties in recruitment of plant and veterinary virologists with knowledge of New Zealand agriculture, horticulture or forestry industries. Such knowledge enables staff in these positions to make a greater contribution to both operations and planning of biosecurity services but recruitment from within New Zealand is extremely difficult.
- There are vulnerabilities to the loss of expertise in some areas, including bees, freshwater fish and marine algae, where the specialist knowledge resides with one scientist.
- The dispersion of scientific expertise to CRIs, which continue to operate in a competitive mode, has spread expertise thinly and created an environment in which collaboration faces impediments.

New Zealand cannot expect to have specialist skills and knowledge of all aspects of every organism that might enter New Zealand. International networks are used to identify those with specialist knowledge and skills when required. If necessary, scientists from other countries are brought to New Zealand. This is generally effective.

### 3.7.4 **Submissions**

The main themes in submissions addressing operational science areas were the needs for:

- improved diagnostic (organism identification) skills and tools;
- improved access to information on research already completed, and
- improved access to databases.

### 3.7.5 **Recommendations**

The issue of developing a biosecurity research strategy will be addressed in the Biosecurity Strategy and is beyond the scope of this document.

- Priorities should be established for improvements in procedures for identifying (diagnosing) pests and diseases either intercepted at the border or suspected in incursion responses. Such improvements might be achieved through additional training of MQS staff or scientists and diagnosticians in MAF laboratories or in organisations providing contracted services.
- Priorities should be established for the development of new methods of identifying suspect exotic organisms.
- CRIs, laboratories and other organisations holding databases of value to biosecurity should be encouraged to develop a system enabling access to (and preferably, compatibility between) databases.
- International networking with scientific groups which might have people with specialist skills relevant to New Zealand biosecurity should be encouraged.

## 3.8 AWARENESS/EDUCATION STRATEGY

### 3.8.1 Scope

The scope of the “education strategy” is promotion, education and information dissemination with potential to affect perception of biosecurity or behaviour affecting biosecurity of New Zealand. These matters are being addressed through the “Protect New Zealand” programme and as part of the more general communications strategies of biosecurity agencies.

### 3.8.2 Desired outcomes

The desired outcome is improved biosecurity through:

- increased stakeholder and public support for New Zealand’s biosecurity,
- increased commitment to compliance with biosecurity requirements and
- communications from New Zealand to those overseas who can influence New Zealand’s biosecurity (e.g. Informing prospective visitors and suppliers of goods for importation of New Zealand biosecurity requirements).

### 3.8.3 Current situation

All central government biosecurity agencies run programmes to inform various parties about specific issues. These include targeted and general programmes. In addition, the government launched the Protect New Zealand programme in September 2001 to raise awareness about biosecurity generally. Whilst it was initially envisaged as a two-year project, Protect New Zealand has now been made a permanent component of New Zealand’s biosecurity programme with annual funding of \$350,000. Extensive information on Protect New Zealand is available at [www.protectnz.org.nz](http://www.protectnz.org.nz).

Research carried out by Protect New Zealand shows clear gaps in public awareness and understanding of biosecurity issues, risks and processes. Specific groups—including youth (15-24 years), Pacific Island, Maori and Asian people—have significant understanding gaps. This lack of understanding is reflected in seizure and instant fine statistics at the border.

The general public and specific groups are critical to the success of New Zealand’s biosecurity programmes. Compliance with biosecurity requirements, effectiveness as the “eyes and ears” of monitoring systems, tolerance of the inconvenience of eradication and monitoring programmes, and support for increased taxpayer expenditure all depend on awareness of the need for and limitations of biosecurity measures. Awareness is also essential for ensuring that interested and affected parties can have constructive and informed input into biosecurity decision-making.

### 3.8.4 Submissions

#### 3.8.4.1 *General*

Submissions called for:

- more consultation with stakeholders and consultation processes that gained increased community and industry ownership of biosecurity measures, and
- increased consultation in the design of biosecurity programmes.

#### 3.8.4.2 *Pre-border*

Improved education of travellers was advocated, including education of departing passengers to improve awareness of requirements when they return.

### 3.8.4.3 *Border*

There was considerable advocacy for increased information dissemination to tourists and others prior to entry to New Zealand. Particular opportunities and improvements that were advocated included:

- improved communications to people with English as a second language including:
  - research to ensure most effective communications with in-bound passengers of various ethnicity and language, and
  - the use of a wider range of languages in information sheets on aircraft.
- use of biosecurity videos on aircraft departing from New Zealand to provide early education for those who will be returning;
- a suggestion that stakeholder organisations could assist with compilation and dissemination of information and that they could “impose” voluntary standards on their members. For example, sections of the tourism industry could provide guidance to visitors on what to bring or not to bring with them and could provide risk information to their clients;
- an improvement in information dissemination to cruise ships particularly where pre-clearances are provided. Information provided should include processes for disposal of ships’ wastes (chemicals, food, garbage, water, sewage, ballast water), as well as on requirements of passengers;
- many containers are unpacked at locations where there are no MQS staff. There should be an active programme to encourage people regularly involved in de-vanning containers to be alert to the possibility of exotic organisms (especially insects and spiders) and to immediately report findings of organisms which might have been imported in containers. This theme is repeated with respect to surveillance where submissions advocated special surveillance efforts around entry points.

### 3.8.4.4 *Surveillance*

Involvement of a wider range of people was proposed, including:

- the training of staff involved in handling imported freight to observe and report the presence of organisms which might be new to New Zealand;
- the identification of high-risk industry groups and the training of those working in them in observation and reporting requirements (e.g. the training of appropriate people in the recognition of leaf miners on beans and cucurbits), and
- the education of the general public (but particularly those in high-risk areas) to be observant and to report unusual findings.

### 3.8.5 **Recommendations**

- The Protect New Zealand awareness programme should be supported.
- Protect New Zealand should give consideration to the submissions above which are relevant to its brief.
- Research should be undertaken into the expectations of stakeholders over consultation processes and the extent to which they can be met.
- All lead agencies should contribute to planning of the Protect New Zealand campaign, particularly by assisting in the identification of target groups and objectives of communications directed toward them.

## 4 Consolidated recommendations

### 4.1 SYSTEM DESIGN

- Consultation processes should be reviewed with a view to identifying reasons for dissatisfaction and means of improvement.
- Information strategies should include an objective of improving stakeholder and public understanding of consultation processes and the opportunities open to them.
- Planning should include systematic analyses of the priorities that should be assigned to pests and risk pathways as a basis for planning the application of biosecurity measures.
- Planning of biosecurity measures should include technical evaluations of the optimal balance of the application of specific pre-border, border, surveillance and response procedures to ensure prevention of entry, early detection post-entry and cost-effective eradication of potential pest organisms.
- Optimal use should be made of available scientific resources to ensure high technical standards of biosecurity measures.
- Providers of biosecurity services should be required to operate within formally recognised quality systems (generally, certification to ISO 9001, 2000 or accreditation to either ISO 17020 or ISO 17025). Government biosecurity agencies should also give serious consideration to the development of quality systems within which to plan and operate biosecurity systems.

### 4.2 PRE-BORDER

- New Zealand's active contributions to international fora should be maintained.
- New Zealand should maintain its practice of developing strategic international relationships and prioritise its effort appropriately. Regional and bilateral biosecurity relationships should be continued.
- Methods must be found to reduce the backlog of risk analyses. Facilitating the contracting of risk analyses should be given serious consideration.
- Risk analysis processes directed at management of the risks of importation of environmental pests should be extended.
- The use of official assurances as a means of pre-border biosecurity is supported subject to assurance (through audits and inspections) that providers will meet New Zealand standards.
- Efforts should be made to extend the proposed electronic certification of the nature of contents of shipping containers to cover assurances related to biosecurity risks.
- Increased use of pre-clearance of goods for importation should be considered, particularly where track record identifies higher risk pathways.

- New Zealand's preferred means of moving biosecurity risks offshore should remain its ability to work with exporting countries to implement risk-mitigating measures as part of official assurance programmes.
- Planning of biosecurity information strategies should include consideration of:
  - use of border security videos on aircraft departing from New Zealand to provide early education for those who will be returning;
  - involvement of the travel and tourism industries in providing information and advice to prospective visitors to New Zealand, and
  - ensuring that biosecurity messages are provided in an appropriate range of languages.

### 4.3 BORDER

- The balance of the application of border security measures to incoming mail, passengers' baggage, sea freight containers and other potential risk pathways should be reviewed with a view to ensuring optimal cost-effective use of available resources.
- Systems of communication of biosecurity messages to incoming passengers should be kept under review.
- Languages used in brochures and available on videos should be matched with the language profile of people visiting New Zealand.
- Increased use of tourism companies to convey messages to tourists before they leave for New Zealand should be investigated.
- Changes in the management of biosecurity risks associated with shipping containers should be made in the light of the major container review that has been undertaken. Suggestions from submitters should be considered during that review.
- Information on the contents of containers which will become available with the provision of assurances from originating countries should be used to improve the clearance of containers and the targeting of inspections.
- Containers and other cargo should be inspected as closely as possible to the port of arrival.
- Transitional facilities should be located in areas of minimal risk of spread of pests to the surrounding environment and should not be near environments of high conservation or primary production value.
- Transitional facilities, and other locations through which large numbers of containers pass, should be required to meet specified standards of "hygiene".
- Containment of exotic organisms should be considered in the location and design of transitional facilities.
- The value of the identification of dead insects found on containers and/or elsewhere in cargo as a means of monitoring risk associated with those pathways should be reviewed.
- Capability and procedures for identification of intercepted organisms should be reviewed. Resources should be available for rapid, reliable identification of organisms

intercepted, particularly if there is a possibility that all are not contained at the border.

- Industry and MAF should work together to find a solution to the apparent lack of suitable plant quarantine facilities.
- The Ministry of Fisheries should continue its investigations of most appropriate biosecurity measures. Note should be taken of the comments in submissions – notably, calls for:
  - increased security of ballast water;
  - provision of treatment facilities for ballast water;
  - prevention or control of fouling of visiting boats, and
  - management interventions to control risks from ballast water, hull fouling and ships' cargo, based on risk profiles of individual ships.

#### 4.4 SURVEILLANCE

##### **Surveillance for organisms new to New Zealand**

- Increased emphasis should be placed on the technical soundness of surveillance processes, including both risk assessment and key technical aspects of programme design. The latter includes the choice of the most appropriate surveillance mechanisms and the targeting of higher-risk entry pathways.
- Design and implementation of programmes to increase public awareness of the contribution they can make to surveillance through observation and reporting of “the unusual” was supported by both the surveillance review and submissions on the “Issues” paper.

##### **Monitoring the behaviour and distribution of established pests**

- The absence of any programmes to temporally or spatially monitor syndromic changes in plants, animals or indigenous species is a significant weakness that should be addressed.
- There needs to be better coordination of monitoring objectives between government agencies and regional councils.
- As a matter of high priority, database coordination should be undertaken to provide higher quality access to known information on the distribution of pests and weeds in New Zealand.

##### **Verifying existing plant and animal health status**

- Increased attention should be paid to the technical standards of surveillance processes intended to support claims of national freedom from specific pests and diseases.

#### 4.5 RESPONSE

- Agreement on “whole of government” responses to biosecurity emergencies should be reached as rapidly as possible.
- The policy on incursion responses should be supported by a checklist to guide CTOs, and their immediate staff, in the process of implementing incursion responses. Generic terms of reference for Technical Advisory Groups (TAGs) should be established to assist CTOs in the planning of responses.

- A group should be established within MAF with response preparedness and response management as their core functions. This could be modelled on the current NCDI group.
- Response plans should be prepared to deal with identified high priority risks and for generic responses.
- Communications with regional councils and territorial authorities, in areas which might be affected by incursion responses, should be established early in the response process.
- Key scientists (both within New Zealand and internationally) with knowledge of high priority biosecurity risk organisms or groups of organisms should be identified and contact details maintained to ensure rapid contact in the event of an incursion response requiring support from such experts.
- Contracts for maintenance of response capability should be coordinated to ensure the most cost-effective use of available incident management skills, contingency planning and simulation exercises.

#### **4.6 PEST MANAGEMENT**

- National biosecurity agencies should provide leadership and facilitation roles in the planning of the management of pests, where that management is likely to be more effective if based on a common approach.
- The development of NPMS as a means of managing pest species which have restricted distribution should be explored.
- Those regional councils that have not committed to the National Pest Plant Accord should be encouraged to do so.
- Neighbouring regional councils should work to ensure common approaches to management of pests unless there is sound justification for differences.
- Consideration should be given to greater use of internal “borders” particularly Cook Strait for the restriction of movement of pest species.
- MAF should review communication processes used in arriving at, and communicating decisions that national responses to biosecurity incursions are to be terminated. There must be support for industries or regional councils wishing to consider the development of industry or council pest management strategies to deal with the new organisms.
- The full range of provisions of the Biosecurity Act which might be used in pest management should be explored, including the ability to declare organisms to be notifiable within RPMS.

#### **4.7 ENFORCEMENT**

- It is recommended that clear enforcement policies be developed for all biosecurity activities, including pest management. These policies should indicate who is responsible for biosecurity enforcement, and how enforcement policies will be integrated with broader risk management measures.

- The goals of biosecurity-related education programmes should include improved knowledge of legal requirements and personal commitment to compliance. Specific target audiences for these components should be identified.

#### **4.8 SCIENCE AS A RESOURCE**

- Priorities should be established for improvements in procedures for identifying (diagnosing) pests and diseases either intercepted at the border or suspected in incursion responses.
- Priorities should be established for the development of new methods of identifying suspect exotic organisms.
- CRIs, laboratories and other organisations holding databases of value to biosecurity should be encouraged to develop a system enabling access to (and preferably, compatibility between) databases.
- International networking with scientific groups which might have people with specialist skills relevant to New Zealand biosecurity should be encouraged.

#### **4.9 AWARENESS/EDUCATION STRATEGY**

- The Protect New Zealand awareness programme should be supported.
- Protect New Zealand should give consideration to the submissions above which are relevant to its brief.
- Research should be undertaken into the expectations of stakeholders over consultation processes and the extent to which they can be met.
- All lead agencies should contribute to planning of the Protect New Zealand campaign, particularly by assisting in the identification of target groups and objectives of communications directed toward them.