Controller and Auditor-General
Tumuaki o te Mana Arotake

Performance audit report

Ministry of Agriculture and Forestry: Managing biosecurity risks associated with high-risk sea containers

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Ministry of Agriculture and Forestry: Managing biosecurity risks associated with high-risk sea containers

This is the report of a performance audit we carried out under section 16 of the Public Audit Act 2001.

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Foreword

More than half a million sea containers are imported into the country each year. These sea containers may carry biosecurity risks in the form of pests or diseases that could harm our economy, environment, health, and well-being.

I conducted a performance audit of how the Ministry of Agriculture and Forestry identifies, inspects, and manages the decontamination of sea containers that pose the highest biosecurity risks.

The Ministry is responsive to emerging risks. However, the Ministry has had more than 2 years to implement a revised Import Health Standard for sea containers, but it is not yet fully in place. The delay in full implementation of the standard means that the Ministry is not as effective as it could be in checking and promoting industry compliance.

The Ministry needs to improve the collection of information for identifying high-risk sea containers. It also needs to take measures to mitigate the risk of pests moving off sea containers before inspection, better monitor how sea containers are cleaned, and ensure that fumigation is effective in eradicating pests.

I acknowledge that the Ministry is taking steps to address the issues raised in my report.

I thank Ministry staff and stakeholders for their help and co-operation during the audit.

K B Brady
Controller and Auditor-General

18 May 2006

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Summary

Sea containers are large; they are usually full of goods and packaging materials, and a great many enter the country each year. Sea containers can carry unintended cargo – exotic pests and diseases that could threaten our primary production industries and our biodiversity. While it is critical that our borders are protected from the risks posed by exotic pests and diseases, it would take a great deal of time, and significant resources, to thoroughly inspect all the sea containers that arrive at our ports.

Instead, the Ministry of Agriculture and Forestry (the Ministry) uses "risk profiling" to identify the sea containers that are most likely to pose risks to our primary production industries and our biodiversity. The Ministry then inspects the sea containers identified as high risk to ensure that they are not contaminated with pests or diseases.

We sought to provide Parliament and the public with assurance that the Ministry accurately identifies the sea containers that pose the highest biosecurity risk, and then comprehensively inspects and decontaminates them.

The Sea Container Import Health Standard

The Ministry's requirements for managing sea container biosecurity risks are set out in the *Import Health Standard for Sea Containers from All Countries* (the Sea Container Import Health Standard).

The Ministry issued the Sea Container Import Health Standard in September 2003, and planned to fully implement it by 31 December 2003. The Sea Container Import Health Standard requires all the systems and facilities associated with the biosecurity clearance of sea containers to be audited. However, the Ministry has not yet fully implemented the required auditing. The delays mean that the Ministry does not have all the information it needs to identify where improvements might be required.

In 2004, an internal audit by the Ministry of the implementation of the Sea Container Import Health Standard made several recommendations for improvement. The Ministry has carried out some of these recommendations, but not those involving amendments to the Sea Container Import Health Standard or operational documents.

Compliance with, and enforcement of, the Sea Container Import Health Standard

A small team within the Ministry investigates offences related to importing sea containers. While the Ministry prosecutes some offenders, it more commonly

sends an educational letter to the person investigated, or takes no action. The Ministry does not deal consistently with non-compliance with the Sea Container Import Health Standard.

The auditing requirements of the Sea Container Import Health Standard were meant to provide additional incentives for compliance, because non-compliant importers would be subject to, and charged for, increased inspections. Because the required auditing has been delayed, there have been no additional incentives for industry groups to comply with the Sea Container Import Health Standard.

The Ministry is not always provided with a destination for sea containers once they leave the wharf, even though this information is required under the Sea Container Import Health Standard. In our view, the Ministry needs to investigate more effective ways to secure compliance with the Sea Container Import Health Standard.

Relationship management and communication

Implementing the Sea Container Import Health Standard put significant pressure on the relationship between the 2 groups within the Ministry responsible for managing sea containers – Biosecurity New Zealand (Biosecurity NZ), which wrote the standard, and the Quarantine Service, which implemented it. However, a relationship agreement between these 2 groups has been signed, and we saw evidence that this relationship is improving.

Overall, the Ministry's relationships with its industry stakeholders are good. Industry stakeholders made a number of positive comments to us about their interaction with the Quarantine Service on operational issues. The Quarantine Service is also improving its day-to-day communication with industry stakeholders.

In our view, it would help if the Quarantine Service and Biosecurity NZ worked together when they involved industry groups in strategic and policy matters.

Risk profiling for sea containers

The Border Monitoring Group within Biosecurity NZ is responsible for setting risk profiles to identify high-risk sea containers. It uses various sources of information and intelligence to determine which sea containers should be considered high risk.

The risk profiling is not as effective as it could be, because of limitations in relation to electronic information. For example, the following information is not, or cannot be, provided electronically to assist risk profiling:

- the country of origin of a sea container (the port at which the sea container was loaded onto a ship for the journey to New Zealand is provided, but it is the sea container's port of origin that is of interest from a biosecurity perspective);
- answers to questions about the type of treatment given to wood packaging (untreated wood packaging may be contaminated with pests or diseases);
- the destination of the sea container once it leaves a New Zealand wharf; and
- any information about empty sea containers (the risk associated with empty sea containers is manually determined).

A computer system of the New Zealand Customs Service is used to obtain the electronic information needed for risk profiling. The Ministry and the New Zealand Customs Service have discussed changing the computer system to improve the electronic information, but have not yet made progress in agreeing the scope of the project.

Quarantine declaration forms

For quarantine declarations to be useful in assessing risk, they need to accurately reflect the cleanliness of, and the type of packaging material used in, the sea containers they relate to. A quarantine declaration is a document signed by a manager of a packing or export facility in the country of origin. It states that the container was inspected internally and externally, was found to be free of contaminants, and what packaging material is used. Many people we spoke to questioned the accuracy of the information provided in quarantine declaration forms.

When the auditing requirements are fully implemented by the Ministry, this should help verify whether quarantine declarations accurately describe the biosecurity risks of sea containers. If quarantine declarations are found to be a valid tool for risk profiling, the Ministry should communicate this internally and to industry stakeholders.

Informing risk profiling

Ministry officials inspect high-risk sea containers. Non-Ministry personnel check lower-risk sea containers when they are unpacked. The Ministry uses the results of these inspections and checks to further inform the risk-profiling process. However,

the results of checks are not always entered into the Ministry's own computer system, QuanCargo, in a timely way. Information on any contamination found on or in sea containers that are cleaned or fumigated is not gathered. This means that the Ministry does not have access, or timely access, to information that could inform risk profiling.

The Ministry is responsible for staying informed of distributions and outbreaks of pests and diseases overseas that may change the risk of pests and diseases coming into the country in or on sea containers. This intelligence is regularly gathered from overseas, and specialist advice and observations from sea container inspectors are also used to inform risk profiles.

Monitoring and evaluating risk profiles

Ministry staff regularly query the data available on sea container inspections and checks. They use this information to assess changes over time, and levels of contamination. We also found evidence that the Ministry is responsive to new and emerging risks.

Biosecurity clearance for high-risk sea containers

Biosecurity clearance – effectively, permission for goods to enter New Zealand – is given by the Ministry's inspectors once they are satisfied that the requirements of the Sea Container Import Health Standard have been met.

The Ministry recruits inspectors who hold a tertiary qualification. Training for new recruits includes both technical and on-the-job training. The technical training allows inspectors to work towards a Certificate in Biosecurity. On-the-job training complements the technical training, and includes using a buddy system for learning how to inspect sea containers. However:

- on-the-job training is inconsistent throughout the country;
- staff may not be available to train new recruits when workloads are high;
- there is no written guidance on what to do when contamination is found;
- documents used to guide staff are not up to date; and
- inspectors are not subject to ongoing competency assessments.

Inspecting high-risk sea containers

The Sea Container Import Health Standard specifies that high-risk sea containers must be brought to a Quarantine Service inspection area within 8 hours of being unloaded from a ship. The Ministry extended this to 14 hours because 8 hours was difficult to implement if it meant inspecting containers at night – there was not

enough light, and inspectors were not on duty. Most sea containers are imported into Auckland, where the 14-hour period is sometimes exceeded, and Tauranga, where it is frequently exceeded.

The 6-hour extension does not apply to sea containers at high risk of carrying highly mobile pests (for example, ants). However, no alternative arrangements have been made to guard against these types of pest. There are opportunities for highly mobile pests to move off sea containers and into surrounding environments before the containers are inspected.

Decontaminating high-risk sea containers

Decontamination means fumigating or cleaning sea containers. Very few sea containers are fumigated. The Ministry has produced standards and procedures for fumigation. Contracted operators fumigate sea containers, and they are subject to regular audit. However, the auditing does not test whether fumigation is effective in killing pests. Fumigation operators have not been audited as often as the Ministry's procedures require.

Many empty sea containers are cleaned at transitional facilities. In 2005, the Ministry commissioned a review of cleaning practices at these facilities. The review highlighted several issues that required urgent action.

Equivalent systems for clearing high-risk sea containers

The Ministry and industry groups may set up arrangements other than those specified in the Sea Container Import Health Standard. These alternative arrangements are called "equivalent systems". There is no guidance available for setting up an equivalent system, and no means to assess whether a proposed equivalent system will manage biosecurity risks to a level equal to the arrangements in the Sea Container Import Health Standard. Despite this lack of guidance, the Ministry has collaborated well with industry groups to set up equivalent systems.

We looked at 2 examples of equivalent systems. In both cases, the Ministry has monitored the equivalent systems to ensure that the biosecurity risks are managed. In one example we looked at, the equivalent system was revoked when monitoring showed that biosecurity risks were not being adequately managed.

Recommendations

We recommend that the Ministry of Agriculture and Forestry:

1. enforce the requirement of the *Import Health Standard for Sea Containers from All Countries* for importers to provide information on the destination of a container once it leaves the wharf;
2. investigate and implement measures to secure greater compliance with the *Import Health Standard for Sea Containers from All Countries*;
3. ensure that processes are consistently followed for dealing with sea containers that arrive without a quarantine declaration or with an incorrect quarantine declaration;
4. work with the New Zealand Customs Service to address existing limitations for the electronic recording of biosecurity information for sea containers, and the inability to confirm that all high-risk sea containers are being identified;
5. enter the results of sea container checks by accredited persons into QuanCargo in a timely manner;
6. ensure that information on the nature of contamination found by contractors during the decontamination of sea containers is recorded for risk-profiling purposes;
7. prepare a national on-the-job training programme for use by trainer-assessors or people with this responsibility;
8. make available to all its relevant worksites staff who are experienced in training, and that it support staff with training responsibilities so that on-the-job training is not compromised by the need to complete routine work;
9. provide written guidance on the action to be taken when contamination is found on or in sea containers;
10. keep import health standards and procedure documents up to date;
11. take measures, where timeframes for inspecting sea containers cannot be met, to mitigate the risk of pests moving off sea containers and becoming established;
12. investigate options for providing better assurance that fumigation is effective in eradicating pests;
13. carry out audits of fumigation operators at the required intervals;
14. improve management and monitoring of the practices of decontamination facilities; and
15. prepare guidance and procedures for setting up equivalent systems under the *Import Health Standard for Sea Containers from All Countries*, which include monitoring requirements to ensure that the equivalent system is adequately managing biosecurity risks.

Part 1
Introduction

1.1 In this Part, we describe:

- what our audit examined;
- the objective of our audit;
- the scope of our audit;
- our expectations;
- how we carried out our audit; and
- the relationship between this audit and our 2002 report.

What our audit examined

1.2 Sea containers are designed for transporting freight by sea. About half a million sea containers are imported each year.

1.3 There are many pests and diseases that can come into the country either on or in the sea containers, the goods, or the packaging materials. The risks to our economy, environment, health, plants, and animals posed by these unwanted pests and diseases are referred to as "biosecurity risks". Biosecurity is the exclusion, eradication, or effective management of risks posed by pests and diseases to the economy, environment, and human health.

1.4 The Ministry of Agriculture and Forestry (the Ministry) is responsible for managing the biosecurity risks associated with sea containers under the Biosecurity Act 1993, and in particular through the *Import Health Standard for Sea Containers from All Countries* (the Sea Container Import Health Standard). An import health standard is issued by the Director-General of the Ministry. An import health standard specifies the requirements to be met for effectively managing biosecurity risks arising from importing goods.

1.5 Our performance audit examined how the Ministry identifies and manages the biosecurity risks associated with "high-risk" sea containers – the sea containers that have a higher than average probability of being contaminated with pests and diseases, of carrying goods not recorded on the manifest, or of carrying packaging material that is not on the manifest or that is prohibited.

Our audit objective

1.6 We sought to provide Parliament and the public with assurance that the Ministry accurately identifies the sea containers that pose the highest biosecurity risk, and then comprehensively inspects and decontaminates them.

The scope of our audit

1.7 Our audit focused on 3 areas:

- the implementation of the Sea Container Import Health Standard;
- how the Ministry identifies high-risk sea containers; and
- how the Ministry ensures that high-risk sea containers are properly inspected and, if necessary, decontaminated.

1.8 We did not consider the import health standards or procedures for managing the biosecurity risks associated with the goods transported in sea containers.

1.9 We concentrated on the management of high-risk sea containers, which are inspected by the Quarantine Service within the Ministry. We have not examined the effectiveness of the management of lower-risk sea containers that are checked by "accredited persons".[1]

1.10 We considered the functionality of the New Zealand Customs Service computer system (CusMod) because it is an important part of the electronic risk-profiling system for sea containers. We did not audit the performance of the New Zealand Customs Service in carrying out any of its functions.

Our expectations

1.11 To assess the Ministry's management of the biosecurity risks associated with high-risk sea containers, we established a set of audit criteria or expectations. We expected that:

- the Sea Container Import Health Standard would be fully implemented and enforced;
- there would be robust systems and processes for risk profiling sea containers; and
- there would be targeted, comprehensive, and consistent processes and procedures to ensure that high-risk sea containers are free from contamination.

1.12 We set out our expectations in more detail in Parts 3, 4, and 5 of this report.

1 An accredited person is a person who has attended and passed a course in basic biosecurity awareness associated with imported sea containers and container checking, and has been approved by the Director-General of the Ministry to conduct checks under the Sea Container Import Health Standard.

How we carried out our audit

1.13 To assess the Ministry's management of the biosecurity risks associated with high-risk sea containers, we reviewed relevant documentation and interviewed Ministry staff in Auckland, Tauranga, Wellington, and Christchurch. We also interviewed industry stakeholders, including:

- New Zealand Customs Service;
- Ports of Auckland Limited;
- Port of Tauranga Limited;
- Lyttelton Port Company Limited;
- Customs Brokers and Freight Forwarders Federation of New Zealand Incorporated;
- shipping companies;
- freight forwarding companies; and
- logistics companies.

Relationship of this audit to our 2002 report

1.14 In 2002, we released a report that looked at the Ministry's management of biosecurity risks.[2] The 2002 report included a case study that focused on the management of biosecurity risks associated with sea containers.

1.15 The Ministry accepted and has implemented the recommendations that we made in 2002 about managing sea containers. Therefore, this audit does not follow up on the implementation of those recommendations. Instead, given a 2003 review (see paragraph 2.6) and 2004 implementation of the revised Sea Container Import Health Standard, we have taken a fresh look at how the Ministry is managing sea containers – with a focus on the management of those sea containers deemed to pose the highest risk.

2 *Ministry of Agriculture and Forestry: Management of Biosecurity Risks*, ISBN 0-477-02898-5.

Part 2
Managing the biosecurity risks associated with sea containers

2.1 In this Part, we describe the:

- importation of sea containers;
- biosecurity risks associated with sea containers;
- responsibilities for managing the biosecurity risks associated with sea containers; and
- policy framework for managing sea containers.

Importing sea containers

2.2 The number of sea containers imported into New Zealand increased from about 350,000 in 2000-01 to about 550,000 in 2004-05. Of the sea containers imported in 2004-05, 45% arrived in Auckland, 24% in Tauranga, and 10% in Christchurch. The other sea ports throughout the country received 5% or less.

2.3 The process by which sea containers are imported into New Zealand is complex. It involves many different parties, including:

- importers – who order the goods from overseas, and who receive the goods on arrival in New Zealand;
- customs brokers – who work on behalf of the importer to handle all or some of the regulatory and administrative aspects of importing sea containers;
- exporters – who sell goods to importers;
- logistics companies, freight forwarders, shipping companies – which are involved in transporting sea containers from the exporter to the importer, and may also offer customs brokerage, warehousing, and distribution services;
- port companies – which manage the entry of ships into New Zealand, and may also unload the sea container from the ships and operate a sea container yard; and
- stevedores – who unload sea containers from ships, and move sea containers around shipping yards.

Biosecurity risks associated with sea containers

2.4 A sea container can be contaminated with pests or diseases that could pose serious risks to our primary production industries (and therefore our economy), and our biodiversity.

2.5 The contamination discussed in this report can be on the inside or outside of the sea container, or in or on the packaging material used to prevent the goods from damage during transportation. The Sea Container Import Health Standard defines contamination associated with sea containers as –

Animals, insects or other invertebrates (alive or dead, in any life cycle stage, including egg casings or rafts), or any organic material of animal origin (including blood, bones, hair, flesh, secretions, excretions); viable or [unviable] *plant or plant products (including fruit, seeds, leaves, twigs, roots, bark); or other organic material, including fungi; or soil or water; where such products are not the manifested cargo being imported.*

2.6 The results of a survey of more than 11,000 sea containers, published by the Ministry in 2003, showed that imported sea containers pose risks to New Zealand's biosecurity.[1] Our 2002 audit found that it was possible that sea containers had been responsible for several pest incursions in recent years – including the Southern Saltmarsh Mosquito and Painted Apple Moth.

Responsibilities for managing the biosecurity risks associated with sea containers

2.7 The Ministry co-ordinates the Government's biosecurity programme, and has overall accountability and leadership for managing biosecurity.

2.8 There are 2 business groups within the Ministry with responsibilities for managing sea containers, Biosecurity New Zealand (Biosecurity NZ) and the Quarantine Service.

2.9 Biosecurity NZ is responsible for:

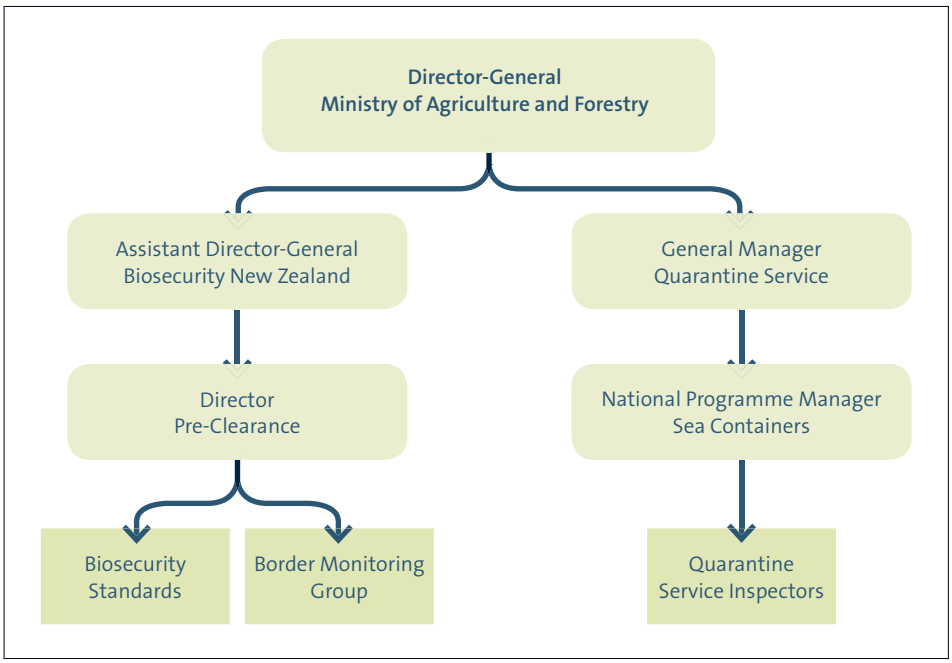
- import health standards;
- the accreditation and audit of providers and facilities in relation to managing the biosecurity risks associated with sea containers;
- risk profiles for sea containers; and
- controlling, managing, or eradicating pests and diseases should they arrive.

2.10 The Quarantine Service is responsible for providing domestic and offshore technical inspection and clearance services at the border.

2.11 Figure 1 shows a simplified organisational structure for the Ministry's management of sea containers.

1 Border Management Group (2003), *Sea Container Review,* MAF Discussion Paper No. 35, ISBN 0-478-07744-0, ISSN 1171-8951.

Figure 1
The Ministry of Agriculture and Forestry's organisational structure for managing sea containers



Policy framework for managing the biosecurity risks associated with sea containers

2.12 The Sea Container Import Health Standard outlines the requirements for managing biosecurity risks associated with the importation of sea containers and associated packaging material of goods inside containers.

2.13 The previous import health standard for managing the biosecurity risks associated with sea containers had been in place since 1998. In 2003, the Ministry reviewed that import health standard, and made significant changes to how the biosecurity risks associated with sea containers are managed.

2.14 The Border Monitoring Group told us that, after the implementation of the revised Sea Container Import Health Standard in January 2004, the "post-border" interceptions of pests associated with sea containers in 2004 fell by 66% compared with the number of post-border interceptions in 2003. This is partly explained by the reclassification of transitional facilities (where sea containers are unpacked) to be part of the border system, rather than post-border.

Risk profiling

2.15 For some types of biosecurity risk, for example, airline passengers and their bags, the Ministry is able to inspect comprehensively – every person and every bag. However, sea containers are large and usually full of goods and packaging material. It is not practicable to thoroughly inspect them all.

2.16 Instead, the Ministry uses risk profiling to identify those sea containers that are most likely to pose the highest risk. We discuss risk profiling in Part 4.

High-risk sea containers

2.17 The Sea Container Import Health Standard defines high-risk sea containers as those deemed to have a higher than average probability of being contaminated, of carrying goods not recorded on the manifest, or of carrying packaging material that is not on the manifest or that is prohibited. In addition, if a Quarantine Service inspector has reasonable grounds to suspect that a sea container has a higher chance of being contaminated, that sea container is also deemed to be high risk.

2.18 Sea containers are deemed to have a high risk of *exterior* contamination if they come from countries where there is a high risk that the Giant African Snail or Asian Gypsy Moth may have contaminated the sea container, if they have inadequate documentation (including quarantine declarations[2]), or if they come from any other high-risk areas specified by the Ministry.

2.19 Sea containers are deemed to have a high risk of *internal* contamination if they have no (or an inadequate) quarantine declaration, they contain prohibited packaging material, there is inadequate information on the contents of the sea container, or they have been specified by the Ministry as high risk for any other reason.

Inspecting sea containers

2.20 A Quarantine Service inspector will examine all 6 sides of a sea container that has been identified as high risk. This includes examining the top of the sea container, and lifting it on to a stand so that its underside can be inspected. The sea container may be decontaminated (fumigated or cleaned), or an equivalent system[3] may be used to ensure that the biosecurity risks are managed. We discuss this part of the process in Part 5.

2 A quarantine declaration is a document signed by a manager of the packing or export facility in the country of origin. It states that the container was inspected internally and externally and found to be free of contaminants, and what packaging material was used.

3 An equivalent system is an alternative arrangement to that specified in the Sea Container Import Health Standard that manages biosecurity risks to the same standard as the Sea Container Import Health Standard.

2.21 All other sea containers undergo a much quicker 4-sided examination (looking at the sides of, but not on top of, or underneath, the sea container). The Ministry calls this type of examination, if performed by a Quarantine Service inspector, an inspection. If an accredited person does it, the Ministry calls it a check.

2.22 All sea containers are unpacked under the supervision of an accredited person or a Quarantine Service inspector who checks for, and informs the Ministry of, any contamination of the sea container (inside and outside), the packaging material, or the goods inside the sea container. In addition, the Quarantine Service inspects some imported goods. We did not consider checks by accredited persons, or the inspection of goods, as part of our audit (see paragraphs 1.8-1.9).

2.23 The Ministry issues the biosecurity clearance for a sea container when all the requirements under the Sea Container Import Health Standard are met, and the Ministry is confident that the container is free from contamination.

Part 3
Implementing the *Import Health Standard for Sea Containers from All Countries*

3.1 In this Part, we discuss:

- our expectations;
- the Sea Container Import Health Standard and auditing requirements;
- compliance with the Sea Container Import Health Standard; and
- relationship management and communication.

Our expectations

3.2 We expected:

- the Ministry to have fully implemented the Sea Container Import Health Standard;
- there to be adequate incentives for complying with the Sea Container Import Health Standard;
- the Ministry to be adequately enforcing the Sea Container Import Health Standard; and
- the Ministry to have strong relationships with industry stakeholders.

The Sea Container Import Health Standard and auditing requirements

3.3 The Ministry issued the Sea Container Import Health Standard in September 2003, and planned to fully implement it by 31 December 2003. The standard states that all systems and facilities associated with the clearance of sea containers are subject to audit.

3.4 The Ministry has not yet fully implemented the required auditing.

3.5 In September 2005, the Ministry released a document called the *Requirements for the Audit of Sea Containers* (the Audit Requirements document).

3.6 Under the Audit Requirements document, 1% of all sea containers will be routinely and randomly selected for audit. Once selected, Ministry staff will:

- verify that the documentation for the container is correct;
- carry out a 4-sided inspection of the sea container to check for external cleanliness; and
- verify the internal compliance of the container (checking its cleanliness, that the packaging material and goods are consistent with that declared, and that any wood packaging meets the requirements of the *Import Health Standard for Wood Packaging Materials from All Countries*).

3.7 The Ministry started the documentation check in October 2005. However, all the aspects of the Audit Requirements document will not be fully implemented until at least July 2006 because the Ministry cannot yet recover from the industry the costs of checking the external and internal cleanliness of sea containers. The costs cannot be recovered from the industry until the Biosecurity (Costs) Regulations 2003 have been amended.

3.8 We understand that Ministry staff involved in amending the Biosecurity (Costs) Regulations (the cost recovery team) were approached after the Sea Container Import Health Standard was revised, and asked to set up the funding arrangements. The cost recovery team had just finalised the 2003 amendments to the Biosecurity (Costs) Regulations 1993, and had not accommodated the changes required for the revised Sea Container Import Health Standard into this amendment. The Biosecurity (Costs) Regulations 2003 are being further amended, and changes that incorporate the revised Sea Container Import Health Standard are expected to be made in July 2006.

3.9 Until all aspects of the Audit Requirements document are fully implemented, the Ministry will not have all the information it needs to identify areas where improvements could be made. This includes information relevant to risk profiling sea containers. For example, the audit may detect undeclared wood packaging in certain sea containers, and this information could be used to better identify the sea containers likely to contain undeclared wood packaging.

3.10 The delay in implementing all aspects of the Audit Requirements document has meant that the extent of poor practices (such as the provision of inaccurate documentation) cannot be determined.

3.11 These delays also mean that incentives for industry compliance with the Sea Container Import Health Standard have been weakened. Full implementation of all aspects of the Audit Requirements document should provide stronger incentive for industry compliance because, where non-compliance is detected, future imports will be subject to increased inspection and associated costs. To avoid the extra inspection costs, importers are expected to demand that exporters improve the cleanliness of containers and the accuracy of their documentation.

Internal audit of the implementation of the Sea Container Import Health Standard

3.12 In 2004, Biosecurity NZ conducted an internal audit of how the Quarantine Service was implementing the Sea Container Import Health Standard.

3.13 The internal audit report made several recommendations for improvement. Biosecurity NZ and the Quarantine Service have a relationship agreement which states that all important actions and recommendations from internal and external audits shall be acted upon within the specified deadlines.

3.14 The Quarantine Service and Biosecurity NZ met in October 2004 to discuss the actions required after the audit. Many of the audit's recommendations had already been addressed. However, the Ministry has yet to act on some recommendations, particularly those requiring amendments to the Sea Container Import Health Standard or the Ministry's procedure documents. Not amending the Sea Container Import Health Standard and procedure documents has implications for staff operating under those documents (see paragraphs 5.18-5.22).

Compliance with the Sea Container Import Health Standard

3.15 We looked at how the Ministry ensures that the Sea Container Import Health Standard is complied with.

3.16 The release or delivery of sea containers to importers can be delayed if documentation is not in order. Because delays incur costs for the importer, this is an incentive to ensure that the correct documentation is provided to the Ministry. In addition, an importer may be charged for any inspection, cleaning, or fumigation of the sea container. This is an incentive to ensure that the sea container is free from contamination when it arrives in the country.

3.17 The Ministry employs a small team of investigators in its Enforcement Group within the Quarantine Service. The team investigates offences under the Biosecurity Act 1993 such as:

- the unauthorised movement of uncleared goods;
- providing false or misleading information to Quarantine Service staff;
- failing to comply with a reasonable direction or requirement made by Quarantine Service staff; and
- moving sea containers off the wharf before the Quarantine Service provides authorisation for the container to be moved.

3.18 An investigation can result in prosecution, a warning, or education. The most common result of an investigation is an educational letter sent to the subject of the investigation, or no action being taken. In 2005, 4 prosecutions were approved, and 2 more were pending approval. We were told that the Enforcement Group cannot keep up with its current investigation load.

Providing a destination for sea containers

3.19 The Sea Container Import Health Standard requires the Ministry to be provided with documentation specifying the destination of the container once it leaves the wharf, which must be an approved transitional facility.[1] However, customs brokers or importers do not have to enter a code for specific transitional facilities into CusMod[2] when they electronically enter the information.

3.20 This means the Ministry cannot ensure that sea containers are taken to a transitional facility for unpacking and checked for contamination by an accredited person, as required by the Sea Container Import Health Standard.

Recommendation 1

We recommend that the Ministry of Agriculture and Forestry enforce the requirement of the *Import Health Standard for Sea Containers from All Countries* for importers to provide information on the destination of a container once it leaves the wharf.

Enforcing the requirements of the Sea Container Import Health Standard

3.21 As we reported in 2002, there have been calls to introduce instant fines for non-compliance with biosecurity requirements for sea containers (similar to the infringement notice for passengers who fail to declare risky goods on arrival declaration forms).

3.22 The Ministry of Justice has advised that instant fines for New Zealand importers for incorrect sea container quarantine declarations would be inappropriate, because importers have no control over the state of the sea containers and the processes by which they are packed by an overseas exporter.

3.23 However, when the Ministry becomes aware that some sea containers have been moved off the wharf without permission, or that there has been unauthorised movement of non-cleared goods, the Ministry would be able to identify the person responsible for the breach of the Biosecurity Act 1993. In such circumstances, it would be possible for the Ministry to take action against the person.

1 A transitional facility is a place approved in accordance with section 39 of the Biosecurity Act 1993, for the purpose of inspection, storage, treatment, quarantine, or holding of sea containers.

2 In our 2002 report, we noted that risk profiling could be improved by the introduction of an integrated information technology system. The New Zealand Customs Service and the Ministry have worked together to provide an integrated system. Customs and biosecurity information on sea containers can be entered into CusMod by customs brokers or importers when they are making their customs declarations.

3.24 We were told that there is abuse of the system, and a lack of respect for the Ministry, because the consequences of non-compliance are not a sufficiently powerful deterrent. In our view, it is important that the Ministry maintains tight control over the release of sea containers from the wharf, and maintains the ability to track where the sea containers are going to be checked that they are free from contamination. In our view, the Ministry needs to secure greater compliance with the Sea Container Import Health Standard.

Recommendation 2

We recommend that the Ministry of Agriculture and Forestry investigate and implement measures to secure greater compliance with the *Import Health Standard for Sea Containers from All Countries*.

Consistency in enforcing the Sea Container Import Health Standard

3.25 The Sea Container Import Health Standard requires a quarantine declaration to accompany all sea containers. The Ministry's procedure document for the biosecurity clearance of sea containers[3] states that any sea container not covered by a quarantine declaration is to be considered high-risk, and treated accordingly (that is, inspected, fumigated, accompanied by an official certificate, or subject to an equivalent system).

3.26 The Ministry has not consistently upheld this requirement. The internal audit carried out in 2004 (see paragraphs 3.12-3.14) found that, depending on the worksite, Quarantine Service staff were lenient to various degrees towards importers when they failed to present a quarantine declaration. Responses by different staff when a container arrived with an incorrect or absent quarantine declaration included:

- no penalties for not producing a quarantine declaration;
- 6-sided inspections and supervised unpacking of the container when the importer failed for the third time to produce a quarantine declaration; and
- occasional enforcement action, requiring a 6-sided inspection and internal check of packaging and internal cleanliness of the container.

3.27 The authority of the Sea Container Import Health Standard has been undermined because the Quarantine Service has not consistently enforced it.

3.28 In June 2004, in response to the internal audit findings, the Ministry introduced a category of "medium risk" for some sea containers that did not have a quarantine declaration. Rather than a 6-sided inspection, "medium risk" sea containers are to undergo a 4-sided inspection. The Ministry needs to ensure that this new requirement is consistently applied.

3 *Process Procedure 32: Clearance of imported sea containers.*

Recommendation 3

We recommend that the Ministry of Agriculture and Forestry ensure that processes are consistently followed for dealing with sea containers that arrive without a quarantine declaration or with an incorrect quarantine declaration.

Relationship management and communication

Relationship management within the Ministry

3.29 The revision and implementation of the Sea Container Import Health Standard put pressure on the relationship between Biosecurity NZ and the Quarantine Service. For example, there was tension about the amount of involvement and consultation between Biosecurity NZ and the Quarantine Service.

3.30 In our view, there are lessons to be learned from the revision and implementation of the Sea Container Import Health Standard – particularly the need for more open communication between Biosecurity NZ and the Quarantine Service.

3.31 After the experience with the Sea Container Import Health Standard, Biosecurity NZ and the Quarantine Service signed a relationship agreement which states that:

- Biosecurity NZ shall ensure that the Quarantine Service has as much advance notice as possible of changes to border management strategies and technical specifications, to enable appropriate resourcing decisions, procedure preparation, and training;
- Biosecurity NZ shall ensure that the Quarantine Service has enough funding to enable the efficient delivery of services to Biosecurity NZ specifications;
- Biosecurity NZ shall, except in emergency situations, ensure that the Quarantine Service has enough time to plan and implement new or revised border specifications; and
- Biosecurity NZ shall consult fully with the Quarantine Service when preparing or reviewing all technical specifications and import health standards.

3.32 We were told that the relationship between Biosecurity NZ and the Quarantine Service is continuing to evolve, and the 2 groups are trying to work more collaboratively.

3.33 This improvement is evident in the consultation undertaken by Biosecurity NZ about the auditing requirements for sea containers. Quarantine Service staff and industry stakeholders told us that they considered this consultation to be significantly better than that for the revised Sea Container Import Health Standard. Quarantine Service staff told us that their concerns about the proposed Audit Requirements document were taken into account.

3.34 In our view, it is very important that Biosecurity NZ and the Quarantine Service continue to build an effective working relationship. It is important for Biosecurity NZ to understand the need for the Quarantine Service to be involved in matters that will affect the Quarantine Service's work. Similarly, to support any proposed changes, the Quarantine Service needs to be provided with information explaining the rationale for those changes. The agreement between Biosecurity NZ and the Quarantine Service contains sound principles for building this relationship.

Relationships with industry stakeholders

3.35 Effective management of the biosecurity risks associated with sea containers requires the co-operation and support of industry stakeholders (such as customs brokers, freight forwarders, port companies, and shipping companies). Maintaining good relationships with these industry groups is an important part of ensuring the successful implementation of the Sea Container Import Health Standard, and managing the biosecurity risks associated with sea containers.

3.36 Relationships with industry stakeholders are managed by both Biosecurity NZ and the Quarantine Service. The relationship agreement between Biosecurity NZ and the Quarantine Service sets out clearly which agency takes the lead in inter-agency and inter-government relations, but not which of the 2 groups is responsible for dealing with industry stakeholders, and about which matters.

3.37 Biosecurity NZ administers consultative committees, such as the Shipping Biosecurity Consultative Committee (which meets every 6 months to discuss operational and strategic policy issues). Biosecurity NZ may also deal directly with industry groups, such as shipping companies and port companies.

3.38 The Quarantine Service regularly deals with industry stakeholders on operational issues. Industry stakeholders (particularly port companies) made a number of positive comments to us by about their day-to-day working relationships with the Quarantine Service. Some industry stakeholders felt that the Ministry was improving the way that it involved stakeholders.

3.39 The Quarantine Service employs a Stakeholder and Agency Liaison Manager, whose role is to maintain effective and meaningful relationships with stakeholders. There is no person with a similar position in Biosecurity NZ.

3.40 The Quarantine Service also communicates with customs brokers and accredited persons through informative and entertaining newsletters. We consider them a useful means of communicating with industry stakeholders.

3.41 Some industry stakeholders we spoke to believe that the Ministry needs to engage more with industry groups. They considered that it is important that industry stakeholders are provided with information about the rationale behind any changes, and that the policy (Biosecurity NZ) and operational (Quarantine Service) arms of the Ministry should work together more. In our view, it would help if Biosecurity NZ and the Quarantine Service worked together to discuss strategic policy and operational changes with industry stakeholders.

Day-to-day communication with industry stakeholders

3.42 Some industry stakeholders we spoke to mentioned that not having one point of contact when dealing with the biosecurity clearance of sea containers was frustrating. They also mentioned that it was difficult to make telephone contact with Quarantine Service staff.

3.43 A project has been approved to centralise the Quarantine Service operations in Auckland. It is envisaged that this new worksite will process sea container clearances for all of New Zealand, to ensure consistency.

3.44 Some stakeholders were frustrated that the documentation needed to clear sea containers had to be sent by facsimile to the Quarantine Service, and considered that this was not an efficient way to transfer information. In our view, the Quarantine Service's information technology capacity is outdated, and does not meet its business needs.

3.45 In Auckland, a project is under way to replace paper-based facsimile machines with technology that can store and archive facsimile messages in an electronic format. This technology is expected to significantly reduce or eliminate paper copies, and the need for the Quarantine Service to manually enter the information.

Part 4
Risk profiling of sea containers

4.1 In this Part, we discuss the Ministry's identification of high-risk sea containers through risk profiling. We discuss:

- our expectations;
- risk profiling;
- the processes and procedures for setting risk profiles;
- collecting information and intelligence for risk profiling; and
- the Ministry's responsiveness to new and emerging risks.

Our expectations

4.2 We expected that the Ministry would have robust systems and processes for effectively risk profiling imported sea containers. More specifically, we expected that:

- there would be a clear and consistent process for establishing risk profiles;
- all information required by the Sea Container Import Health Standard would be collected, analysed, and evaluated by the Ministry;
- the Ministry would collect, analyse, and evaluate intelligence relevant to sea container risk profiling; and
- risk profiling would be responsive to new and emerging risks.

What is risk profiling?

4.3 Container data analysts in the Border Monitoring Group in Biosecurity NZ undertake risk-profiling activities. These staff are responsible for identifying which sea containers are most likely to be contaminated with pests and diseases.

4.4 Sources of information used to set risk profiles include:

- the results of sea container inspections and checks;
- the results of sea container audits, and a survey of 11,000 sea containers undertaken in 2003;
- information from external intelligence;
- advice from specialist staff in Biosecurity NZ and Quarantine Service inspectors; and
- risk factors associated with specific sea containers (for example, port or country of origin, importer, exporter, customs broker, shipping company, type of goods carried, and quarantine declaration answers).

4.5 The Ministry uses this information to prepare risk profiles for identifying which sea containers are considered high risk. High-risk sea containers need to be inspected, fumigated, or cleaned once they arrive in the country.

4.6 When a sea container is imported into New Zealand, customs brokers or importers enter information (such as the origin of the container, the types of goods in the container, and the answers to the quarantine declaration questions) into CusMod through a "customs import entry". If the information entered into CusMod matches a sea container risk profile, an alert is automatically raised about the sea container.

4.7 The alert results in a message being sent to the customs broker or importer and port company telling them, for example, that the container must be taken to the Quarantine Service inspection area. If no alerts are triggered, a message is sent to the customs broker or importer and port company saying that the sea container can be released from the port to a transitional facility, to be checked for contamination by an accredited person.

Processes and procedures for setting risk profiles

4.8 The processes for preparing, modifying, and implementing sea container risk profiles are set out in a draft procedure document. It gives guidance on:

- events that would trigger the creation or modification of sea container profiles (for example, a change in the overseas distribution of a significant pest or disease);
- the information to analyse on a regular basis (for example, weekly analysis of the sea containers where inspection or check results show that undeclared wood packaging was present);
- the identification of risk factors (for example, the sea container's country of origin); and
- deciding whether to create a new profile or modify an existing risk profile.

4.9 The Ministry's Risk Profile Review Group decides whether to introduce a new risk profile, or to change an existing one.

4.10 Establishing a new or modified risk profile involves analysing quantitative data on the risk of sea containers introducing a specific pest or disease, while taking into account factors such as the compliance costs involved in introducing the risk profile and the resource implications for the Ministry. This is part of the process because port facilities and inspectors could be overwhelmed by alerts on a large number of sea containers as the result of a new risk profile.

4.11 Once a risk profile is approved and in use, it is applied consistently and nationally to all sea containers. A sea container that meets high-risk criteria will be inspected regardless of the New Zealand port it is shipped to.

4.12 In addition to criteria for specific pests and diseases, risk profiles may also have a compliance intent. For example, the Ministry may set up a risk profile for a company or individual found to have supplied inaccurate information, and their containers may be inspected to check that their compliance has improved.

Collecting information and intelligence for risk profiling

4.13 The Sea Container Import Health Standard states that all imported sea containers must be covered by documentation that includes:

- the origin of the sea container (where it was packed), and the port at which the sea container was first loaded aboard a ship for transportation to New Zealand;
- the destination of the sea container once it arrives in the country (this must be a transitional facility); and
- a quarantine declaration.

4.14 However, the existing design of CusMod does not allow the electronic entry of all the biosecurity information required under the Sea Container Import Health Standard, and which could be used to identify which sea containers pose a high risk.

4.15 For example, information about the port at which a container was first loaded aboard a ship is not recorded electronically if the container has been moved from one ship to another during its journey to New Zealand. The customs broker or importer is only required to enter into CusMod the port where the goods were loaded onto the ship for the final leg of the journey – not the country the container originally came from. For biosecurity purposes, the country of origin is of greater importance. The country of origin is used, for example, to identify high-risk sea containers from far east Russia, which could be contaminated with Asian Gypsy Moth.

4.16 In addition, CusMod can only record "Y" for yes and "N" for no answers. The quarantine declaration asks how wood packaging has been treated, but this information cannot be recorded electronically in CusMod because it is not a yes or no answer.

4.17 Furthermore, despite it being a requirement of the Sea Container Import Health Standard, customs brokers or importers are not required to enter into CusMod the destination of a container once it arrives. They must indicate that a sea container is going to a transitional facility, but do not have to specify which transitional facility or where it is located. This has implications for ensuring compliance with the Sea Container Import Health Standard.

4.18 Also, Ministry staff have only a limited ability to electronically search biosecurity alerts within CusMod, because the computer system does not have the technical capability to support such searches. This means that the Ministry is unable to check that it is targeting all the sea containers it wants to.

4.19 The Ministry and the New Zealand Customs Service have discussed improving the electronic risk profiling system, but have not yet agreed the scope of such a project. We were told that the New Zealand Customs Service is reviewing its information technology work programme and will consult with the Ministry about priorities.

Manual risk profiling of empty sea containers

4.20 Empty sea containers may be contaminated, but there is no requirement for a customs broker or importer to enter any information about empty sea containers into CusMod.

4.21 Empty sea containers require a quarantine declaration, and there is a facility for customs brokers or importers to electronically enter the answers to the quarantine declaration questions, and the origin of the container, into CusMod if they choose to. However, for many empty sea containers this information is not provided electronically. If an electronic entry is made, the country of origin is often not given.

4.22 Because of this, the Quarantine Service must manually check the information provided by the shipping company to identify which empty sea containers it needs to inspect. This is time consuming. It would be more efficient if high-risk empty sea containers could be identified using the electronic risk-profiling system.

Recommendation 4

We recommend that the Ministry of Agriculture and Forestry work with the New Zealand Customs Service to address existing limitations for the electronic recording of biosecurity information for sea containers, and the inability to confirm that all high-risk sea containers are being identified.

Accuracy of the quarantine declarations

4.23 For quarantine declarations to be useful in assessing risk, they need to accurately reflect the cleanliness of, and the type of packaging material used in, the sea containers they relate to.

4.24 The Ministry's 2003 survey of more than 11,000 sea containers found that containers with cleaning certificates (a predecessor to quarantine declarations,

intended to provide assurance that sea containers are free from internal contamination) did not have a lower contamination rate than sea containers without cleaning certificates. However, the survey found that the requirement for cleaning certificates may have been responsible for 80% of sea containers arriving in New Zealand free from internal contamination.

4.25 In 2005, about 4000 sea containers with quarantine declarations stating that the sea container was clean were found to be contaminated. In about 10,000 sea containers, wood packaging was found when the quarantine declaration stated that no wood packaging was used.

4.26 Between October 2005 and February 2006, the Ministry checked the paper and electronic copies of quarantine declarations for almost 1500 sea containers. The Ministry found that 1.4% were non-compliant. In three-quarters of these cases, the customs broker or importer made an incorrect electronic declaration (that the sea container had been inspected before it was packed and was found to be free of contamination, or that no high-risk packaging material was present), when the hard copy of the quarantine declaration stated otherwise.

4.27 The Ministry is yet to assess whether the information provided in quarantine declarations accurately reflects the cleanliness of, or presence (or not) of high-risk packaging material in, the sea containers they relate to. This aspect of the Audit Requirements document is intended to be implemented after July 2006 (see paragraphs 3.7-3.8).

4.28 Many of the industry stakeholders and Ministry staff we spoke to during our audit questioned the accuracy of quarantine declarations. They doubted whether the person signing the quarantine declaration overseas had seen the container, and if they could attest to its cleanliness, or whether wood packaging or other restricted packaging materials were present, with any certainty.

4.29 Staff in some parts of the Ministry consider that quarantine declarations are beneficial (for example, quarantine declarations raise awareness of the requirement to transport clean sea containers), and that these benefits will be greater when the fully implemented Audit Requirements document enables the Ministry to identify and penalise those importers making incorrect declarations. However, because of delays in implementing the Audit Requirements document, the Ministry currently has little assurance over the integrity of the answers to quarantine declaration questions – which are used for risk profiling.

4.30 In our view, it would help if the Ministry further analysed the usefulness of quarantine declarations as a risk-profiling tool. If quarantine declarations are found to be a valid tool for risk profiling, this should be communicated to internal and industry stakeholders.

Timeliness of results entered into QuanCargo

4.31 Contamination found during Quarantine Service inspections, or during checks of sea containers by accredited persons, is required to be entered into the Ministry's computer system (QuanCargo). This information is critical for risk-profiling purposes, because it shows where contamination is found and enables the container data analysts to examine contamination trends over time – and then design risk profiles to target the containers most likely to be contaminated.

4.32 Quarantine Service staff are responsible for entering the results of their inspections into QuanCargo. Accredited persons are required to provide the Quarantine Service with the results of their sea container checks. Some accredited persons opt to enter the check results into QuanCargo through a website, and others send check results to the Quarantine Service in hard copy.

4.33 There is a backlog of hard copy check results to be entered into QuanCargo. To mitigate the risk that this information is not available for identifying high-risk sea containers, Biosecurity NZ has informed the Quarantine Service that inspection results showing contamination or wood packaging should receive priority for recording in QuanCargo. These type of results are vital for identifying high-risk sea containers.

4.34 We agree that entry of these type of results should be a priority. In our view, delays in entering this information into the computer system could result in delays in identifying and responding to new biosecurity risks.

Recommendation 5

We recommend that the Ministry of Agriculture and Forestry enter the results of sea container checks by accredited persons into QuanCargo in a timely manner.

Contamination found during fumigation or cleaning of sea containers

4.35 Some high-risk sea containers require decontamination (cleaning or fumigation). The Ministry uses contractors to clean and fumigate sea containers, but does not collect (or require the contractors to collect) any information about the nature or extent of contamination.

4.36 Recording the details of the nature of any contamination found during cleaning or fumigation would further inform the identification of high-risk sea containers. In our view, information on contamination needs to be recorded for risk profiling purposes.

Recommendation 6

We recommend that the Ministry of Agriculture and Forestry ensure that information on the nature of contamination found by contractors during the decontamination of sea containers is recorded for risk-profiling purposes.

Gathering biosecurity information and intelligence

4.37 Under the draft procedure document for sea container risk profiling (see paragraph 4.8), Biosecurity NZ is responsible for staying informed of changing pest distributions overseas, and outbreaks of serious pests and diseases in new areas, that may change the risk of pests or diseases entering the country in or on sea containers from those areas.

4.38 Biosecurity NZ regularly gathers information and intelligence on international biosecurity issues. It does this, for example, through internet alerts and information from overseas quarantine organisations and international agencies about emerging plant pests.

4.39 The Border Monitoring Group also receives information from specialist staff within Biosecurity NZ – for example, updates on the presence of invasive ant species in various countries. In addition, Biosecurity NZ is in contact with the Quarantine Service about contamination observed by its inspectors.

Monitoring and evaluating the information that informs risk profiles

4.40 Under the draft procedure document for sea container profiling, Biosecurity NZ is responsible for regularly monitoring the results of sea container inspections and checks. It does this to identify sea containers where contamination or disease agents have been found, and where the results of sea container inspections conflict with the statements made on the quarantine declaration.

4.41 The draft procedure document identifies the data queries to be regularly run in QuanCargo. Data queries are run to calculate the proportion of contaminated sea containers that fit various criteria. The Border Monitoring Group uses this information to assess changes over time, or overall contamination levels.

Responding to new and emerging risks

4.42 The Quarantine Service has observed significant contamination on sea containers that are not profiled as high risk, and has shared this information with Biosecurity NZ. This shows that the Quarantine Service and Biosecurity NZ are able to work together in managing the biosecurity risks associated with sea containers.

4.43 In one example, Quarantine Service staff noted unacceptable contamination on sea containers from Pacific Island countries. The Quarantine Service and Biosecurity NZ worked together to generate the statistics on contamination that were needed to determine the action required, and to structure increased inspections to get the best value for money. This exercise has had the added benefit of improving the cleanliness of sea containers from some Pacific Island ports. The increased costs to importers of having their sea containers inspected has encouraged them to try to clean the sea containers before they are shipped to New Zealand.

4.44 In another example, Quarantine Service staff noted that 2 sea containers that arrived at Tauranga were contaminated with Asian Gypsy Moth egg masses on the underside of the sea container. Information about the sea containers entered into CusMod showed they came from Hong Kong, which does not pose a risk for Asian Gypsy Moth. The sea containers were inspected only because they contained timber. If these sea containers had not contained timber, they would have had only a 4-sided inspection and the contamination could have gone unnoticed.

4.45 The sea containers had been transported from far east Russia to Hong Kong, and then moved to a second ship that transported them to New Zealand – this is referred to as "transhipping". Because this information cannot be recorded electronically (see paragraph 4.15), the sea containers were not identified as high risk.

4.46 Once the origin of the transhipped sea containers was identified, Biosecurity NZ took steps to amend the risk profile. As well as a high-risk alert for sea containers from far east Russia, an alert is raised for any sea containers that contain goods from far east Russia irrespective of the port they come from. These containers receive a 6-sided inspection.

Part 5
Biosecurity clearance for high-risk sea containers

5.1 In this Part, we focus on the steps taken before the Ministry gives biosecurity clearance for high-risk sea containers. In particular, we discuss:

- our expectations;
- training and guidance for the biosecurity clearance (clearing) of sea containers;
- inspecting high-risk sea containers;
- decontamination of high-risk sea containers; and
- equivalent systems for clearing high-risk sea containers.

Our expectations

5.2 We expected that the Ministry would have targeted, comprehensive, and consistent procedures to ensure that high-risk sea containers are free from contamination. More specifically, we expected that:

- inspectors would be trained, supervised, and supported in their roles;
- clear and comprehensive guidance material would be available to inspectors;
- there would be a nationally consistent approach to dealing with high-risk sea containers;
- inspectors would report the results of their inspections accurately and consistently; and
- high-risk sea containers would be cleared in accordance with the Sea Container Import Health Standard.

Training and guidance for clearing sea containers

5.3 The Ministry recruits inspectors who hold a tertiary qualification (most often a degree in applied science, biology, or resource management). It takes up to one year to train new recruits, and training consists of both technical and on-the-job training.

5.4 The Ministry's National Training Centre runs the technical training for new recruits. The technical training course teaches new recruits about insect and plant pests and diseases, and then assesses their knowledge. The course is based on unit standards of the New Zealand Qualifications Authority, and allows staff to work towards a Certificate in Biosecurity.

5.5 The National Training Centre also teaches communication skills, customer service, assertiveness training, health and safety considerations, and computer skills.

On-the-job training

5.6 On-the-job training is given by trainer-assessors (who are usually experienced Quarantine Officers with an interest in training), or senior staff and managers. Some trainer-assessors are employed in a full-time training role, while other worksites employ staff with trainer-assessor responsibilities as well as their regular role.

5.7 The staff member responsible for training at particular worksites must ensure that training for new recruits covers all aspects of clearing sea containers, including handling paperwork, risk assessment, and sea container inspections.

5.8 At all the Quarantine Service sites that clear sea containers, a buddy system is used to train new recruits how to inspect sea containers. The new recruit spends time with experienced inspectors to observe container inspections. For example, at the Auckland wharf worksite, new recruits learn from a range of experienced inspectors to ensure that they receive training to inspect sea containers from more than one person. In Wellington, 2 inspectors who are based permanently on the wharf observe new recruits.

5.9 Initially, new recruits are supervised, and their work is checked by experienced inspectors. While the timing varies from site to site, the new recruits are assigned to carry out inspections unassisted when they are considered competent by the worksite trainer, experienced inspector, or manager.

5.10 Some generic tools are used to assess the ability of staff to clear sea containers. The most common method of ensuring that new recruits understand a particular procedure is having them complete a written test (called a competency review).

Consistency of on-the-job training throughout the country

5.11 Not all worksites have specific staff appointed as trainer-assessors, or support from a trainer-assessor. For example, the Tauranga worksite (which handles the second biggest volume of sea containers after Auckland) does not have a trainer-assessor, and is not visited by a trainer-assessor from another region. In contrast, the Auckland wharf worksite employs 2 full-time trainer-assessors. Where worksites are not covered by a trainer-assessor, there may be no staff available to set training programmes, or with the ability to train new recruits and assess their competency.

5.12 There is also no consistency in on-the-job training between worksites. The content of the on-the-job training provided at each worksite is the responsibility of those in charge of training at each worksite. We consider that there would be benefit in a nationally consistent on-the-job training programme for use at all worksites.

5.13 In addition, staff at most Quarantine Service worksites are under significant pressure to handle their workload, and the need for training can be overtaken by the need to complete routine work. This is particularly so when the trainers are combining their training role with routine work.

Recommendation 7

We recommend that the Ministry of Agriculture and Forestry prepare a national on-the-job training programme for use by trainer-assessors or people with this responsibility.

Recommendation 8

We recommend that the Ministry of Agriculture and Forestry make available to all its relevant worksites staff who are experienced in training, and that it support staff with training responsibilities so that on-the-job training is not compromised by the need to complete routine work.

Written guidance on what to do when contamination is found

5.14 The Ministry has operational guidelines for clearing sea containers – *Process Procedure 32: Clearance of imported sea containers*. This document gives effect to the Sea Container Import Health Standard.

5.15 We expected this document to provide written guidance for staff about what to do when contamination is found. It does not.

5.16 In our view, it would be beneficial, particularly for new recruits and those who work at airport and wharf worksites on a roster system, for there to be written guidance about the action to take when contamination is found on or in sea containers. We note that an updated draft of the operational guidelines contained some information about the action to be taken when contamination is found, but the draft was not in use at the time of our audit.

5.17 Several stakeholders we spoke to told us that it can be frustrating when decisions are not consistent from one inspector to another. For example, one inspector may require that a shipment of sea containers is fumigated, while another may not. We consider that, where possible, written guidance would improve the consistency of decision-making for inspectors (both regionally and nationally) on what action to take when contamination is found.

Recommendation 9

We recommend that the Ministry of Agriculture and Forestry provide written guidance on the action to be taken when contamination is found on or in sea containers.

Changes to the Sea Container Import Health Standard and procedure documents

5.18 The main documents available to guide staff in clearing sea containers are the Sea Container Import Health Standard and *Process Procedure 32: Clearance of imported sea containers*. These documents are out of date.

5.19 The Quarantine Service advises staff, through a "standing order", of any changes to procedures. Staff are informed at team meetings about any change in procedure given through a standing order, and each worksite employs a Quality Officer who is responsible for communicating changes to staff.

5.20 In June 2004, a standing order was issued that made a significant amendment to *Process Procedure 32: Clearance of imported sea containers*. It introduced a category of "medium risk" for sea containers that did not have a quarantine declaration, but were not from a country that is deemed to be a high risk for Asian Gypsy Moths or Giant African Snails. The required inspection changed from 6-sided to 4-sided. This change has not yet been reflected in *Process Procedure 32: Clearance of imported sea containers* or the Sea Container Import Health Standard.

5.21 In another example (see paragraphs 5.26-5.28), the period within which high-risk sea containers must be inspected has been amended from 8 to 14 hours. The Ministry has not updated the Sea Container Import Health Standard to reflect this change.

5.22 While staff have been informed of the changes to the process for clearing sea containers, it would be better practice if the amendments were reflected in one clear set of guidance material, rather than in memoranda, standing orders, e-mails, or oral instructions. When staff have many documents to refer to for guidance, it creates confusion and inconsistency, and there is a possibility that an incorrect process might be used.

Recommendation 10

We recommend that the Ministry of Agriculture and Forestry keep import health standards and procedure documents up to date.

Ongoing competency assessments for inspectors

5.23 Significant changes to procedures can and do occur. However, staff are not reassessed on their understanding of procedures once they have passed an initial competency assessment during their training.

5.24 In addition, inspectors are not regularly assessed to ensure that they are carrying out their inspections in keeping with the latest procedure. We note that this type of assessment is being introduced for staff at the Auckland passenger terminal. In our view, it may be useful for this to be introduced at all relevant worksites.

5.25 We note that Quarantine Service staff are subject to review or audit if they make a significant mistake.

Inspecting high-risk sea containers

5.26 The Sea Container Import Health Standard specifies that all high-risk sea containers should be brought to a Quarantine Service inspection area as soon as practicable, but in all cases within 8 hours of being unloaded from the ship. This deadline was put in place to minimise the risk of pests moving off a container before it underwent a 6-sided inspection.

5.27 This deadline was difficult to implement, because it meant that some sea containers would have to be inspected at night, when there was neither adequate light nor inspectors on duty. In December 2003, the Ministry approved a 6-hour extension for undertaking 6-sided inspections of high-risk sea containers, with the exception of containers that might carry highly mobile pests (for example, invasive ant species).

5.28 *Process Procedure 32: Clearance of imported sea containers* was amended in March 2004, and confirmed that high-risk sea containers should be inspected within 14 hours of being unloaded from the ship. However, no alternative arrangements were made for containers that might carry highly mobile pests. Some sea containers identified as high risk come from countries where invasive ant species are present.

5.29 We expected that sea containers considered high risk for external contaminants would be inspected within the specified deadlines. Most sea containers (69%) are imported into Auckland and Tauranga. In Auckland, high-risk sea containers are usually inspected within 14 hours, but there are times when this target cannot be met because of competing work (for example, giving biosecurity clearance for fresh produce, used cars, and machinery). In Tauranga, the 14-hour period is frequently exceeded, because several hundred high-risk sea containers can arrive on a single ship.

5.30 We were told that, in Tauranga, it takes an hour to inspect about 30 empty sea containers, or 10 full sea containers. At this rate, it can take 2-3 days to inspect shipments of several hundred sea containers. During this time, pests could move off the container. There are no specific mechanisms for preventing these pests from moving to an area where they could establish a nest.

5.31 If it is impossible for sea containers to be inspected within the specified deadlines, then arrangements need to be made to mitigate the risk of pests moving off the sea containers and becoming established.

5.32 There is some surveillance for ants at ports – baits are laid and the ants feeding on them are collected and identified. This surveillance detected a nest of Red Imported Fire Ants at the Port of Napier (the nest has since been eradicated). We were told that this ant nest was almost certainly introduced through sea containers.

Recommendation 11

We recommend that, where timeframes for inspecting sea containers cannot be met, the Ministry of Agriculture and Forestry take measures to mitigate the risk of pests moving off sea containers and becoming established.

Reporting inspection results

5.33 Inspectors record the results of their inspections on a paper check list, and enter the results of the inspection into QuanCargo when they return to their worksite. It would be more efficient for staff to have electronic equipment for recording the results of inspections while in the field. This would reduce the need for duplicate recording of results.

5.34 A draft Information Solutions Strategic Plan for the Quarantine Service has been written. The strategy recognises the need to significantly change the way the Quarantine Service works. This includes using mobile technologies and (close to) real time interaction with computer systems wherever the inspector is working, and for data to be recorded once, accurately, and in a timely manner.

Decontaminating high-risk sea containers

5.35 One of the options included in the Sea Container Import Health Standard for dealing with high-risk sea containers is that they are fumigated with methyl bromide at 48gms/m^3 for 24 hours at a temperature of at least 10°C. Very few sea containers are fumigated.

5.36 In addition, all quarantine risk goods (including sea containers) that have signs of live insect infestation must be treated on entry to New Zealand (some potentially high-risk goods are treated offshore). Treatment options include fumigation by one of several toxic chemicals.

5.37 We expected that the Ministry would have processes in place to provide assurance that fumigations are effective in killing pests on high-risk sea containers. Biosecurity NZ has produced standards that specify the requirements to be met by fumigation operators working on behalf of the Ministry, and standards specifying technical fumigation rates.

5.38 The Quarantine Service has produced *Process Procedure 38: Quarantine Treatments*, which covers:

- the approval of fumigation operators (who are contractors);
- methods for determining the effectiveness of fumigation;
- the monitoring, supervising, and auditing of fumigation operators; and
- the requirements for fumigation facilities.

Testing whether fumigation is effective

5.39 *Process Procedure 38: Quarantine Treatments* states that it is important that each quarantine treatment (fumigation) carried out is measured in some way to ascertain whether the treatment has successfully achieved the desired outcome (that is, the pests are killed). Methods to detect whether fumigation has been successful include the use of control insects, indicator chemicals, monitoring equipment, re-inspection, post-fumigation testing, and observation. The procedure document does not specify which methods should be used, or under what circumstances.

5.40 Fumigation operators are subject to regular monitoring and audit by either Ministry staff or an Independent Verification Agency. This monitoring or audit checks that the fumigation operator is carrying out fumigation in accordance with the Ministry's standards.

5.41 During our audit, several people raised concerns about the level of assurance that the Ministry receives about the effectiveness of treatments, and the current monitoring of fumigation operators. In particular, there were concerns about the:

- Effectiveness of the audit process to identify non-compliant fumigation practices – the audit practices check only if the fumigation has been set up appropriately and that gas was present, not whether it was effective in killing pests. Even when fumigation has been set up appropriately and gas was present, it may not be effective in killing pests if, for example, the gas leaks from the container.

- Limited Ministry resources available for fumigation audits – the Quarantine Service currently undertakes most of the fumigation audits, but has not been able to meet the required audit interval for fumigation operators in many instances. There has been a lack of trained staff, and site managers have been reluctant to provide resources for fumigation audits when their ability to undertake core activities is already strained.

5.42 In our view, improvements to fumigation processes could provide greater assurance that fumigation is effective in killing pests. For example, the United Nations advocates that gas concentration readings are taken from 3 points of the container. The Australian Quarantine Inspection Service requires the air-tightness of sea containers to be verified, or gas concentration readings to be taken.

5.43 The costs associated with Ministry staff carrying out audits of fumigation operators are recovered from fumigation operators. We see value in the Ministry continuing to be involved in audits of fumigation operators to ensure high auditing standards, and to reduce the possibility that private sector auditors might form too close a relationship with the fumigation operators to audit them thoroughly. Therefore, the Ministry needs to give priority to maintaining effective levels of auditing of fumigation operators.

Recommendation 12

We recommend that the Ministry of Agriculture and Forestry investigate options for providing better assurance that fumigation is effective in eradicating pests.

Recommendation 13

We recommend that the Ministry of Agriculture and Forestry carry out audits of fumigation operators at the required intervals.

Monitoring decontamination facilities

5.44 The Sea Container Import Health Standard also makes provision for high-risk sea containers to be subject to a "decontamination process" (usually cleaning).

5.45 About 180,000 empty sea containers were imported into the country in 2005. About 15,000 of these were from countries considered high risk for Giant African Snails. As mentioned in paragraphs 4.20-4.22, empty sea containers are not subject to electronic risk profiling, but many are subject to cleaning at a decontamination facility.

5.46 In 2005, the Ministry commissioned a review of the cleaning practices used by decontamination facilities for imported empty sea containers. The review was commissioned because the Ministry was concerned about the management of empty sea containers. In our view, the concerns were well founded.

5.47 The review found that:

- The Ministry could not readily identify the number of empty sea containers being taken off ships or where those sea containers would be cleaned. There is no single electronic point of collection or co-ordination of information relating to the movements and decontamination of empty sea containers.
- A complete and up-to-date list of decontamination facilities did not appear to exist within the Ministry.
- The cleaning process was designed to manage animal disease risks, not live insect contamination.
- The systems for establishing "off wharf" decontamination facilities lacked a robust assessment of the risks, establishment of controls, and measurement of their effectiveness.
- There was no stipulation of the period within which empty sea containers should be decontaminated.
- Monitoring frequency and practice varied widely between Quarantine Service sites. Responsibilities for monitoring were not clear, and in the 3 regions considered in the review staff were not routinely monitoring the standard of decontamination facilities.

5.48 Some of the practices used by decontamination facilities that were identified in the review posed potential risks to New Zealand's biosecurity. For example, sea containers were stored near seed and fertiliser storage areas (which could result in the transfer of pests to rural areas) or near vegetation (which provides a potential habitat for pests to become established).

5.49 In our view, the issues raised in the review required urgent action. The Ministry has suspended one decontamination facility, and changes have been made at another. The Ministry also intends to clarify roles and responsibilities for carrying out decontamination facility audits, and to address national consistency issues.

Recommendation 14

We recommend that the Ministry of Agriculture and Forestry improve management and monitoring of the practices of decontamination facilities.

Equivalent systems for clearing high-risk sea containers

5.50 The Sea Container Import Health Standard allows for equivalent systems to manage biosecurity risks. Equivalent systems provide a means for the Ministry and industry to work together to achieve business efficiency under the Sea Container Import Health Standard. Other benefits can be the management of biosecurity risks offshore (therefore preventing potential pests from entering the country), and reducing the need for the Ministry to be involved in inspecting sea containers.

5.51 We looked at 2 examples of equivalent systems:

- Empty sea containers from countries considered a high risk for Giant African Snails were being cleaned and inspected offshore before being shipped to New Zealand. Both the Ministry and the importer supported this equivalent system, because the biosecurity risks were managed offshore, and it was more cost-effective for the importer.
- Sea containers are transported from the port of entry to inland container yards (known as inland ports). The example we looked at facilitated the transport, by rail to South Auckland, of about 80% of the sea containers arriving at the Port of Tauranga.

5.52 Where equivalent systems are set up, we consider it is vital that the Ministry regularly monitors whether the system is adequately managing the biosecurity risks. Equivalent systems can potentially allow pests and diseases into the country in a way that would not usually be a risk – for example, where sea containers are transported through rural areas, there is a risk that pests could escape into farmland.

5.53 In the first example in paragraph 5.51, the Ministry was monitoring the cleanliness of the empty sea containers on arrival into New Zealand. This equivalent system has been withdrawn because the sea containers were not cleaned to an acceptable standard.

5.54 In the second example in paragraph 5.51, the Ministry requires that all sea containers undergo 4-sided checks before they are transported to Auckland. The Ministry carries out regular audits of these checks. We were told by both the logistics company operating this equivalent system and the Ministry that contamination is regularly found during the checks on the sea containers.

Procedures for setting up equivalent systems

5.55 There is no set process for preparing equivalent systems, and no baseline against which to assess whether a proposed equivalent system will manage biosecurity risks to an appropriate or equivalent level.

5.56 One operator of an equivalent system considered that it would have been useful if guidance on setting up an equivalent system had been available. It might also be helpful if the Ministry provided a point of contact for any stakeholders looking to set up an equivalent system.

5.57 Despite the lack of formal guidance available, the Ministry has worked collaboratively with industry to accommodate equivalent systems – even in circumstances where the main benefit of the equivalent system is to industry stakeholders. Setting up an equivalent system can take considerable time and effort for Ministry staff and the importers, port company, or logistics company.

Recommendation 15

We recommend that the Ministry of Agriculture and Forestry prepare guidance and procedures for setting up equivalent systems under the *Import Health Standard for Sea Containers from All Countries*, which include monitoring requirements to ensure that the equivalent system is adequately managing biosecurity risks.

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