Biosecurity System Achievements, 2003-2015

This paper presents an outline of biosecurity system achievements since 2003, in the context of the Biosecurity Strategy's recommendations.

The Strategy's recommendations were in the form of ten 'First Steps' and 57 'Expectations', organised into categories. This paper is organised by those same categories. Within the document, each category heading is followed by a list of the relevant First Steps and Expectations from the Strategy for that category (note - some of the First Steps pertained to more than one category, so in some instances appear more than once).

At the end of this paper, in Appendix 1 is a timeline of biosecurity system milestones and achievements, presented by year, from 2003 to 2015.

Abbreviations and acronyms used in this paper are explained at the end.

This paper is presented as a draft for comment. The information in the paper has been gathered from interviews with MPI staff who have or have had key roles in the biosecurity system, and from documentary sources. It is intended that the paper will be further developed as further information and comment is made available, including from stakeholders.

Table of Contents:

Categories I and II: OVERALL EXPECTATION – BIOSECURITY OPERATIONS, and INSTITUTIONAL ARRANGEMENTS

First Step 1 - Make MAF clearly accountable for overall management of the whole biosecurity system, on behalf of all New Zealanders

First Step 2 - Put in place the necessary systems, structures and capabilities within MAF to support its role – starting with strong strategic capability

Expectation 1 - That the biosecurity system is fully integrated, operating efficiently and transparently in an environment of continuous improvement (measure, review and refine)

Expectation 2 - That a single agency (MAF) is accountable for ensuring the full range of biosecurity activities are delivered effectively and efficiently to meet the outcome expectations of agencies with a biosecurity interest

The following matters are discussed here Under Categories I and II:

- Accountability by MAF for the biosecurity system
- Governance of the biosecurity system
- Systems, structures and capabilities within MAF
- Other agencies' accountabilities and responsibilities
- Regional authorities
- Biosecurity system strategic documents
- Assessment / measurement of performance
- Biosecurity law reform

Accountability by MAF for the biosecurity system

In August 2003, Cabinet assigned accountability to MAF for end-to-end management of the biosecurity system. This included accountability for strategic, regulatory and service delivery functions, from pre-border through to pest management, that contribute to health, environment, economic and social/cultural outcomes. MAF was also assigned a leadership role to establish new structures, capabilities and systems to support a whole-of-biosecurity focus [CAB Min (03) 28/8].

Cabinet also agreed that governance of the biosecurity system would be provided through the framework discussed below, in the section on governance.

Along with MAF's accountability for the biosecurity system, decisions were made about the demarcation of roles and responsibilities, and allocation of functions and resources, between the biosecurity agencies. A memorandum of understanding between biosecurity agencies DOC, MFish, MOH and MAF clarified the agencies' respective biosecurity roles, responsibilities and

accountabilities. This is discussed further in the section on governance, and on other agencies' accountabilities and responsibilities.

In 2004, Biosecurity NZ was established, as a business unit within MAF to be lead agency accountable for the biosecurity system. The government clarified that the system leadership role would cover all biosecurity activities, including those carried out by central government agencies, regional councils, industry, and community organisations. MAF would not directly control these activities, but would actively seek opportunities for collaboration. The oversight role provided by MAF (with the Biosecurity Chief Executives Forum) would be to:

- facilitate a shared sense of strategic direction
- provide commentary and advice to the Minister for Biosecurity about what's happening across the system
- facilitate cooperation
- provide national leadership and coordination, including for pest management
- gather information and report to chief executives, Ministers and the public
- provide direction for the whole system
- disseminate information, best practice, and new tools for biosecurity

In 2012 the Biosecurity NZ brand was retired, and the Ministry for Primary Industries became responsible for biosecurity system leadership.

MPI established a Biosecurity Governance Board in 2014. Although its focus is principally on MPI operations, its role includes accountability to ensure effective performance of the biosecurity system, including providing oversight of risks, and ensuring the system performs to expectations, is well-connected and operating to best effect.

Governance of the biosecurity system

At the same time that Cabinet assigned accountability to MAF for end-to-end management of the biosecurity system, discussed above, it agreed that governance of the biosecurity system would be provided through new entities:

- Biosecurity Chief Executives Forum - to develop the strategic direction for biosecurity, and monitor the performance of the biosecurity system
- The Biosecurity Strategic Unit – to advise the CE of MAF and support the CEs Forum
- Biosecurity Ministerial Advisory Committee – a stakeholder advisory committee to provide independent advice to the Minister for Biosecurity on the performance of the overall Biosecurity System
- Biosecurity Central/Regional Government Forum – to participate in strategic direction setting at the boundaries of central and regional government responsibility.

The Biosecurity Chief Executives Forum was established in 2003, comprising the chief executives of MAF (chair), DOC, MFish, MOH and Te Puni Kokiri. A memorandum of understanding between biosecurity agencies DOC, MFish, MOH and MAF clarified the agencies' respective biosecurity roles, responsibilities and accountabilities. The Forum led strategic direction-setting and provided an overarching framework to work together on biosecurity matters. In 2004 the Forum members agreed that MAF, DOC, MFish and MoH would have equal responsibility for:

- contributing to and supporting the Biosecurity Chief Executives' Forum
- contributing to strategic policy development

- commenting on overall biosecurity system performance from their perspectives
- reporting on their own biosecurity activities
- contributing scientific expertise when that expertise lies in their agencies
- working with and contributing to MAF and other agencies' public awareness activities.

In 2006, the Biosecurity Chief Executives Forum agreed that Statements of Intent across the departments would be aligned for biosecurity. Over time, the Forum became less and less involved with governance and strategic issues, and discontinued meeting after 2007.

As the CEs Forum's role in biosecurity system governance diminished, MAF's role in governance grew. During this transition period, MAF's strengthening governance role was reflected in the series of biosecurity-related strategic frameworks, plans and Ministerial briefings which it prepared. These are discussed further below, in the sections on MAF's systems, structures and capabilities, and biosecurity system strategic documents.

The Biosecurity Strategic Unit in MAF was established in 2003, and its role is discussed below in the section on MAF's systems, structures and capabilities.

The Biosecurity Ministerial Advisory Committee was established in 2005 as a stakeholder advisory body with members appointed by the Minister for Biosecurity. Its role is to provide the Minister with independent advice on the performance of the biosecurity system, and to monitor the implementation of the Biosecurity Strategy, including strategies, policies, efficiency, effectiveness and capability. The advice is intended to address environmental, economic, human health and social/cultural outcomes.

The Biosecurity Central/Regional Government (BCR) Forum was established in 2003, comprising central government agency and regional council chief executives (from MAF, MOH, MFish, LINZ, DOC and all regional councils) to improve coordination and collaboration across central and regional government biosecurity. The forum agreed priorities for pest management, progressed a partnership to build marine capability, and encouraged MAF to adopt the coordinated incident management system (CIMS) for potential incursions, as proposed by regional councils. In 2012 the Forum was disestablished; MPI and regional council chief executives agreed to meet in future on an ad-hoc basis as required, and that MPI would keep the regional CEs regularly informed on biosecurity issues [this was the start point for regular monthly letters that MPI sends out].

The Biosecurity Coordination Group was established in 2005 as a working group of the BCR, comprising central and regional government biosecurity managers, plus Animal Health Board members attending on matters of mutual interest; it facilitated strong linkages and regular communication between agencies, and last met in 2011.

In 2012, regional councils established a Bio Managers Group (tier 2 and 3 managers with oversight for biodiversity and biosecurity portfolios) and a Biosecurity Working Group (biosecurity managers and senior technical/policy staff); these meetings have been attended by MPI, but not by other key Crown agencies.

The Border Sector Governance Group (BSGG) was established in 2007, comprising the Chief Executives of Customs, MAF, Biosecurity NZ, DOL, Immigration NZ, NZFSA, DIA and MOT (also representing Crown Aviation Security Service and Maritime NZ). It had a strategic role to improve border sector agency collaboration, increase effectiveness and efficiency, enhance border and biosecurity protection, and streamline services to users. It developed the Border Sector Strategy 2008-2013, to provide a border management system that facilitates trade and travel while managing risk. The Border Sector Ministerial Group was established in 2010, including the Minister for Biosecurity, to provide strategic leadership and direction, and drive the border sector work programme. BSGG still meets six-weekly to consider border sector issues.

In 2012 a new Minister for Primary Industries was appointed; the portfolio incorporated the agriculture, biosecurity, forestry, fisheries and aquaculture portfolios, and it thus replaced the Minister for Biosecurity.

Systems, structures and capabilities within MAF

In order for MAF, through Biosecurity NZ, to undertake its biosecurity system leadership role, development of organisational capability was a key early focus for the agency. It established a policy function to ensure a strategic approach to policies, procedures, systems and resource allocation, and to review sector wide performance. The organisational change included a change from a sector-based arrangement (plants, animals, forestry, marine, etc.) to a functionally based approach (border, post-border, etc.). Biosecurity staff numbers were significantly increased, and risk analysis and national/regional response capabilities were strengthened. It also increased its capabilities in marine, freshwater, environment and public health biosecurity, and its capacity across all aspects of its business, through significant new budget allocations.

The biosecurity agencies' roles were better defined by the Biosecurity Chief Executives Forum, which included clarifying the difference between MAF's system oversight role and service delivery role. Pest management roles in MAF were also clarified and capability for this was planned. Marine biosecurity was incorporated into MAF. MAF became accountable for taking account of biosecurity risks to human health, with MOH continuing to help provide input to risk analysis and standard development while MAF developed its capability. MAF also increased its focus on coordination with other agencies, for example, closer relationships were forged with regional councils and with ERMA.

The Biosecurity Strategic Unit (BSU) was established in 2004 to provide strategic direction for biosecurity and to support the governance framework – as directed by Cabinet. It included people drawn from the three biosecurity agencies, and reported directly to MAF's Director General and to the Chief Executives Forum. It focused on roles and responsibilities, and reviewing the Biosecurity Act, and developing performance measurement for the whole system. It also provided the secretariat for the three main governance and advisory forums. The biosecurity principles and the outcomes framework that were developed by the BSU set the strategic direction for the biosecurity system.

Biosecurity New Zealand was established in November 2004 within MAF, drawing staff from the previous Biosecurity Authority, MAF Policy and the Ministry of Fisheries. People were appointed

to develop pest management capability within MAF. Corporate capability across MAF was improved to support the expanded roles and responsibilities within MAF.

From 2004 to 2007 the MAF Quarantine Service was the arm of MAF that managed biosecurity risks at New Zealand's ports, airports and related facilities, both in New Zealand and offshore. (It merged with Biosecurity NZ in 2007 to ensure a single agency held clear accountability for border biosecurity activities.) Staff identified and managed potential biosecurity risks at the border and provided domestic and offshore inspection and clearance services. The Quarantine Service staff were the primary public face of MAF, e.g. by appearing on the TVNZ programme 'Border Control'.

In 2007, NZFSA separated from MAF to become a public service department, and then merged back into MAF in 2010,

In 2010 Biosecurity NZ ceased to exist as a separate branch within MAF, but the Biosecurity NZ brand was retained.

In 2011, MFish merged with MAF.

MAF was renamed MPI in 2012 and continued to hold biosecurity system leadership. It administers the Biosecurity Act, creates most biosecurity regulations and import standards, provides assurances for exported primary products, manages biosecurity risks at the border, provides diagnostics for suspect pests and diseases, carries out responses to nationally significant pests and diseases, and has a leadership role in relation to national-scale pest management. The way in which MPI implements its leadership role [as at 2015] is guided by its "Our Strategy 2030". Relevant parts of the strategy include protection from biological risk, and developing stronger partnerships with industry including Maori, and enabling them to maximise the benefits to be gained through the sustainable use of their primary sector assets.

Other agencies' accountabilities and responsibilities

Roles of the four central government biosecurity agencies were better defined in 2004. All agencies that received Vote Biosecurity funding were directly accountable to the Minister for Biosecurity for delivering those services (e.g., the southern saltmarsh mosquito programme that was delivered by MOH).

In 2004 it was agreed by the CEs Forum that the agencies would continue to be accountable for the following:

MFish – Marine biosecurity accountabilities and functions undertaken by the MFish shifted to Biosecurity NZ. MFish was no longer accountable for delivering biosecurity services but remained a member of the Biosecurity CEs Forum.

ERMA – Decided on applications to import, release or develop new organisms, its accountabilities remained unchanged.

LINZ, and the New Zealand Defence Forces – Carried out pest management on land they administered on behalf of the Crown; their accountabilities remained unchanged.

MOH – Was accountable for:

- managing nuisance pests under the Health Act
- port sanitation, surveillance for, and exclusion of rats and mosquitoes that pose health risks to meet international health obligations
- the southern saltmarsh mosquito eradication programme (until it expired, when accountabilities for mosquito control shifted to MAF)
- providing input to risk analysis and standard development regarding biosecurity risks to human health, while MAF developed its capability for this.

DOC – Was accountable for:

- managing wild animals under the Wild Animal Control Act
- freshwater pest fish programmes under the Conservation Act
- regional-scale pest programmes for conservation pests
- wildlife health protection programmes
- managing pests to protect identified conservation values in national parks, marine reserves and other specific high value sites
- authorising the control of wildlife causing damage, under the Wildlife Act.

In 2008, the Operational Guideline between DOC and Biosecurity NZ was agreed, setting out changes to DOC advice and transfer of functions.

Regional authorities

As explained above, the Biosecurity Central/Regional Government (BCR) Forum was established in 2003, as part of the governance framework specified by Cabinet to implement the recommendations from the Biosecurity Strategy. The Forum was disestablished in 2012.

The Biosecurity Managers' Group was established in 2003, a network for senior regional government staff with biosecurity responsibilities, to share information and develop a coordinated approach to pest management. It continues to meet periodically [as at 2015], and reports to the Regional Councils' Chief Executives' Group

Regional authorities can develop 10-year regional pest management strategies under the Biosecurity Act to protect values important to their communities. All 16 regional authorities now have regional pest management strategies in place.

Biosecurity system strategic documents

In 2003, Cabinet agreed that the recommendations [i.e., the 10 'First Steps', and the 57 'Expectations'] from the Biosecurity Strategy would form the basis for the Government's improvements to the biosecurity system over the next five years [CAB Min (03) 28/8]. Highest priority was given to the recommendations concerning governance, risk management, systems and processes, and funding and cost recovery.

The outcomes framework developed by the Biosecurity Strategic Unit (BSU) in 2003 set the strategic direction for the biosecurity system. The biosecurity principles developed by the BSU at the same time articulated how biosecurity will operate. The outcomes framework and

biosecurity principles were developed in consultation with government agencies, Maori, industry and environmental groups.

The Biodiversity Strategy was reviewed in 2005 [originally prepared by DOC and MfE in 2000]; it included a strategic theme on biosecurity.

Biosecurity NZ released its 5-year Strategic Plan in 2007, setting the long term direction for the biosecurity system. From this time on, this plan rather than the Biosecurity Strategy was used to guide the agency's biosecurity system focus and priorities. It provided a statement of strategic direction, seven key goals and a number of related priority actions.

In 2008, the Border Sector Governance Group issued the Border Sector Strategy 2008-2013. It set out the key areas of focus for development of a more integrated and responsive border management system.

In 2008 BMAC commissioned an assessment of progress against the Biosecurity Strategy to assist in formulating an approach to the major review of the Strategy that had been scheduled for 2010. As a result, BMAC recommended that the scheduled review not take place because scarce biosecurity resources could be better used on other work. It proposed that a simple update to the Strategy would be more appropriate, and instead work should focus on developing meaningful performance indicators of the biosecurity system in consultation with key groups including Maori, that could be tracked over time and take into account changing risks relative to trade patterns, visitor numbers and origin. In 2009, the Minister for Biosecurity agreed that instead of reviewing the 2003 Biosecurity Strategy, the Biosecurity NZ Strategic Plan would undergo a full review in 2012, and that this would become the key strategic document for the future biosecurity system.

In 2009 the Biosecurity Foresight Project was undertaken – a horizon scan and cross-agency workshops to identify emerging issues to inform biosecurity strategic decision-making. In 2010 Biosecurity NZ published the Border Directions Statement 2010-2015, and Post-Border Directions Statement 2010-2015 – which together outlined MAF's vision for leading the management of biosecurity risks within New Zealand; both documents aligned with the Biosecurity NZ Strategic Plan and were supported by implementation plans.

In 2010, the Border System Manual was developed – a guidebook that described the biosecurity system as a whole, explained MAF's border risk management system, roles and responsibilities, and associated policies and procedures.

Biosecurity NZ developed a detailed programme for the review of the Biosecurity NZ Strategic Plan, including a plan to develop biosecurity system performance indicators; in 2010 the Minister invited BMAC to be a 'guardian of the review process' on his behalf. The Minister asked BMAC to ensure that adequate consideration be given to all four values – economic, socio/cultural, environment and health – during the review. BMAC accepted this invitation. The Chief Executives of DOC, MOH, MFish and TPK were informed of the process for the proposed review, which was planned to entail engagement with those agencies and other stakeholders. BMAC recommended that a visible sign of the agreement of content by government agencies of the Strategic Plan would be to have the logos of the government agencies that are involved in

the biosecurity system. In 2012, when MAF was renamed MPI and the Biosecurity NZ brand was retired, the review of the Biosecurity NZ Strategic Plan did not proceed.

Assessment / measurement of performance

Cabinet agreed in 2003 that implementing improved performance measurement systems was one of the highest priorities for the biosecurity system. It also charged the new governance bodies – Biosecurity NZ and the Biosecurity Chief Executives Forum – with responsibility for monitoring performance of the system. MAF's role of accountability for end-to-end biosecurity was determined by Cabinet to include collecting and reporting information about the whole biosecurity system and providing advice to the Minister for Biosecurity about the performance of the whole system. This included responsibility for developing indicators to measure system performance against strategic direction.

In 2004, the development of performance measurement for the whole system was one of the BSU's early priorities.

In 2005, MAF advised the incoming Minister that one of the areas of focus for Biosecurity NZ for the next three years would be to develop a performance and evaluation system for the whole biosecurity system.

BMAC has provided ongoing review and reporting to the Minister since 2005 on biosecurity system performance. BMAC's 2008 assessment of progress against the Biosecurity Strategy found that progress had been good overall, with good monitoring and reporting by MAF on many aspects of the system. However, it found that meaningful performance indicators of the entire biosecurity system were still needing to be developed, and recommended to the Minister in 2009 that this be done.

MAF reported to the Minister in 2010 that Biosecurity NZ had good internal systems for measuring, reviewing and refining performance (the Performance Measurement Framework), but acknowledged that there are gaps in the measurement and review of system performance, and that a work programme had been initiated to address this.

In 2012, Cabinet approved the Future Direction for the Border Sector programme developed by Border Sector agencies; it was a joint agency programme of medium-to-long term initiatives to improve border protection and service delivery across the air passenger, cargo, sea craft, cruise craft and passenger, and mail pathways.

A 2013 performance audit by the Office of the Auditor General looked at how effectively the biosecurity system works in preparing for and responding to biosecurity incursions. It found that MPI responds well to incursions and has high-trust relationships with stakeholders. However it also identified areas that merit improvement such as improved performance reporting.

The role of MPI's Biosecurity Governance Board, established in 2014, includes accountability to ensure effective performance of the biosecurity system, providing oversight of risks, and ensuring the system performs to expectations. It has begun work on developing biosecurity system performance measures.

Under the Government Industry Agreement (discussed further under Category IV – Stakeholders' Voice) MPI has committed to "implement a transparent process for assessing biosecurity system performance, to monitor and measure ongoing biosecurity operations and outcomes".

Biosecurity law reform

Review of key parts of the Biosecurity Act 1993 began in 2009. The Biosecurity Law Reform Act passed in 2012.

The legislation strengthened enforcement tools, set up the Government Industry Agreement on Biosecurity Readiness and Response (GIA), and supported improvements to the way the biosecurity system is managed, including -

- improving powers to gather information and use it for risk profiling so as to ensure that resources are allocated according to the level of risk
- adding a new duty that requires importers to ensure that their goods comply with the applicable import rules
- improving the enforcement options for dealing with non-compliance at the border
- improving the tools for dealing with the biosecurity risks that are presented by craft
- providing clarity around roles and responsibilities, and promoting partnerships and collaboration
- allowing for increased use of electronic systems
- enabling the Biosecurity Act to be used to manage biosecurity risks that arise in the Exclusive Economic Zone
- improving the information that is available on the FarmsOnLine database to support incursion responses, and
- important changes in the pest management area, including streamlining the process for developing pest management plans.

Category III: MAORI

First Step 5 - Identify ways to involve Maori in biosecurity issues and decisions, nationally and locally

Expectation 3 - That the Chief Executive of MAF is responsible for developing a Maori responsiveness strategy for biosecurity agencies

Expectation 4 - That capacity and capability is developed within the biosecurity agencies with specific training (specialist skills and knowledge) to ensure Maori are involved meaningfully

Expectation 5 - That existing channels (under the Resource Management Act, Fisheries Act, District Health Boards or conservancies) are used in consulting on pest management strategies and during incursions

Expectation 6 - That kaitiaki are invited to work with central government and regional councils on biosecurity matters

Expectation 7 - That Maori values are explicitly considered in decision-making criteria

The following matters are discussed here Under Category III:

Maori Responsiveness Strategy
Capacity and capability for biosecurity agencies to ensure Maori are involved meaningfully
Existing channels are used in consulting on pest management
Kaitiaki are invited to work with government on biosecurity matters
Maori values are considered in decision-making criteria

Maori values, influence and engagement in biosecurity decision-making

The MAF Maori Responsiveness Strategy was signed off in 2004. It recognised that relationships needed to be developed and maintained with Maori to improve Maori participation and input into biosecurity issues. Progress implementing the strategy included:

- Developing a risk analysis and management framework to analyse the impact of incursions on Maori economic and cultural resources
- Addressing species of economic and cultural significance to Maori as part of a project to analyse the impact of foreign pests on indigenous flora
- Ensuring Maori participation and input regarding issues of economic and cultural significance to Maori in developing the biosecurity science strategy
- Including a process to identify marine species of economic and cultural significance to Maori as part of the 5 Year Value Mapping Marine Biosecurity project
- Engagement with iwi representatives during the Foot and Mouth simulation exercise regarding carcass disposal to ascertain areas of risk to Maori; iwi representatives were then contracted to prepare a Cultural Safety Plan for the site

- Successfully using existing channels of communication to consult with Maori where there were specific incursions in regions, for example during responses for the painted apple moth, hydrilla, Red Imported Fire Ant, and Southern Salt Marsh Mosquito. Long term management programmes and partnerships used existing ERMA iwi forums and MFish customary fisheries forums to facilitate Maori participation and input to the programmes, e.g., the Te Tau Ihu customary forum participation in the Top of the South marine partnership. The didymo surveillance programme and incursion readiness planning leveraged off existing regional freshwater monitoring programmes undertaken by regional councils
- Building relationships with iwi groups and Maori organisations throughout the country, leveraging off MAF's work with Maori on sustainable development, climate change and the water programme
- Creation of a new staff position within Biosecurity NZ to foster stronger relationships with Maori and provide information, systems, processes and strategies needed to respond to specific issues for Maori
- Holding wananga (workshops) with Biosecurity NZ staff to assist their understanding of Maori world views and the implications of the Treaty of Waitangi for their work.

The Officials Maori Advisory Forum was established to support the MAF Chief Executive in his responsibility of delivering on the responsiveness of biosecurity agencies to Maori. The Forum comprised representatives from: MAF, MFish, TPK, DOC, ERMA and MfE. In 2007 the Forum participated in the development and delivery of a marine focused wananga with ERMA; this was a test case for developing a model for cross government engagement with Maori.

Two biosecurity research projects undertaken in 2007, one for the marine environment and a pilot plants project, were established with the aim of identifying Maori values and building relationships with those iwi and hapu involved in research. In 2008/09 a further project explored how Biosecurity NZ might utilise collaborative approaches to working with iwi on research that produces outcomes for matauranga Maori and biosecurity science.

In 2007, the Biosecurity Science Strategy, Mahere Rautaki Putaiao Whakamaru, was launched. It identified the inter-disciplinary nature of matauranga Maori and recognised that Maori have a repository of scientific knowledge to offer the biosecurity system. Maori were consulted throughout the development of the strategy and were involved in the development of an implementation plan.

Maori participation in biosecurity responses has improved over time, for example in 2011 local Maori were involved in a pilot to control Pyura Seasquirt, and to identify cultural impacts in relation to the Kanakana (Lamprey) response.

Kaitiaki were invited to work with central government and regional councils on biosecurity matters, including regarding a range of proposed marine biosecurity partnerships. Kaitiaki are partners with government in the Kauri Dieback Long Term Management Programme. For engagement regarding kauri dieback, Maori organisations determined for themselves their own mandating process for engaging in the programme and were resourced to participate as partners in governance, scientific and operational matters. Waikato-Tainui, Ngati Maniapoto,

Ngati Rawakau, Te Arawa River Iwi Trust, Ngati Tu Wharetoa - co-management agreements are in place in relation to the Waikato River and its catchment.

The Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 requires all biosecurity decision makers to have "particular regard" to the Vision and Strategy for the Waikato River in relation to carrying out their functions or powers as they relate to the Waikato River; or to the activities in the catchment that affect the Waikato River.

The National Pest Management Plan of Action 2011 integrates tangata whenua objectives across all actions and seeks to build two way capability between Maori and agencies engaged in pest management.

In 2012, changes were made to the Biosecurity Act 2003 to require the proposer of a plan to consider the relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu, and taonga at various levels of plans.

Other work that has yet to be completed includes:

- Biosecurity Surveillance Strategy 2020 – at the governance level, there was Maori representation on the Biosecurity Surveillance Committee and by March 2011 two wananga had been held to identify Maori needs in surveillance as part of an overall process to identify needs; further follow-up on this is still required
- The Biosecurity Science Strategy, Mahere Rautaki Putaiao Whakamaru, recognised that Maori have a repository of scientific knowledge to offer and provides for the participation of experienced Maori practitioners in its implementation; Maori were also represented at the governance level and on the science advisory groups that informed the identification of science needs; focus has shifted to developing an MPI-wide science strategy that includes biosecurity science with the potential for continued recognition of Matauranga Maori as a science discipline
- The Maori and Treaty of Waitangi Cultural Resource that was developed in 2008 to help MPI staff identify Treaty and Maori issues is available but the training programme that accompanied it was last run in 2010; MPI's informal Maori network, Te Tauaki Puawai, is investigating options to address this gap but this work has yet to be completed
- Research projects to better understand Maori values and enhance relationships through better models for engaging Maori in biosecurity science research was completed in 2010; this led to a category "Impact on Maori Values" being added when assessing the biosecurity risks associated with an organism; further work is required to ensure uptake of the research
- Guidelines to assist staff to consider Maori values in risk assessments were developed in 2010; at the time, the guidelines helped to raise awareness of Maori values and the different perspectives Maori had around risk; further work is needed to support adoption of the guidelines.

Capacity and capability for biosecurity agencies to ensure Maori are involved meaningfully

From 2003 to 2011, MAF focused on building its internal capability to develop effective and enduring relationships with Maori, and enhancing the capability of staff to understand Maori issues and concerns, and how they could be incorporated into MAF's planning and policy processes.

In 2010, MAF acknowledged that all biosecurity agencies have some capacity and capability in working with Maori. DOC and several of the regional councils are good examples of this. Within MPI, the 2011 MAF/MFish merger saw the formation of a regionally based Maori Partnerships and Programmes team with specialist skills and knowledge in working with Maori. The role of the team is to provide strategic and operational advice to support the organisation in staying abreast of Maori issues, and to work with Maori to maximise the benefits from their primary sector assets. The merger also saw an explicit recognition that teams across the agency need to take greater responsibility for how and when they engage with Maori, which has led to MPI staff having a greater awareness of the importance of engaging with Maori in a meaningful way because of Maori cultural, economic and environmental interests.

Existing channels are used in consulting on pest management

The single scalable response model requires early engagement with affected stakeholders, including Maori. This has been successfully applied to responses for painted apple moth, didymo, hydrilla, red imported fire ant, southern salt marsh mosquito, lamprey/kanakana, Mediterranean fan worm, pyura sea squirt, and Queensland fruit fly.

Long term management programmes and partnerships have used existing Environmental Protection Authority networks, Resource Management Act Iwi forums and MAF/MFish customary fisheries forums to facilitate Maori participation and input to responses and programmes. Examples include:

- the Te Tau Ihu customary forum participation in the Top of the South marine partnership
- Initial awareness raising of the Kauri Dieback programme was through the EPA's network of Maori environmental and resource managers
- Nga Hapu o Te Uru's involvement in the sea spurge response at Aotea, Kawhia
- The Check, Clean, Dry programme to slow the spread of didymo and other freshwater pests leveraged off regional freshwater monitoring programmes undertaken by regional councils
- The Auckland 2015 fruit fly response used networks shared with MPI by Auckland Council.

Category IV: STAKEHOLDERS' VOICE

First Step 3 – Establish governance mechanisms (including a reconstituted Biosecurity Council and chief executives' forum) to support this strategy's implementation and monitor performance

First Step 4 - Encourage all New Zealanders to support and participate in biosecurity through a social marketing programme

Expectation 8 – That the system encourages all New Zealanders to participate and support biosecurity

Expectation 9 – That there is an annual review with external stakeholders on the performance and development of biosecurity, with an overall review in 2010

Expectation 10 – That a reconstituted Biosecurity Council monitors this strategy's implementation on behalf of stakeholders for the Minister

Expectation 11 – That a central government/regional council forum is established to address the joint issues of incursion response and pest management

Expectation 12 - That appropriate links with industry are formed to address priorities and who should pay for what

The following matters are discussed here Under Category IV:

- Engaging with stakeholders
- Government Industry Agreement

Other relevant matters are discussed elsewhere in this document:

See discussion under Categories I and II regarding -

- Governance mechanisms
- Review of performance
- Reconstituted Biosecurity Council (Biosecurity Ministerial Advisory Committee (BMAC))
- Central government/regional council forum

See discussion under Category IX regarding -

- Social marketing

Engaging with stakeholders

Significant progress has been made to work more collaboratively with stakeholders and to ensure a strong role for industry in the biosecurity system since 2003.

An annual Biosecurity Summit was launched in 2003, and continued annually until 2008. It was convened for all biosecurity stakeholders including representatives from central, regional, and local government, importers and exporters, industry, research institutes, the science community, pest management companies and community groups. About 250 attended each summit. It provided an opportunity for parties involved and interested in biosecurity to meet, discuss issues and raise concerns relating to biosecurity and share information on the latest in new incursions and preparation for the future. Biosecurity NZ also reported on its activities, on the state of the biosecurity system and on progress against the Biosecurity Strategy.

Biosecurity NZ utilised supply chain industry groups to assist with managing biosecurity risk and in particular through the introduction of the Sea Container Standard in 2004. The initiative generated 12,000 registered and trained accredited personnel in the supply chain to identify and report risk material associated with the Sea Container pathway. This allowed Biosecurity NZ to focus on high risk commodity and container inspections.

In relation to the Passenger Pathway, there has been significant engagement with stakeholders over the years to improve biosecurity risk management while at the same time enhancing passenger facilitation.

Government Industry Agreement

In 2012, Cabinet confirmed the policy framework for a government-industry agreement (GIA) to create a partnership between industry and government to share decision-making, costs and responsibility in preparing for and responding to biosecurity incursions. Kiwifruit Vine Health (KVH) and MPI signed the GIA Deed in 2014, formally commencing the GIA partnership. Three more signatories have joined since then [as of 2015]: Pipfruit NZ, NZ Pork, and NZ Equine Health Association, with several other industry organisations expected to sign soon.

The agreement is intended to improve joint priority setting to ensure the best use of limited resources. Industry signatories will incur costs from activities they agree to cost-share, and will decide how much they are willing and able to spend.

The GIA Deed includes the outcome "to deliver an integrated approach to prepare for and effectively respond to biosecurity risks" with the expectation that "all Signatories will work in collaboration with each other and other stakeholders to improve biosecurity outcomes through enhanced engagement across the biosecurity system". The scope of the Deed includes "engagement across the end-to-end biosecurity system". It acknowledges the efforts and investments of signatories in the biosecurity system, and sets out associated expectations of all signatories for partnership.

The signatories meet biannually in a biosecurity forum for discussions on the biosecurity system. The initial focus of the forum was on implementation requirements, including roles and responsibilities of GIA governance and the Secretariat, clarification of minimum commitments, joint decision-making in responses and the development of operational agreements. Longer term, the forum's focus will widen to address ways to improve response efficiency and effectiveness, and to ensure resources are used for the highest priority readiness activities and responses.

Category V: CAPABILITY GAPS

First Step 2 - Put in place the necessary systems, structures and capabilities within MAF to support its role – starting with strong strategic capability

First Step 6 - Identify, prioritise and review current and emerging risks – from pre-border to pest management and across aquatic and terrestrial environments

First Step 10 - Increase funding over the next five years for priority areas and build organisational capability across the system

Expectation 13 – That central government is committed to maintaining a clear and effective role as overall steward of the biosecurity system

Expectation 14 – That funding baselines for biosecurity are increased over the next five years specifically to close gaps in the system

Expectation 15 – That immediate funding is provided to ensure sufficient capacity and capability for rational and strategic management of the total biosecurity system

Expectation 16 – That central government develops a comprehensive set of possible initiatives for increased expenditure each financial year – clearly prioritised across all agencies, sectors, environments and functions

Expectation 17 – That the IHS for risk management of sea containers is fully implemented

Expectation 18 – That pre-border and border measures to reduce risks to the marine environment are being addressed as a high priority

Expectation 19 – That the appropriate data management systems are in place to support quality decision-making and performance monitoring

Expectation 20 – That all critical eradication tools such as vaccines and pheromones are available for responding to incursions

The following matters are discussed here Under Category V:

- Emerging risks / prioritisation of risks
- IHS for risk management of sea containers
- Data management systems
- Critical eradication tools

Other relevant matters are discussed elsewhere in this document:

See discussion under Categories I and II regarding -

- Systems, structures, capabilities within MAF
- Central government stewardship

See discussion under Category VIII regarding -

- Funding and expenditure

See discussion under Category X regarding -

- Measures to reduce risks to the marine environment

Emerging risks/ prioritisation of risks

The Biosecurity Integrated Risk Management Framework (IRMF) was developed in 2004. This was a decision support tool to guide resource allocation in managing biosecurity risks across the biosecurity system. It was designed to allow comparison between sectors and points of intervention. The IRMF was used to set priorities between competing programmes and funding bids, for decision making regarding surveillance, incursion responses and pest management, and for setting priorities in developing import health standards.

In 2006, the effectiveness of the use of the IRMF was reviewed ("Valuing Biodiversity: Biosecurity New Zealand's Integrated Risk Management Framework: theory and application – review of Biosecurity NZ's procedures for allocating biosecurity resources") by Nimmo Bell for

the Foundation for Research Science and Technology. This led to a revision and expansion of the scope of the IRMF, and it was superseded by the Biosecurity Decisions Framework in 2007.

In 2012, an independent review of import requirements and border processes around the introduction of Psa V kiwifruit disease in New Zealand recommended that MPI "renew efforts to centralise the identification and management of emerging risks". Implementation of an Emerging Risks System was a key deliverable of the Management Action Plan that constituted MPI's response to the review.

The Emerging Risks System currently [as of 2015] covers plant and animal hazards and other invasive species in the terrestrial and aquatic environments, but the system will be extended in the future to cover food safety hazards as well. The system involves scanning key alert sources for new information on changes in hosts, distribution and impacts of organisms. Risk managers then assess what action (if any) may be needed (off-shore, at the border, or in readiness and response planning). The system links up risk management across MPI and supports communication of new risks to stakeholders where they may impact on their business.

Monitoring emerging risks is supported through collaborations globally, building on intelligence being gathered through initiatives such as the International Biosecurity Intelligence System (IBIS) – a joint initiative between MPI, the Australian Department of Agriculture, Forestry and Fisheries, and the Centre for Excellence in Biosecurity Risk Analysis (CEBRA) in Melbourne.

IHS for risk management of sea containers

As was explained above in the discussion regarding Category IV Stakeholders' Voice, in 2004 Biosecurity NZ utilised supply chain industry groups to assist with managing biosecurity risk through the introduction of the sea container import health standard (IHS). The IHS was revised in 2009. Container arrival numbers have increased since that time, although industry's compliance with the standard is increasing also.

Key initiatives to further manage this pathway include:

- Sea container hygiene system: a system developed by MPI and industry to reduce internal and external contamination of containers from high-risk Pacific Island countries prior to arrival in New Zealand. The programme is owned and operated by a number of different shipping lines and implemented by their agents and container cleaning facilities, with specialist help from pest control consultants. The system currently [as of 2015] operates in Papua New Guinea, Solomon Islands, Tonga and Samoa, with systems in Fiji and Vanuatu undergoing the approval process. The system has been very successful in reducing the contamination rates of sea containers and is arguably the world's best practice in sea container biosecurity risk management. The Australian Department of Agriculture joined the system in 2012.
- International standard for sea container cleanliness: a long term initiative that MPI is leading via the International Plant Protection Convention (IPPC) - a multilateral treaty overseen by the Food and Agriculture Organization to prevent and to control the introduction and spread of pests of plants and plant products.

Data management / information systems

The Biosecurity Strategy signalled the need for information to be used more strategically and to better inform risk management and decision-making. It identified gaps and duplication of biosecurity data stored in different systems and run by different groups.

From 2003 to 2006, work was done to identify areas where data capture, storage, and manipulation were inadequate and to design solutions for those systems. This was regarded as an area of particular importance as many biosecurity functions - modelling and risk assessment, and developing import health standards - rely on quality data.

In 2007, an Information Technology Initiatives project was undertaken to improve information systems at the border following integration of MAF Quarantine Service into Biosecurity NZ. The project included replacing the existing 'paper-bound' systems and processes used at the border with new technology, maintaining the existing border information system, and harmonising information systems between the Quarantine Service and Customs.

In 2009, the Biosecurity Response Knowledge Base was developed as an online information repository of procedures, standards, and other tools for leading and managing biosecurity responses.

In 2011, Farms Online went live. It is a database of information about the ownership and management of all rural properties, land use and stock to ensure that essential information is available for a quick response to a biosecurity incursion.

In 2012, the National Animal Identification and Tracing (NAIT) project was completed and its use was mandated by law. NAIT is an animal identification and tracing scheme providing information about stock location and movements to help quickly contain and manage biosecurity threats.

MPI's Information Systems Strategic Plan (ISSP) in 2012 set out the Ministry's plans for how information technology would support its organisational objectives and mission over the next five years, including its leadership of the biosecurity system. A subsequent review of information systems found that there were a number of problems that affected biosecurity operations including fragmented information systems that do not necessarily communicate with one another. Since that time, the agency has been improving the way it handles information including:

- improving information governance through the Information and Data Management Strategy
- using information from transactional data to research and analyse emerging risks, industry trends and business indicators; the information is used for all parts of the system to provide assurance around system performance, aid decision making, improve system responsiveness and communicate with participants in the system
- improving collection of information through the use of technology and electronic systems to process trade and travel documentation quicker and, in an increasing number of cases, in advance of arrival
- developing and using risk profiles to target resources to the goods, pathways, suppliers, and importers that present the highest risk

- developing the Joint Border Management System with Customs to provide the technology needed to gather, store, and assess the information required to enable a profile-based approach.

Key databases have been put online, and made more usable and accessible by those who need to use the information (but not all are publicly accessible). Examples of these include:

- Animal Disease Data Exotic Diseases Investigations - notification and investigation details relating to notifications via the exotic pest and disease hotline (0800 number)
- Animal Disease Data Animal Health Surveillance - endemic diseases in species of interest at a district council spatial level
- Approved Transitional Facilities list – facilities for inspection, storage, treatment, quarantine, holding or destruction of uncleared goods under the Biosecurity Act
- Biosecurity Infringement For Arriving International Passengers - supports biosecurity inspection and clearance of incoming passengers (air and cruise ship)
- Biosecurity Organisms Register for Imported Commodities (BORIC) - records organisms that may be associated with imported plants or plant products
- Biosecurity Risk Analysis Database - plant risk analysis information
- Biosecurity Surveillance Traps Inspection Data - management and inspection data for fruit fly trapping, gypsy moth surveillance, national invasive ants trapping
- Commercial Vessel Movement - risk intelligence tool to track all craft movement
- Container Checks Information - to record container checks results
- High Risk Site Surveillance Management and Inspection Scheduling Data - to manage data around location, management and inspection of host tree species around risk areas
- Honey Bee Exotic Pest and Disease – high risk areas, inspection records, surveillance planning
- Imported Cargo – national database of sea cargo and air cargo clearance information
- Imported Live Animal – imported ruminant animals
- Imported Mail Intercepted – clearance documentation
- Imported Vehicle Information - related to inspection, treatment, redirection and associated charges
- Unwanted Organisms Register - a list of unwanted organisms, including notifiable organisms, as required by the Biosecurity Act.

Critical eradication tools

The Biosecurity Strategy identified the need for effective tools to implement responses to a range of pests and diseases. It explained that some tools are no longer available, some are under threat due to health, humanitarian or environmental concerns, and others, such as pheromones, do not have regulatory approvals. It also said that unresolved regulatory issues could delay access to imported vaccines in the event of a foot and mouth disease outbreak.

Since that time critical tools have been put in place for foot and mouth disease, including the purchase of a vaccine bank. In other cases, provision for access, including registration of the chemicals and vaccines, was put in place.

Access to some kinds of tools is still not available, such as chemicals to kill bees that might be needed during an outbreak of a bee disease. Despite several research and development initiatives it has not been possible to identify a suitable chemical.

Access to priority tools is being regularly updated under the framework for readiness and response.

Category VI: SCIENCE

First Step 8 - Recognise the contribution of science to biosecurity (strategically and operationally) and fund it properly

Expectation 21 – That science is closely involved in the development of biosecurity strategy

Expectation 22 – That the purchase of science is integrated across providers

Expectation 23 – That investment in science is long term to ensure maintenance of key capabilities

Expectation 24 – That the priority for research to improve biosecurity is understood

The following matters are discussed here Under Category VI:

Science contribution to biosecurity, science investment, and integration of science across providers

Science contribution to biosecurity, science capability

During the first five years following release of the Biosecurity Strategy a number of key achievements were made in the area of science. The development of the Biosecurity Science Strategy provided a focus point for discussions about future priorities for biosecurity-related science. It also highlighted the central role of research in biosecurity. Research providers were involved in many aspects of the biosecurity system and science provided a critical input to all biosecurity decision processes. This included increased awareness of the importance of social science in informing biosecurity interventions. Achievements included:

- Establishment of a long-term (up to 12 years) outcome based investment research programme that required collaboration of science providers and a focus on outcomes through end-user participation on governance boards and technical groups
- Establishment of graduate training programmes in Biosecurity at Auckland and Lincoln Universities and biosecurity courses at many other institutions
- The move by the Foundation for Research, Science and Technology away from purely contestable funding to increased levels of negotiated funding that supported greater collaboration between research providers
- Increased investment in border focused research
- Co-location of Biosecurity NZ Investigation and Diagnostic centres with Crown Research Institutes on Auckland University Tamaki Campus and at the National Centre for

Biosecurity and Infectious Disease, Wallaceville to promote and enhance connectedness and sharing of expertise and resources

- Better Border Biosecurity (B3) was established in 2005, a multi-partner, cooperative science collaboration that researches ways to reduce the entry and establishment of new plant pests and diseases in New Zealand; integrates investment and expertise from five science agencies – Plant & Food Research , AgResearch, Scion, Landcare Research, the Bio-Protection Research Centre at Lincoln University - and three end-user partners – MAF (MPI), DOC and the New Zealand Forest Owners Association
- Envirolink investment funding scheme was established to increase return on investment in environmental and biosecurity research, science and technology by facilitating its uptake by regional councils [now run by MBIE Science & Innovation].

Key areas of progress within Biosecurity NZ included:

- The establishment of the Strategic Science Team as a focal point for coordinating and facilitating science input into biosecurity
- Progress towards development of a biosecurity science system for ongoing prioritisation of research needs and identification of capability gaps or issues
- Establishment of biosecurity research forums (particularly for aquatic research) which gave researchers from different institutions the opportunity to come together to discuss biosecurity research progress and outcomes with one another, with Biosecurity NZ and with other end-users.

Over the period since the release of the Biosecurity Science Strategy in 2007, science has become more integrated into biosecurity policy and strategy. The Strategy set out research priorities to guide biosecurity science investment and provided for a new science system, under which research needs for biosecurity could continue to be prioritised to reflect the changing needs of the biosecurity system. Scientists from the agencies, Crown Research Institutes and private science providers are involved in some way in virtually all aspects of biosecurity, from researching the implications of pre-border trade agreements to judging the most acceptable and effective means of eradicating pests. Scientists provide advice at many stages, during incursions, on medium to long-term pathway mitigation and on responses to eradicate or control pests. Recent achievements have included:

In 2009 –

- Regional Council Research, Science and Technology Strategy was agreed – which provides an overview as to what regional councils require in research, science and technology, including tools and methodologies related to biosecurity

In 2011 –

- Research for the Environment: Review of the Regional Council Research, Science and Technology Strategy was published – which identified key issues and longer-term priorities to funding agencies and research providers, including on biosecurity and science capability; it proposed that regional councils move from being end users to being partners in research with central government and research providers
- Forest Biosecurity Research Strategy was agreed - for the forest industry to communicate biosecurity research priorities to funding agencies and research providers, and influence research and development investment and capability retention and development
- Better Border Biosecurity funding moved from a contestable model to a collaboration model, resourced primarily through CRI core funding

In 2012 –

- a Departmental Science Advisor was appointed within MPI in 2012 – the role focuses on strategic direction for science investment, emerging risks, and quality assurance of science inputs into regulatory decision making; biosecurity is within his scope
- New Zealand Organisms Register (NZOR) was launched – a web-based register of plants, animals, fungi and bacteria that are significant to New Zealand; a multi-agency collaborative project to assist business, biosecurity and conservation decision-making; the most complete national digital species catalogue of any country in the world

In 2013 –

- the Centre of Excellence for Biosecurity Risk Analysis (CEBRA) was established – a joint initiative between MPI, University of Melbourne and Australian Federal Department of Agriculture to provide practical solutions and advice related to biosecurity risk management
- the Organism Ranking System was established – a science-based tool for ranking organisms, based on their impacts on New Zealand's economy, environment and people, and the likelihood of those consequences occurring. Organisms can then be compared against each other and can be used to support activities across the biosecurity system, including strategic risk-based decision-making, Government Industry Agreement discussions, and determining which new and emerging risks are the greatest priority for detailed risk assessment and action
- the Biological Heritage Science Challenge was announced by the Government - funding of $25.8 million over five years to allow more strategic science investment in biodiversity and biosecurity research; a national partnership of CRIs, universities, government agencies, industry and others to facilitate development, uptake and application of results by a wide range of sectors and end-users

In 2014 –

- Biosecurity outcomes were embedded in the Statements of Core Purpose of most CRIs

In 2015 –

- Strategic Roadmap for Biosecurity and Biodiversity Research was completed by LandCare Research and funded by MBIE - provides a framework to define medium to longer term (10–20 years) research, science and technology priorities for biosecurity and biodiversity outcomes of regional councils and unitary authorities; to ensure that research prioritisation for biodiversity and biosecurity fits within a national picture.

Category VII: PRIORITIES

First Step 9 - Ensure decision-making processes take account of risks to the economy, biodiversity, taonga, human health and lifestyle in setting priorities

Expectation 25 – That the criteria for assessment of benefits and costs includes the full range of effects across all sectors and in particular consequences for the environment, human health and well-being, economic production, and Maori cultural values

Expectation 26 – That there is an integrated framework for establishing whole-of-system priorities and providing greater transparency and accountability in risk management

The following matters are discussed here Under Category VII:

Decision-making taking account of whole-of-system values and priorities

Other relevant matters are discussed elsewhere in this document:

See discussion under Categories I and II regarding -

Governance of the biosecurity system

Biosecurity system strategic documents

See discussion under Category V regarding -

Emerging risks / prioritisation of risks

Decision-making taking account of whole-of-system values and priorities

The 2003 Biosecurity Strategy clarified that biosecurity concerns the impacts posed to New Zealand's economic, environmental, human health and Maori cultural values, and that biosecurity risk management priority-setting must be undertaken within frameworks that account for all of those values.

The Biosecurity Outcomes Framework was developed in 2003-2004 by the Biosecurity Strategic Unit to provide strategic direction for biosecurity in the context of a range of economic, social and environmental outcomes. The framework also was intended to be used to guide decisions about allocation of resources across the system. Elements from the framework were incorporated into agencies' statements of intent and in Budget Estimates for Votes Biosecurity. The outcomes were adopted explicitly in the Integrated Risk Management Framework (IRMF) to improve consistency and transparency in decision-making. The framework was also used by the Foundation for Research, Science and Technology to determine some of the outcomes they were seeking from their Ecosystems investment.

Biosecurity NZ built a Decisions Framework in 2007 that expanded upon the IRMF to guide how to make decisions across the biosecurity system. It contained criteria and principles to reflect that users should consider the benefits and costs for all values when assessing information and making decisions. Biosecurity NZ implemented this through many processes, such as the Response Model and Procedures, Border Systems Project, Future of Pest Management Project, and High Priority Organisms Framework (which later became part of the Organism Ranking System).

Other programmes and frameworks that have incorporated values across the biosecurity system, and that include criteria for assessing costs and benefits across the system, include:

- the Response Model and Response Policy
- revised risk analysis and import health standard development processes
- surveillance and incursion response systems that include explicit objectives, performance standards and review processes to ensure continuous improvement and adoption of the most appropriate science, technologies and methods
- consistent and transparent approaches to responding to biosecurity risks in the post border environment, including ongoing prioritisation to ensure that resources are targeted to the highest risks
- techniques used in the management of all pests and diseases to ensure they do not pose unnecessary or disproportionate risks to the environment.

Category VIII: FUNDING SOURCES

First Step 10 - Increase funding over the next five years for priority areas and build organisational capability across the system

Expectation 27 - That central government and regional councils are applying a clear and consistent cascading framework for determining who should pay what

Expectation 28 - That funding arrangements for all existing activities are progressively reviewed to ensure consistency with this framework

The following matters are discussed here Under Category VIII:

Funding over the first five years

Funding reviews and framework for who should pay for what

Other relevant matters are discussed elsewhere in this document:

See discussion under Categories I and II regarding -

Governance of the biosecurity system

Biosecurity system strategic documents

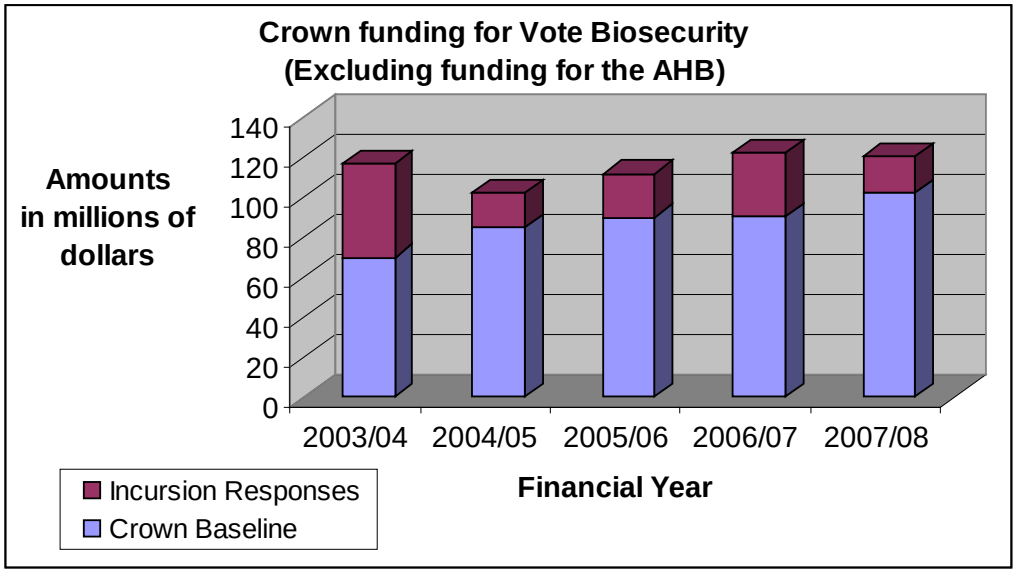
Funding over the first five years

When the Government agreed that the recommendations in the Biosecurity Strategy formed the basis for improvements to the biosecurity system over the next five years, it provided new biosecurity funding.

In 2003, the Biosecurity Chief Executives Forum was established, and one of the forum's functions was to prioritise biosecurity budget bids. However, most of the biosecurity functions undertaken by other government agencies were subsequently transferred to Biosecurity NZ. Consequently, the prioritisation process for new initiatives principally occurred within Biosecurity NZ, but in consultation with other agencies, including regional councils, about the budget bids.

The funding that Biosecurity NZ received, other than that allocated to responding to incursions, steadily increased every year for the first five years. Overall it increased by 48 percent, from $70.1 million in the 2003/2004 financial year to $102.3 million in the 2007/2008 financial year. Over the same period of time the funds allocated to respond to incursions decreased significantly, from $47.1 million in 2003/2004 financial year to $18.4 million in the 2007/2008 financial year. This decrease reflects reduced incursion response activity, as significant responses (such as the Painted Apple Moth) came to an end. The graph below illustrates this. The graph excludes Animal Health Board funding, which was the Crown's contribution to control the vectors of Bovine Tuberculosis, which primarily involves culling possums. While that funding was part of Votes Biosecurity it was ring-fenced and paid directly to the Animal Health Board.

Crown funding for biosecurity over the first five years of the Biosecurity Strategy



This increased funding for biosecurity included new funding for marine biosecurity, for the Protect New Zealand programme, border management, standard setting, and post-border monitoring and effectiveness. Funding was also provided to help with MAF's restructuring, provide for capability in pest management and health risk assessment, and to build capability in core services, including financial management.

The table below shows the four initiatives that were allocated the greatest amount of funds over that period.

Funding allocated to significant initiatives over the first five years of the Biosecurity Strategy

	Funding each financial year ($millions)				
Initiatives	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Foot and mouth disease	4.7	4.7	4.7	4.7	4.7
Preparedness major bio responses				4.0	5.0
New pest management functions				1.9	3.8
Effective border management					7.5
Totals	4.7	4.7	4.7	10.6	21.0

In addition to the above, there was also a significant amount spent on pest management within Vote Conservation, of the order of $53 million per year. There was also spending through regional pest management strategies developed by regional authorities. Furthermore, industry and community groups undertook a significant amount of voluntary pest management or preventative activities.

Of the Vote: Biosecurity departmental allocation each year, the Crown funded 78% and third parties funded 22% through cost recovery. The Crown primarily recovered costs under the Biosecurity Act and the Biosecurity (Costs) Regulations 2003.

Funding reviews and frameworks for who should pay for what

There have been a range of reviews and frameworks that have been developed over the past 12 years to address how much the government should invest in biosecurity to achieve the desired level of protection, and what costs should be shared with other stakeholders in the biosecurity system. Some of the significant ones are described below.

In 2004-2005, a major review was undertaken on the funding of biosecurity services. From that review, Cabinet agreed the following biosecurity funding principles - that biosecurity services are most appropriately funded by those that can:

- change their behaviour to reduce the costs of the service or the risks that give rise to the need for the service
- assess whether the benefits of the service at its current level of provision outweigh the costs and consequently influence the level of service provided, and/or
- determine whether the service at its current level of provision is being delivered most cost-effectively.

Applying those principles, Cabinet agreed that Crown funding would continue to be provided for:

- Policy advice, publicly funded research and law enforcement programmes
- Multilateral international standard setting and market access work (industry would fund some bilateral market access work that they request)
- Border standards and transitional/containment standards
- Border inspection services for passenger and aircraft clearance and mail clearance
- Surveillance and incursion response for programmes of public benefit and for existing responses
- Pest management for programmes of public benefit

User charges or levies would be charged for some or all of the costs for:

- Export certification, accreditation and related standards work
- Import health standards when sought by importers
- Cargo and vessel clearance services
- Transitional and containment facilities services
- Laboratory diagnostic testing on imports with suspect finds
- Surveillance and incursion response services of direct benefit to industry
- Pest management services of direct benefit to industry.

Following this review the Minister directed MAF to work with industry to consider options for working more closely together on biosecurity preparedness and response, and the Surveillance and Incursion Response Working Group was established in early 2005. Although this started out by looking at the livestock industries, in 2006 representatives of the horticulture, forestry and marine sectors were invited to join. This led to development of the policy framework and legislative changes to enable establishment of the Government Industry Agreement for Biosecurity Readiness and Response, or GIA (discussed in the section on Stakeholders' Voice,

above). Under this agreement, industry signatories incur costs from activities they agree to cost-share, and decide how much they are willing and able to spend.

During 2009-2010, within a review of New Zealand's pest management systems, the Biosecurity Central Regional Government Forum agreed-in-principle to a core rationale for government intervention, to guide decision-making for allocating roles in pest management. This agreement, along with biosecurity funding principles, formed a framework for determining who should pay for what. The framework was reflected in the Pest Management Plan of Action in 2011, and was embedded within the 2012 amendment to the Biosecurity Act.

Currently [2015], MPI is undertaking a review of cost recovery for biosecurity services. It is being driven both to cover the real cost increases through delivery of a wider range and more substantial scale of services, but also to rectify the different systems for recovering costs from industry, which over time has led to inequities in charges for different businesses.

Category IX: CHANGING BEHAVIOURS

First Step 4 - Encourage all New Zealanders to support and participate in biosecurity through a social marketing programme

Expectation 29 - That all New Zealanders, and our visitors, are encouraged to support and participate in our biosecurity

The following matters are discussed here Under Category IX:

Social marketing

Other relevant matters are discussed elsewhere in this document:

See discussion under Category IV regarding -

Engaging with stakeholders

Government Industry Agreement

Social marketing

The Biosecurity Strategy said that New Zealand needed to fund research to learn how to encourage the public to support public participation in biosecurity, and to develop appropriate social marketing campaigns to change behaviours.

Biosecurity NZ was launched in 2004, and "everyone participates" was shortly thereafter established as one of the outcomes in the Outcomes Framework that set the strategic direction for the biosecurity system. A Public Awareness Campaign plan was developed with the aim to increase general awareness of biosecurity, and provide a platform for messages that invited greater public participation in biosecurity. This included research undertaken on public knowledge and levels of involvement in biosecurity. The Protect New Zealand programme was brought into Biosecurity NZ to form an integral part of the overall biosecurity programme and brand. The 'Know the Enemy' campaign was an information campaign aimed at public

awareness. Other activities included improving pre-travel information for those coming to New Zealand, improving airport signage and working with industry bodies on specific pest responses.

Social marketing programmes were implemented that brought increased voluntary compliance with biosecurity programmes, including:

- Check Clean Dry - didymo and other freshwater pests
- Red imported fire ants - public surveillance
- Clean and Anti-foul Hulls - marine pests
- Declare or Dispose - seeking higher compliance at the border

Other communications activity focused on responses to unwanted pests and diseases, such as dampwood termite, varroa mite and response preparedness, e.g., avian influenza.

In 2004, MAF, incorporating Biosecurity NZ social marketing programmes, began having a significant presence with a stand at the Mystery Creek National Agricultural Fieldays - the biggest show on the agricultural calendar and attended by tens of thousands in the rural industries. Also in 2004, the "Border Patrol" social marketing and reality television programme began [continued until 2012] – which showed border protection activities of Customs and MAF.

In 2006, education campaigns targeting China, Europe and Pacific Islands contributed to a reduction in the number of seizures of risk goods and infringement notices issued to arriving passengers from these regions.

The 2007-2012 Biosecurity NZ Communications Strategy was designed to increasingly shift the focus from awareness to behaviour change and participation. Research was used to inform and measure communications activity. It indicated increased levels of compliance and awareness of campaigns amongst target audiences. Stakeholder surveys were used to benchmark stakeholders' perceptions.

In 2008, the "Dog Squad" social marketing and reality television programme began [still continuing in 2015] – which showed detector dog border protection activities of MAF (MPI), Customs and other agencies.

Research conducted in 2009 found that biosecurity remains a very important issue amongst the general public and is second in priority (out of 11 issues) only to reducing domestic violence.

In 2010, the Marine Biosecurity Porthole was launched - a web-based portal to provide public access to information on unwanted marine pests, developed by MAF and the National Institute for Water and Atmospheric Research.

During 2013, MPI led a cross stakeholder project, taking a customer-centric approach to border compliance, seeking to understand behaviour and decisions of visitors to New Zealand, including what impedes their ability to be voluntarily compliant with our biosecurity regulations and new ways in which they could be assisted to comply. This informed development of initiatives to encourage voluntary compliance with biosecurity regulations.

In 2014, MPI launched a bi-monthly newsletter - *Viral News* - on foot and mouth disease preparedness.

Also in 2014, the Border Compliance Social Marketing Programme Strategy was developed to change and reinforce the behaviours of individual travellers to ensure compliance using a range of interventions and social marketing.

Category X: PRE-BORDER

First Step 6 - Identify, prioritise and review current and emerging risks – from pre-border to pest management and across aquatic and terrestrial environments

Expectation 30 - That there is a continuous, targeted programme to move risk reduction measures offshore

Expectation 31 - That all relevant pre-border regulations and standards are in place – robust, consistent and subject to appropriate review processes

Expectation 32 - That New Zealand is using wider international – multilateral or bilateral – arrangements to reduce potential threats to indigenous biodiversity

Expectation 33 - That New Zealand is benefitting from and contributing to international standards to protect production and trade

Expectation 34 - That New Zealand's coastal waters are protected from threats carried in ballast water or on fouled hulls

Expectation 35 - That New Zealand is helping Pacific countries reduce biosecurity threats to the region

The following matters are discussed here Under Category X:

- Pre-border regulations and standards
- International standards, multilateral and bilateral arrangements
- Protecting coastal waters from ballast water or fouled hulls
- Reducing biosecurity threats from Pacific countries

Other relevant matters are discussed elsewhere in this document:

See discussion under Category V regarding -

- Emerging risks / prioritisation of risks
- IHS for risk management of sea containers

Pre-border regulations and standards

The Biosecurity Strategy stated that New Zealand's import health standard (IHS) procedures were under stress, needed consistency, and required improved processes to hasten their completion and meet New Zealand's trade obligations without increasing biosecurity risks. Work undertaken since that time to address these issues has included:

- In 2007, Biosecurity NZ's Border Strategy Work Programme included steps to make import health standards less prescriptive, and to focus on managing risk outcomes rather than the then current practice of mandating specified processes for mitigating particular biosecurity risks
- In 2010, MAF undertook a process of regulatory reform of its import health standards to better target border activity to actual biosecurity risk, decrease inspection while undertaking more audit and verification, and lower compliance costs
- In 2012, the Standards Integration Programme was launched [renamed the Smart Regulation Programme in 2014, which is still underway as of 2015] - to bring clarity to MPI's standards and guidance so that they are easy to find, understand and use; it includes a framework for making risk management decisions, and ensuring transparency over decisions made.

International standards, multilateral and bilateral arrangements

The Biosecurity Strategy acknowledged that New Zealand takes a leading role – disproportionate to its relative size – in international organisations working to reduce the risk of importing or exporting pests and diseases. It recommended that New Zealand should continue these influential international roles and build upon them. Since that time, some of the efforts that have been made in this regard are outlined below.

New Zealand has had substantial engagement in international standard or protocol setting bodies, with New Zealand officials taking leadership roles in key forums:

- Sanitary and Phytosanitary Committee of the World Trade Organisation, which maintains and implements the World Trade Organisation Agreement on the application of sanitary and phytosanitary measures (the SPS Agreement)
- International Plant Protection Convention (IPPC)
- World Organisation for Animal Health (OIE)
- Codex Alimentarius Commission (Codex); IPPC, OIE and Codex are international standard-setting bodies recognised in the SPS Agreement
- Convention on Biodiversity – biosecurity interests focus on invasive alien species management, and the Cartagena Protocol, which seeks to protect biological diversity from the potential risks posed by living modified organisms
- Montreal Protocol on substances that deplete the ozone layer – biosecurity interest is principally in the regulation of methyl bromide usage
- International Maritime Organisation – biosecurity interests revolve around preventing the introduction of marine pests via ballast water or bio-fouling on vessel hulls
- World Health Organisation – biosecurity interests are mainly in implementation of International Health Regulations, and risk management programmes for zoonotic disease

Within these forums, New Zealand has argued for standards based on proven science and established risk management principles. This principled approach has been well recognised in the international community, and is key strength that New Zealand brings to alliances of like-minded countries.

Similarly, when negotiating sanitary and phytosanitary (SPS) provisions in New Zealand's trade agreements, facilitation of trade is sought through the least trade restrictive measures that have been proven effective in managing recognised biosecurity risks. The agreements provide an

ongoing framework that offers opportunities for strengthening New Zealand's risk management programme, reciprocal recognition of risk management systems and avoidance of duplication, and greater cooperation and alignment of our input to multi-national forums. Chapters related to managing SPS (food safety and biosecurity-related) issues have been included in all of the current trade agreements:

- Australia-NZ Closer Economic Relations – 1983
- NZ-Singapore Closer Economic Partnership – 2001
- PACER Plus agreement for Pacific Forum countries (Australia, New Zealand and Pacific island countries) – 2002
- New Zealand-Thailand Closer Economic Partnership – 2005
- Trans-Pacific Strategic Economic Partnership – 2005
- New Zealand-China Free Trade Agreement – 2008
- New Zealand-Malaysia Free Trade Agreement – 2010
- ASEAN-Australia-New Zealand Free Trade Agreement – 2010
- New Zealand-Hong Kong, China Closer Economic Partnership – 2011

Ongoing efforts have then been made to enforce and implement chapters' provisions once agreements are in force, including development of import health standards, negotiating implementation arrangements which bind agreements made under the chapters, and capacity building and technical assistance projects between the parties to the agreements.

Other key international initiatives and relationships have included:

- In 2010, the New Zealand and Australia Mutual Recognition Framework was signed – an agreement to recognise each other's biosecurity risk management efforts – to increase confidence biosecurity risks are being effectively addressed, and to increasingly enable management of risk offshore
- In 2010, New Zealand coordinated and hosted an international workshop on regional action to combat invasive species on islands to preserve biodiversity and adapt to climate change
- In 2009, New Zealand renewed its International Animal Health Emergency Reserve (IAHER) agreement with Australia, Canada, USA, United Kingdom and Ireland to provide for veterinary and other specialised support in the event of an animal disease outbreak, where extra resources can be made available at short notice by the donor countries if assistance is requested
- In 2014, MPI audited the Australian Department of Agriculture's processes and procedures for the management of the export of fruit fly host commodities into New Zealand, and a Memorandum of Understanding was signed between New Zealand Minister for Primary Industries and Australian Minister for Agriculture for cooperation on foot and mouth disease preparedness; it covers sharing intelligence on risk, collaborating on training, sharing skills in the event of an outbreak, and influencing international policy on disease management
- Ongoing linkages to international scientific research – most key biosecurity science researchers in New Zealand engage in numerous global collaborations, ranging from investigator-to-investigator interactions to formal agency involvement in international consortia. Many have positions in international organisations, edit international journals or are invited scholars at overseas institutions. This includes linkages with international consortia on biosecurity-related research and international policy development – e.g., with key international programmes, such as Invasive Animals Cooperative Research

Centre, University of New England, School of Biological Sciences, University of Sydney; Border Rivers-Gwydir CMA; the Plant Biosecurity Cooperative Research Centre; CSIRO Sustainable Agriculture and Biosecurity Flagships, Chinese Academy of Sciences, Centre National de la Recherche Scientifique, German Centre for Integrative Biodiversity Research, BioForsk, Imperial College, London, Grand Challenges in Ecosystems, Insituto de Ecología y Biodiversidad, Intergovernmental Panel on Biodiversity & Ecosystem Services, and many others.

Protecting coastal waters from ballast water or fouled hulls

The Biosecurity Strategy recognised that one of the biggest biosecurity risks to the New Zealand coastal environment is from sea craft. As craft travel between destinations, over time they accumulate organisms (many of them pests or potential pests) on their hulls (biofouling) and then proceed into New Zealand waters. Another significant biosecurity risk to the local marine environment is posed by the release of ballast water. Efforts to address these risks over the past 12 years are outlined below.

- In 2005 the ballast water import health standard was reviewed and re-issued
- In 2006, New Zealand and Australia began working together to produce a set of quality assurance procedures for marine pest monitoring; following this, marine risk pathways were analysed to identify management options, particularly regarding the two key marine pathways of vessel ballast water and biofouling. In New Zealand, this included marine biosecurity capability building, with MPI, DOC, most regional councils, MFish and several industry groups working together in partnership
- A Fiordland biosecurity strategic plan and long-term operational plan were prepared to support the protection of the Fiordland Marine area
- In 2008, Cabinet approved New Zealand becoming a party to the International Maritime Organization's (IMO) International Convention for the Control and Management of Ships Ballast Water and Sediments; the IMO is the United Nations' global-standard setting authority for the environmental performance of international shipping, with a role to develop a regulatory framework that is universally adopted and implemented – a key feature of the Convention is a performance standard requiring ships to operate treatment systems to disinfect ballast water taken up in foreign ports. As at 2015, the coming into force of the Convention is expected to be imminent, and New Zealand will then complete ratification of the Convention.
- In 2011, the IMO issued biofouling management guidelines; New Zealand played a lead role in developing the guidelines, the work on which began in 2006
- In 2012, the Biosecurity Law Reform Act provided for a number of key aspects of marine biosecurity risk management, including that it:
  - gave legal effect to the issuing of craft risk management standards
  - enabled New Zealand to ratify the IMO Ballast Water Convention
- In 2014, the Craft Risk Management Standard for Biofouling on Vessels Arriving to New Zealand was issued by MPI - the world's first border regulation on biofouling on arriving ocean vessels; it is intended to mitigate risk of exotic marine pests being introduced to New Zealand by requiring vessels to arrive with 'clean hulls'; it will come into force in 2018. The Standard is aligned with the 2011 IMO guidelines which means that much commercial shipping is already compliant. MPI will use the four-year lead-in period to work with vessel operators and communicate the different measures available to shipping lines and other parties to ensure compliance.

Reducing biosecurity threats from Pacific countries

As was explained above in the discussion regarding IHS for risk management of sea containers, under Category V Capability Gaps, MPI and industry developed the sea container hygiene system to reduce internal and external contamination of containers from high-risk Pacific Island countries prior to arrival in New Zealand. [As of 2015] it operates in Papua New Guinea, Solomon Islands, Tonga and Samoa, with systems in Fiji and Vanuatu undergoing the approval process. The system has been very successful in reducing the contamination rates of sea containers.

Other successful programmes that have been implemented include:

- Red Imported Fire Ant (RIFA) Surveillance Programme and the Pacific Ant Prevention Plan - to determine RIFA status at high risk Pacific ports, and train local Pacific quarantine services with best practice ant surveillance systems, and develop an emergency response plan for invasive species
- Fiji Quarantine Inspection Department Capability Support Programme - to help the Fiji Quarantine Inspection Department establish sustained capability to run an inspection system across all aspects of its biosecurity border management; it included assistance with establishing systems around passenger processes, installation of X-ray machines and training of staff to operate them effectively
- Quarantine Awareness Communications – undertaken in Samoa, Tonga, Fiji and Cook Islands; resulted in a reduction in infringements by passengers arriving in Auckland from the countries involved
- The Pacific Invasives Initiative was established with seed funding from the New Zealand Government and the Pacific Development and Conservation Trust based in New Zealand in 2004, and was the first formal invasive species partnership in the Pacific. It is a multi-disciplinary team of invasive species specialists based at University of Auckland. It works extensively with Pacific agencies and leverages expertise from universities, government agencies, such as MPI and DOC, and commercial companies in New Zealand. It has assisted Pacific agencies to implement invasive species control projects within national boundaries, and has also provided technical support for the design and implementation of the Pacific Ant Prevention Programme
- The New Zealand Government Agencies Fund funded MAF to undertake biosecurity initiatives for facilitating market access into New Zealand from the Pacific, the Pacific Export Treatment Systems initiative, and facilitating fresh produce imports to New Zealand from Tonga.

Category XI: BORDERS

First Step 6 - Identify, prioritise and review current and emerging risks – from pre-border to pest management and across aquatic and terrestrial environments

Expectation 36 – That clear and transparent measurements of risk mitigation are providing appropriate information about residual risk or 'leakage' across the border

Expectation 37 – That all significant hitchhiker pathways are covered where possible

Expectation 38 – That all significant pathways are covered

Expectation 39 – That border compliance is managed cost-effectively

Expectation 40 – That effective post-entry quarantine facilities are available where appropriate

Expectation 41 - That all high-risk entry points for the marine environment are evaluated, with risk mitigation measures in place

The following matters are discussed here Under Category XI:

Border risk and compliance management across all pathways
Measurement of risk 'leakage' across the border
Post-entry quarantine facilities

Other relevant matters are discussed elsewhere in this document:

See discussion under Category V regarding -

Emerging risks / prioritisation of risks

See discussion under Category X regarding -

Risk mitigation for the marine environment

Border risk and compliance management across all pathways

The new structure within MAF established in 2004 (discussed under Categories I and II, above) represented a move away from a previous "sector-focus" (i.e., animals, plants, and forestry) to one based on a "points of intervention" model. Over time, it became increasingly apparent that the then current border management system – while working reasonably well – was not sustainable given constrained government resources, increasing levels of trade and travel, and increasing service expectation. New system delivery models were explored that entailed using resources more efficiently and effectively, working collaboratively across government agencies and with stakeholders, and better targeting of resources to areas of highest risk. This resulted in adoption of a new approach to border-related biosecurity risk management, which in many cases was found to be best managed pre- or post-border (and discussed further in other parts of this paper). The approach involved identifying where risk is best managed – for example in the case of hitchhikers – either from within the country of origin, enroute, at the New Zealand border or post-border. The approach involved:

- Formalising new collaborative ways of border sector agencies working together and with industry and other stakeholders (e.g., see discussions in Categories I and II, above, about the Border Sector Governance Group, Border Sector Ministers, Border Directions Statement, Border System Manual, Border Sector Strategy, and Future Direction for the Border Sector)
- Continued development of off-shore systems and confidence building in key exporting countries, including establishment and maintenance of relationships with stakeholders and exporting countries' national plant protection agencies
- Working smarter through risk profiling of high-risk passengers, craft, containers and cargo; reducing emphasis on physical inspection of goods and passengers, with deployment of resources focused on areas of highest risk – either by pathway, importer, commodity type or individual consignment.
- Development of improved screening and detection tools, training, and practices; investment in X-ray scanners; deployment of detector dogs to screen disembarking passengers from cruise ships and aircraft, and to identify risk items in mail at the international mail centre
- Making greater use of data, information and technology to achieve biosecurity outcomes; systems such as the Joint Border Management System (JBMS), and Immigration Global Management System; establishment of the Integrated Targeting and Operations Centre to support risk profiling, information sharing and engagement across border agencies
- Influencing compliant behaviour through information and education, introduction of appropriate sanctions and incentives, enhanced presentation of rules and guidance material
- Continuous learning and improvement processes; use of information gathered through intervention monitoring programmes, surveys, frontline operations and collaboration with agencies and industry to enhance system effectiveness.

Some noteworthy examples of the many significant programmes and initiatives that have been undertaken over the past 12 years as part of the above approach to border-related biosecurity risk management are provided below:

- Imported used vehicles project – entailed improving biosecurity interventions on the used vehicle pathway through a change in the import health standard, improved inspection techniques, working with industry and other government departments to decide how best to manage this pathway
- Vessel clearance system – to enable better targeting of risk vessels based on prior compliance, history of ports visited, goods carried and type of vessel
- Pathway assessment for nonconforming commodities and reporting back to the exporting country of pests intercepted on imported products – to encourage stakeholders and the exporting country to investigate causes of non-compliance, and to determine steps to prevent recurrence
- The Psa V Review report was released in 2012 – an independent review of import requirements and border processes following the outbreak; the Psa-V Management Action Plan was put in place as a result
- Offshore system approaches – system-based approaches to better manage risk offshore such as accreditation of offshore plant treatment facilities and plant health schemes

- Every import health standard is now supported by an internal bridging document that explains decisions and their justification, updated every time an import health standard is changed – provides a long-term record of decisions to stop or treat commodities to aid consistency and understanding

Measurement of risk 'leakage' across the border

In 2004, the Border Monitoring Group was created to begin systematically monitoring the amount of residual risk (referred to as 'slippage' or 'leakage') entering New Zealand. The air passenger, express freight, mail and sea container pathways had a level of continuous monitoring, and short-term surveys were carried out in a variety of other pathways, including fresh produce, nursery stock, cut flowers, seed for sowing, yachts, vessel holds, personal effects, new and used vehicles, air containers and breakbulk cargo. The work informed the development and review of risk analyses and standards, risk profiles and operational practices.

In 2009, as part of an overall shift to a more targeted risk-based approach to managing biosecurity risks, a compliance output standard was established for the passenger pathway. The output standard required demonstration that 98.5% of all passengers are compliant with biosecurity requirements by the time they depart the airport. To measure passenger compliance, surveys are conducted at New Zealand international airports and the results are combined with compliance data gathered on an ongoing basis.

In 2012, the Passenger Process Assurance Group was established to take a biosecurity system view of managing biosecurity risk in the passenger pathway, and to lead work on the passenger compliance survey. The results of the performance monitoring are fed back in to all relevant parts of the system, to drive continuous improvement in import health standards development, front line staff training, facilities layout, public communications and education, detection techniques and practices, and other aspects of the biosecurity system.

Post-entry quarantine facilities

The Biosecurity Strategy said that some people alleged that smuggling of plant material into New Zealand was encouraged by the lack of facilities for plants in quarantine. As a result, Biosecurity NZ maintained a watching brief to ensure that there were sufficient post entry quarantine (PEQ) facilities available. In 2005/2006, funding was provided through the Growth and Innovation Framework to set-up a government run level 3 PEQ facility (the most contained level for quarantine) for high value crops (agricultural and horticultural plants that are highly significant to New Zealand's primary industries). The level 3 PEQ facility is run by the MPI Plant Health and Environment Laboratory in Auckland. Two other level 3 facilities are available in New Zealand, however these are privately run facilities. There are also several level 1 and level 2 PEQ facilities in New Zealand and these are all privately run. In 2003 there were approximately 80 PEQ facilities (all levels) for plants in operation in New Zealand, and [as at 2015] there are about 50 now.

Facilities are approved against the criteria set-out within the MPI PEQ standard. MPI sets the import health standards for high-value crops and stakeholders are obliged to follow these standards when importing plant material. For most of the high-value crops, the plants must undergo a period quarantine and quarantine testing. The demand for PEQ space is driven by the

volume of stakeholder importations of high-value plant material. As there are only three level 3 PEQ facilities available in New Zealand, demand for space often exceeds space availability.

In the past, all high risk material was required to be quarantined on arrival in New Zealand. While some offshore quarantine systems had been accredited by MAF from as early as the 1990s to reduce post-entry requirements, in most cases New Zealand also needed additional requirements to be met beyond those provided by the offshore facilities. Since then, MPI has now recognised some offshore quarantine systems which allow more rapid distribution of genetic material once it arrives in New Zealand. MPI accredits and audits these offshore quarantine systems and facilities to ensure the pests of concern to New Zealand continue to be effectively managed.

MPI is currently undertaking work in this area, including collaboration with industry; in particular barriers for importation are being addressed by the Germplasm Advisory committee (GERMAC). This includes addressing changes to import health standards, demand verses availability of PEQ space, increasing costs around PEQ, and any other risks that may influence importation of plant material in the future.

Category XII: SURVEILLANCE

First Step 6 - Identify, prioritise and review current and emerging risks – from pre-border to pest management and across aquatic and terrestrial environments

Expectation 42 - That there is a consistent policy for developing surveillance programmes across all sectors, based on the overall goals for biosecurity

Expectation 43 – That explicit surveillance objectives and performance standards are based on these and are resourced to ensure delivery

Expectation 44 - That there is strong coordination of, and access to, the set of databases supporting surveillance activities

Expectation 45 – That quality information is available to the public to help them identify new or emerging pests

Expectation 46 - That the surveillance programme responds to changes in risk profiles as new pests and diseases emerge and others decline

Expectation 47 – That the programmes are based on the best available technology and sampling methodologies

The following matters are discussed here Under Category XII:

Surveillance programme development, objectives, systems

Information available to the public

Other relevant matters are discussed elsewhere in this document:

See discussion under Category V regarding -

Emerging risks / prioritisation of risks

See discussion under Category IX regarding -

Social Marketing

Surveillance programme development, objectives, systems

In 2005, Biosecurity NZ began the Biosecurity Surveillance Strategy 2020 project to develop a strategy and implementation plan. The strategy was endorsed by Cabinet in September 2009 and the implementation plan was delivered in draft. The project was the first attempt world-wide to write a consistent strategy for developing surveillance programmes covering the marine, animal, plant, and environment sectors. The Strategy's general direction and outcomes are still regarded as valid [as of 2015].

A review of this work undertaken by the Office of the Auditor General (OAG) in 2013 ("Preparing for and responding to biosecurity incursions") concluded that the project had been too ambitious and was not sufficiently strategic in approach. The OAG review said that the surveillance strategy, together with MPI's 2030 organisational strategy [discussed above, under Categories I and II], would act as a vision within which a more realistic set of surveillance objectives would be prepared, and that the GIA and increased focus on preparedness would provide opportunities to do this.

The OAG acknowledged achievement of some surveillance-related discrete and focused pieces of work, including:

- improving notifications through the 0800 telephone number
- a method for targeting surveillance sites based on risk – a way of prioritising surveillance activities to make decision-making more consistent
- the Atlas of Biosecurity Surveillance – illustrating biosecurity surveillance activities across the animal, plant, environment and marine sectors
- the biosecurity surveillance panel for procurement of services – to streamline the tender process, increase understanding of the surveillance market's capability, provide contractors with longer contracts and more security, and promote innovation
- collaboration between parties on surveillance, including MAF helping the New Zealand Forestry Owners' Association design its surveillance system, sharing information about high-risk surveillance sites, work undertaken on detection of brain and nervous system diseases, and work on Avian Influenza to agree on response policies and to implement surveillance starting with commercial flocks.

Other surveillance-related initiatives and achievements over the past 12 years have included:

- High Risk Site Surveillance programme – the programme started as a result of a joint review by MAF and the forest industry in 2004; the focus changed from inspecting a small number of airports and seaports, to inspecting around 6,000 transitional facilities where sea containers are unloaded, and other high risk sites such as first night campsites associated with risk from overseas visitors, parks, military bases with returning personnel and equipment, post border incursion events, and large scale industrial projects

- Marine Surveillance programme – six-monthly surveys for unwanted marine pests in some of New Zealand's busiest and, therefore, high-risk ports and marinas of first entry for international vessels; the programme's key objectives are to detect potentially invasive and harmful marine animals and plants early enough to maximise the chance of removing or controlling them
- New Zealand Port Biological Baseline Surveys – a series of marine biological surveys were undertaken at ports and marinas throughout New Zealand that are points of entry for international shipping; the surveys provided baseline information on the indigenous and non-indigenous species present in each maritime transport node including their identity, distribution, and relative abundance
- In 2006, OIE recognised that New Zealand is free from BSE (mad cow disease) - following surveillance and banning the feeding of ruminant protein to ruminants
- In 2006, New Zealand and Australian governments collaborated on the development of a targeted marine pest surveillance manual
- New National Pest Plant Accord - identified the most serious pest plants that currently exist in New Zealand, and how industry and government agencies will work together to prevent their sale, propagation and distribution; it was developed by Biosecurity NZ, regional councils, DOC, and the Nursery and Garden Industry Association; it introduced national standards and training for compliance staff
- For Didymo, Biosecurity NZ worked with regional councils to coordinate surveillance, awareness and research and provided significant funding; this work continued with MAF and then MPI in partnership with Fish and Game New Zealand, DOC, Iwi, impacted industries and regional councils
- MPI has [as at 2015] 12 active surveillance programmes in place to enable early detection of pests and diseases – these provide assurance of New Zealand's status to facilitate international trade; some programmes are targeted at specific pests or diseases e.g., Asian Gypsy Moth, fruit fly, arboviral diseases, exotic ants, exotic mosquitoes; others are targeted at high risk sites or pathways; MPI also collects information from veterinary laboratories to support international reporting requirements.

Information available to the public

The Biosecurity Strategy stated that the public's awareness of and participation in biosecurity surveillance is important and that information must be made available to help them identify pests. Some social marketing initiatives undertaken over the past 12 years were outlined above in the discussion under Category IX. This section below outlines some further examples of initiatives undertaken to help the public understand what to look for and what to do if they find something of interest.

- Information about all surveillance programmes is published annually, updated quarterly, in the "Surveillance" magazine
- The Enhanced Notifications Project is currently [as at 2015] looking at a range of alternative channels – in addition to the 0800 24-hour telephone hotline – that could be used for reporting of suspect pest organisms to MPI, e.g., web-based and mobile apps, and also looking at better use of trusted intermediaries to assist with notifications
- Information about new and emerging risks is made public through a range of communication channels, such as regarding brown marmorated stink bug, myrtle rust, and foot and mouth disease preparedness

- Lists of notifiable pests, diseases and unwanted organisms are published
- The Surveillance Guide, an online introduction to biosecurity surveillance, is an interactive tool that provides guidance on how to plan or develop a surveillance programme
- "The Marine Biosecurity Porthole" is a web-based portal that provides public access to information on unwanted marine pests; it was developed by MAF and the National Institute for Water and Atmospheric Research (NIWA) in 2011, and is useful for a range of people and organisations with an interest in protecting the marine environment

Category XIII: INCURSIONS

Expectation 48 – That there is sufficient access to expertise and enough operational capacity available to respond immediately to high impact incursions

Expectation 49 – That specific response plans are in place and routinely updated for an agreed set of high impact pests and diseases

Expectation 50 – That generic response capability is maintained for all other incursions

Expectation 51 – That financial restraints do not delay the implementation of rapid responses to high impact incursions

Expectation 52 – That all initial incursions are controlled until decisions about future actions can be made

Expectation 53 – That explicit expectations are established for marine incursion management

The following matters are discussed here Under Category XIII:

Incursion operational capacity and capability
Response planning
Marine incursion management

Other relevant matters are discussed elsewhere in this document:

See discussion under Category IV regarding -

Government Industry Agreement

Incursion operational capacity and capability

Response preparedness and response capability were enhanced following publication of the Biosecurity Strategy through establishment of the new governance and accountability arrangements discussed earlier in this paper, including explicitly addressing capacity and aligning preparedness and response functions in Biosecurity NZ's Biosecurity Response group. Achievements over subsequent years included:

- Establishment of the National Centre for Biosecurity and Infectious Disease (NCBID) in 2004 – a collaboration between four agencies: Biosecurity NZ [now MPI], Crown

Research Institutes AgResearch and Environmental Science and Research, plus state-owned enterprise AsureQuality – to provide centralised coordination and emergency response for disease outbreaks, biosecurity investigations, chemical and biological threats and events

- Events such as the 2005 Waiheke Foot and Mouth disease hoax led to significant changes to the response system; this included an increased focus on improving supporting systems and developing response readiness
- The Policy for Response to Risk Organisms was approved by Cabinet in 2008 – a generic response policy that replaced the Biosecurity Council Policy Statement on Responding to an Exotic Organism Incursion (2001)
- Development and implementation of a new generic Biosecurity Response Model in 2008 to implement the above Policy – which is still in use today [as of 2015]; it is scalable, and has consistent processes for any type of risk organism; it is more efficient than previously when a different system was used for each response type (animal, plant, environmental or marine risk organisms) requiring staff to adapt to different methods for each response; the model draws on the standardised emergency management structure known as the Coordinated Incident Management System or "CIMS" to facilitate interagency and all-of-government responses
- Greater use of collaboration/partnerships for national responses and management programmes – a key example being the Kauri Dieback programme which began in 2008 – a joint biosecurity response between MAF [MPI], iwi, and other agencies (DOC, Auckland Regional Council, Northland Regional Council, Environment Waikato, and Bay of Plenty Regional Council) and which was the first national programme where tangata whenua participated across all areas of the programme (governance, planning and operational delivery)
- The Whole-of-Government Biosecurity Response Guide was developed in 2011 – an agreed approach to managing MAF-led whole-of-government biosecurity responses; it set expectations for the information and resources each agency would provide, and described how MAF's biosecurity response system would operate in such an emergency
- Development of the Biosecurity Response Knowledge Base in 2011 – an on-line tool with processes, standards and other resources for leading and managing biosecurity responses
- FarmsOnLine [2011] and National Animal Identification and Tracing (NAIT) [2012] – both discussed earlier in this paper under Category V – are systems developed and established to enable property owners/managers to be contacted to minimise damage if a biosecurity outbreak occurs, and to provide individual animal identification and tracing to help quickly contain and manage biosecurity threats
- Establishment of the National Biosecurity Capability Network in 2012 – a joint initiative between government agencies, managed under contract by AsureQuality, to build a field team capable of responding to biosecurity incursions; its members include regional councils, industry experts, government agencies, community groups and commercial enterprises
- The Biosecurity Recovery Framework was announced in 2012 – to guide decisions on when and what government assistance may be made available to aid recovery from a significant biosecurity incursion impacting commercial agriculture, horticulture, forestry and aquaculture producers on-farm

- The Government Industry Agreement [discussed above, under Category IV] which enables MPI and each signatory industry to jointly:
  - decide what pests and diseases (risk organisms) are a priority
  - design and oversee readiness for these priority risk organisms
  - improve New Zealand's capability and capacity to respond to these risk organisms, and
  - agree on cost shares for readiness and response for each risk organism, based on the proportion of public to industry benefits.

Major pest eradication successes over the past 12 years have included:

Pest	**Eradication completed**
Fall web worm	2004
Painted apple moth	2004
Asian gypsy moth	2005
Red imported fire ant	2009
Queensland fruit fly	2012,2014,2015
Southern saltmarsh mosquito	2010
Various termites	Various years
Eucalyptus leaf beetle	Pending confirmation [2015]

Response planning

The Biosecurity Strategy recognised that a key aspect of preparedness for incursions is the preparation of response plans for high impact pests and diseases. Examples of progress made in developing plans, participating in exercises, and testing of systems over the past 12 years are outlined below:

- Plans for responding with other government agencies were rehearsed in simulations, e.g., avian influenza simulations with Biosecurity NZ, DOC and MoH
- Development of response contingency plans for equine influenza, red imported fire ant, varroa, tropical fire ant, GM beauveria bassiana, fruit fly, pine pitch canker and atypical scrapie
- In 2011, a joint MAF-industry review was completed of foot and mouth disease preparedness
- In 2012, MPI led the whole-of-government Exercise "Taurus", including representatives from industry organisations, to test biosecurity response to a simulated outbreak of foot and mouth disease; following this, a plan was prepared for acting on recommendations from the exercise, and a programme of work was developed; this included a vaccination operational plan to guide use of vaccination during an incursion
- In 2013, MPI undertook a review of the Queensland fruit fly response plan
- The Trans-Tasman Action Plan for foot and mouth disease preparedness was announced in 2013
- In 2013, the Office of the Auditor General undertook a performance audit of MPI's effectiveness in preparing for and responding to incursions; this led to a programme of work to respond to the recommendations
- In 2013, MPI participated in Exercise "Walnut" – an exercise run by DEFRA (UK Department of Environment, Food and Rural Affairs) that simulated a classical swine

fever outbreak in the United Kingdom; it tested activation of the International Animal Health Emergency Reserve (IAHER) agreement between New Zealand, Australia, Canada, Ireland, UK and USA for supply of veterinary, laboratory and other scarce-skill resources in the event of an exotic disease outbreak in a signatory country

- In 2014, 30 exercises were successfully completed, testing preparedness and readiness for incursions, including:
  - Exercise "Hamilton", National Biosecurity Capability Network – was the first major callout of NBCN to test procedures for contacting network members and assessing availability for deployment at short notice to support a hypothetical foot and mouth disease outbreak
  - Exercise "Barrier", All-of Government "Mass Arrivals" – led by Customs and Immigration NZ, to test the New Zealand government contingency plan for responding to mass arrivals of asylum seekers; MPI participated to contribute to validation of command and control arrangements re biosecurity
  - Exercise "Gemini", Small Hive Beetle – involved reviewing draft operational specifications to inform a response plan; enabled bee industry representatives to engage with MPI, enhanced understanding of MPI's biosecurity response model, and increased awareness of how industry and government could work together in responses
  - Exercise "Whakatau", All-of-Government "Oil Spill" - led by Maritime NZ, explored high-level planning and inter-agency coordination needed in a response to a major oil spill in New Zealand waters; MPI's interests were regarding biosecurity, food and trade
- In 2014, MPI observed biosecurity response exercises run by international partners in Australia and Canada for animals, plants and aquaculture
- In 2014, a response plan was developed for brown marmorated stink bug; development of operational specifications is underway [as of 2015]
- Preparedness planning work is currently underway [as of 2015] for myrtle rust
- MPI has partnered with the industry via Kiwifruit Vine Health to support a co-funded research programme to search for solutions to the Psa issue; research is underway into many areas, including biology of the Psa pathogen, improvements in diagnostics, and factors affecting spread, vine impact and management
- In 2014, New Zealand joined the Australian foot and mouth disease training programme in Nepal – to provide veterinarians and livestock industry representatives the opportunity to experience FMD in the field

Marine incursion management

Marine incursion management has benefited from the use of the Biosecurity Response Model as the model was designed to ensure that responses are consistently managed across marine, freshwater and terrestrial environments.

Category XIV: PEST MANAGEMENT

First Step 7 - Establish national leadership and coordination of pest management

Expectation 54 – That there is clear and effective national leadership and coordination of pest management activities within central government, local government and the private sector

Expectation 55 – That there are transparent and effective performance measures to monitor and forecast the establishment of pest and weed impacts and pathways

Expectation 56 – That the Crown meets its obligations as a landowner

Expectation 57 – That there is a routine programme of national and regional communication and coordination including ongoing assessment and review of both individual programmes and the overall system

The following matters are discussed here Under Category XIV:

Pest management leadership and coordination
Crown meeting its obligations as a landowner

Pest management leadership and coordination

The Biosecurity Strategy stated that controlling established pests and weeds represented over half biosecurity's total expenditure, but that pest management decision-making was being done by a wide range of entities, in isolation and not well coordinated or planned. It recommended that there be strong national leadership and overview, with clarification of roles and responsibilities, and better communication. Examples of progress and achievements in this regard over the past 12 years are outlined below:

- In 2004, the new governance and accountability arrangements discussed earlier in this paper led to clarification of roles in pest management, with Biosecurity NZ allocated the national leadership and coordination role
- In 2005, Biosecurity NZ took over responsibility for six national pest management programmes from DOC
- In 2005, the Varroa National Pest Management Strategy and response programme came into effect – their objectives were to keep the South Island varroa-free; varroa is a parasitic bee mite first discovered in Auckland in 2000; the varroa response programme ceased in 2009 after varroa was found to have spread throughout the South Island
- The 'Check, Clean Dry' social marketing campaign – discussed earlier in this paper, under Category IX – was launched in 2006 and is still in place today [as of 2015]; it has been an element of a long term management programme for controlling Didymo and other freshwater pests; since 2008 MAF [MPI] has led the programme in partnership with Fish and Game New Zealand, DOC , iwi, impacted industry and regional councils
- In 2006, the National Plant Pest Accord was revised, with an agreed list developed by Biosecurity NZ with regional councils and the nursery industry; all regional councils but

one are partners to the accord and undertake surveillance and compliance activities under this programme

- In 2006, STOMP (Stop the Spread of Marine Pests) partnership was established - includes members from government and marine-related industries across New Zealand, to improve marine pest management capability over time including an increased level of protection for high value marine areas; includes:
  - Top of the South Marine Biosecurity Partnership
  - Top of the North Marine Biosecurity Partnership
  - Fiordland Marine Biosecurity Partnership
  - Chatham Islands Marine Biosecurity Partnership
- In 2006, the regional pest management website launched – to provide a nationwide picture of regional pest management activity
- In 2006 the Top of the South marine partnership was formed, and the strategic plan was launched in 2008
- In 2008, MAF and regional councils completed complementary reviews that considered issues and options to improve New Zealand's pest management arrangements. The Future of Pest Management Project was established in 2009 to progress that with a focus on achieving:
  - More effective use of the funding available for pest management to improve outcomes
  - Better oversight and understanding of overall goals
  - Clearer accountabilities and responsibilities of those undertaking pest management
  - More effective collective action
  - Better availability and more effective use of physical control tools
  - To develop the draft strategy and proposals for improvement to be considered by Cabinet in 2010; this strategy became the National Pest Management Plan of Action (discussed below)
- In 2012-2014, MAF initiated a collaborative project to develop a 'Toolbox' to provide improved access to best practice information for pest management agencies and tangata whenua to use in the physical control and monitoring of pests; representatives of regional councils, DOC, OSPRI, Federated Farmers and tangata whenua contributed at design and governance level; the Biosecurity Decisions Framework was embedded into the toolbox; management of risk to values (such as social, cultural, economic and environment) formed the basis of deciding how to best respond through a coordinated pest management project; the toolbox applies to all pests (animal, plants and insects, and marine), and to all sizes and all types of pest management
- The Plan of Action for Rabbit Management was developed in 2010 by the Rabbit Coordination Group – the group was set up in 2007 to strengthen approaches to rabbit management, allowing key stakeholders to share information and collectively address issues; members of the group include affected regional councils, DOC, LINZ, Federated Farmers, Landcare Research, NPCA and MPI
- The Pest Management National Plan of Action was launched in 2011 – which set the direction for continuous improvement of the pest management part of the biosecurity system looking out 25 years, and drove subsequent improvements to the Biosecurity Act
- In 2011, the National Pest Management Plan for Bovine TB was revised and implemented; its goal is to eradicate TB from wild animal populations − mainly possums

– and farmed cattle and deer herds, to maintain New Zealand's access to international markets for beef, dairy and deer products

- The passage of the Biosecurity Law Reform Act in 2012 strengthened pest management in New Zealand; for example it:
  - provided MAF with tools to be effective in its pest management leadership role
  - bound the Crown to meet rules in regional pest management strategies, which strengthened the effectiveness of those strategies
  - provided guidance on how tools within the Act should be applied by the parties concerned and
  - better enabled development of alternative approaches to pest management, such as pathway management or site focused activities
- 16 regional authorities throughout New Zealand have adopted Regional Pest Management Strategies that provide a strategic and statutory framework for efficient and effective management of pest plants and animals in their region
- In 2014, MPI and three regional councils agreed to jointly fund a coordinated management plan for Chilean Needle Grass, a pasture pest with significant production and animal welfare impacts; the management plan was also supported by Federated Farmers, Beef & Lamb NZ & researchers; MPI provided funding via the Sustainable Farming Fund to support education & technology transfer for farmers to improve identification and management of the pest
- DOC developed a Natural Heritage Management System to monitor protocols, pests and weed distribution across the country; the information is used to create maps of key pests, weeds and native species regarding terrestrial and freshwater, marine and coastal environments; it supports implementation of a national monitoring framework, and provides a common platform for assessing status and trends in the health and functioning of ecosystems and species, and for monitoring the effectiveness of management actions
- In 2014, the Kauri Dieback Management Strategy was launched – a ten-year strategy as a result of collaborative effort between tangata whenua, DOC, Auckland Council, Northland Regional Council, Waikato Regional Council, Bay of Plenty Regional Council and MPI
- The National Wilding Conifer Management Strategy 2015-2030 was released – developed by forestry and farming industries, regional and district councils, MPI, DOC, LINZ, NZDF, researchers and community trusts; MPI is now [2015] leading development of a business case to support the Strategy's implementation, with significant input from key government partners, including regional councils
- The National Policy Direction for pest management plans and programmes (the NPD) and the non-statutory guidance material that will accompany it are currently [2015] being finalised by the NPD Guidance Advisory Group, consisting of representatives from regional councils, DOC, LINZ and MPI
- A draft biosecurity relationship agreement is currently [as of 2015] being finalised between MPI and regional councils – a high level principle based document on when and how MPI and regional councils will work together to achieve shared pest management outcomes.

Crown meeting its obligations as landowner

The Biosecurity Strategy stated the expectation that the Crown should meet its obligations as a landowner with respect to pest management. Under the Pest Management National Plan of Action in 2011, the Government agreed to meet these obligations. The Biosecurity Law Reform Act in 2012 included a new instrument, the National Policy Direction, to provide direction on using the pest management instruments in the Biosecurity Act, including the setting of pest management obligations for the Crown and other landowners, and requiring the Crown to comply with regional pest management plans where the spread of pests from Crown land would impose costs to other landowners.

Appendix 1 - Biosecurity System Timeline of Milestones and Achievements since 2003

2003

- Biosecurity Strategy endorsed by Cabinet
- Single point of leadership and accountability established for the biosecurity system – Cabinet agreed [CAB Min (03) 28/8] that the chief executive of MAF be given accountability for end-to-end management of the biosecurity system, including strategic, regulatory and service delivery functions, from pre-border through to pest management, that contribute to health, environment, economic and social/cultural outcomes. Two components of this accountability:
  - system oversight
  - delivery of services
- Biosecurity Chief Executives Forum established - comprising the chief executives of MAF (chair), DOC, MFish, MOH and Te Puni Kokiri - tasked with developing the strategic direction for biosecurity and monitoring the performance of the biosecurity system
- Memorandum of Understanding agreed between biosecurity agencies – DOC, MFish, MOH, MAF
- Biosecurity Central/Regional Government (BCR) Forum established - comprising central government agency and regional council chief executives [from MAF, MOH, MFish, LINZ, DOC and all regional councils] to improve coordination and collaboration across central and regional government biosecurity. The forum agreed priorities for pest management, progressed a partnership to build marine capability, and encouraged MAF to adopt the coordinated incident management system (CIMS) for potential incursions, as proposed by regional councils [last met in 2011; superseded by a smaller group of chief executives with most immediate interest in biosecurity (i.e., MPI, DOC and 3–4 regional councils) to meet as required]
- Biosecurity Managers' Group established - network for senior regional government staff with biosecurity responsibilities, to share information and develop a coordinated approach to pest management. Reports to the Regional Councils' Chief Executives' Group
- Annual Biosecurity Summit launched [continued annually until 2008] - convened for all biosecurity stakeholders including representatives from central, regional, and local government, importers and exporters, industry, tertiary institutes, the science community, pest management companies, community groups, and more
- National Invasive Ant Surveillance programme established to detect and eradicate invasive ants that reach New Zealand's border
- Improved Biosecurity research programme [2003-2005] - funded by Foundation for Research Science & Technology, involving scientists from AgResearch, HortResearch, Crop & Food Research, MAF and industry working together to predict, prioritise and prevent future biosecurity threats to farming, cropping and orcharding [superceded by Better Border Biosecurity programme]

2004

- Biosecurity NZ established - a business unit, in MAF, established as lead agency accountable for the biosecurity system
- MAF (MPI) became accountable for taking account of biosecurity risks to human health, with MOH continuing to help provide input to risk analysis and standard development while MAF developed its capability
- Future Funding of Biosecurity Services – recommended changes to funding for import health standards, surveillance programmes and incursion responses for target pests/diseases
- National Centre for Biosecurity and Infectious Diseases established – a collaboration between MAF, ESR (Environmental Science and Research), AgResearch and AsureQuality to provide centralised coordination and emergency response for disease outbreaks, biosecurity investigations, chemical and biological threats and events
- Biosecurity Integrated Risk Management Framework developed – decision support tool to guide resource allocation in managing biosecurity risks across the biosecurity system [superceded by the Biosecurity Decisions Framework in 2007]
- First credible detection of Didymo in New Zealand, leading to Biosecurity New Zealand's involvement leading the response
- Pacific Invasives Initiative established - multi-disciplinary team of specialists based at University of Auckland that works with Pacific agencies and leverages expertise from universities, government agencies, such as MPI and DOC, and commercial companies in New Zealand to implement invasive species control projects within national boundaries; it has also provided technical support for the Pacific Ant Prevention Programme
- Dedicated biosecurity branding introduced to raise public awareness of biosecurity
- "Border Patrol" social marketing and reality television programme began [continued until 2012] – showed border protection activities of Customs and MAF
- Public survey undertaken of public biosecurity awareness
- MAF (MPI) – incorporating Biosecurity NZ - began having a significant presence with a stand at the Mystery Creek National Agricultural Fieldays - the biggest show on the agricultural calendar and attended by tens of thousands in the rural industries

---

2005

- Biosecurity Ministerial Advisory Committee established - a stakeholder advisory committee with 12 members appointed by the Minister for Biosecurity to provide independent advice on the performance of the biosecurity system and monitor the implementation of the Biosecurity Strategy
- MAF (MPI) became accountable for national pest management including for national leadership and coordination for pest management, and for national pest management programmes
- Biosecurity Coordination Group (BCG) established – a working group of the BCR, comprising central and regional government biosecurity managers, plus Animal Health Board attending on matters of mutual interest [last met in 2011]; it facilitated strong linkages and regular communication between agencies
- Biosecurity Surveillance Strategy 2020 project began - to deliver the Biosecurity Surveillance Strategy 2020 and an implementation plan

- Better Border Biosecurity (B3) established - a multi-partner, cooperative science collaboration that researches ways to reduce the entry and establishment of new plant pests and diseases in New Zealand; integrates investment and expertise from five science agencies – Plant & Food Research , AgResearch, Scion, Landcare Research, the Bio-Protection Research Centre at Lincoln University - and three end-user partners – MAF (MPI), DOC and the New Zealand Forest Owners Association
- Envirolink investment funding scheme established - to increase return on investment in environmental and biosecurity research, science and technology by facilitating its uptake by regional councils [now run by MBIE Science & Innovation]
- Biodiversity Strategy reviewed [originally prepared by DOC & MfE in 2000] – includes strategic theme on biosecurity
- A revamped High Risk Site Surveillance Programme started - as a result of joint review by MAF and the forest industry in 2004; the focus changed from inspecting a small number of ports to inspecting around over 6,000 transitional facilities along with traditional risk sites
- Waiheke Island foot and mouth disease hoax
- Maori Responsiveness Strategy signed off
- Asian Gypsy Moth eradicated
- Response to Sea Squirt begins – sea squirt is an invasive pest that can be spread on the hull of vessels
- New Zealand-Thailand Closer Economic Partnership signed
- Trans-Pacific Strategic Economic Partnership signed
- 'Check, Clean, Dry' social marketing campaign created to stop spread of Didymo
- Launch of the Biosecurity NZ website
- Launch of the 'Know the Enemy' campaign to raise awareness of the threats of exotic pests and diseases and encourage people to play a part in protecting New Zealand's biosecurity

---

2006

- New National Pest Plant Accord launched - identified the most serious pest plants that currently exist in New Zealand, and how industry and government agencies will work together to prevent their sale, propagation and distribution. Developed by Biosecurity NZ, regional councils, DOC, and the Nursery and Garden Industry Association; introduced national standards and training for compliance staff
- Painted Apple Moth eradicated
- OIE recognised that New Zealand is free from BSE (mad cow disease)
- STOMP (Stop the Spread of Marine Pests) partnership established - includes members from government and marine-related industries across New Zealand, to improve marine pest management capability over time including an increased level of protection for high value marine areas; includes:
  - Top of the South Marine Biosecurity Partnership
  - Top of the North Marine Biosecurity Partnership
  - Fiordland Marine Biosecurity Partnership
  - Chatham Islands Marine Biosecurity Partnership

- Sea Container Hygiene System established - strategy adopted by industry in collaboration with Biosecurity NZ whereby biosecurity risks are managed prior to export by ensuring containers are cleaned, stored and shipped properly
- Valuing Biodiversity: Biosecurity New Zealand's Integrated Risk Management Framework: theory and application – review of Biosecurity NZ's procedures for allocating biosecurity resources, by Nimmo Bell for Foundation for Research Science and Technology
- NAIT Governance Group established with representatives from industry, MAF and NZFSA – to develop a world-recognised animal identification and tracing system
- Biosecurity Chief Executives Forum agreed that Statements of Intent across the departments would be aligned for biosecurity
- Memorandum of Understanding on Biosecurity Activities signed between MAF, DOC, MFish and MOH [replaced earlier ones in 2004 and 2005] - to provide an overarching framework to work together on biosecurity matters; it clarified accountabilities and responsibilities among the four agencies
- Biosecurity NZ Risk Analysis Procedures adopted - to support biosecurity risk management decision making regarding import health standards, surveillance programmes, incursion responses to new organisms, or prioritising established pests for national management
- Funding provided through the Growth and Innovation Framework to set up a government run level 3 post-entry quarantine facility (the most contained level for quarantine) for high value crops (agricultural and horticultural plants that are highly significant to New Zealand's primary industries)
- Biosecurity NZ head Barry O'Neil elected president of the World Animal Health organisation the Office International des Epizooties (OIE); OIE is responsible for standards that guide the World Trade Organisation and allow animal products to be traded safely, including country 'disease-free' status
- Regional pest management website launched – to provide a nationwide picture of regional pest management activity
- Red imported fire ant response
- New Zealand and Australian governments collaborated on the development of a targeted marine pest surveillance manual
- Biosecurity amnesty bins introduced to international airports
- Biosecurity NZ Strategic Business Plan – the unit's second [and last] annual strategic business plan, covered the three year period 2006-2009

2007

- Biosecurity NZ and MAF Quarantine Service merge – bringing together policy/standards setting and operational parts of biosecurity risk management
- Biosecurity Science Strategy launched
- Biosecurity Communications Strategy (2007-2012) launched
- Border Sector Governance Group established - comprising Customs, MAF, Biosecurity NZ, DOL, Immigration NZ, NZFSA, DIA, MOT (also representing Crown Aviation Security Service and Maritime NZ) - to improve border sector agency collaboration, increase effectiveness and efficiency, enhance border and biosecurity protection, and streamline services to users

- Biosecurity Decisions Framework adopted – to support how decisions made/ prioritisation
- New Zealand Food Safety Authority (NZFSA) separated from MAF to become a public service department
- The Officials Maori Advisory Forum was established to support the MAF Chief Executive in his responsibility of delivering on the responsiveness of biosecurity agencies to Maori. The Forum comprised representatives from: MAF, MFish, TPK, DOC, ERMA and MfE. In 2007 the Forum participated in the development and delivery of a marine focused wananga with ERMA; this was a test case for developing a model for cross government engagement with Maori
- Biosecurity NZ released its 5-year Strategic Plan; from 2007, Biosecurity NZ used its own Strategic Plan rather than the Biosecurity Strategy to guide its focus and priorities [in 2009 the Minister agreed that this would replace the Biosecurity Strategy as the key strategic document for the biosecurity system, see explanation below under 2009 entry]

2008

- Policy for Response to Risk Organisms approved by Cabinet – a generic response policy that replaced the Biosecurity Council Policy Statement on Responding to an Exotic Organism Incursion (2001)
- Biosecurity Response Model adopted - aligned to the response policy approved by Cabinet [see above] for responses to pests and diseases from all sectors (animal, plants and insects, and marine), of all sizes, and applies to newly arrived or already established pests or diseases. It uses Biosecurity NZ's decision-making framework, is aligned with the whole-of-government Coordinated Incident Management Response System (CIMS) approach; and can be scaled up or down as appropriate for almost any situation
- New Zealand-China Free Trade Agreement signed
- BMAC commissioned a review of progress against the Biosecurity Strategy; the two-stage review comprised an online survey conducted by MAF, and focus group sessions conducted by UMR Research to -
  - assess progress made in implementing the Biosecurity Strategy and impact that implementation has had on biosecurity outcomes
  - provide information on key areas where improvements can be made
  - highlight what future priorities should be
  - assist in formulating an approach to the major review of the Strategy scheduled for 2010
- Two complementary reviews undertaken to improve New Zealand's pest management arrangements – one by regional councils, and one by MAF [Review of the Current State of the Biosecurity Surveillance System]
- Border Sector Strategy 2008-2013 issued by the Border Sector Governance Group - set out the key areas of focus for development of a more integrated and responsive border management system
- Policy for MAF's Responses to Risk Organisms - outlined roles for MAF and others in a biosecurity response, and to guide response decision making
- Kauri Dieback disease first reported – the response was the first example of a joint biosecurity response between the Ministry, iwi, and other agencies (DOC, Auckland

Regional Council, Northland Regional Council, Environment Waikato, and Bay of Plenty Regional Council)

- "Dog Squad" social marketing and reality television programme began [still continuing in 2015] – showed detector dog border protection activities of MAF (MPI), Customs and other agencies
- Declare or Dispose programme launched - to encourage travellers entering New Zealand through international airports to leave biosecurity risk items at home or to declare or dispose of them at the border
- Operational Guideline between DOC and Biosecurity NZ on changes to DOC advice and transfer of functions
- Review of the Current State of the Biosecurity Surveillance System – which led to development of the Surveillance Strategy

---

2009

- Biosecurity NZ advised the Minister for Biosecurity that the 2003 Biosecurity Strategy "is largely out of date", and that Biosecurity NZ had been using its own Strategic Plan rather than the Strategy since 2007 to guide its focus and priorities. The Minister agreed [ref B09-255]:
  - to retain the Biosecurity Strategy for New Zealand as a foundation document for the biosecurity system, but that the Strategy should not be reviewed or updated at the present time
  - the MAF Biosecurity New Zealand Strategic Plan will undergo a full review to be completed by 2012 [this did not happen], and will incorporate and refresh the expectations in the Biosecurity Strategy for New Zealand
  - the updated MAF Biosecurity New Zealand Strategic Plan should become the key strategic document for the future biosecurity system
- Biosecurity Foresight Project undertaken – horizon scan and cross-agency workshops to identify emerging issues to inform biosecurity strategic decision-making
- Review of key parts of the Biosecurity Act 1993 begun
- Sea Container Import Health Standard revised and issued - requires shipping lines to provide advance information on container condition
- 100% x-ray screening / physical search of airline passenger baggage replaced by a more targeted risk management approach
- Red Imported Fire Ant eradicated
- Future of Pest Management Project begun
- MAF's offshore vehicle inspection programme in Japan [begun in 2002] scaled down from 12 to 8 staff due to declining volumes of vehicle imports
- Surveillance Strategy endorsed by Cabinet - first strategy, world-wide, to cover developing surveillance programmes for marine, animal, plant and environment sectors
- AsureQuality selected to provide Master Supplier role for a capability network to manage response capability
- Kauri Dieback response ended and the Government funded long-term management until 2014 [extended with new programme in 2014]
- Regional Council Research, Science and Technology Strategy agreed - provides an overview as to what regional councils require in research, science and technology, including tools and methodologies related to biosecurity

2010

- Border Sector Ministerial Group established, including the Minister for Biosecurity - to provide strategic leadership and direction, and drive the border sector work programme
- Biosecurity NZ ceased to exist as a separate branch within MAF; Biosecurity NZ brand retained
- NZFSA merged back with MAF
- New Zealand and Australia Mutual Recognition Framework signed - agreement to recognise each other's biosecurity risk management efforts - to increase confidence biosecurity risks are being effectively addressed, and management of risk offshore
- Waikato-Tainui Biosecurity Accord signed between Waikato-Tainui, the Minister for Biosecurity and Director-General of MAF
- Border Directions Statement 2010-2015, and Post-Border Directions Statement 2010-2015 published – which together outlined MAF's vision for leading the management of biosecurity risks within New Zealand; both documents aligned with the Biosecurity NZ Strategic Plan and were supported by implementation plans
- Border System Manual signed off– guidebook that described the biosecurity system as a whole, explained MAF's border risk management system, roles and responsibilities, and associated policies and procedures
- National Centre for Biosecurity and Infectious Disease (NCBID) opened - centralised coordination and emergency response centre for animal and human disease outbreaks, biosecurity investigations and chemical and biological threats and events, at Wallaceville, Upper Hutt
- International Mail Centre Process Alignment Project - MAF, NZ Post and Customs established new collaborative ways to improve mail processing systems including enhanced biosecurity risk management
- The Marine Biosecurity Porthole launched - a web-based portal to provide public access to information on unwanted marine pests, developed by MAF and the National Institute for Water and Atmospheric Research
- MAF began a process of regulatory reform of its import health standards to better target border activity to actual biosecurity risk, decrease inspection while undertaking more audit and verification, and lower compliance costs
- The instant fine penalty for border offences doubled from $200 to $400 – to give travellers an added incentive to comply with our biosecurity laws
- Southern Saltmarsh Mosquito declared eradicated
- Psa V kiwifruit disease first detected in New Zealand - the response was notable because it was the biggest biosecurity response for some years and an example of a joint response with industry
- Ostreid herpes virus-1 disease killed many young oysters in upper North Island marine farms - the response was notable because the incursion was triggered by a combination of environmental factors such as global warming changes, increasing levels of acidity in the seas, chemical pollution and diminishment of biodiversity
- Great white cabbage butterfly, a pest of brassica crops, was found in Nelson – DOC took over managing and funding the operational arm of this response
- New Zealand-Malaysia Free Trade Agreement signed
- ASEAN-Australia-New Zealand Free Trade Agreement signed

2011

- MFish merged with MAF
- World Trade Organisation apples-to-Australia dispute resolved - enabling Australian market access for New Zealand's apples; long-running case which found that Australia's restrictive quarantine measures were not supported by adequate scientific evidence
- Pest Management National Plan of Action launched - set the direction for continuous improvement of the pest management part of the biosecurity system looking out 25 years
- Joint MAF-industry review completed of foot and mouth disease preparedness
- Whole-of-Government Biosecurity Response Guide developed - an agreed approach to managing MAF-led whole-of-government biosecurity responses; it set expectations for the information and resources each agency would provide, and described how MAF's biosecurity response system would operate in such an emergency
- Biosecurity Response Knowledge Base created - provided processes, standards and other resources for MAF's management of biosecurity responses
- Research for the Environment: Review of the Regional Council Research, Science and Technology Strategy – identified key issues and longer-term priorities to funding agencies and research providers, including on biosecurity and science capability; proposed that regional councils move from being end users to being partners in research with central government and research providers
- Forest Biosecurity Research Strategy - for the forest industry to communicate biosecurity research priorities to funding agencies and research providers, and influence R&D investment and capability retention and development in New Zealand
- Integrated Targeting and Operations Centre (ITOC) opened – staffed by key border agencies - contributes to biosecurity risk management using advanced intelligence tools to identify potential threats and conduct risk assessments for specific people, goods or craft entering the country
- Atlas of Biosecurity Surveillance published - illustrating biosecurity surveillance activities across the animal, plant, environment and marine sectors
- MAFPAX passenger information system developed – providing improved ability to gather, store and assess information for passenger risk management and clearance; as part of the first stage of the Joint Border Management System, a collaborative information management system for MAF and Customs
- Better Border Biosecurity funding moved from a contestable model to a collaboration model, resourced primarily through CRI core funding
- National Bovine Tuberculosis Pest Management Plan came into effect
- FarmsOnline went live – an online register with contact and location details for rural properties in New Zealand to provide MAF (MPI) with instant access to information so it can respond quickly to a biosecurity alert or natural disaster
- The International Maritime Organisation (IMO) issued biofouling management guidelines; New Zealand played a lead role in developing the guidelines
- New Zealand-Hong Kong, China Closer Economic Partnership signed

2012

- MAF renamed MPI. The new Minister for Primary Industries incorporated the agriculture, biosecurity, forestry, fisheries and aquaculture portfolios, and thus replaced the Minister for Biosecurity
- Biosecurity NZ brand retired
- Biosecurity Law Reform Act passed – strengthened enforcement tools, set up the Government Industry Agreement on Biosecurity Readiness and Response (GIA), and supported improvements to the way the biosecurity system is managed
- GIA introduced - Cabinet confirmed the policy framework for GIA to create a partnership between industry and government to share decision making, costs and responsibility in preparing for and responding to biosecurity incursions
- NAIT (National Animal Identification and Tracing) Act became law - to identify and trace cattle and deer, providing information about stock location and movements to help New Zealand quickly contain and manage biosecurity threats
- Biosecurity Recovery Framework announced, to guide decisions on when and what government assistance may be made available to aid recovery from a significant biosecurity incursion impacting commercial agriculture, horticulture, forestry and aquaculture producers on-farm
- National Biosecurity Capability Network established - a joint initiative between MPI and AsureQuality to provide a field team for a response in a biosecurity outbreak
- Biosecurity Central/Regional Government (BCR) Forum disestablished; MPI and regional council chief executives agreed to meet in future on an ad-hoc basis as required, and that MPI would keep the regional CEs regularly informed on biosecurity issues [this was the start point for regular monthly letters that MPI sends out]
- Exercise Taurus foot and mouth disease simulation held - to test a whole-of-government response to an FMD outbreak or similar incursion; recommendations from the exercise led to development of a biosecurity response preparedness implementation plan
- Psa V Review report released - independent review of import requirements and border processes following the outbreak; Psa-V Management Action Plan put in place as a result, including implementation of an Emerging Risks System
- Japan offshore vehicle inspection programme ceased
- A single male Queensland fruit fly was found in Auckland; intensive checks by MPI found no further sign of the fruit fly in New Zealand
- New Zealand Organisms Register (NZOR) launched - web-based register of plants, animals, fungi and bacteria that are significant to New Zealand; a multi-agency collaborative project to assist business, biosecurity and conservation decision-making; the most complete national digital species catalogue of any country in the world
- Passenger Process Assurance Group established – to take a biosecurity system view of managing biosecurity risk in the passenger pathway, following previous year's compliance survey
- Departmental Science Advisor appointed within MPI in 2012 – focusing on strategic direction for science investment, emerging risks, and quality assurance of science inputs into regulatory decision making; biosecurity is within his scope
- Regional Councils established a Bio Managers Group (tier 2 and 3 managers with oversight for biodiversity and biosecurity portfolios) and a Biosecurity Working Group

(biosecurity managers and senior technical/policy staff); meetings attended by MPI [but not by other key Crown agencies]
- Standards Integration Programme launched [renamed the Smart Regulation Programme in 2014] - to bring clarity to MPI's standards and guidance so that they are easy to find, understand and use; includes a framework for making risk management decisions, and transparency over decisions made
- Future Direction for the Border Sector – joint agency programme of medium-to-long term initiatives to improve border protection and service delivery across the air passenger, cargo, sea craft, cruise craft and passenger, and mail pathways

---

2013

- Foot and mouth disease preparedness programme initiated - by MPI in partnership with the industry
- FMD preparedness Trans-Tasman Action Plan announced
- Hornwort eradicated from South Island
- Cabinet approved the GIA (Government Industry Agreement) Deed – which outlines the formal commitments that signatories make to the partnership; developed by a joint industry and MPI working group
- JBMS Trade Single Window opened - a single channel for industry to comply with border requirements, enabling exporters, importers, and others in the cargo industry to provide shipment details electronically to one place, rather than to several government agencies
- Centre of Excellence for Biosecurity Risk Analysis (CEBRA) established
- Organism Ranking System established – science-based tool for ranking organisms, based on impacts on the economy, environment and people, and likelihood of those consequences occurring
- Office of the Auditor General performance audit of MPI's effectiveness in preparing for and responding to incursions
- MPI's Data and Management Strategy implemented - to provide information infrastructure to support the development of tools and activities; including those that will enhance biosecurity focussed systems
- Operational Solutions for Primary Industries (OSPRI) New Zealand Limited established to manage the TBfree New Zealand and National Animal Identification and Tracing (NAIT) programmes; TBfree New Zealand appointed as the agency responsible for the National Bovine TB Pest Management Plan
- Biological Heritage Science Challenge announced by the government - funding of $25.8 million over five years to allow more strategic science investment in biodiversity and biosecurity research; a national partnership of CRIs, universities, government agencies, industry and others will facilitate development, uptake and application of results by a wide range of sectors and end-users

---

2014

- GIA partnership formally commenced with Kiwifruit Vine Health and MPI signing the GIA Deed; Pipfruit NZ and NZPork also became signatories to the GIA Deed later that year
- GIA Response Guide completed - to accommodate joint decision making within the National Biosecurity Response System with industry signatories

- First response under GIA partnership – yellow spotted stink bug response
- MPI audited the Australian Department of Agriculture's processes and procedures for the management of the export of fruit fly host commodities into New Zealand
- Memorandum of Understanding signed between New Zealand Minister for Primary Industries and Australian Minister for Agriculture for cooperation on foot and mouth disease preparedness; it covers sharing intelligence on risk, collaborating on training, sharing skills in the event of an outbreak, and influencing international policy on disease management
- Trans-Tasman Action Plan for FMD preparedness finalised
- New Zealand joined the Australian FMD training programme in Nepal - to provide veterinarians and livestock industry representatives the opportunity to experience FMD in the field
- MPI launched bi-monthly newsletter - *Viral News* on foot and mouth disease preparedness
- Kauri Dieback Management Strategy launched - ten-year strategy as result of collaborative effort between tangata whenua, DOC, Auckland Council, Northland Regional Council, Waikato Regional Council, Bay of Plenty Regional Council and MPI ; new government funding over next five years
- 15 additional biosecurity x-ray screening machines installed at New Zealand international airports
- Kiwifruit Vine Health Wider Biosecurity Strategy adopted
- Western Drywood Termite eradicated
- MPI Biosecurity Governance Board established - to ensure effective performance of the biosecurity system, including providing oversight of risks, and ensuring the system performs to expectations, is well-connected and operating to best effect
- Craft Risk Management Standard for Biofouling on Vessels Arriving to New Zealand issued - the world's first border regulation on biofouling on arriving ocean vessels; intended to mitigate risk of exotic marine pests being introduced to New Zealand by requiring vessels to arrive with 'clean hulls'
- Biosecurity outcomes are embedded in the Statements of Core Purpose of most CRIs
- Border Compliance Social Marketing Programme Strategy 2014-2017 – to change and reinforce the behaviours of individual travellers to ensure compliance using a range of interventions and social marketing
- MPI adopted the New Zealand standard for incident management, the revised Coordinated Incident Management System CIMS 2nd edition, and published its Single and Scalable Response Model for the Ministry for Primary Industries – to provide a framework for a common and consistent approach across the different types of responses involving MPI, whether MPI leads or supports the response
- MPI issued the Craft Risk Management Standard, the world's first border regulation on international vessel biofouling

---

2015

- Strategic Roadmap for Biosecurity and Biodiversity Research completed by LandCare Research and funded by MBIE - provides a framework to define medium to longer term (10–20 years) research, science and technology priorities for biosecurity and biodiversity

outcomes of regional councils and unitary authorities; to ensure that research prioritisation for biodiversity and biosecurity fits within a national picture

- National Wilding Conifer Management Strategy 2015-2030 released - developed by a working group comprising forestry and farming industries, regional and district councils, MPI, DOC, LINZ, NZDF, researchers and community trusts; MPI is now leading development of a business case to support the Strategy's implementation, with significant input from key government partners, including regional councils
- The National Policy Direction for pest management plans and programmes (the NPD) and the non-statutory guidance material that will accompany it are currently being finalised by the NPD Guidance Advisory Group, consisting of representatives from regional councils, DOC, LINZ and MPI
- Draft biosecurity relationship agreement being finalised between MPI and regional councils - a high level principle based document on when and how MPI and regional councils will work together to achieve shared pest management outcomes

Abbreviations used:

B3 - Better Border Biosecurity
BCG - Biosecurity Coordination Group
BCR - Biosecurity Central/Regional Government Forum
BMAC – Biosecurity Ministerial Advisory Committee
CIMS - Coordinated Incident Management System
CRI – Crown Research Institute
DIA – Department of Internal Affairs
DOL – Department of Labour
FMD – foot and mouth disease
GIA – Government Industry Agreement on Biosecurity Readiness and Response
JBMS – MPI and Customs Joint Border Management System
LINZ – Land Information New Zealand
MAF – Ministry of Agriculture and Forestry
MfE – Ministry for the Environment
MFish - Ministry of Fisheries
MOH - Ministry of Health
MOT – Ministry of Transport
MPI – Ministry for Primary Industries
NAIT - National Animal Identification and Tracing scheme
NZFSA – New Zealand Food Safety Authority
TPK – Te Puni Kokiri