

The Strategic Context and Emerging Issues

Biosecurity

OVERVIEW

1. Biosecurity protects New Zealand from the risks posed to the economy, environment and people's health arising from pests, weeds and diseases, whether exotic or endemic. It involves protecting New Zealand from the importation of pests, weeds and diseases, and managing pests, weeds and diseases in New Zealand. The Biosecurity Act 1993 provides a tool that can be used within a variety of ministerial portfolios, by local government and by others.
2. There are four biosecurity departments. MAF provides advice to the Government on matters relating to agriculture and forestry, including primary production and trade in related products. MAF administers the Biosecurity Act 1993. MAF also provides advice to the Minister for Biosecurity in relation to the Minister's powers and duties under the Biosecurity Act 1993 in the terrestrial and freshwater environments.
3. Other departments with important biosecurity roles are Health, Fisheries and Conservation. The Ministry of Health is responsible for providing advice to Government on matters relating to human health and administering and implementing a variety of health-related legislation. For the purposes of the Biosecurity Act 1993, the Ministry of Health's priority is to enforce the relevant provisions of the legislation so as to protect public health from the adverse effects of exotic organisms. The Ministry of Fisheries and the Department of Conservation also have important departmental interests in, and commitments to, biosecurity as it affects the marine sector and indigenous flora and fauna, respectively.
4. Coordination of the activities of the four biosecurity departments is covered under a memorandum of understanding signed early in 2002. It outlines the responsibilities of each department and indicates how matters affecting more than one department are to be handled.
5. Each department with operational responsibility for biosecurity is accountable for biosecurity decisions that affect its areas of interest. Among the difficult issues that need to be addressed in biosecurity is the extent to which each department should invest in developing its own expertise and systems, compared to a more integrated approach. An integrated approach could involve departments drawing on core expertise or systems, and building only that additional expertise that is specific to their areas of concern. An example of this is the establishment within MAF Biosecurity, rather than within the Department of Conservation, of a group specifically tasked with assessing risks to indigenous flora and fauna from pests associated with imported goods.



BIOSECURITY COUNCIL

6. The Biosecurity Council was established in 1997 by the then Minister for Biosecurity as a forum to provide him with co-ordinated and consistent advice on biosecurity policy and implementation across agencies with an interest in biosecurity. The Council comprises the chief executives of Agriculture and Forestry, Conservation, Fisheries, Health, Environment, the Environmental Risk Management Authority, and Research, Science and Technology, the Group Director, MAF Biosecurity Authority, and a representative of regional councils, the primary production industries and environmental organisations. The chief executives of the New Zealand Customs Service and the Ministry of Foreign Affairs and Trade are also members who may attend when matters of specific interest to them arise. The Council has an independent chair.
7. The Council considers a number of key issues which impact on all biosecurity departments. It has developed several policies to ensure a consistent and cooperative effort between agencies. Under the current arrangements each biosecurity department is responsible for ensuring biosecurity programmes are in place for its own area of interest. For example, MAF is the lead agency for terrestrial and freshwater biosecurity while the Ministry of Fisheries is the lead agency for marine biosecurity.

BIOSECURITY STRATEGY

8. The Biosecurity Council is developing a Biosecurity Strategy for New Zealand. This strategy is needed because increased trade and international travel continue to exacerbate biosecurity risks to New Zealand, and there is a need to widen New Zealand's biosecurity capabilities to address environmental risks more effectively. Surveillance activities (i.e. programmes to determine the presence or absence of pests and diseases) have been recognised as an area that requires further attention. A comprehensive review of New Zealand's surveillance activities, whether undertaken by central government, local government or affected industries, has been undertaken to inform the development of the Biosecurity Strategy in this area.
9. The Biosecurity Strategy will address overarching goals for biosecurity, roles, responsibilities and governance for border biosecurity and pest management, and the need for a consistent risk management framework for all biosecurity activities. The strategy is also addressing the issues of capabilities and appropriate resourcing for biosecurity.
10. When completed, the strategy will help to set national priorities and to ensure consistency and co-ordination across agencies involved in biosecurity. An initial document outlining the issues in biosecurity has been consulted on widely, in an attempt to obtain agreement on the overarching goals and principles through which biosecurity activities in New Zealand can be focused.
11. There are a number of important and difficult biosecurity issues that need to be addressed. Expectations have been built up that the Strategy can provide a basis for resolving these issues. However, substantially more work needs to be done on the Biosecurity Strategy before it will be at a stage where it can be released for public comment, and then be finalised and decisions made on its implementation.

PREVENTING INCURSIONS

12. Incursions of unwanted organisms have become more common because of increasing levels of trade and travel, and changing environmental and climatic conditions. In addition, improvements in New Zealand's surveillance systems have resulted in more incursions being identified earlier.
13. Two key issues arise:
 - what level of risk from an unwanted pest, weed or disease are we prepared to accept; and
 - if an unwanted pest, weed or disease arrives, whether and how should we respond (e.g. eradicate or otherwise manage it).
14. The first issue requires government to establish a view on the acceptable level of risk, given that "zero" risk is not achievable. This would require consideration of:
 - the nature of the risk or hazard that gives rise to the risk;
 - the tools available to manage the risk and their efficacy;
 - the costs and benefits of managing the risk; and
 - social and environmental factors.
15. The WTO agreements indicate that trade should be allowed to occur provided it can be made safe. The level of risk that New Zealand determines to be acceptable must be broadly consistent across the range of biosecurity risk situations.

MANAGING INCURSIONS

16. The Biosecurity Act does not require the government or any other body to respond to an incursion. The current policy is that government will maintain the capability to contain the spread of an unwanted organism until a positive diagnosis is established. The level of response once a positive identification is made will depend on whether an agreed programme, such as a pest management strategy, is in place for that organism, or on whether the government will agree to fund the response on a case-by-case basis. MAF's recommendations on the level of response will be determined in consultation with other affected biosecurity agencies, and after considering whether a response is technically feasible and economically justifiable.
17. This situation creates uncertainty for the primary production sector, as affected industries have no guarantee as to whether a response will be mounted. MAF has been encouraging affected sectors to work in partnership with it to develop contingency plans for those exotic organisms that would cause serious harm to that sector. This approach is intended to ensure certainty in the level of response required, the actions to be taken, and the level of funding required by each party. The sectors are reluctant to adopt this approach as they see it as a means of reducing government involvement in pest and disease incursions, particularly for funding responses.

18. Around 50 new incursions of unwanted organisms are discovered within New Zealand each year, and this number is rising. Although incursion response is an expected part of New Zealand's biosecurity risk management framework, government appropriates no baseline funding for this purpose. MAF is funded to maintain a *capability* to diagnose and respond to incursions, but this funding does not cover the *actual costs* of a response. None of the other departments involved with biosecurity receive baseline funding for this work either, with responses to incursions being funded on a case-by-case basis.
19. While there are specific policies to guide agencies in managing incursion responses, such as unwanted organisms policies, there is no overall framework for priority setting and decision making. This is a key issue for the Biosecurity Strategy outlined above to address.

PEST MANAGEMENT

20. Once an organism has become established in New Zealand (i.e. eradication is no longer being attempted), a decision needs to be made about its ongoing control. Government decisions on establishing or continuing a management programme are based on technical feasibility and cost-benefit analysis. Affected sectors, including regional councils, have been concerned about accountability and funding (including the Crown's commitment to funding) for the ongoing management of these unwanted organisms.
21. For longer term pest management, central and local government agencies make decisions according to their priorities. However, there is no consistent decision making framework, and as a result there may be gaps and inconsistencies. The Biosecurity Strategy is addressing the issue of transition to, and coordination of, pest management.
22. One way of addressing some of the above concerns is to develop a pest management strategy for particular pests. The Biosecurity Act provides that pest management strategies may be developed by central government, regional councils, or by groups of affected people. A national pest management strategy is a plan established in secondary legislation for managing a pest and identifies (among other things) the powers to be used and how the strategy will be funded. Two national pest management strategies have been developed, one by the Animal Health Board for bovine TB and the other by the National Beekeepers' Association for American foulbrood – a honeybee disease. A long-term management plan is also being developed for the varroa bee mite by a group of affected stakeholders which may result in a national pest management strategy.
23. While contingency plans are being considered for a number of exotic pests and diseases to enable shared funding arrangements in the event of an incursion, industry sectors are reluctant to become involved in their development.
24. A number of regional pest management strategies are in effect for widespread endemic pests. The biosecurity departments and regional councils have also established a cooperative national pest plant accord to prevent the sale and distribution of significant weeds.

BIOSECURITY AWARENESS

25. Education and awareness are key tools for effective biosecurity. A biosecurity awareness programme is in place to ensure all New Zealanders, international travellers and importers understand their role in biosecurity and are aware of the consequences of biosecurity breaches.

AUDITOR-GENERAL'S REPORT ON BIOSECURITY

26. The Auditor-General has undertaken a significant review of biosecurity focusing, among other things, on MAF's activities and specific incursions. A report will be tabled in Parliament after the election, and MAF and the Minister will need to address issues raised in it.

SPECIFIC BIOSECURITY ISSUES

27. Current biosecurity and related issues that MAF is focusing on include:

Painted apple moth

28. Painted apple moth poses a threat to a range of exotic forestry, indigenous tree, horticulture and home garden species. It was first identified in the Auckland suburb of Glendene on 5 May 1999, and has subsequently expanded its range to include other West Auckland suburbs. A population has also been found at Mt Wellington. While male moths have been trapped over an area exceeding 20,000 hectares, ground surveys suggest that breeding populations of painted apple moth are probably present over an area of some 7,100 hectares. An eradication attempt has been underway since 1999.

29. The response options available to Government are:

Option	Description
	<i>Control or adaptation</i>
1	Undertake no further control of painted apple moth
2	Establish a programme to prepare for long-term management of painted apple moth aimed at controlling its economic and environmental impacts
	<i>Eradication</i>
3	Pursue eradication by aerial spraying of all known larval infestations (up to 12,000 hectares)

30. A decision on the future management of painted apple moth relates to three primary factors, each of which involves significant uncertainties. These factors are:

- the likely economic and environmental impact arising from the spread of painted apple moth in New Zealand;
- the costs of various eradication or control strategies; and
- the likely effectiveness of each of those strategies.

31. MAF has been directed to report to the first Cabinet meeting of the incoming Government on the future management of painted apple moth.

TB strategy review and related issues

32. A review of the bovine tuberculosis pest management strategy (“the TB strategy”) is underway in accordance with the requirements of the Biosecurity Act 1993. The Minister of Agriculture notified a proposed amendment to the strategy in May 2001. Submissions on the proposal were made to the Minister. The amended TB strategy has an annual cost of \$90 million (GST inclusive). The two distinct components of the programme are disease control and vector control. The disease control programme focuses on TB testing of farmed domestic animals and the slaughter of diseased animals. This programme costs \$17.5 million per annum and is funded by the farming industry sectors affected by the disease.
33. The vector control component of the TB programme has the objective of destroying TB infected feral animals (including possums, deer, pigs and ferrets). Vector control costs approximately \$72.5 million per annum. The Crown has agreed to fund approximately 50% of the vector control costs and the farming industries benefiting from the strategy have agreed to fund the remaining 50%.

Review of TB strategy

34. The Minister of Agriculture has appointed a board of inquiry to inquire into and report on the Animal Health Board’s proposal for an amendment to the Tb strategy. The board has indicated that it will report in July 2002.

The dairy industry share of funding for the TB strategy

35. The farming industries benefiting from the TB strategy agreed to review the share of funding provided by each farming sector. MAF provided its views and the farming industries also commissioned their own report on funding. Both reports concluded that, based on the protection from TB provided by the strategy, the dairy industry should increase its share of funding and the share of funding provided through the cattle slaughter levy and the levy on venison and velvet needed to be reduced. Discussions between industry sectors are continuing.

GM contamination of seed imports

36. Following concern in 2000 about sweet corn seeds that were possibly contaminated with genetically modified (GM) seeds, MAF has been developing and refining protocols to test imported seeds for the presence of GM seeds. The protocols will need to be reviewed if and when the number and area of GM crops increases, as international standards develop for testing, and as our experience shows us where the greatest risks are and how costs can be minimised.
37. MAF considers that New Zealand will be the first country to develop systematic rules for testing seed imports. Although several other countries do some ad hoc testing, there is

very little public information about what they do. There are also no international standards for these tests and there are problems with reliability and consistency.

38. The matter of new organisms arriving unintentionally at the border has highlighted an issue with the interface between the Biosecurity Act 1993 and the Hazardous Substances and New Organisms Act 1996. MAF believes that the appropriate way to deal with unintended importation is through the risk management approach built into import health standards. However, this raises some significant policy issues. MAF suggests that these be addressed through the Biosecurity Strategy.

Apples to Australia

39. Access for New Zealand apples to the Australian market has been blocked for over 80 years due to the presence in New Zealand of fire blight, a serious apple disease. Several requests for access have been unsuccessful. The latest request was tabled in 1999 and Australia released a draft import risk analysis in October 2000. Submissions on this draft by stakeholders, including New Zealand, have been reviewed by a recently established risk assessment panel which released its scientific review paper on 5 July 2002. A meeting to discuss this paper was held on 22 - 23 July in Melbourne. MAF and the apple exporting industry were represented.
40. In Australia the case has generated considerable political heat and the disease has been touted as “the foot and mouth disease of apples” by the Australian apple industry. The New Zealand case is essentially that mature apple fruit in commercial trade is not a sufficient pathway for the transfer and establishment of the disease. This has been clearly demonstrated in several peer reviewed and internationally published scientific papers from New Zealand and the US. This technical case applies equally to a similar dispute New Zealand has with Japan.

Apples to Japan

41. Access for New Zealand apples into Japan was negotiated in 1993 and the US negotiated access for its apples on similar terms soon after. Japanese quarantine concerns revolve around two serious pests of apples, fire blight and codling moth. The phytosanitary conditions for entry have proved so onerous as to make the trade unprofitable. New Zealand and the US have sought to modify the technical requirements to allow trade to resume while maintaining the high standard of quarantine protection that Japan justifiably demands. All offers of compromise have been met with negative responses and, in MAF’s view, untenable arguments.
42. In March 2002 the US requested formal WTO “consultations” on this issue, and after this drew the expected negative results, on 8 May 2002 the US initiated the WTO dispute settlement procedures. New Zealand has formally informed the WTO that it wishes to participate in the case as a third party. The US and Japanese cases will be submitted in late July or early August, and third parties will then have 20 days to make supporting statements. MAF is preparing documentation in readiness.

SPECIFIC ISSUES AFFECTING FISHERIES

43. The Ministry of Fisheries (MFish) is the lead agency for marine biosecurity. The Department of Conservation (DoC) also plays an important supporting role in marine biosecurity. All marine biosecurity initiatives contribute to the strategic policy direction of protecting the health of the aquatic environment.

44. Specific issues affecting MFish include:

Ballast water

45. Ballast water discharge is a high-risk pathway for the introduction of marine pests into New Zealand waters. New Zealand is actively working to promote the development of internationally consistent regulations on ballast water management through the International Maritime Organisation. A conference of parties is expected in 2003 at which agreement will be sought on details of such controls.

Hull fouling

46. Fouling on vessel hulls can lead to the introduction of marine pests into New Zealand waters. Surveillance programmes are being implemented to monitor high-risk areas such as ports.

47. Earlier this year, MFish undertook public consultation on measures to control the cleaning of vessels and to prevent the discharge of fouling material back into the sea. This has led to consideration of requirement for all vessels (including recreational vessels) to be cleaned in facilities that are compliant with discharge requirements.

48. MFish has developed, on a consultative basis, proposals for measures to mitigate the risks associated with hull fouling and cleaning, and will advise the Minister for Biosecurity on these by around 30 September 2002.

Undaria control

49. Undaria (*Undaria pinnatifida*, or Japanese kelp) is a commonly known exotic marine species. Undaria is difficult to manage and there are conflicting views on its effects and potential value. A precautionary approach has therefore been taken. Resources have been allocated to begin work to control the further spread of undaria through a vector management programme. The Department of Conservation is also undertaking an undaria eradication programme at Big Glory Bay in Stewart Island and in Bluff Harbour.

50. The undaria vector management programme is funded until June 2003. At this point, the programme will be assessed through MFish's biosecurity risk management framework and a decision will need to be made by Cabinet on ongoing management options. The decision by Cabinet will need to include consideration of DOC's eradication programme, funding for which has now largely come to an end.

SPECIFIC ISSUES AFFECTING HEALTH

51. The Ministry of Health has a key interest in biosecurity measures to protect public health. It also contributes to the development of applicable import health standards, risk analysis processes, and standards for associated border controls and containment. A key health issue relates to the Southern saltmarsh mosquito, where the Ministry of Health has the lead role for surveillance and responding to interceptions and incursions.

Southern saltmarsh mosquito

52. The Southern saltmarsh mosquito (SSM) is a known vector for the debilitating Ross River virus. Ross River virus disease is known as epidemic polyarthritis (inflammation of the joints). No locally acquired cases of Ross River virus disease have been reported, however, people carrying Ross River virus will regularly be present in New Zealand (e.g. tourists or travellers returning from Australian states where Ross River virus is endemic). Ross River virus disease can only be transmitted by mosquitoes, it cannot spread from person to person. There are animals in New Zealand that could act as 'bridge hosts' for the disease, namely possums and horses. Being an aggressive day-biting species, the mosquito also has a high nuisance value.

53. SSM has been found in the following areas:

- Napier (first identified in December 1998): eradicated from 650 ha of infested habitat as at late July 2002;
- Gisborne, Mahia and Porangahau (identified in October/November 2000): subject to an eradication programme over 190 ha; and
- Kaipara (identified in February 2001): initially subject to a containment/control programme with initial eradication activity using *Bti* starting in December 2001. In June 2002, the Government agreed to an attempted eradication programme over the estimated habitat of 2,710 ha. This also includes an outlier discovered in Whitford in April 2002 (2 ha being treated).

The table below sets out total funding appropriated for SSM responses to date.

Funding for Government Response Activities	1998/99 \$m	1999/2000 \$m	2000/01 \$m	2001/02 \$m	2002/03 \$m	2003/04 \$m	2004/05 \$m	2005/06 \$m
Napier	2.579	5.326	0.126	0.126				
Tairāwhiti, Hawke's Bay and Kaipara (initial)			0.408	2.000	2.000	0.500	0.500	
Kaipara (Long-term)					12.613	12.294	2.511	2.937
Total	2.579	5.326	0.534	2.126	14.613	12.794	3.011	2.937

SPECIFIC ISSUES AFFECTING CONSERVATION

54. Specific biosecurity issues affecting the Department of Conservation include:

Operational capability

55. The Department of Conservation (DoC) receives 2.2% of Vote Biosecurity, of which approximately 85% is used to meet the department's exacerbator obligations under regional pest management strategies. This leaves \$416,000 for DoC to fulfil its biosecurity responsibilities as outlined in the memorandum of understanding with MAF. This level of funding is insufficient to enable the department to adequately provide sound technical, scientific and policy advice to the two lead biosecurity agencies (MAF and MFish) for issues where there are implications for conservation. The Biosecurity Strategy should address these matters.

Pest fish - koi carp and gambusia (Mosquitofish)

56. In 2001/02 DoC was appropriated funding to undertake a delimitation survey of the South Island for the presence of koi carp and gambusia. The survey resulted in the identification of six populations of gambusia and two of koi carp in the Motueka region only. Funding for this work ceased in 2002/03. The department is reviewing funding options for eradication of these populations, additional survey work targeting West Coast and Canterbury waterways, implementation of post-treatment surveillance and monitoring, and for heightened public awareness to identify residual populations and minimise the risk of re-introduction.

Hornwort

57. In January 2002 DoC initiated a biosecurity incursion response following the discovery for the first time of hornwort, a serious aquatic weed, in the South Island (Motueka). Containment action, a delimiting survey, and investigation into the cause of the incursion were undertaken. Assessment of management options, including eradication, is underway. Incursion response actions to date have been jointly funded by DoC, Tasman District Council and Land Information New Zealand. A management liaison group has been established to identify resource needs and coordinate a response. Additional funding may be sought from Cabinet if eradication is determined to be feasible and appropriate.