

The Auditor-General
Audit Report No.47 2000–2001
Performance Audit

Managing for Quarantine Effectiveness

**Department of Agriculture, Fisheries and
Forestry—Australia**

© Commonwealth
of Australia 2001
ISSN 1036-7632
ISBN 0 642 44240 1

COPYRIGHT INFORMATION

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without prior written permission from the Commonwealth, available from AusInfo. Requests and inquiries concerning reproduction and rights should be addressed to:

The Manager,
Legislative Services,
AusInfo
GPO Box 1920
Canberra ACT 2601
or by email:
Cwealthcopyright@dofa.gov.au

Canberra ACT
07 June 2001

Dear Madam President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit in the Department of Agriculture, Fisheries and Forestry—Australia in accordance with the authority contained in the *Auditor-General Act 1997*. I present this report of this audit, and the accompanying brochure, to the Parliament. The report is titled *Managing for Quarantine Effectiveness*.

Following its tabling in Parliament, the report will be placed on the Australian National Audit Office's Homepage—
<http://www.anao.gov.au>.

Yours sincerely



P. J. Barrett
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

AUDITING FOR AUSTRALIA

The Auditor-General is head of the Australian National Audit Office. The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act 1997* to undertake performance audits and financial statement audits of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

Auditor-General reports are available from Government Info Shops. Recent titles are shown at the back of this report.

For further information contact:
The Publications Manager
Australian National Audit Office
GPO Box 707
Canberra ACT 2601

Telephone (02) 6203 7505
Fax (02) 6203 7519
Email webmaster@anao.gov.au

ANAO audit reports and information about the ANAO are available at our internet address:

<http://www.anao.gov.au>

Audit Team

Alan Greenslade
Craig Gillman
David Marcus

Contents

Abbreviations/Glossary	7
Summary and Recommendations	
Summary	11
The role of quarantine	11
Quarantine reform	12
The audit	13
Conclusion	14
AFFA response	17
Key Findings	19
Managing for Quarantine Outcomes (Chapter 2)	19
Operational Risk Management (Chapter 3)	20
Pre- border Quarantine Operations (Chapter 4)	22
Border Quarantine Operations (Chapter 5)	24
Post-border Monitoring and Surveillance (Chapter 6)	29
Management of Import Risk Analysis (Chapter 7)	30
Management of Funding for Implementing the Government Response to the QRC Report (Chapter 8)	34
Recommendations	35
Audit Findings and Conclusions	
1. Introduction	41
The importance of quarantine	41
Administration of quarantine	41
Reform of quarantine	45
The Audit	47
2. Managing for Quarantine Outcomes	50
The outcome and output hierarchy	50
Overall effectiveness indicator for quarantine	51
Other high-level indicators for quarantine	53
3. Operational Risk Management	54
Introduction	54
Operational risk management processes	56
Management of risk across programs and the quarantine continuum	57
Risk profiling within quarantine operations programs	62
4. Pre-border Quarantine Operations	69
Introduction	69
Cargo	69
Community awareness raising	75

5.	Border Quarantine Operations and Outcomes	77
	Introduction	77
	Assessing the effectiveness of border operations	77
	Achieving consistency in the application of quarantine protocols	95
	Role of industry in border operations	96
6.	Post-border Monitoring and Surveillance	99
	Introduction	99
	Wharf and depot surveillance	100
	Northern Australia Quarantine Strategy	102
	Greater emphasis on plant quarantine	103
7.	Management of Import Risk Analysis (IRA)	104
	Introduction	104
	IRAs as a scientific process	107
	Harmonisation with international standards	110
	Achieving consistency with Government policy	111
	Consultation, transparency and openness	114
	The appeal process	120
	Administration of import requests	120
8.	Management of Funding for Implementing the Government Response to the QRC Report	124
	Appendices	
	Appendix 1: Recent Reviews of Quarantine.	129
	Appendix 2: Technical Background on Calculation of Seizure Rates for the International Mail and Airports Programs	130
	Appendix 3: Overview of the IRA Process	134
	Appendix 4: Summary of Frequently Suggested Changes to IRA Process by Domestic Stakeholders	135
	Appendix 5: Import Risk Analysis—Summary of Appeals Received Since Publication of the IRA Process Handbook in 1998	136
	Index	137
	Series Titles	139
	Better Practice Guides	143

Abbreviations/Glossary

ABFC	AQIS Business and Finance Committee
ACA	Air Cargo Automation system
ACS	Australian Customs Service
AFAS	Australian Fumigation Assessment Scheme
AFFA	Agriculture, Fisheries and Forestry–Australia
AIMS	AQIS Import Management System
ALOP	Appropriate Level of Protection
AMS	Airport Monitoring System
ANAO	Australian National Audit Office
AQIS	Australian Quarantine Inspection Service
BA	Biosecurity Australia
Breach	A pest or disease is detected beyond the limits of the national quarantine barrier, but has not spread beyond the original host shipment with which it was imported.
COMPILE	COMPILE is the Australian Customs Service IT system for managing the flow of commercial goods into Australia.
Incursion	The perpetuation of a pest or disease in an area, for the foreseeable future, after its entry into Australia.
IPC	Incoming Passenger Card
IRA	Import Risk Analysis
IRAAP	Import Risk Analysis Appeal Panel
IT Systems	Information Technology Systems
MOU	Memorandum of Understanding
NAQS	Northern Australia Quarantine Strategy
PBS	Portfolio Budget Statements
PDI	Pest and Disease Information database
PHA	Plant Health Australia
PNG	Papua New Guinea
PRA	Pest Risk Analysis

QA	Quality Assurance
QEAC	Quarantine and Exports Advisory Council
QRC	Quarantine Review Committee
QRU	Quarantine Risk Unit
Quarantine continuum	Reflects the flow of quarantine risk material from offshore (pre-border) to the Australian border and into Australia (post-border).
RAP	Risk Assessment Panel
SDB	Seizures Database
SPS	Sanitary and Phytosanitary
SPS Agreement	WTO Agreement on the Application of Sanitary and Phytosanitary Measures
VMS	Vessel Monitoring System
WTO	World Trade Organisation

Summary and Recommendations

Summary

The role of quarantine

1. Australia is fortunate to have an environment which, compared to other countries, is relatively free of many harmful pests and diseases of animals, plants and humans. This favourable health and quarantine status provides a significant economic advantage to Australia. Risks to this status from potential incursions of exotic diseases or pests are largely managed through quarantine policies and operations.

2. The Department of Agriculture, Fisheries and Forestry—Australia (AFFA) is responsible for the delivery of Commonwealth animal and plant quarantine. AFFA's quarantine services cost some \$90 million a year, with income from cost recovery from industry, the Passenger Movement Charge,¹ and Commonwealth budget allocations.

3. AFFA delivers quarantine through Biosecurity Australia and the Australian Quarantine Inspection Service (AQIS). Biosecurity Australia is responsible for quarantine policy, which describes which animals, plants, genetic material and other products can be brought into Australia, and under what conditions.² Much of this takes the form of Import Risk Analyses (IRAs), which are a structured, science-based, approach to developing and reviewing particular quarantine policies. AQIS is responsible for managing quarantine operations, including clearing, seizing or treating goods arriving from overseas. AQIS has four key border programs which are aligned with the main modes of entry: airports, international mail, cargo imports and shipping.

4. AFFA works closely with other Commonwealth and State/Territory Governments in administering quarantine. This includes the Australian Customs Service, which undertakes primary screening of international mail and at airports, and Australia Post, which provides facilities for quarantine operations in mail centres. Under arrangements with the Western Australian, Tasmanian and the Northern Territory Governments, Commonwealth quarantine border operations are undertaken by relevant State/Territory agencies.

¹ The Passenger Movement Charge (PMC) is levied on departing passengers and is designed to recover the notional cost of Customs, Immigration and Quarantine processing of incoming and outgoing passengers.

² Quarantine policy is bound by World Trade Organisation (WTO) Agreements, which prohibit the use of unjustified quarantine requirements to protect domestic producers from international competition.

5. AFFA is assisted by the Quarantine and Exports Advisory Council (QEAC), which advises the Minister for Agriculture, Fisheries and Forestry on quarantine and export inspection matters. QEAC's responsibilities include: acting as a focal point to ensure broad-ranging consultation between AFFA, industry and stakeholders on quarantine; helping AFFA evaluate its performance with respect to quarantine; and overseeing AFFA's implementation of quarantine reform.

Quarantine reform

6. Australia's quarantine has been subject to a number of reviews in recent years. The most recent comprehensive review was conducted by the Australian Quarantine Review Committee (QRC) in 1996. The Committee identified a range of concerns about the state of quarantine at the time, including: a lack of performance measures and of a consistent, data based approach to managing risk at the border; inadequacy of x-ray and detector dog utilisation; the absence of infrastructure to support plant health quarantine; and politicisation of the IRA process, including an inability to achieve common ground for deciding issues on scientific merit.

7. The extent and impact of these deficiencies were not quantified by the QRC. However, it considered that the effectiveness of quarantine was less than necessary to protect Australia's unique plant and animal health status. It concluded that a fresh approach was needed if Australia's quarantine policies and programs were to continue to meet the expectations of the Australian community.

8. In response to the review, the Government endorsed most of the QRC's recommendations, committing \$76 million over four years commencing 1997–1998.³ The Government also established some key themes to underpin management of Australia's quarantine services, including:

- managed risk, based on science;
- quarantine needs to be seen as a continuum, involving pre-border measures, well targeted border controls, and post-border activities;
- community responsibility for quarantine;
- a more consultative approach to quarantine policy setting and decision making, and improved external input to quarantine policy through QEAC; and
- improved plant and aquatic infrastructure.

³ Of this, \$50.7 million was to be provided by the Government and \$25.3 million was recovered from industry through fees and charges for quarantine services.

The audit

9. The objective of this audit was to assess AFFA's management of plant and animal quarantine services, and the implementation and impact of the Government Response to the QRC Report. The audit in particular assessed the setting of quarantine priorities through assessing and managing risk; management of the continuum of quarantine operations; and management of Import Risk Analyses to deliver and review quarantine policies. Stakeholder consultation and advisory processes were also assessed in addressing these issues.

10. The audit focussed on AFFA's key quarantine operations and management of the IRA process. Together, these account for around \$52 million, or two-thirds, of the total additional funding allocated by the Government in response to the QRC Report. The audit did not address AFFA's role in emergency pest management, nor its cost recovery processes, as these have both been the subject of recent ANAO audits.⁴ The audit also did not cover the human quarantine function.

11. The audit was based upon criteria drawn from the Government Response to the QRC Report and recognised better practice. Two recognised authorities in quarantine policy and operations were engaged to provide expert advice for the audit.

12. The recent outbreak of Foot and Mouth Disease in the United Kingdom, and subsequently Ireland and Europe, occurred after the completion of audit fieldwork and analysis. Consequently, the audit does not cover the additional quarantine measures taken in response to the outbreak. However, the preliminary findings on key issues relating to the effectiveness of quarantine operations were progressively provided to AFFA from November 2000, so that management could consider any appropriate corrective action. As advised by AFFA in its response to the audit below,

Noting the areas for improvement identified by the ANAO and in the context of outbreaks of foot and mouth disease in Europe together with other emergent quarantine threats to Australia, the Government has decided to further strengthen quarantine border operations and associated arrangements. This involves additional funding for AFFA of \$289 million over four years, allocated in the 2001–02 Budget.

⁴ Auditor-General Report No.9 1999-2000, *Managing Pest and Disease Emergencies* and Report No.10 2000-2001, *AQIS Cost Recovery Systems*.

Conclusion

13. The QRC considered in 1996 that, although not quantifiable, the effectiveness of quarantine was less than necessary to protect Australia's unique plant and animal health status. Particular areas identified for improvement were a better resourced and more scientific and risk-based approach, and the ability to assess performance. The package of quarantine reforms in the Government Response to the QRC Report was designed to address these gaps.

14. On the basis of information available from AFFA's financial management systems, funds allocated to implement the Government Response to the QRC Report were generally spent and managed appropriately. AFFA's quarantine operations are now markedly more effective across the board, particularly in those areas identified by the QRC as needing improvement and for which additional funding was provided by the Government. There has been an expansion and restructuring of the IRA process; greater quarantine coverage of the border, both through application of a more risk-based approach to targeting quarantine operations within programs, and through greater use of detector dogs and x-rays; provision of new plant health infrastructure; and implementation of an expanded consultation and advisory structure. The impact of most of these improvements cannot be quantified because of limitations in data in 1996 (and to a lesser extent now). Where relevant data is available, it indicates substantial improvements in the effectiveness of quarantine in some areas.

15. Despite these improvements, the ANAO concluded that there remain weaknesses in management of the quarantine function, which need to be addressed to improve both operational effectiveness and quarantine outcomes. Areas which warrant management attention include extending risk management practices to ensure that risk treatments appropriately address quarantine risks across different modes of entry; appropriately assessing and monitoring performance; and reducing the extent to which aspects of the IRA process result in avoidable controversy and uncertainty.

16. As noted above, the 2001–02 Budget announced funding to strengthen Australia's quarantine operations, including implementing a heightened quarantine inspection regime for goods and mail entering Australia and increased monitoring of airline and ship waste disposal. These measures respond, in part, to the weaknesses in management of the quarantine function identified in this audit.

17. The ANAO's specific conclusions are discussed below.

18. AFFA's key performance target for the effectiveness of quarantine is zero increase in the rate of exotic pest or disease incursions. This target has not been consistently described, nor understood. AFFA does not report on related changes in the rate in its Annual Report. In fact, there has been a marked rise in reported incursions, increasing from eight in 1995–1996 to 26 in 1999–2000, the implications of which at least warrant assessment and suitable advice to stakeholders.

19. AFFA has improved its approach to managing risk over recent years, with improved data systems and business planning frameworks. However, there are limitations in their application of risk concepts, data management and analysis of risk consequences. There is only a limited risk-based process for allocating resources and determining quarantine risk treatments across different modes of entry and the quarantine continuum. This adversely affects the overall effectiveness of quarantine operations. AFFA has plans to undertake a project to address some of these concerns in the longer term.

20. AFFA makes more extensive use of risk management practices within programs to profile quarantine risk material to assist in detection. Use of these profiles has substantially improved risk targeting and seizures of quarantine material, but their potential has yet to be fully exploited to maximise outcomes.

21. Achieving the aim of managing quarantine as a continuum includes using pre-border operations to keep risk offshore as much as possible. There has been only limited expansion in use of pre-border arrangements such as offshore pre-clearance. AFFA considers this adequate, without being highly proactive, and sufficient to give effect to the Government's intention. However, AFFA has not supported this work with targets and plans which would assist in developing more effective offshore pre-clearance.

22. A longstanding method of mitigating quarantine risk offshore is the use of overseas inspectors and treatment providers, or importers, to certify that appropriate treatments have been carried out, or that the goods are free from contamination, pests or diseases. One area where overseas certification is frequently used is in the fumigation of goods, particularly timber. The ANAO found that there has been evidence for some years that fumigation certificates are not reliable. This results in Australia being exposed to actual and potentially substantial quarantine risk. An effective response is yet to be implemented to deal with this risk.

23. AFFA has strengthened its performance information for all border operations in recent years, with the measures providing indications of substantial improvement in border integrity since implementation of the quarantine reforms. While all four of the key border programs prepare output volume performance measures, only two collect data for, assess, and report on, AFFA's measure of leakage—the percentage of items crossing the border which still contain seizable material—notwithstanding that AFFA and QEAC have agreed this is necessary to evaluate effectiveness. The other two programs—covering cargo and shipping—are equally important to AFFA's quarantine objectives.

24. The value of current border effectiveness measures is limited as they do not address the likelihood of seizable material approaching and breaching the border, or the potential consequence(s) of such an event. The ANAO has undertaken estimates of the former, using available AFFA data. Estimates of the latter, that is how 'risky' the material escaping detection is, could not be made because of the absence of relevant AFFA data. The ANAO estimates indicate that almost 90 per cent of seizable material arriving by mail, and more than half arriving carried by international airline passengers, enters Australia undetected. These rates, and differences in the rates between entry routes within these two programs, suggest aspects of border operations warrant priority management review and action, including assessing the consequences of barrier breaches, and appropriate cost-benefit options for dealing with them.

25. AFFA has made substantial improvements to the IRA process, reflecting the directions of the Government Response to the QRC Report. IRAs are scientifically based and are now conducted within a consultative framework. More IRAs are being conducted, although AFFA has not yet met its targets for timeliness and completion of IRAs, hampering stakeholders' ability to plan their contribution to the IRA process. AFFA's management of the scientific basis for IRAs is generally sound.

26. AFFA's implementation of the consultative framework sought by Government has made the IRA process more transparent and open than in the past. However, management of these processes can be strengthened to address strong concerns by stakeholders about the quality and appropriateness of aspects of consultation. In particular the concept of Australia's appropriate level of protection, which underpins the IRA process, is often not well understood. Industry stakeholders involved in the IRA process were also often unclear about the purpose of some consultations. Guidance on these matters is limited. It was also suggested that greater opportunity for early input to the IRA process,

and more flexibility in the gathering of this input, would better meet the aim of involving stakeholders at the front end of IRAs for improved effectiveness.

AFFA response

27. AFFA's response, in summary, was as follows.

28. AFFA has implemented 134 of the 149 recommendations of the QRC Report accepted or partially accepted by Government. The remaining 15 recommendations are in progress.

29. AFFA notes that the ANAO model for estimating quarantine effectiveness developed during the course of the audit, inter alia, does not take account of the quarantine risk of particular material estimated to approach the border. However, AFFA agrees that the model is a measure that, with further development, could be useful in better informing quarantine management decisions, and is working with its quarantine counterparts in New Zealand to develop common and more refined measures of quarantine effectiveness.

30. Noting the areas for improvement identified by the ANAO and in the context of outbreaks of foot and mouth disease in Europe together with other emergent quarantine threats to Australia, the Government has decided to further strengthen quarantine border operations and associated arrangements. This involves additional funding for AFFA of \$289 million over four years, allocated in the 2001–02 Budget. The Government is also funding additional complementary border activities undertaken by the Australian Customs Service (ACS) and necessary infrastructure changes at international airports and mail centres. The full package to strengthen quarantine border controls totals almost \$600 million over four years.

31. This represents a substantial and comprehensive response by the Government and AFFA to serious quarantine threats to Australia and to issues raised in this ANAO Report. It will significantly strengthen Australia's quarantine border controls and achieve the highest practicable rates of quarantine effectiveness, especially at international airports and mail centres. It is directed towards achieving 100 per cent quarantine intervention at all border entry points except at some airports during peak periods. Based on the ANAO model, these intervention levels are expected to deliver 87 per cent quarantine effectiveness for high-risk material at airports and 96 per cent for this material at other border entry points.

32. With respect to the Import Risk Analysis (IRA) process, work is already underway to address the key requirements identified by the ANAO for greater transparency in the treatment of science, for more effective communication with stakeholders during the IRA process, and for greater consultation with relevant State/Territory agencies in relation to Biosecurity Australia's IRA work program.

33. A formal review of the IRA process has commenced and some changes proposed already include improved opportunities for early stakeholder input, scientific review and regular updating of progress with IRAs. Additional opportunities have already been provided for stakeholder contribution to IRAs currently underway. Technical guidelines have been produced for AFFA staff preparing IRAs to ensure a consistent science-based approach to IRAs and improved transparency to stakeholders.

Key Findings

Managing for Quarantine Outcomes (Chapter 2)

34. AFFA has an overall effectiveness performance indicator for its quarantine output which is described in its Portfolio Budget Statements as '*zero increase in the rate of exotic pest/disease establishments attributable to breaches of quarantine.*' However, AFFA's 1999–2000 Annual Report states that the effectiveness target is '*zero increase in the rate of incursions...*' The ANAO found that the terms *establishments/incursions* were subject to markedly different interpretations at senior levels within AFFA.

35. Inconsistent understanding, and application, of the key performance measure for quarantine risks undermining efficient management of performance, as well as AFFA's accountability to Parliament for that performance. AFFA has since advised that it has acted to resolve this inconsistency, and that the terms *incursions* and *establishments* may be used interchangeably as the perpetuation of a pest or disease in an area, for the foreseeable future, after its entry into Australia.

36. The ANAO found that AFFA does not report on whether there has been an increase or decrease in incursions, as would appear necessary to address this indicator. It reports only on the number of incursions for the most recent year. In fact, there has been a marked rise in recent years, with reported incursions increasing from eight in 1995–1996 to 26 in 1999–2000. This trend would seem to warrant more explicit management attention, assessment and advice to stakeholders, particularly the Parliament. For example, the increase may be the result of less effective quarantine arrangements; improved surveillance and recording; increasing presentation of quarantine risk material at the border; or breaches occurring some years previously which have been latent or undetected for some time. AFFA advised that it considered the increase in incursions to be the result of much greater emphasis on systematic recording and reporting of suspected incursions.

Operational Risk Management (Chapter 3)

37. Management of quarantine involves efficiently allocating available quarantine detection and inspection resources so as to minimise Australia's exposure to untreated quarantine risk material, a process referred to in this report as operational risk management. This is a challenging task, as the risk posed by a particular commodity can be difficult to estimate and can vary according to when, where, and in what volume it enters the country.

38. AFFA recognises the need for operations to be risk-based and has in place a risk management plan for each quarantine operational program and a risk management plan for its quarantine output. Business risks rated as high or above are monitored biannually by the AQIS Business and Finance Committee.

39. The ANAO found that, notwithstanding this structure, and its apparent robustness, there was uneven application of risk concepts. For example, programs assessed the consequences of the same major pest or disease incursion differently and managed the same risk of incursions to different levels of residual risk, with no clear reason apparent for accepting varying levels of residual risk between programs. Such limitations in the identification and assessment of risks weakens assurance that management's efforts and treatment action appropriately address quarantine risk.

Management of risk across programs and the quarantine continuum

40. Assessing and managing quarantine risk requires, inter alia, consistent data collection methodologies/definitions between operations to facilitate assessment and comparison of the likelihood of breaches across different modes of entry. The ANAO found that, notwithstanding improvements in several of AQIS's data systems, there are inconsistent data definitions, varying data collection methodologies, and data system incompatibilities between operational programs.

41. A risk-based approach also includes assessing the consequences of possible breaches. This is a complex task that requires assessment of many combinations of host, contaminant, entry point and the consequences of entry, establishment and spread of a disease or pest. However, AFFA's operations do not currently support such analysis, categorising quarantine risk items into just two categories—prohibited (seizable) and non-prohibited.

42. These limitations mean that AFFA lacks a fully encompassing risk-based process for allocating resources and determining quarantine risk treatments. Consequently, there is little assurance that quarantine risk is effectively, and consistently, managed across the different modes of entry and across the quarantine continuum.

43. AFFA intends to address some of these concerns through a Border Risk Management Project which aims to establish consistent description and measurement of quarantine risk across programs in order to make better resource management decisions. Planning for the project has not yet been finalised. In the first instance, the project will be limited to the Airports and International Mail Programs.

44. AFFA has also emphasised that altering the allocation of resources and risk treatments is challenging, as most of AFFA's programs operate on a cost recovery basis. The ANAO considers that this reinforces the need for resource allocation to be based on appropriate assessment of risk to ensure that AFFA does not impose inappropriate costs on clients or the community.

Risk profiling within quarantine operations programs

45. AFFA makes more substantial use of data-based risk management by 'risk profiling' within border programs. These profiles are used by all border programs to identify those items in a particular route of entry that are most worthy of attention. Their use is at varying stages of development, with the system used in international airports being the most extensive. The risk profiles used at airports have been developed from historical seizures data to identify the flights and types of passenger most likely to present a quarantine risk, and are subject to regular review. These profiles are applied to passengers at Sydney and Brisbane airports; they are not currently being applied at other international airports.

46. The use of profiling in other programs is somewhat less advanced. For example, AFFA has developed data-based profiles to screen international mail and, as a result, there has been an increase in the rate of seizures from the screening process since their implementation. However, the profiles are only applied to a small proportion of incoming mail, thus limiting their effectiveness.

47. Commercial imports and shipping are also subject to risk profiling. However, limited recording of details of quarantine incidents/failures in the underlying data systems limits the degree of sophistication possible in the profiles. The ANAO also found that, for some programs, there was limited review of the profiles to keep them up to date in an environment of changing quarantine risk patterns.

48. The use of such profiling represents a substantial strengthening of quarantine risk management. However, to the extent to which the systems are not sufficiently soundly based nor consistently applied, there is an increase in the risk of quarantinable material entering Australia. The ANAO considers that the effectiveness of risk profiling would be enhanced through more detailed analysis of data on the incidence of quarantine risk material, increasing the extent to which incoming items are subject to profiling, and more regular review of the efficacy of profiles. This would be a matter for AFFA to assess as part of an appropriate cost-benefit analysis.

Pre-border Quarantine Operations (Chapter 4)

49. A major theme of the Government Response to the QRC Report was the need for quarantine to be seen as a continuum of activities, including the use of pre-border operations to keep risk offshore as much as possible. AFFA's pre-border strategies focus on inspection and assessment of systems and risk treatments overseas, and on awareness raising.

Pre-inspection/pre-clearance

50. The Government Response to the QRC Report endorsed the expansion of pre-clearance of goods overseas by either an AFFA officer or by specified authorities in the country of origin *'as opportunities arise and/or resources permit.'*⁵ The ANAO found that, while pre-inspection has been used in some special circumstances, such as the return of equipment from the peacekeeping operation in East Timor, its use has been limited to some fresh fruit and vegetables and a small number of second hand machines or parts. Its use has not increased markedly since the QRC Report.

51. There was no documentary evidence as to why applications for pre-inspection have not proceeded. AFFA did not have a plan, performance measures or targets to guide its expansion. However, AFFA advised that it has not proactively expanded pre-inspection because of opportunity costs to AFFA, preferences for other pre-border strategies, and legal concerns in the event that pre-inspected goods do not to comply with quarantine requirements on arrival in Australia.

⁵ Pre-inspected/pre-cleared goods are still subject to formal quarantine clearance upon arrival in Australia, but this typically involves merely verifying the contents as those pre-inspected and that there is no obvious contamination.

52. The ANAO considers that more explicit and structured planning and performance targets would facilitate the development of offshore pre-clearance and assist in addressing opportunity costs and other considerations. Any perceived legal impediments would seem to warrant prompt resolution.

Assessment of offshore supply systems

53. Offshore assessment of supply systems occurs when AFFA assesses and certifies that offshore production, processing and transport systems for a particular product will effectively treat its quarantine risk. AFFA has implemented only one such arrangement—for shipments of fertiliser from one port in the United States of America—and is developing two similar arrangements. Both stakeholders and AFFA have confirmed that there is considerable scope to increase the use of offshore supply systems. However, as with pre-inspection, AFFA has no performance measures or explicit management approach to support achievement of this aim.

Overseas certification

54. A longstanding method of mitigating quarantine risk offshore is the use of overseas inspectors and treatment providers, or importers, to certify that appropriate treatments have been carried out, or that the goods are free from contamination, pests or diseases. One area where overseas certification is frequently used is the fumigation of goods, particularly timber.⁶

55. A fumigator's capacity to deliver effective fumigation is not first assessed before allowing goods fumigated by them into Australia. The ANAO found that, since 1998, AFFA has been aware that fumigation certificates are not reliable, with live pests frequently discovered on shipments of timber certified as fumigated. AFFA has responded by suspending some overseas fumigation companies for sub-standard fumigation; increasing surveillance at wharves and depots; and developing a scheme to train, assess and accredit fumigators in high-risk countries. It is proposed to trial this scheme initially in Indonesia, but this has not yet started.

56. Notwithstanding the above measures, and the possible longer term benefits of the new scheme, the numbers of breaches, such as the discovery of exotic pests in structures using infested timber, due to inadequate fumigation is increasing, with 23 such breaches occurring in the five months to end September 2000, the most recent period for which data is available. The number of breaches which are not detected has not been estimated by AFFA.

⁶ Other goods frequently imported with a fumigation certificate are some horticultural products and other goods likely to carry live insects.

Community awareness raising

57. Improved public awareness of quarantine is a key performance measure for quarantine. In its response to the QRC Report the Government provided \$5.529 million over four years for AFFA to develop and implement a national campaign to improve the community's understanding of, and commitment to, quarantine.

58. Awareness of quarantine amongst Australians intending to travel, or who have travelled recently, has improved markedly since commencement of the campaign. Despite these overall improvements, AFFA has recognised the need to adjust its campaign to address declining awareness amongst young Australians (39 per cent of young respondents to a survey did not know what the function of quarantine was).

59. The ANAO found that the survey also identified that only 66 per cent of cargo importers considered that quarantine regulations are always strictly enforced. This is an improvement from earlier years, and AFFA has advised that specific action is not therefore required. However, the ANAO notes that this means that one-third of importers consider that AFFA does not strictly enforce quarantine regulations, which would seem to warrant at least some management investigation and assessment of the implications for quarantine effectiveness.

Border Quarantine Operations (Chapter 5)

AFFA's effectiveness performance measures

60. The border is the main point of the continuum at which quarantine operations must focus. This is where AFFA places most of its quarantine effort. About half of the additional funding flowing from the Government Response to the QRC Report, commencing in 1997, was directed at increasing the effectiveness of border operations through, for example, increasing the use of detector dogs and x-ray equipment.

61. Prior to 1997, AFFA had limited management information from which to assess the effectiveness of its border operations. Since then, it has improved the collection and analysis of relevant data, and assesses the effectiveness of its border programs in two key ways—using volume measures of quarantine outputs, such as counts of interceptions and seizures, and assessing the rate at which quarantinable material 'leaks' into Australia.

62. Overall, there has been a marked increase in the number of interceptions of pests and diseases at the border, from around 3500 interceptions in 1994 to over 10 000 in 1999. The volume measures for international mail and airports also show a steady rise in the number of prohibited items intercepted,⁷ rising from some 1000 per month in 1997 to 3000 per month in 2000 for mail and 1000 per month in 1998 to 4000 per month in 2000 for airports, reflecting the impact of quarantine reform initiatives. The relevant volume indicators for commercial cargo imports, and shipping vessels and yachts, have also increased but at more modest rates.

63. In December 1999 AFFA and QEAC agreed leakage surveys for border programs are '*necessary...to evaluate their effectiveness*'. These surveys support the calculation of border leakage rates, which measure the percentage of all items that have crossed the border and entered Australia but which still contain or possess seizable material. Since 1999, AFFA has commenced collecting leakage data for international mail and expanded its surveys at airports. However, comparable leakage data for cargo or vessels has not yet been collected, meaning that the effectiveness of two of the four main border programs cannot be assessed in this way.

64. The estimated leakage rate for international mail was 1.2 per cent for the year 2000. The available information on leakage rates for international airline passengers shows a marked improvement between December 1995 and 1998. Leakage rates for airline passengers have been relatively stable since then, at between 3 and 4 per cent.

65. Leakage rates are more useful performance indicators than the simple volume measures. However, the ANAO found that leakage rates and volume measures do not, of themselves, give an adequate indication of the effectiveness of AFFA in its key task of intercepting and seizing quarantinable material at the border. This is because changes in the measures can be due to changes in the extent to which seizable material approaches the border, changes in effectiveness of detection of that material, or both. Furthermore, low leakage rates can still result in large volumes of quarantinable material entering Australia, as is highlighted below.

⁷ Prohibited items are those considered have a high risk of carrying pests or diseases and which are seized, treated or re-exported.

The rate of detection of quarantinable items at the border

66. The ANAO found that some of AFFA's existing data may be used to estimate the likelihood that it will intercept a seizable quarantine item approaching the Australian border (the 'seizure rate'); its converse is the likelihood that AFFA will not detect such items and they will enter Australia illegally. A similar approach to assessing the likelihood of intercepting quarantine material has been used by some overseas quarantine agencies (for example, New Zealand and the United States of America) and a similar measure was also used in a 1999 evaluation of AFFA's International Mail Program.

67. In common with AFFA's current border effectiveness measures, the seizure rate does not address the important consequence dimension of a quarantine breach, that is, how 'risky' the material is. However, unlike current effectiveness measures, the seizure rate does provide valuable insight into those areas warranting further consideration. That is, low seizure rates indicate a high likelihood of quarantinable material breaching the barrier, suggesting that this is an area where consequence assessment should receive priority.

68. The ANAO estimates, on the basis of available data, that AFFA intercepts and seizes some 11 per cent of seizable material in international mail entering through the Clyde (in Sydney) and Melbourne mail centres. Put another way, almost 90 per cent of seizable material in mail is estimated to escape detection and enter Australia undetected. This equates to approximately 170 000 undetected mail items a year entering Australia through these centres.

69. The ANAO also found that there is substantial variation in these estimated seizure rates for the different classes of mail, ranging from an some 1 per cent of seizable material for letter class mail and small packages to around 70 per cent in Express Mail. AFFA advised that lower detection rates for letters and small packages is likely to be due to the relatively large volumes of mail in these categories and that they are often not individually screened. AFFA also advised that it considers that operations have improved since the quarantine reform funding, and that it has also been working with Australia Post and ACS to address logistical problems in mail handling centres.

70. As AFFA has not calculated these rates in the past, it has established no targets for this measure. Further, the above estimates do not address the consequence of the high levels of potential seizures being missed by quarantine operations in the mail, as such information is not available to AFFA. The ANAO suggests these analyses indicate that, for mail operations generally, and particularly for letters and packages less than 2 kg, the need for such consideration of consequences is a priority

matter. Such analysis would also inform establishment of appropriate targets for management monitoring, resource allocation and risk management purposes.

71. Analysis of the estimated 'seizure rate' in international airports is more complicated than for international mail, as passengers can exit the airport through the Red Channel or the Green Channel, and seizable quarantine material may also be disposed of in quarantine amnesty bins. At the time of the audit, AFFA only had reliable leakage data on the Green Channel exit and did not have data on quarantine material deposited in amnesty bins. The ANAO estimates, using this data, that AFFA intercepted 39 per cent of seizable material arriving at international airports in the second half of 2000 (excluding material deposited in amnesty bins). The data also show a substantial improvement from 1995, coinciding with increased funding from the quarantine reforms.

72. AFFA has subsequently collected some data over a short period which indicates that the seizure rate could increase by an estimated 8 per cent if amnesty bins were included. This adds an important dimension to the above estimates, but the ANAO notes that the analysis has required a number of assumptions which limit its reliability in the short term. Even allowing for this assessed effect of amnesty bins, the estimates suggest in excess of half of the seizable material (or 300 000 items per year) carried by international air passengers breaches the quarantine barrier.

73. The ANAO also found that there is wide variation in seizure rates⁸ between airports, ranging from an estimated 25 per cent at Cairns airport being captured, to 68 per cent for Adelaide airport. At Australia's major international airport, Sydney, an estimated 32 per cent of seizable material is captured. These differences appear to warrant further management review for the effectiveness of the systems employed.

74. Only two of AFFA's border programs had sufficient data on which to estimate seizure rates. There would be substantial advantage for management purposes in AFFA acting promptly to collect and analyse appropriate information on the other areas of border operations, since these other programs are also important in maintaining quarantine integrity. For example, a cargo shipment breaching quarantine has the potential to import an exotic pest or disease in quantities which can be distributed widely after arrival.

⁸ As discussed at paragraph 71, the ANAO estimates exclude material deposited in quarantine amnesty bins at international airports.

Achieving consistency in the application of quarantine protocols

75. AFFA has set delivery of a nationally consistent quarantine service as a high priority. To facilitate this outcome, it has updated and made widely available guidance to quarantine officers. The ANAO found that there was sound knowledge of this guidance and that, in many instances, the protocols were consistently applied. However, the ANAO also found there was marked variation between States in the rate at which shipping vessels fail inspections, which could not be explained by differences in cargo or vessel type.

76. The ANAO also found that, notwithstanding additional funding of some \$4 million to expand external container inspections to strengthen quarantine management, there were inconsistent approaches to these inspections, reducing assurance that the desired benefits were being achieved. It was also apparent that external inspections are not yet conducted on all landbridged⁹ containers, as is intended by AFFA, presenting an increased quarantine risk. AFFA advise that this is due to substantial difficulty in identifying which containers are to be landbridged, and that procedures for identifying such containers are in development. The ANAO considers that prior assessment of such implementation and procedural considerations is part of a sound approach to risk management.

Role of industry in border operations

77. Some lower-level quarantine border tasks can be done by industry through co-regulation arrangements, leading to reduced costs for the community and more targeted effort by AFFA. Since the QRC Report, AFFA has implemented a Broker Accreditation Scheme which allows over 600 brokers to assist with low-risk quarantine procedures, such as documentation checks. AFFA also has other major co-regulation projects underway in the Import Clearance, Airports and Seaports Programs.

78. Industry also has a role in quarantine management as part of the partnership approach to quarantine sought by the Government. AFFA has a network of industry based consultative committees, which has expanded since the QRC Report, to facilitate this partnership approach. The ANAO found that these arrangements provide a sound basis for the partnership approach envisaged by the QRC and the Government and that industry and other stakeholders supported the consultative committee structure.

⁹ Landbridged containers are shipped overland, by rail or road, to another container depot (usually in another city) after being landed at a shipping port.

Post-border Monitoring and Surveillance (Chapter 6)

79. Monitoring and surveillance for outbreaks of exotic pests and diseases are a key part of post-border quarantine and can provide valuable early warning of pest and disease outbreaks. Some aspects of AFFA's post-border operations were addressed as part of this audit, particularly implementation of agreed improvements to surveillance activities at wharves and depots, the Northern Australia Quarantine Strategy (NAQS), and to plant infrastructure.

80. In response to the QRC Report, the Government asked AFFA to give a high priority to wharf surveillance (which includes monitoring disposal of ship galley waste, and cargo not subject to quarantine border clearance). The ANAO found that AFFA has since implemented systematic and improved wharf surveillance in all relevant States and Territories. However, resources to improve wharf surveillance in Western Australia were only assigned by AFFA at the end of 1999–2000, notwithstanding that Western Australia has a high number of vessels landing at its ports.

81. The ANAO also found that AFFA has increased surveillance of cargo packaging at registered premises, depots and wharves. AFFA is also planning to implement co-regulatory arrangements which would allow container depot operators to undertake routine surveillance of timber packaging. Break-bulk cargo¹⁰ is a particular risk area as some 14 per cent is detected as having contaminated packaging material. AFFA proposes to manage this risk through increased surveillance.

82. NAQS is a series of programs to address quarantine risk specific to northern Australia, including proximity to Papua New Guinea. QEAC undertook a review of NAQS in 1998 and found that it had been effective in detecting and responding to major incursions. It also made recommendations aimed at improving NAQS administration. The ANAO found that there has been solid progress in implementing all recommendations accepted by AFFA.

¹⁰ Break-bulk cargo is uncontainerised cargo carried in the hull of ship.

83. The QRC Report considered greater emphasis should be given to plant quarantine, as it had been relatively neglected compared to animal quarantine issues. The Government allocated some \$4 million over four years to improve plant health infrastructure. AFFA has since established the Office of the Chief Plant Protection Officer and implemented initiatives such as trapping programs for exotic fruit fly and Asian Gypsy Moth, and a National Forest Pest Awareness Guide. AFFA has also been active in contributing to incursion management and response plans, such as Forest Generic Incursion Management Plan, Melon Fruit Fly Plan and state plans such those for fireblight and plum pox.

Management of Import Risk Analysis (Chapter 7)

Overall management and progress

84. Before commodities can be imported into Australia, the associated risks must be carefully assessed and suitable policies developed to govern their importation. The process of developing these policies is termed Import Risk Analysis (IRA). IRAs are conducted in two main ways: **routine IRAs**, which are managed by in-house teams within AFFA, and **non-routine IRAs**, which are conducted by a Risk Analysis Panel, chaired by an AFFA officer and including people with expertise in quarantine risk analysis. Twenty three out of the 24 completed IRAs have used the routine process.

85. As at December 2000, AFFA was conducting IRAs on 47 commodities and had another 150 it planned to conduct, as resources become available. It spends some \$7 million a year on managing IRAs; the ANAO estimates that, at current completion rates, each IRA costs approximately \$400 000 on average to undertake.

86. When the revised IRA process was implemented in 1998, AFFA set the target times for duration of final IRAs at 10 months for routine IRAs and 14 months for non-routine IRAs. However over 90 per cent of IRAs completed so far exceed these targets. On average, non-routine IRAs have taken around 20 months to complete and routine IRAs around 19 months. Those IRAs currently in progress are taking longer, with an average duration of over 30 months. Because of these pressures, only three new animal IRAs were started in 1999, and only one in 2000.

87. The ANAO was advised by some stakeholders that they find it difficult to plan against AFFA's work program, because deadlines are often not met. They also considered they are not kept sufficiently well informed of the progress of an IRA. In some cases, this created extra costs and inconvenience for stakeholders. AFFA has acknowledged the need to manage timelines better.

IRAs as a scientific process

88. Rigorous hazard identification and risk assessment are necessary if the risk management measures proposed in IRAs are to meet Australia's international obligations and be recognised and accepted as credible by stakeholders. The ANAO found that AFFA's management of the scientific basis for IRAs was generally sound. AFFA used appropriately skilled staff; includes relevant material in IRAs; and generally analyses and presents scientific evidence appropriately. So far, appeals on the grounds of inappropriate scientific analysis in IRAs have been unsuccessful.

89. However, stakeholders have expressed a range of concerns about AFFA's approach to managing scientific issues in IRAs. These include that, in some routine IRAs, the IRA used a relatively narrow range of scientific advice and that staff had limited direct experience of the industry under consideration. They were also concerned that the routine path provided less opportunity than the non-routine path for early input on scientific issues. These concerns were reflected to some extent in directions by IRA appeal panels in two appeals to clarify documentation on the scientific aspects of the IRAs.

90. The ANAO considers that, while the scientific basis of IRAs has generally been sound, these concerns suggest that there would be merit in considering means of seeking earlier input from stakeholders on key scientific issues (for example through discussion papers) and ensuring that routine IRAs more regularly use experts familiar with the industry under consideration. Such measures offer the prospect of increasing stakeholder confidence in IRA outcomes.

Harmonisation with international standards

91. Until recently, there was no structured internal guidance on the conduct of IRAs. As a result, IRAs have varied markedly in their layout, presentation and approach to issues such as risk, pest or disease hazards and target level of protection. AFFA has now issued internal guidance for its staff and Risk Assessment Panels to address these and other concerns. The guidelines are a comprehensive summary of risk analysis principles and practice for those involved in the process, and represent better practice in the discipline. Their use should lead to greater consistency in the approach of IRAs, and give greater assurance that the requirements of relevant international standards are met.

Achieving consistency with Government policy

92. Australia's appropriate level of protection (ALOP) is the basic policy stance set by Government and used to guide the setting of individual quarantine risk management measures. Many stakeholders considered that the concept of ALOP and the process by which it is set is not well explained by AFFA. Many also lacked appropriate understanding of the role of ALOP in the IRA process, believing that, for example the ALOP was set at a level which guaranteed that no pests enter the country.

93. AFFA's internal guidance material gives little assistance to AFFA staff on how the ALOP is to be applied in the setting of individual measures. Thus the final decision on suitable measures is somewhat subjective. A more structured approach would facilitate greater consistency and help ensure measures achieved Australia's ALOP.

94. Quarantine also has an important role in protecting Australia's indigenous flora and fauna from exotic pests and diseases. AFFA and Environment Australia have started developing a protocol for consultation between the two departments to clarify working relationships, roles and responsibilities under the legislation, but it is progressing only slowly.

Consultation, transparency and openness

95. The Government Response to the QRC Report considered that '*...if processes are open and transparent the potential for conflict is reduced*' and that it was essential that the process be conducted in a consultative manner.¹¹ AFFA has implemented several initiatives to achieve this, including: release of a public *Handbook on the IRA Process*; consulting with and seeking input from stakeholders at various points in the IRA process; maintaining a public file on each IRA, thus enabling stakeholders to examine relevant documents; and establishing an electronic stakeholder register.

96. The ANAO's advisers considered that AFFA's consultation processes were, by world standards, comprehensive and lengthy. While stakeholders agreed that the current consultation processes were markedly improved on those previously in place, they had a range of concerns about their effectiveness. The ANAO identified opportunities to strengthen the consultative process in several areas, as discussed below.

97. The decision on whether the IRA should follow the routine or non-routine path is based solely on the scientific aspects of the IRA. Notwithstanding this, routine IRAs can still deal with pest or disease

¹¹ DPIE 1997, *Australian Quarantine: A Shared Responsibility—The Government Response*, p. 24.

risks that may have dramatic impact on an industry, and involve substantial controversy over the efficacy of risk management measures. A more risk-balanced approach to choosing the IRA path could also have regard to the likely consequences of an incursion on an industry, and potential complexity or controversy on likely risk treatment options as well as the additional costs of the non-routine path.

98. AFFA treats all stakeholders uniformly in order to achieve procedural fairness in the IRA process. For example, consultations are open to all stakeholders. Local industry groups advised the ANAO that the presence of overseas stakeholder producers in such consultations restricted their ability to divulge commercially sensitive information. They considered that the opportunity to provide such information directly to Risk Analysis Panels would result in a stronger information base for the IRA and potentially better quarantine outcomes. AFFA's procedures do, in practice, allow the submission of confidential information. However, the *Handbook* and related information could give greater clarity and assurance on how such information will be treated, thus alleviating stakeholder concerns.

99. Consultation periods are applied strictly by AFFA, notwithstanding that there are often major delays and uncertainties in the release of documents by AFFA. For example, in some IRAs important documents such as lists of the pests to be considered, or other relevant technical reports have not been available at the start of the consultation period.

100. Despite the importance of effective consultation to the IRA process, there was no explicit guidance to AFFA staff on the aims, approach and desired outcomes of the consultation process. The ANAO also found that stakeholders were often unclear about the purpose of a particular consultation, and about how their views would be taken up. Clearer guidance for staff and stakeholders on the aims of the various parts of the consultation process would support a more consistent approach to consultation, provide stakeholders with a clearer understanding of the consultation process, and reduce the likelihood of misunderstandings and controversy.

101. The first point at which stakeholders can have input on the substantive content of an IRA is on the draft IRA in the routine process and on the issues paper (which sets out the hazard assessment) in a non-routine IRA. Industry and State/Territory stakeholders consulted by the ANAO stated that they would have more confidence in the IRA process if they had an opportunity to identify at the start of the IRA what they considered to be, for example, the major pests and hazards, or important

areas in risk management that the IRA should address. AFFA has begun to respond to some of these concerns in recent IRAs but has not made such approaches a standard part of its consultation process.

Management of Funding for Implementing the Government Response to the QRC Report (Chapter 8)

102. The extra funds given to AFFA to implement the Government Response to the QRC Report represented approximately 15 per cent of the total quarantine budget (including cost recovered funding) for 2000–2001. The Government allocated the funds to specific recommendations, or a particular group of recommendations.

103. AFFA decided not to track expenditure on each recommendation individually or to use an activity-based accounting system for this purpose. As well, it did not conduct an explicit cost-benefit analysis in making this decision. AFFA's financial monitoring arrangements were, instead, that funds for new activities were separately identified and tracked by recommendation, or by group of recommendations; additional funds for existing activities were estimated and monitored through spreadsheets; or derived indirectly through monitoring changes in program expenditure. This made the process of collating financial information by AFFA, and the ANAO's examination of this information, somewhat involved and time-consuming, and limited the extent to which the ANAO was able to test and verify the financial information. Where tests were able to be conducted, the information was found to be valid.

104. Based on this information, the ANAO found that funds allocated by the Government in response to the QRC Report were appropriately expended. Over the first three years there was a small underspend, which AFFA plans to address by the end of the program.

105. From an accountability perspective, it is highly desirable that agencies are able to provide appropriate and reasonable assurance to Parliament and other stakeholders that specific allocations have been spent as directed by the Government. While implementation of separate accounting by recommendation would have aided transparency and accountability, AFFA's approach overall was not unreasonable.

Recommendations

Set out below are the ANAO's recommendations with Report paragraph references and AFFA's abbreviated responses. More detailed responses are shown in the body of the report. The ANAO considers that AFFA should give all recommendations equal priority.

Recommendation No.1
Para. 3.29

The ANAO recommends AFFA ensures that resource allocation, cost recovery and risk treatment decisions across all modes of entry and the quarantine continuum are based on a systematic and integrated risk management framework, including appropriate strategies to treat and manage quarantine risk. This requires both short and long term measures to provide:

- information that supports comparative assessment of risk and risk treatments;
- appropriate analysis of consequences in risk assessment; and
- proper monitoring and review of the effectiveness of risk treatments.

AFFA response: Agreed.

Recommendation No.2
Para. 3.49

The ANAO recommends that, in order to ensure the highest risk pathways are subject to appropriate quarantine treatment, AFFA takes early action to ensure that program risk profiles are:

- based on comprehensive analysis of data on the incidence of quarantine risk material;
- applied effectively to all incoming goods and passengers; and
- regularly reviewed to ensure they remain effective at directing effort at the border.

AFFA response: Agreed.

Recommendation No.3
Para. 4.27 The ANAO recommends that, in order to ensure appropriate management of quarantine risk offshore, AFFA strengthen its management of pre-border cargo activities by:

- clearly articulating government policy directions in operational targets and criteria to guide the use of pre-border arrangements; and
- where pre-border strategies (such as certification) are found to be unreliable, AFFA act promptly to ensure quarantine risk is effectively managed.

AFFA response: Agreed.

Recommendation No.4
Para. 5.51 The ANAO recommends that, in order to effectively support management decision making and reporting to Parliament and other stakeholders, AFFA establish more appropriate and useful effectiveness indicators for each border program (and for important elements within each program) which should:

- address the likelihood of detecting seizable material arriving in Australia through measures such as the 'seizure rate';
- address the risk consequence of quarantine items escaping detection; and
- include appropriate performance targets.

AFFA response: Agreed.

Recommendation No.5
Para. 7.22 The ANAO recommends that, to improve the transparency in the treatment of science in IRAs, AFFA consider:

- encouraging early discussion and agreement of scientific issues by means such as issuing discussion papers that focus on hazard identification and risk assessment; and
- arranging adequate access to experts familiar with the industry under consideration.

AFFA response: Agreed.

Recommendation No.6
Para. 7.37 The ANAO recommends that AFFA consider more effective means of communicating with stakeholders the concept, definition and application of Australia's appropriate level of protection in order to facilitate stakeholder understanding of the IRA process and achieve better outcomes.

AFFA response: Agreed.

Recommendation No.7
Para. 7.67 The ANAO recommends that AFFA:

- give consideration to the costs and benefits of including the consequences of pest and disease incursions in the criteria for use of the non-routine process;
- ensure that the consultation process allows provision of commercially sensitive information, while remaining consistent with Australia's WTO obligations;
- develop and promulgate guidelines on the purpose and conduct of consultation in the IRA process; and
- seek stakeholder views on the major issues or considerations at the start of the IRA.

AFFA response: Agreed.

Recommendation No.8
Para. 7.82 The ANAO recommends that AFFA consult with relevant State/Territory agencies on the priority of IRA applications.

AFFA response: Agreed.

Audit Findings and Conclusions

1. Introduction

This chapter describes the role of quarantine and how it is administered. It also sets out the objectives and methodology of the audit.

The importance of quarantine

1.1 Australia is fortunate to have an environment which, compared to other countries, is relatively free of many harmful pests and diseases of animals, plants and humans. This favourable health and quarantine status provides a substantial economic advantage to Australia:

- the gross value of Australian agricultural production is \$28 billion a year, of which \$22 billion is exported; and
- a clean, green status benefits Australians as a whole through protecting the natural environment and reducing costs to the agricultural industries.

1.2 Exotic pest or disease incursions can also be expensive to control. For example, the outbreak of papaya fruit fly near Cairns in 1995 involved an estimated response cost of around \$34 million, caused major disruption to the marketing of nearly all fruit crops from North Queensland, and cost growers up to \$100 million.

Administration of quarantine

1.3 The Department of Agriculture, Fisheries and Forestry—Australia (AFFA) is responsible for the delivery of animal and plant quarantine on behalf of the Commonwealth of Australia. Under section 8B of the *Quarantine Act 1908* the Secretary of AFFA holds the appointments of Director of Animal Quarantine and Director of Plant Quarantine.

1.4 AFFA's quarantine business has a budget of approximately \$89.5 million for 2000–2001, funded by income from cost recovery from industry, the Passenger Movement Charge,¹² and Commonwealth budget allocations.

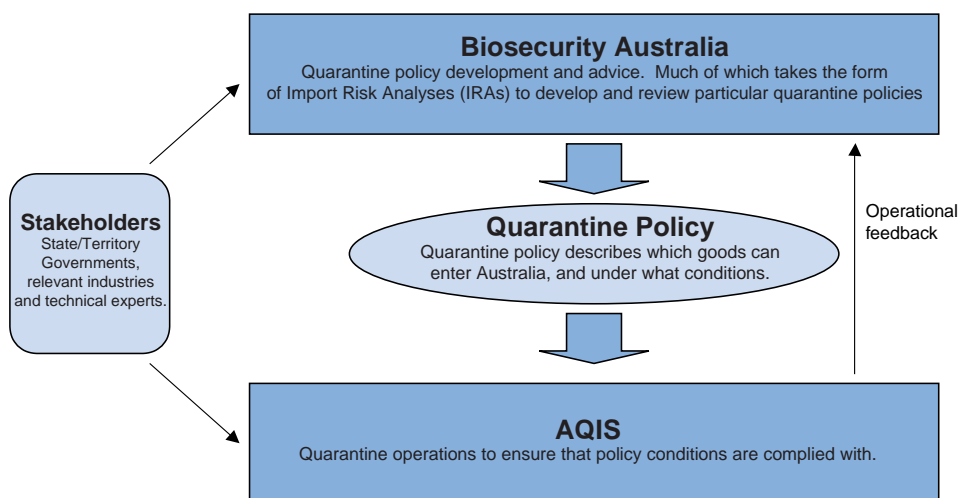
¹² The Passenger Movement Charge (PMC) is levied on departing passengers and is designed to recover the notional cost of Customs, Immigration and Quarantine processing of incoming and outgoing passengers.

1.5 The administration of quarantine (see Figure 1) is organised into:

- developing quarantine policy, the responsibility of Biosecurity Australia; and
- quarantine operations, the responsibility of the Australian Quarantine and Inspection Service (AQIS).

Figure 1

Administration of quarantine



Quarantine policy

1.6 The risks to Australia’s quarantine status are managed through quarantine policy which describes which animals, plants, genetic material and other products can be brought into Australia, and under what conditions. Quarantine policy is bound by the World Trade Organisation (WTO) Agreement on Agriculture, which prohibits the use of agriculture-specific non-tariff measures to distort trade, and the Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement), which prohibits the use of unjustified food safety and quarantine requirements to protect domestic producers from international competition.

1.7 Under the SPS Agreement, Governments have the right to impose restrictions on international trade where it is necessary to protect human, animal or plant health from certain risks. In employing a protective measure, Governments need to be able to demonstrate that there is scientific evidence of potential animal, plant or human health risks by:

- using internationally developed standards, guidelines and recommendations; or
- demonstrating that measures are based on a scientific assessment of

the potential health risks, where standards do not exist or a government chooses not to use them.

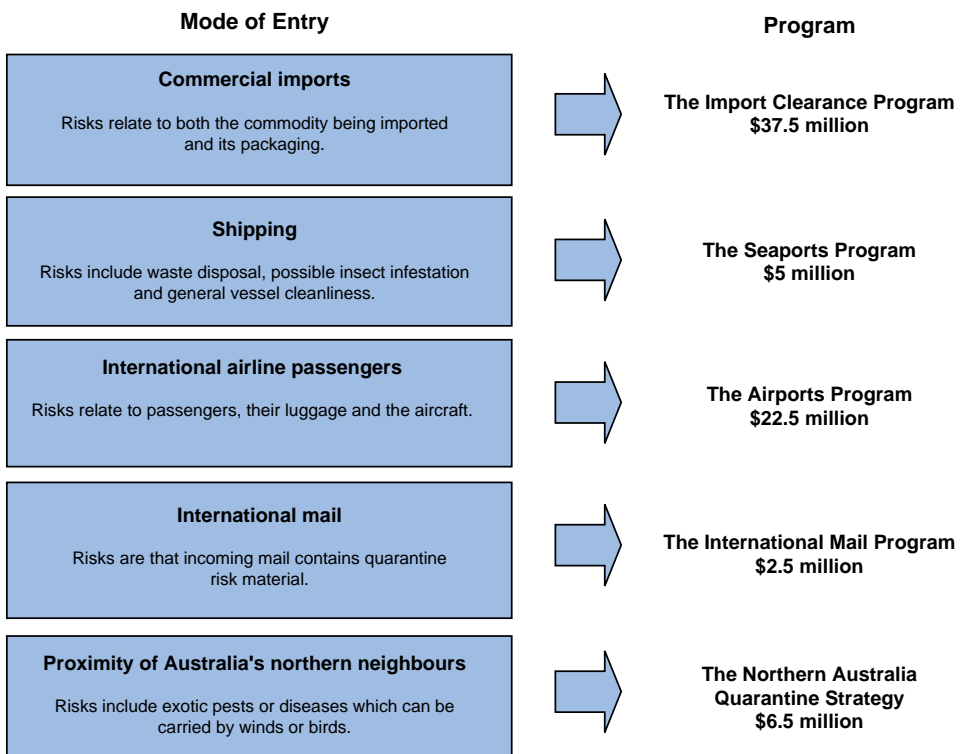
1.8 Quarantine policy is recorded in the Quarantine Proclamation, which lists goods prohibited in Australia unless accompanied by appropriate permits from AQIS. Permits specify the quarantine treatments required to bring a product into Australia. Goods not accompanied by permits, or failing to have completed all quarantine treatments specified on the permit, can be re-exported or in some cases treated on arrival before being released from quarantine.

Quarantine operations

1.9 AQIS is responsible for managing quarantine operations including clearing, seizing or treating goods arriving from overseas which are subject to the quarantine proclamation and permits. These operations are aligned with the key modes of entry for quarantine risk material (see Figure 2).

Figure 2

Key AQIS operational programs¹³



¹³ Other operational programs include the Quarantine Detector Dog Program (which provides dogs for the other programs), the Ballast Water Program, and the Animal and Plants Programs. The audit focussed on the key programs listed above, as well as Biosecurity Australia.

1.10 AQIS is also responsible for managing animal and plant quarantine stations, along with certain inspections and certification of Australian exports (particularly meat) to ensure they meet the sanitary and phytosanitary conditions required by the importing country.¹⁴ These functions were not within the scope of the audit.

The Quarantine and Exports Advisory Council

1.11 In managing quarantine, AFFA is assisted by the Quarantine and Exports Advisory Council (QEAC), which advises the Minister for Agriculture, Fisheries and Forestry on quarantine and export inspection matters. QEAC's terms of reference are to:

- advise on quarantine and export services policy issues and strategic directions;
- oversee AFFA's implementation of Government decisions on the Quarantine Review Committee (see paragraph 1.16);
- provide advice on matters referred by the Minister;
- act as a focal point to ensure broad-ranging consultation between AFFA, industry and stakeholders on quarantine;
- provide advice on the effectiveness of quarantine delivery; and
- help AFFA evaluate its performance with respect to quarantine.

1.12 QEAC is supported by a Secretariat within AFFA and often works cooperatively with AFFA officers in examining particular issues. It has taken an active role in quarantine policy development and service delivery and has reviewed major programs such as the Northern Australia Quarantine Strategy. AFFA regularly advises QEAC on all aspects of its quarantine operations. The Chair and members of QEAC also sit on the import risk analysis appeal panels that hear appeals against import risk analysis decisions.

Inter-governmental and inter-agency arrangements for quarantine

1.13 Some quarantine operations are undertaken by other agencies on behalf of AFFA. The Australian Customs Service (ACS) undertakes primary screening of international mail and international airline passengers, and also shares some of its IT systems with AFFA.¹⁵ Australia Post provides facilities for AQIS quarantine operations in international

¹⁴ Sanitary and phytosanitary conditions are all import conditions related to human, animal or plant health.

¹⁵ A 1990 Memorandum of Understanding between AQIS and ACS formalises an arrangement by which ACS is authorised to perform certain routine quarantine clearance processes at the border.

mail centres. Commonwealth quarantine border operations in Western Australia, Tasmania and the Northern Territory are undertaken by the States/Territories Governments. Under these arrangements the Commonwealth pays the State or Territory to provide these services.¹⁶

1.14 Monitoring and surveillance, which provide valuable early warning of pest and disease outbreaks, is mostly (with the exception of NAQS) conducted by States/Territories.¹⁷

1.15 A 1995 inter-governmental Memorandum of Understanding requires the State/Territory Governments to consult fully with the Commonwealth before implementing sanitary or phytosanitary measures which could inhibit trade into Australia, or which may not conform to the WTO SPS Agreement.

Reform of quarantine

1.16 There has been wide-ranging and ongoing interest by Parliament and other stakeholders which has resulted in a number of reviews of quarantine (see Appendix 1). The most recent comprehensive review of quarantine was conducted by the Australian Quarantine Review Committee (QRC) in 1996. The QRC identified a range of concerns about the state of quarantine, including:

- politicisation of the IRA process, and an inability to achieve common ground for deciding issues on scientific merit;
- the impact of rapid increases in the volume of trade on border control measures;
- a lack of infrastructure to support plant health quarantine;
- a lack of performance measures for quarantine;
- inadequacy of x-ray and detector dog utilisation;
- inadequacy of the major systems used to clear low value air cargo; and
- lack of a consistent, data based approach to managing risk at the border.

¹⁶ The terms and conditions of these arrangements are set out in resource agreements between the Commonwealth and the governments of Western Australia, Tasmania and the Northern Territory.

¹⁷ The term 'monitoring' refers to the passive collection of data on Australia's current animal and plant health status, while 'surveillance' involves active measures to detect new pest and disease incursions.

1.17 The extent and impact of these deficiencies were not quantified by the QRC. However, the QRC considered that the effectiveness of quarantine was less than necessary to protect Australia's unique plant and animal health status. It concluded that a fresh approach was needed if Australia's quarantine policies and programs were to continue to meet the expectations of the Australian community.

1.18 The Government endorsed most of the QRC's recommendations and established key themes to underpin management of Australia's quarantine services, including:

- managed risk, based on science—quarantine decisions (particularly those resulting from an IRA) must be based on scientific evaluation of whether risk can be managed to an acceptable level;
- quarantine needs to be seen as a continuum—involving pre-border measures to reduce the threat of entry, well targeted border controls, and post-border activities such as monitoring and surveillance to detect incursions at an early stage;
- community responsibility—while the Commonwealth Government has a clear leadership role, the State/Territory Governments, industry and the wider community have important roles to play;
- a more consultative approach to quarantine policy setting and decision making is required—this is particularly relevant to the IRA process;
- improved external input to quarantine policy—QEAC was established to fulfil this role;¹⁸ and
- improved plant and aquatic infrastructure—to enhance capacity in plant and aquatic animal quarantine.

1.19 The Government committed additional funds of \$76 million over four years, commencing in 1997–1998, to implement some of the QRC's recommendations, as summarised in Table 1.¹⁹

¹⁸ More complete terms of reference for QEAC are at paragraph 1.11.

¹⁹ Of this, \$50.7 million was to be provided by the Government and \$25.3 million was recovered from industry through fees and charges for quarantine services. For example, AFFA recovers costs for quarantine inspection and treatment from the importing community and Australia Post.

Table 1
Additional expenditure for quarantine reforms²⁰

	<i>1997–98</i> \$m	<i>1998–99</i> \$m	<i>1999–00</i> \$m	<i>2000–01</i> \$m	<i>Total</i> \$m
Enhanced Border Activities	7.948	10.959	10.146	9.722	38.775
Improved Import Risk Analysis Processes	1.501	3.625	3.825	4.289	13.240
Community Awareness, Education & Advisory Structures	1.509	1.972	2.334	2.459	8.274
Fish Health Infrastructure	1.021	1.937	1.861	1.875	6.694
Plant Health Infrastructure	0.653	0.771	1.334	1.347	4.105
Emergency Preparedness & Response	2.072	0.578	0.475	0.479	3.604
Offshore Quarantine Preparedness	0.295	0.318	0.345	0.349	1.307
Total Funding	15.000	20.160	20.320	20.520	76.000
Recoverable from industry through fees and charges	4.712	7.024	6.997	6.616	

Source: AFFA

The Audit

Audit objective and scope

1.20 The objective of this audit was to assess AFFA’s management of plant and animal quarantine services, and the implementation and impact of the Government Response to the QRC Report. The audit in particular assessed: the setting of quarantine priorities through assessing and managing risk; management of the continuum of quarantine operations; and management of Import Risk Analyses to deliver and review quarantine policies. Stakeholder consultation and advisory processes were also assessed in addressing these issues.

1.21 The audit focussed on the key quarantine operations programs and management of the IRA process. Together, these account for around \$52 million, or two-thirds, of the total additional funding allocated by Government in response to the QRC Report.

²⁰ Initiatives to improve border operations are discussed in Chapters 3 to 6 of this report; import risk analysis in Chapter 7; and awareness raising in Chapter 4.

1.22 The audit did not address AFFA's role in emergency pest management, nor its cost recovery processes, as these have both been the subject of recent ANAO audits.²¹ Also excluded were the Imported Foods Program and the human quarantine function performed by AQIS as the agent of the Department of Health and Aged Care.

1.23 The recent outbreak of Foot and Mouth Disease in the United Kingdom and, subsequently, Ireland and Europe, occurred after the completion of audit fieldwork and analysis. Consequently, the audit does not cover the additional quarantine measures taken in response to the outbreak. However, the preliminary findings on key issues relating to the effectiveness of quarantine operations were progressively provided to AFFA from November 2000, so that management could consider any appropriate corrective action. As advised by AFFA in its response to the audit below,

Noting the areas for improvement identified by the ANAO and in the context of outbreaks of foot and mouth disease in Europe together with other emergent quarantine threats to Australia, the Government has decided to further strengthen quarantine border operations and associated arrangements. This involves additional funding for AFFA of \$289 million over four years, allocated in the 2001–02 Budget.

Audit methodology

1.24 The audit was conducted in accordance with ANAO auditing standards. The cost of the audit to report tabling was \$339 000.

1.25 The audit was based upon criteria drawn from the Government Response to the QRC Report and recognised better practice. The audit methodology involved:

- file examinations, key document reviews and inspections of AFFA's quarantine facilities and operations in a number of regions and central office;
- interviews with AFFA staff;
- discussions with stakeholders;
- review of performance management and information management systems and measures;
- consultation with other agencies, including the Department of Foreign Affairs and Trade, the Australian Customs Service, and State/Territory Government agencies; and
- review of international literature on quarantine.

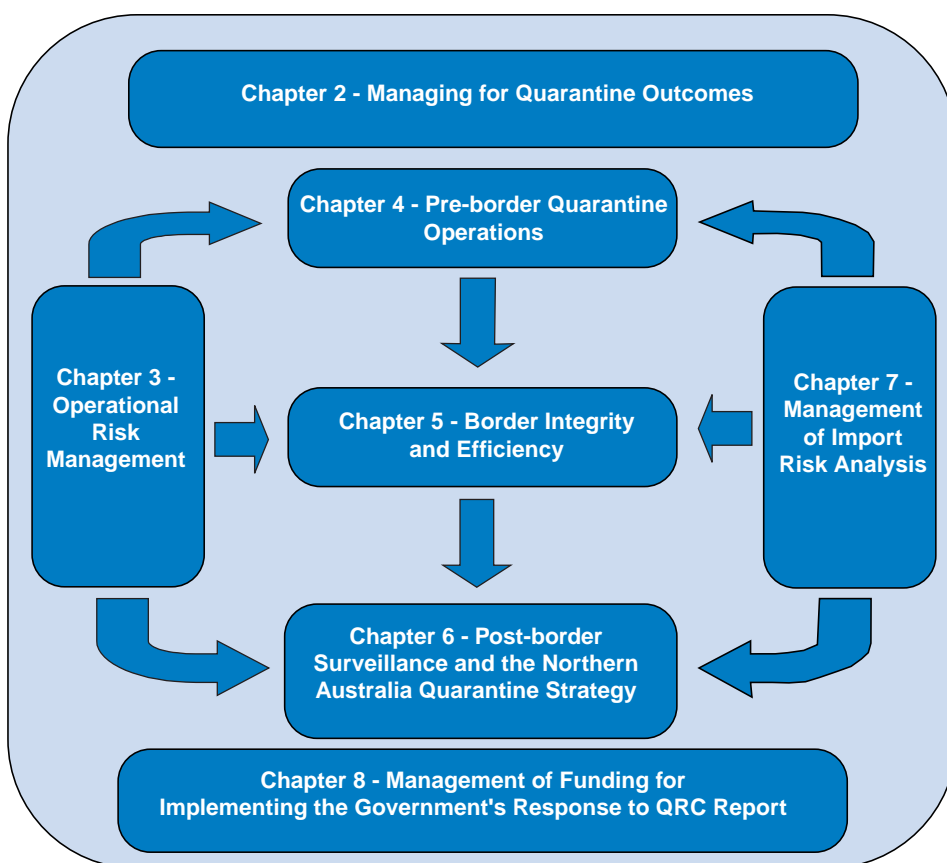
²¹ Auditor-General Report No.9 1999-2000, *Managing Pest and Disease Emergencies* and Report No.10 2000-2001, *AQIS Cost Recovery Systems*.

1.26 An AFFA officer experienced in quarantine program management was seconded to the ANAO to assist in the audit. Two recognised authorities in quarantine policy and operations were engaged to provide expert input, including advice on audit approach, findings, conclusions and recommendations. The advisers were Professor Roger Morris, of Massey University, New Zealand, an authority in import risk analysis, and Mr Andrew Turner, an authority in quarantine operations, formerly Chief Veterinarian of Victoria.

Report structure

The structure for this report is summarised in Figure 3.

Figure 3
Report structure



2. Managing for Quarantine Outcomes

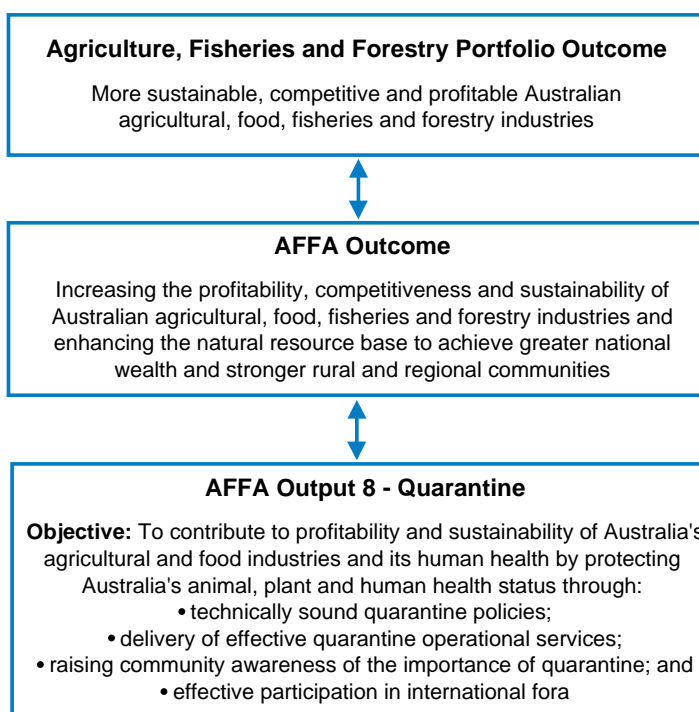
This chapter examines AFFA outcomes and outputs and related performance indicators for quarantine.

The outcome and output hierarchy

2.1 AFFA's planned outcomes, outputs and performance measures for quarantine are set out in its Portfolio Budget Statements (PBS) as described in Figure 4 and Table 2.²² This outcome and output framework is supplemented by lower-level outcomes, outputs and performance measures identified in the business plans of relevant programs.

Figure 4

The outcome and outputs for quarantine, 2000–2001



Source: AFFA 2000–2001 PBS

²² The QRC Report recommended the development of 'objectives' prior to the implementation of the new 'Outcomes and Outputs Framework' and the resulting changes in accepted terminology. AFFA still uses the term 'objective' to describe some lower level or intermediate outcomes in its planning framework. Accordingly, the terms 'outcomes' and 'objectives' are both used in this report to describe key outcome-oriented goals of AFFA, a business unit or activity.

2.2 The performance indicators for the Quarantine output are summarised in Table 2.

Table 2

AFFA performance indicators for the quarantine output

<i>Overall effectiveness indicator</i>	
<i>Measure</i>	<i>Indicator</i>
Australia's agricultural and food industries and human health status is protected	Zero increase in the rate of exotic pest/disease establishments attributable to breaches of quarantine
<i>Other indicators</i> ²³	
Technically sound quarantine policy advice	<i>Effectiveness:</i> No new exotic pest and disease detections attributable to quarantine policy decisions
Effective quarantine operational services	<i>Effectiveness:</i> <ul style="list-style-type: none"> • Number of prohibited goods intercepted at the border • Number of pest and disease detections at the border
Raising community awareness	<i>Effectiveness:</i> Increase in public awareness of quarantine
Effective participation in international fora	<i>Effectiveness:</i> Influence in international arena to advance Australian interests as measured through progress in relation to identified key issues

Source: AFFA 2000–2001 PBS

Overall effectiveness indicator for quarantine

The indicator was not consistently understood

2.3 The ANAO found that AFFA's overall quarantine effectiveness indicator was not consistently described in key accountability documents, and that there was considerable misunderstanding within AFFA over the meaning of the key term '*establishments*.' The PBS describes the overall indicator for the effectiveness of quarantine as '*zero increase in the rate of exotic pest/disease establishments attributable to breaches of quarantine*.' However, the 1999–2000 AFFA Annual Report states that the effectiveness target is '*zero increase in the rate of incursions...*'. The ANAO found that the terms *establishments/incursions* were subject to markedly different interpretations at senior levels within different parts of AFFA.

²³ These indicators are discussed in the relevant chapters.

2.4 Inconsistent understanding, and application, of the key performance measure for quarantine undermines the effectiveness of AFFA's management of performance, as well as its accountability to Parliament for that performance.

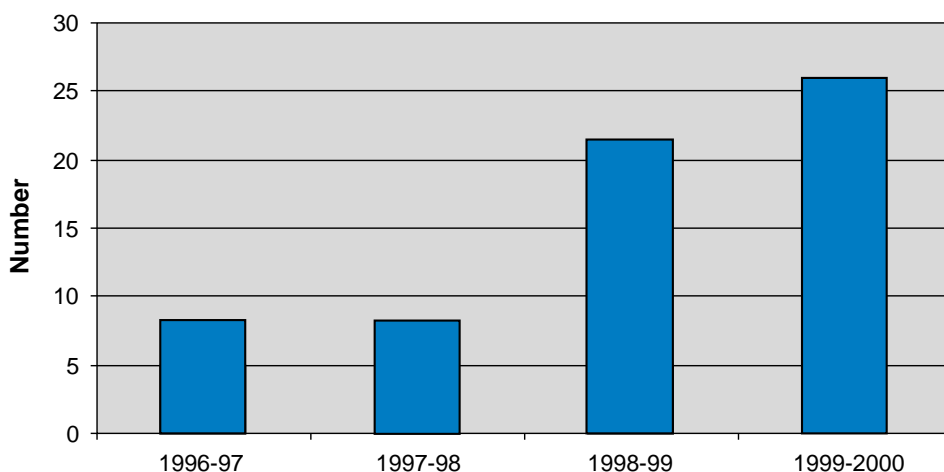
2.5 Since the completion of ANAO fieldwork AFFA has advised that it has acted to resolve confusion over these terms by reconsidering the definitions. It has advised that the terms *incursions* and *establishments* may be used interchangeably. They are now defined as the perpetuation of a pest or disease in an area, for the foreseeable future, after its entry into Australia.

Results achieved

2.6 Notwithstanding that AFFA's target for its overall effectiveness indicator is 'zero increase in the rate of exotic pest or disease incursions as a result of breaches in quarantine', AFFA does not report on whether there has been an increase or decrease in incursions. It only presents data for the most recent financial year in its Annual Report.

2.7 The ANAO found that, in fact, there has been a marked increase over recent years, as summarised in Figure 5.

Figure 5
Reported incursions 1996–1997 to 1999–2000



Source: AFFA

2.8 Agencies are required to report fully to Parliament against the indicators and targets set out in their PBS. In this case, the trend would seem to warrant more explicit reporting and analysis. For example, the increase in the number of reported incursions may be the result of less effective quarantine arrangements (policy setting, operations or both);

improved surveillance (including identification and recording) by State/Territory agencies; or increasing presentation of quarantine risk material at the Australian border. The changes may also reflect breaches in quarantine occurring some years previously, as pests/diseases can often lie latent or undetected for some time. These are factors which warrant management attention, assessment and advice to stakeholders, particularly the Parliament. AFFA advised that it considered the increase in incursions to be the result of much greater emphasis on systematic recording and reporting of suspected incursions, due to increased attention to surveillance flowing from the Government Response to the QRC Report.²⁴

2.9 The ANAO considers that there would be considerable benefit in AFFA reviewing its key effectiveness indicator for the quarantine output to ensure that it is appropriately reported and explained, including trend data to allow assessment of effectiveness and contributing factors over time.

Other high-level indicators for quarantine

2.10 Other performance indicators described in Table 2 are addressed elsewhere in this report²⁵ as follows:

- raising community awareness—Chapter 4;
- effective quarantine operational services—Chapter 5; and
- technically sound quarantine policy advice—Chapter 7.

²⁴ AFFA also advised that the increased surveillance initiatives include formal reporting for suspected plant pests replacing ad-hoc arrangements in place up to the late 1990's. There are also often difficulties in accurately determining whether a detection is a new incursion, native or endemic pest.

²⁵ Australia's participation in international fora was not part of this audit's objectives, which focus on quarantine operations and the IRA process.

3. Operational Risk Management

This chapter examines AFFA's approach to operational risk management within key quarantine operations programs, as well as across programs and the quarantine continuum.

Introduction

3.1 Management of quarantine involves assessing and managing quarantine risk. In this respect, even more so than for most agencies, risk management is the core business of AQIS. There are two key dimensions in risk managing the quarantine function:

- determining the risk posed by individual products or substances and deciding whether these goods should be prohibited or subject to specific treatments (in order to achieve the desired level of protection). This is the role of the IRA process and quarantine policy formulation, and is discussed further in Chapter 7; and
- efficiently allocating available quarantine detection and inspection resources so as to minimise Australia's exposure to untreated quarantine risk material, referred to in this report as operational risk management. Operational risk management is primarily about understanding, and treating, varying risks between, for example, international airports and international mail, or even between individual passengers.

3.2 The importance of a robust operational risk-management framework in determining risk treatments and resource allocation has been identified in several reviews, as set out in Figure 6.

Figure 6

Risk based resource allocation has been a major theme in a series of reviews of quarantine

- The Lindsay Review (1988) commented that *"one of the first things a quarantine service must know is how effective its operations are at assessing and addressing risk."*²⁶
- In its 1992 Efficiency Audit of AFFA, the ANAO considered that there was scope for more work to assess operational risk and a need for AFFA to place greater emphasis on risk factors in allocating agency resources.²⁷

continued next page

²⁶ DPIE 1988, *Australian Quarantine Requirements for the Future: report of the Quarantine Review Committee*, Australian Government Publishing Service, Canberra, p. 35.

²⁷ Auditor-General Report No.35 1991-92, *Australian Quarantine Inspection Service*.

- The 1996 QRC report recommended ‘the use of risk analysis based on comprehensive detection databases and information systems to target resource allocation to increase the efficiency and effectiveness of border activities.’²⁸ The recommendation was accepted in principle by the Government but there was no specific allocation of funds.

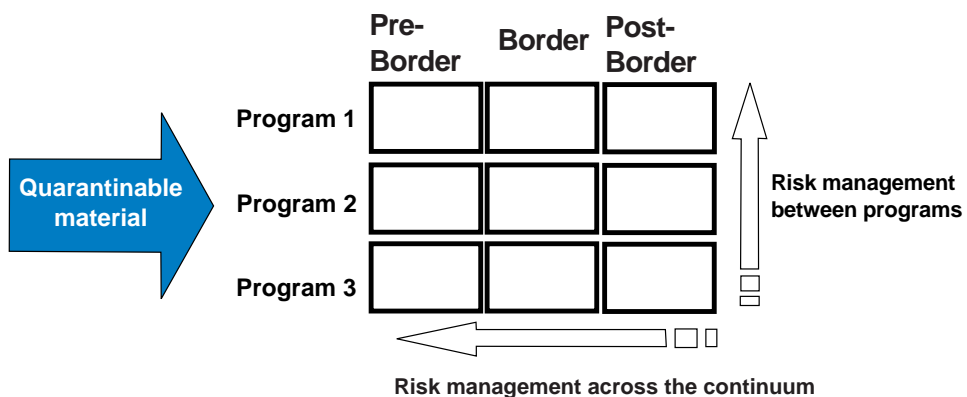
3.3 AFFA faces a complex task in managing quarantine risks, as the risk posed by a particular commodity can be difficult to estimate and can vary according to when, where, and in what volume it enters the country. AFFA has also advised that as most programs operate on a cost-recovered basis, implementing and changing risk treatments and resource allocations can be complicated and take time, requiring negotiations with relevant industries in order to raise the revenue to fund the activity.

3.4 The ANAO considers that these complexities reinforce the value of comprehensive operational risk assessment to inform the Government, Parliament and industry on risk assessed resource requirements. While factors other than risk, such as industry desire for reduced service times will also be pertinent, assessment of quarantine risk and appropriate treatment options should underpin expenditure decisions in the different border programs.

3.5 This chapter assesses AFFA’s ability to manage operational risk across quarantine operations, including between programs, across the quarantine continuum, and within operational programs. Figure 7 illustrates the challenges that AFFA faces in managing risk in an integrated way.

Figure 7

Risk management matrix: border programs and the quarantine continuum



Source: ANAO analysis and representation

²⁸ Nairn M.E., Allen, P.G., Inglis, A.R. and Tanner, C. 1996, *Australian Quarantine: A Shared Responsibility*, Department of Primary Industries and Energy, Canberra, p. 118.

Operational risk management processes

AFFA's risk management framework

3.6 AFFA has recognised the need for its operations to be soundly risk-based. For example, AQIS has in place a Business Risk Management Policy, and each program has a risk management plan that complements the program business plan. Program risk management plans are drawn together, on the basis of a standard template, into a divisional risk plan that assesses risks across all quarantine operations. Business risks rated as being 'high' or above are monitored biannually by the AQIS Business and Finance Committee.

3.7 AFFA also has a Quarantine Output Plan which identified three key strategic risks to quarantine in 2000–01:

- the Sydney Olympics;
- financial sustainability of programs due to external influences; and
- Australia's military involvement in East Timor.²⁹

3.8 The treatment of these risks is set out in individual program plans. For example, the Airports Program sought additional funding to manage increased passenger numbers arriving for the Olympics.

Uneven application of risk concepts

3.9 The ANAO found that, notwithstanding AFFA's apparently robust risk management structure and guidance, there was uneven application of risk concepts, with potential consequences for the management of outcomes. For example, the ANAO found that:

- some programs assessed the consequences of a major pest or disease incursion as 'extreme', while others assessed the consequences of the same incursion as 'very high', notwithstanding that the impact of an incursion is unlikely to depend on the route of entry;
- programs implemented controls to manage the same risk of incursions to different levels of residual risk. For example, the import clearance program considered that a residual risk rated as 'major' to be acceptable, whereas this level of residual risk was not acceptable in seaports and airports. There was no clear reason apparent for accepting varying levels of residual risk between programs; and
- application of AFFA's risk approach requires identification and assessment of the risk of disease incursion. The International Mail Program, unlike other programs, does not do this.

²⁹ This is a particular quarantine risk as there are large numbers of personnel and military equipment (which may become contaminated with mud or seeds) travelling between Australia and East Timor.

3.10 Such limitations in the identification and assessment of risks weakens assurance that management efforts and treatment action appropriately address quarantine risk. AFFA's risk management would be more soundly based if supported by more consistent application.

Management of risk across programs and the quarantine continuum

3.11 AFFA has identified that assessing and managing quarantine risk between border programs and across the quarantine continuum requires:

- consistent data collection methodologies/definitions to enable assessment and comparison of the *likelihood* of breaches across the different modes of entry;
- a methodology for assessing the relative risks of different quarantinable items, to determine the *consequences* of breaches; and
- a process for *allocating quarantine effort and treatments* based on assessment of relative risk.

Data collection to assess likelihood of breaches

3.12 AFFA has implemented several new data systems to guide effort within its quarantine operations programs. These include a new mail seizures database and an improved airports management system. These systems have resulted in a marked improvement in the range and quality of data available to AFFA for management and reporting purposes.

3.13 Notwithstanding these improvements, the ANAO found that there are inconsistent data definitions, varying data collection methodologies, and data system incompatibilities between the programs. This limits the extent to which the data is used to inform resource allocation and risk treatment decisions across different modes of entry.

3.14 Quarantine risk material presents differently through different modes of entry (for example, airline passengers, international mail, imports or shipping) and, as a consequence, AFFA quarantine operations programs each define and record different quarantine actions at the border. For example, 'seizures' are used to describe the key quarantine risk treatment in airports and mail, while other programs record 'failures' or 'remedials'. Measuring and defining different quarantine risk treatments differently in quarantine operations programs means that AFFA is unable to directly compare data on quarantine across the different operations programs.

3.15 The ANAO also found that at the time of the audit the Airports Program recorded goods seized from a passenger under categories describing the type of good intercepted. Thus, where fruit and dairy items are seized from a passenger, this was recorded as two seizures. By contrast, the International Mail Program recorded all goods intercepted in one mail article as one seizure. The ANAO also found that the categories used to describe the type of product being seized were not consistent between the two programs. Thus, even though the terminology was the same, the methodology for counting and recording seizures was different, making even straightforward 'seizure' data comparison between the programs difficult, and preventing more sophisticated assessment of performance in mitigating quarantine risk. AFFA has advised that it has now altered its procedures for recording of seizures to ensure consistency between the two programs.

3.16 Comparing data on quarantine risk across programs is further hampered by the use of different IT systems to collect and manage quarantine data for each program, and incompatibility between these systems. For example, the key database for recording the interception of pests and diseases is not compatible with border management systems such as the AQIS Import Management System. As a result, analysis of pest and disease interceptions by entry pathways is not possible. AFFA has recently commenced design work to enable linking of the data in these two systems.

3.17 System incompatibility is also evident in the recently developed International Mail Seizures Database and Airports Management System, which do not facilitate direct comparison of information on passengers and mail and the risk that seized products pose to Australia.

Assessing the consequences of breaches

3.18 A risk-based approach includes assessing the consequences of possible breaches. This is a complex task that requires assessment of many combinations of host, contaminant, entry point and the consequences of entry, establishment and spread of a disease or pest. For example, the entry of exotic fruit fly in the luggage of a passenger into Hobart presents a lower quarantine risk than a container of fruit infested with exotic fruit fly arriving in Cairns, and quarantine treatment and effort should reflect this.

3.19 Currently, AFFA quarantine operations programs data collections do not support such analysis, categorising quarantine risk items into just two categories, depending on their risk consequence:

- prohibited (seizable). These items are considered highest risk and are prohibited from entering Australia; and

- non-prohibited (treated or released). These items are inspected or treated and allowed entry.

3.20 AFFA acknowledges that this simple categorisation is inadequate for the purpose of analysing quarantine risk across different modes of entry, and has commenced work to improve consequence analysis to recognise important factors such as: the country of origin; species involved; degree of processing; and an assessment of the likelihood and consequence of a pest or disease outbreak associated with the type of product. This is discussed further at paragraph 3.24.

Allocating resources to reflect risk

3.21 The ultimate aim of a risk-managed approach to quarantine is to be able to direct resources and treatments according to their impact on risk. However, AFFA resource allocation and risk treatment decisions are currently aimed at addressing risks assessed within individual quarantine operations programs. It does not have a fully encompassing risk-based process for allocating resources and determining quarantine risk treatments across its different operations (and therefore the different modes of entry for quarantine risk material) and across the quarantine continuum. Hence, there is little assurance that quarantine risk will be effectively, and consistently, managed across the different modes of entry for quarantinable material. As discussed above, limitations in the application of AFFA's risk management framework, data on quarantine risk, IT system compatibility and analysis of risk consequences all limit AFFA's approach in developing a sound risk-based approach to allocating resources across its quarantine operations.

3.22 AFFA has emphasised that a particular challenge in altering the allocation of resources and risk treatments is that most of AFFA's programs recover their costs from their respective importing industries and that it should therefore avoid cross-subsidisation between programs.³⁰ However, AFFA can seek additional resources from industry or Government if it considers that the risks in the program justify additional effort. Indeed, AFFA's cost recovery relationship with industry reinforces the need for resource allocation decisions to be based on a rigorous assessment of risk to ensure that AFFA is not over-treating quarantine risk in one program, and therefore imposing excessive costs on these clients or the community, while under-treating quarantine risk, and undercharging clients, in another program.

³⁰ This is discussed further in Auditor-General Report No.10 2000–2001, *AQIS Cost Recovery Systems*, pp. 84–92.

3.23 Later parts of this report, particularly Chapter 5, indicate that there are marked variations in the effectiveness of quarantine operations programs, suggesting that reconsideration of the resources allocated to these programs is warranted to ensure that they are linked to a structured and consistent consideration of risk.

Future directions—the Border Risk Management Project

3.24 AFFA identified in mid-2000 that it lacks a system for effectively managing operational risks across modes of entry and the quarantine continuum. It intends to undertake a Border Risk Management Project which aims to establish consistent description and measurement of quarantine risk across programs in order to make better resource management decisions.

3.25 AFFA intends to achieve this by developing:

a risk measurement system, which integrates both quantitative and qualitative data and assigns a quarantine risk unit to items of quarantine concern. The [units] assigned to an item may vary according to the country of origin, degree of processing, its end use, the value of the industry threatened or the cost of eradication.

3.26 Plans for developing the project have not yet been finalised and the timelines and priorities have not yet been decided. In the first instance the project will be limited to the Airports and International Mail Programs. AFFA has also advised that a meaningful single quarantine risk unit across all programs may not be possible. As the project is still in its early stages, has uncertain outcomes and its initial focus is on only two programs, it may be some time before the project leads to a substantially more integrated approach to risk management.

Conclusion

3.27 Over recent years, AFFA has improved its approach to managing risk within each of its quarantine operations programs, with better data systems and business planning frameworks. Notwithstanding these improvements, AFFA does not have a robust risk-based approach to managing and treating quarantine risk across the different modes of entry and the quarantine continuum. In particular: there is uneven application of risk concepts in AFFA's business planning, data collection and data systems are not comparable across programs; there is insufficient analysis of risk consequences; and there is no fully encompassing risk-based process for allocating resources and determining quarantine risk treatments across different quarantine operations programs. This adversely affects the overall effectiveness of quarantine operations. Chapter 5 discusses further the apparently differing levels of risk accepted in various programs.

3.28 AFFA's Border Risk Management Project is intended to address some of the above concerns. This project offers prospects of improved cross-program quarantine risk assessment, treatment and resource allocation for the Airports and International Mail Programs in the longer term. In the shorter term there would be merit in AFFA considering other measures to increase the effectiveness of its risk management structure. For example, more consistent application of its risk management structure and the findings discussed later in this report on the effectiveness of some aspects of quarantine operations.

Recommendation No.1

3.29 The ANAO recommends AFFA ensures that resource allocation, cost recovery and risk treatment decisions across all modes of entry and the quarantine continuum are based on a systematic and integrated risk management framework, including appropriate strategies to treat and manage quarantine risk. This requires both short and long term measures to provide:

- information that supports comparative assessment of risk and risk treatments;
- appropriate analysis of consequences in risk assessment; and
- proper monitoring and review of the effectiveness of risk treatments.

AFFA response

3.30 Agreed. AFFA notes that resource allocation, cost recovery and risk treatment decisions are currently based on arrangements within individual border program activities such as airports, import clearance, international mail and seaports programs. AFFA also notes that cost recovery and therefore resource allocation decisions are influenced by a combination of risk assessments and legal requirements that limit the imposition of fees in individual programs to the actual cost of services in those programs. AFFA has commenced a major project directed towards a more integrated whole of quarantine border approach to risk management and resource allocation decisions.

Risk profiling within quarantine operations programs

Introduction

3.31 AFFA makes more substantial use of data-based risk management in 'risk profiling' within border programs. These profiles are used to identify those items in a particular route of entry that are most worthy of attention, for example, by identifying particular flights and types of passenger most likely to present a quarantine risk, based on experience, data and intelligence. Accurate risk profiles are an essential tool for maximising border integrity. The use of risk profiles in each of the four major border programs is discussed below.

Airline passengers

3.32 Until recently, selection of international airline passengers for quarantine inspection was based on the judgement and experience of individual AFFA officers, rather than on data-based profiles. AFFA has now developed risk profiles using historical data on seizures. The profiles, which were to be implemented from 1 July 2000 and reviewed every two months, are based on:

- the relative risk presented by the country of origin of the flight;
- the overall compliance history of the particular flight; and
- the demographic characteristics of passengers.

3.33 The new approach provides a more robust, risk-rated approach to profiling, which is complemented by the additional inspection resources flowing from the Government Response to the QRC Report.³¹

3.34 Notwithstanding AFFA's commitment to introduce the new profile system by July 2000, only Sydney and Brisbane airports had implemented the methodology at the time of the audit fieldwork (November 2000). The limited implementation of these profiles means that considerable numbers of passengers are not subject to effective profiling, increasing the risk of quarantinable material entering Australia. AFFA has initiated a review of the implementation of the new methodology in response to this audit finding.

³¹ \$2.05 million over four years to improve passenger selection.

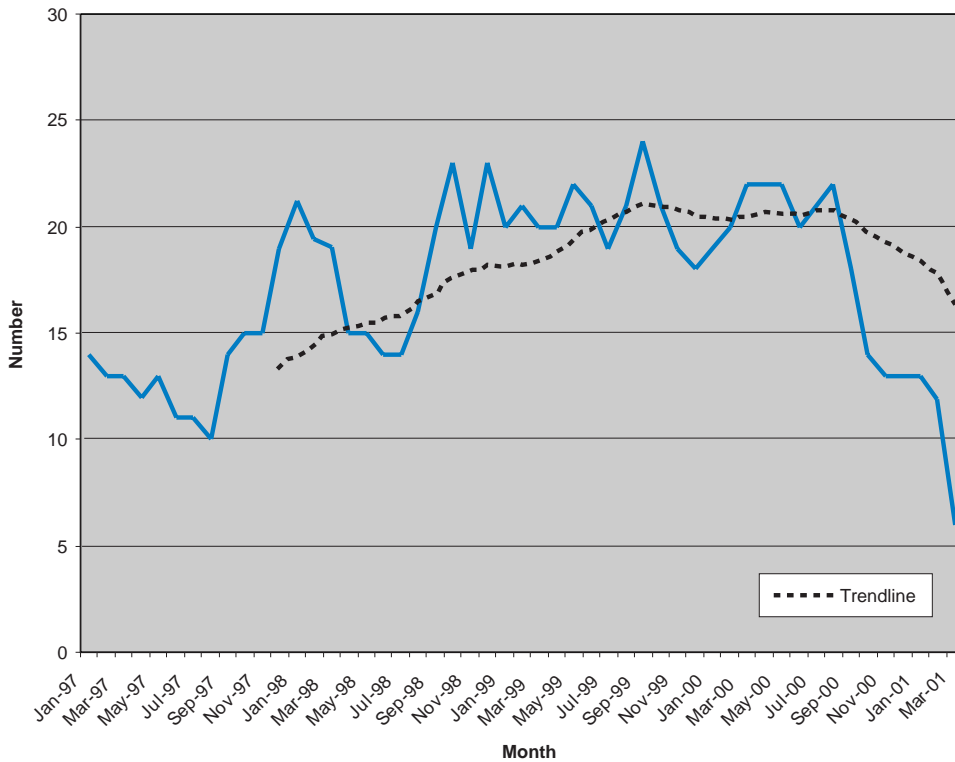
3.35 The ANAO also found that application of the new profiles is limited in practice. Officers selecting passengers for inspection have to rely primarily on visual cues to select passengers. Information is available on passengers' 'Incoming Passenger Cards' (IPCs) that would better inform selection, but this is not readily available to AFFA inspectors.³² This markedly reduces AFFA's ability to use the profiles effectively in identifying passengers likely to be carrying quarantinable material. AFFA has sought to have staff operate in the baggage hall, where they could inspect passengers' IPCs, but have not been able to do so, due to ACS concerns that such activity could compromise ACS operations. ACS has now agreed to a trial of such an arrangements; and the trial is now underway.

International mail

3.36 AFFA is responsible for managing the quarantine risk associated with some 162 million articles of mail arriving in Australia from overseas each year. AFFA developed a set of profiles in 1997 based on the declarations accompanying incoming mail and the mail's physical characteristics. In addition, the profiling targets mail from specific countries during seasonal events. ACS applies quarantine profiles on behalf of AFFA and refers mail fitting these profiles to AFFA for further examination. The rate of seizures from mail referred by ACS as a result of implementation of these profiles has increased steadily to mid 2000, but has since declined (see Figure 8). AFFA advised that the decline is a result of changes to quarantine policy which allowed the importation of personal consignments of certain meat and dairy products produced in non Foot and Mouth Disease countries, which had previously been prohibited. However, referrals of these products from ACS have remained relatively stable, as many of these products require inspection by quarantine staff to determine whether they meet the conditions for release.

³² The Incoming Passenger Card includes all relevant passenger details such as country of origin, age and occupation.

Figure 8
Seizures per 100 referrals



Source: AFFA

3.37 However, the ANAO found that profiles are not being applied effectively. For example the Mail Handling Unit at Sydney selects only a small proportion of small packages for screening (on the basis of a risk analysis conducted by ACS), with the balance being cleared automatically.³³ The impact of this on the extent to which quarantinable material enters Australia is discussed further at 5.29.

3.38 AFFA has recently instituted a ‘free line’ survey to develop better knowledge of the flow of quarantine material in international mail, as well as to determine the extent to which AFFA is not successful in intercepting quarantine material in the mail.³⁴ Over time this survey will provide data which could be used by AFFA to inform better risk assessment and targeting of resources in the International Mail Program.

³³ Australia Post previously limited the volume of small packages which could be screened by ACS to 15 per cent. Despite removal of this limit, AFFA advised that the rate remains at about 15 per cent. ACS were unable to provide data on the exact proportion of mail being selected. Since the ANAO fieldwork and the outbreak of Foot and Mouth Disease in the United Kingdom, AFFA and ACS have altered procedures at this exchange to increase the volume of mail selected for screening.

³⁴ The survey is discussed further in the section dealing with AFFA effectiveness.

Shipping vessels

3.39 Profiles of the quarantine risk associated with commercial shipping and other vessels arriving in Australia from overseas are based on the recent inspection history of the vessel, or on the type of vessel. Some types of vessels, such as empty livestock vessels and yachts, are considered high-risk and are always inspected on arrival in Australia. The frequency of inspection for other types of vessels depends primarily on their previous inspection history. Vessels with a good inspection history are inspected one in every three times they arrive in Australia.³⁵ Vessels with a poor record are subject to AFFA inspection every time they arrive in Australia.

3.40 AFFA is also currently discussing with New Zealand a harmonised approach to vessel inspection and clearance, which would mean that Australia and New Zealand did not re-inspect vessels once inspected by the other service. This approach should free AFFA resources from inspecting ships recently inspected by a reliable third party.

3.41 The ANAO found that other information, such as the reason for a vessel failing quarantine inspection, is not analysed as part of profile development. This limits AFFA's ability to extend profiling. Profiles based on such information would provide greater assurance that available quarantine resources are targeted at intercepting vessels presenting the highest risks to quarantine.

Import clearance

3.42 AFFA works closely with customs brokers and other members of the import community to manage the quarantine risk associated with approximately 2.7 million consignments imported into Australia each year. An automated profiling system has been developed by AFFA using ACS computer systems which record importers' description of shipments. Quarantine profiles in this system attempt to cover all commodities that are described in the quarantine proclamation. AFFA applies its profiles to these descriptions to identify shipments worthy of more detailed review. If a shipment is flagged by a profile further quarantine questions will be asked of the importer or broker and, subject to the answers to these questions, the consignment will be held for clearance by AFFA.³⁶

³⁵ This is generally at the first port of call. There are some circumstances where this may not be possible and the vessel is inspected at the 2nd port of call.

³⁶ AFFA clears the consignment after appropriate documentation checks, quarantine treatment or quarantine inspection.

3.43 The effectiveness of this profiling is dependent on the accuracy of the shipment declarations and descriptions, and on the comprehensiveness and precision of the profiles. To address the former, AFFA undertook a survey in July 2000 to assess the integrity of the goods descriptions on Air Way Bills for consignments valued at less than \$250. AFFA found that less than 1 per cent of these consignments were incorrectly described. For goods valued in excess of \$250,³⁷ AFFA advised that the tariff descriptions are checked at various points in the clearance process by the ACS, customs brokers and AFFA inspectors. However, the ANAO found that there has been no analysis of these checks in order to assess the integrity of tariff descriptions and the consequences for profiling of goods greater than \$250 in value.

3.44 The ANAO also found that the complex interaction of quarantine conditions, IT systems, the tariff code and profiles can lead to failure to identify high-risk shipments. For example, profiles for crustacean tariffs did not cover freshwater crayfish, which should have been subject to quarantine intervention. AFFA has advised that it estimates that some 30 per cent of imports under this category would, in fact, have been identified through screening against other profiles, such as imported foods profiles (which are administered by AFFA on behalf of the Australia New Zealand Food Authority) and would, therefore, have been subject to at least some intervention at the border. AFFA is not aware of the number of freshwater crayfish consignments that have crossed the border inappropriately. AFFA also advised that since completion of ANAO fieldwork it has adjusted its profiling for crustaceans to ensure that freshwater crayfish are appropriately subject to quarantine.

3.45 The extent to which other profiles do not cover goods which should be subject to quarantine is not known by AFFA, although it considers that the problem is not widespread. The ANAO considers that confidence in the efficacy and completeness of the profiles would be enhanced through review and analysis to ensure appropriate coverage.

3.46 The ANAO also found that the profiles employed are not underpinned by a systematic recording of the import pathways and commodities to identify those which present the highest likelihood of breaching Australia's quarantine requirements. Such analysis could provide relative risk information on consignments which do not comply with quarantine requirements, for example, by identifying importers and

³⁷ These goods are dealt with differently to low-value cargo as ACS uses different entry management data systems to track high and low value cargo.

brokers regularly handling such consignments, the origin of these consignments or port of entry. AFFA is planning to address this through developing an 'Incidents Database' to record quarantine 'incidents'³⁸ along with details of the import pathway and commodity.

Conclusion

3.47 AFFA quarantine operations programs have each developed profiling systems to help identify quarantine risk material. However, use of the profiling systems is at varying stages of development, as summarised in Table 3, with the system used in international airports presenting the most complete approach, while other programs still require substantial development.

Table 3

Adequacy of profiling, data collection and infrastructure

	<i>Airline passengers</i>	<i>International mail</i>	<i>Shipping vessels</i>	<i>Imports</i>
Program collects data on the population incidence of quarantine items	✓	✓	✓	P
Profiles are built on appropriate analysis of incidence data	✓	P	P	P
All Items/ passengers are subject to profiling	P	✗	✓	✓
Regular review of the efficacy of profiles	✓	✓	P	✗

Source: ANAO analysis of AFFA data.

Note: ✗ not significantly implemented.

P partially implemented.

✓ substantially implemented.

3.48 The efficacy of profiling methodologies in identifying quarantine risk material would be enhanced through more detailed analysis of data on the incidence of quarantine risk material, ensuring a greater number of incoming items (particularly passengers and mail) are subject to appropriate profiling, and more regular review of the efficacy of profiles and their implementation. This would be a matter for AFFA to progress as part of an appropriate cost-benefit analysis.

³⁸ Quarantine incidents include all breaches of Australian quarantine requirements, minor or severe, detected by AFFA.

Recommendation No.2

3.49 The ANAO recommends that, in order to ensure the highest risk pathways are subject to appropriate quarantine treatment, AFFA takes early action to ensure that program risk profiles are:

- based on comprehensive analysis of data on the incidence of quarantine risk material;
- applied effectively to all incoming goods and passengers; and
- regularly reviewed to ensure they remain effective at directing effort at the border.

AFFA response

3.50 Agreed. AFFA notes that the development of program risk profiles involve a process of continuous improvement as more information and data becomes available on quarantine risk issues. This data will be used by AFFA to refine risk profiles and programs will be required to ensure that these profiles are applied consistently on a national basis.

4. Pre-border Quarantine Operations

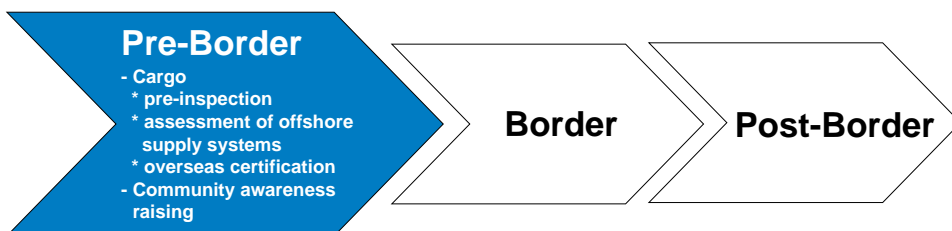
This chapter examines AFFA's approach to managing quarantine risk associated with cargo and international passengers offshore, before quarantinable items approach the border.

Introduction

4.1 A major theme of the Government Response to the QRC Report was the need for a balanced approach to quarantine that included use of pre-border operations to keep risk offshore as much as possible. AFFA's pre-border effort focuses on commercial cargo imports and on awareness raising.

Figure 9

Pre-border quarantine operations as part of the quarantine continuum



4.2 Apart from these pre-border activities, AFFA undertakes a range of other pre-border initiatives which were not directly considered as part of the audit as they relate less directly to management of import risk. For example, AFFA works closely with AusAID along with the governments of Australia's near northern neighbors and trading partners, to improve pest and disease surveillance and management. This acts to reduce the pest and disease risk presented by these particular countries.

Cargo

4.3 The major elements of AFFA's pre-border effort in managing quarantine risk associated with imports are:

- *pre-inspection* of goods before export from the country of origin;
- *assessment and certification* by AFFA of off-shore production and supply systems, to ensure production, processing, handling and treatment procedures for certain goods to minimise the quarantine risk associated with that product; and

- certification by overseas agencies that products comply with Australia's requirements, or that appropriate quarantine treatments have been applied in order to clear consignments at the border (*overseas certification*). Importers, or overseas treatment providers and inspectors certify (declare) that appropriate quarantine treatments have been applied off-shore, and/or that the goods are in accordance with Australia's quarantine requirements.

Pre-inspection/pre-clearance

4.4 Pre-inspection (or pre-clearance) takes two forms. It may involve an AFFA officer traveling, typically at the importer's expense, to inspect goods overseas to ensure they meet Australia's quarantine import requirements. Alternatively, the pre-inspections may be carried out by specified authorities in the country of origin.

4.5 Pre-inspected goods are still subject to formal quarantine clearance upon arrival in Australia. However, the clearance typically involves merely verifying the contents as being those goods pre-inspected and that there is no obvious contamination. Accordingly, pre-inspection can have advantages for the importer as well as AFFA by reducing the risk of delay or rejection for time-critical goods.

4.6 The Government Response to the QRC Report endorsed the expansion of pre-clearance activity, stating that AFFA should '*... negotiate with overseas quarantine agencies to continue the development of arrangements for offshore pre-clearance of goods by appropriate export authorities and companies ...as opportunities arise and/or resources permit.*' In response, AFFA advised QEAC that implementation of this recommendation required '*...expansion of pre-clearance as part of the pre-border phase of the quarantine continuum*'.

4.7 Notwithstanding this intention, the ANAO found that AFFA did not have a specific plan, performance measures or targets to guide its proposed expansion of pre-clearance. Such mechanisms would be particularly valuable where decisions have to be made about applying limited resources to opportunities for expanded pre-inspection.

4.8 Against this background the ANAO found that, while pre-inspection has been used in some special circumstances, such as the return of equipment from the peacekeeping operation in East Timor, and the inspection of horses prior to their arrival for the Sydney Olympic Games, its use has not increased markedly.

4.9 Pre-inspection has been used for some years for consignments of some fresh fruit and vegetables and for second hand machinery. However, there has been little increase in such pre-inspections since the Government Response in 1997. Only two more horticultural products

(New Zealand persimmons and Chinese Ya Pears) are subject to pre-inspection and, while three further horticultural products have been approved for pre-inspection, the importation under these arrangements has yet to occur. AFFA performed only seven pre-inspections on machinery or machinery parts in 1998–1999, eleven in 1999–2000 and four over the first six months of 2000–2001.

4.10 There was no documentary evidence as to why applications for pre-inspection have not proceeded. However, AFFA advised that these requests were often informal, and did not proceed to a more formal application after the applicant received further advice from AFFA. Further, AFFA has advised that it has not expanded its use of pre-inspection because:

- while the direct cost of a pre-inspection is recovered from the importer, there is an opportunity cost to AFFA, as the officer conducting the pre-inspection is unavailable for normal border operations;
- it is concerned at possible legal action against the Commonwealth in the event that the pre-inspected goods arrive in Australia and are discovered, at that point, not to comply with quarantine entry requirements; and
- the assessment of offshore supply and production systems is often a more appropriate alternative.

4.11 Notwithstanding AFFA's comments, the ANAO considers that more explicit and structured planning and performance targets would facilitate the continued development of offshore pre-clearance. It would assist, for example, in addressing opportunity costs and other considerations, including any concerns AFFA has about possible legal challenges. The latter would seem to warrant prompt resolution. AFFA's use of offshore supply systems to control risk are discussed in the following section.

Assessment of offshore supply systems

4.12 In contrast to pre-inspection, where AFFA staff or specified overseas authorities conduct the inspection of individual importations in the exporting country, offshore assessment of supply systems occurs when AFFA assesses and certifies that offshore production, processing and transport systems for a particular product, will effectively treat the quarantine risk associated with that product.

4.13 AFFA has implemented one such arrangement—for shipments of fertilizer from one port in the United States of America. The arrangement allows fertilizer which has been treated according to an agreed process to be subject to reduced levels of quarantine inspection at the Australian border.

4.14 AFFA is currently establishing similar arrangements for Canadian green sawn timber and plywood from some South East Asian countries.

4.15 Although AFFA has advised that it considers assessment of offshore supply systems to generally be a better option than pre-inspection of individual consignments, progress has been limited with only the one arrangement established. Both stakeholders and AFFA have confirmed that there is considerable scope to increase the use of offshore supply systems in managing quarantine risk more efficiently. However, AFFA has no performance measures or explicit management approach to support achievement of this aim.

Overseas certification

4.16 A longstanding method of mitigating quarantine risk offshore is the use of overseas inspectors and treatment providers, or importers, to certify that appropriate treatments have been carried out, or that the goods are free from contamination, pests or diseases. Goods are then allowed to enter Australia without further treatment as long as they are clearly identified as having been treated in the exporting country. Certification is often recommended as a risk management tool in Import Risk Analysis.

4.17 One key area where overseas certification is used by AFFA is the fumigation of goods, particularly timber.³⁹

Effectiveness of overseas fumigation certification

4.18 AFFA accepts fumigation certificates from all overseas fumigation providers unless the previous fumigations by that provider are proven to have failed through quarantine inspection or surveillance.⁴⁰ AFFA does not first assess a provider's capacity to deliver effective fumigation. Thus fumigation certificates from all new providers will be accepted by AFFA, and goods fumigated by those providers will be allowed into Australia.

4.19 The ANAO found that there has been evidence for some years that fumigation certificates are not reliable. In 1996 the QRC expressed concerns at the frequent failure of offshore fumigation, and expressed doubt over the validity of some certificates, particularly cut flowers. Further, in the past few years AFFA has frequently discovered live pests on shipments of timber certified as fumigated. There has also been a series of significant breaches, such as the discovery of exotic pests in

³⁹ Other goods frequently imported with a fumigation certificate are some horticultural products and other goods likely to carry live insects.

⁴⁰ AFFA does not accept certification from all Italian companies, rather, AFFA accepts certification from only a selected number of Italian providers.

structures using infested timber, many of which have been traced back to shipments covered by fumigation certificates. Of 80 such breaches reported between July 1997 and April 2000 involving timber pests, over half resulted from failed offshore fumigation.

4.20 AFFA responded by suspending more than 80 overseas fumigation companies in the period 1998–2000 for sub-standard fumigation. It also increased the number of AQIS officers undertaking surveillance of wharves and depots in an effort to detect breaches.

4.21 AFFA also established a Timber Pest Coordination Unit in 1999, which developed and distributed a fumigation standard to overseas providers. It has also developed an Australian Fumigation Assessment Scheme under which fumigators in countries identified as presenting the greatest risk of fumigation failure would be trained and assessed before AFFA accepts their fumigation certificates. It is proposed to trial this approach initially in Indonesia, the country presenting the highest risk of timber pest breach from fumigation failure, and in two other high-risk countries. The scheme has yet to be implemented in Indonesia.

4.22 AFFA advise that they do not specifically target high-risk shipments, rather inspectors at the border attempt to cover high-risk shipments as part of their general border surveillance. AFFA considers that in the longer term its new approach to fumigation with the Australian Fumigation Assessment Scheme will improve the reliability of fumigation certificates.

4.23 Notwithstanding the above measures and the longer term benefits of the Assessment Scheme, the numbers of breaches due to inadequate fumigation is increasing, with a further 23 such breaches occurring in the five months to end September 2000, the most recent period for which data is available from AFFA.⁴¹ The number of breaches which are not detected is not estimated by AFFA. Concerns over the validity of offshore fumigations date back to 1996, and AFFA has had data on the relationship between fumigation failure and levels of serious quarantine breaches since 1998. The ANAO concludes that offshore fumigation certification remains unreliable, and that a considerable number of consignments carrying live insects due to failed fumigation are not being detected at the border, presenting a continuing risk of exotic insects breaching the Australian border.

⁴¹ Since this time, AFFA has not further analysed available data to identify quarantine breaches as a result of failed offshore fumigation.

4.24 The ANAO considers that the unreliability of offshore fumigation certification suggests that systematic assessment, treatment and monitoring the reliability of such instruments is warranted as part of AFFA's management of quarantine risk.

Conclusion on cargo pre-border activities

4.25 There has been some limited expansion in AFFA's pre-border management of quarantine risk associated with commercial imports. AFFA considers that '*...evidence suggests an adequate record [on expanding pre-clearance] without being highly proactive...*' and that this was sufficient to give effect to the Government's intentions. The ANAO considers that the lack of clear targets and planning makes it difficult for stakeholders, including Parliament, to assess whether Government directions are being appropriately implemented and if AFFA is making optimal use of pre-border quarantine strategies.

4.26 AFFA does make considerable use of overseas certification as a pre-border strategy. However, the ANAO concludes that AFFA cannot be confident in the integrity of certifications provided by some overseas fumigation providers, and this results in Australia being exposed to actual and potentially substantial quarantine risk. The ANAO recognises AFFA's actions in identifying and responding to this problem. However doubts over the validity of overseas fumigation are longstanding and an effective response is yet to be implemented. A broader management strategy addressing the adequacy of all offshore certification (not just fumigation certificates) is required if the quarantine risk is to be effectively assessed and managed.

Recommendation No.3

4.27 The ANAO recommends that, in order to ensure appropriate management of quarantine risk offshore, AFFA strengthen its management of pre-border cargo activities by:

- clearly articulating government policy directions in operational targets and criteria to guide the use of pre-border arrangements; and
- where pre-border strategies (such as certification) are found to be unreliable, AFFA act promptly to ensure quarantine risk is effectively managed.

AFFA response

4.28 Agreed. In accordance with government policy directions articulated in its response to the report by the Australian Quarantine Review Committee, AFFA will continue to undertake off-shore inspection of goods as opportunities arise and/or resources permit. Particular efforts

will continue to be directed towards high value cargo of quarantine interest where such inspections are requested by importers. AFFA will continue to act promptly to manage the quarantine risk arising from the detection of unreliable documentation such as offshore fumigation certification.

Community awareness raising

4.29 Improved public awareness of quarantine is a key performance measure for quarantine. In its response to the QRC Report the Government provided \$5.529 million over four years for AFFA to develop and implement a national campaign to improve the community's understanding of, and commitment to, quarantine. The initiatives were coordinated under the broad approach of the 'Quarantine Matters' campaign, and included:

- Quarantine Week;
- creation of a network of State-based quarantine awareness officers;
- production of schools kits;
- strengthening of links with in-bound tourism industry bodies;
- projects targeting the non-English speaking communities;
- a revised quarantine in-flight video for use on all incoming flights;
- upgrading of information for travelers and importers on the AFFA web site; and
- targeting overseas travel authorities and businesses whose products have raised quarantine problems in the past.

4.30 AFFA has assessed changes to attitudes as a result of these initiatives by conducting community attitude surveys and comparing them with an August 1997 benchmark survey. The 1999 survey found that overall awareness levels amongst Australians intending to travel, or who have traveled recently, have improved markedly. Table 4 summarises some of the changes.

4.31 Despite these general improvements, the proportion of young Australians who did not know what the function of quarantine was rose from 21 per cent in 1997 to 39 per cent in 1999 (see highlighted row in Table 4). In the light of these findings AFFA has directed additional resources at reaching this audience. For example, the 18-year-old solo around the world yachtsman Jesse Martin was engaged as campaign spokesperson, and AFFA has arranged Internet advertising on web sites directed at young people and also organised Youth Week promotions.

Table 4**Selected changes in awareness and attitudes toward quarantine**

<i>Audience</i>	<i>1997</i>	<i>1999</i>	<i>change</i>
Recent Australian travellers			
- self-perceived knowledge about quarantine	60%	72%	▲ 12%
- have heard of quarantine in the last 12 months	68%	69%	▲ 1%
Intending Australian travellers			
- self-perceived knowledge about quarantine	40%	68%	▲ 28%
- have heard of quarantine in the last 12 months	57%	70%	▲ 13%
Young People (18 – 24 year old)⁴²			
- did not know the function of quarantine	21%	39%	▲ 18%
Overseas Visitors			
- it is necessary to declare to quarantine items for personal use	52%	60%	▲ 8%
Cargo importers			
- self-perceived knowledge of quarantine	91%	94%	▲ 3%
- agree quarantine regulations are always strictly enforced	55%	66%	▲ 10%
Travel Agents			
- self-perceived knowledge of quarantine	n/a	76%	-
- have heard of quarantine in the last 12 months	n/a	82%	-

Source: AFFA Community Attitudes Survey

4.32 The Quarantine Matters campaign reflects substantially increased effort by AFFA in increasing community and industry awareness of quarantine. An evaluation this year of the campaign also confirmed that there had been improvements in domestic and overseas awareness of quarantine issues. It also suggested that the balance of campaign elements be reconsidered, for example to reduce the emphasis on Quarantine Week, as it was proving less effective as a communication vehicle. AFFA is considering these recommendations.

4.33 The ANAO found that results of the survey also suggest that the effectiveness of some aspects of quarantine operations warrant further consideration. For example, Table 4 indicates that only 66 per cent of cargo importers surveyed considered that quarantine regulations are always strictly enforced. AFFA has advised that, as the trend is improving, no specific action is required. However, the ANAO notes that this means one-third of importers consider that AFFA does not strictly enforce quarantine regulations. This would seem to warrant at least some management investigation and assessment of any potential implications for the effectiveness of its quarantine operations and quarantine risk management.

⁴² The increase of 18 per cent indicates a substantial decline in awareness amongst young people.

5. Border Quarantine Operations and Outcomes

This chapter examines AFFA's effectiveness indicators for its quarantine operations at the border; the effectiveness of quarantine operations in airports and international mail is examined in detail. The chapter also examines AFFA's approach to managing consistency in border operations and the role of industry in AFFA's border programs.

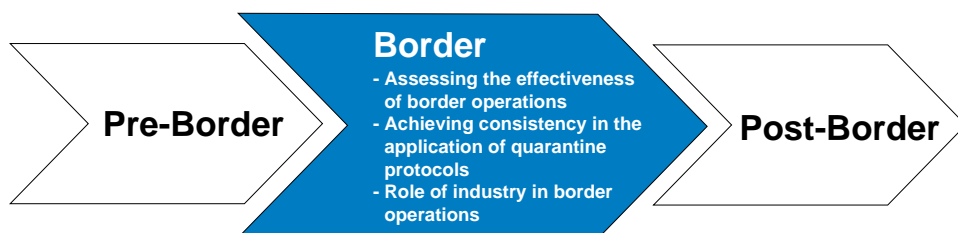
Introduction

5.1 The border is the main point of the quarantine continuum at which quarantine operations focus. This is where AFFA places most of its quarantine effort. Managing border operations requires, inter alia:

- performance measures to provide managers and stakeholders with accurate and timely information on the effectiveness of quarantine operations;
- management structures which ensure quarantine protocols are appropriately applied; and
- appropriate engagement of industry in support of quarantine aims.

Figure 10

The quarantine continuum and border operations



Assessing the effectiveness of border operations

5.2 Prior to 1997, AFFA had limited management information from which to assess the effectiveness of its border quarantine operations. Since then, it has improved the collection and analysis of relevant data, assessing the effectiveness of its border programs in two key ways:

- volume measures of quarantine outputs. These measure, in various ways, the number of times AFFA detects, and acts upon, a quarantinable item; and

- leakage rates. Leakage rates are the percentage of all inbound items, such as international mail or arriving international passengers, that have passed through the border quarantine detection and inspection processes and still contain or possess seizable quarantine items.

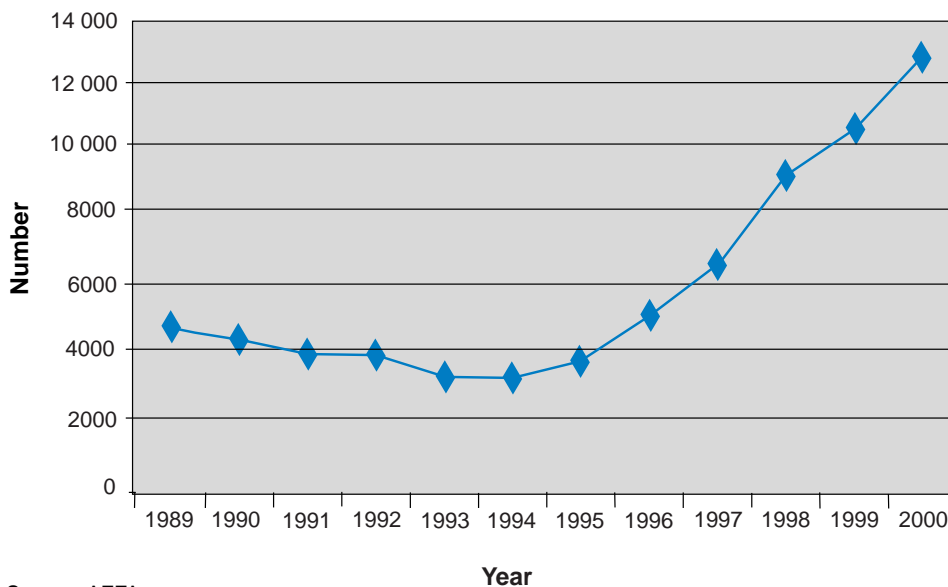
5.3 These measures provide indications of substantial improvement in border effectiveness in some areas, as discussed below.

Volume measures

5.4 AFFA collects performance information on the total number of pests or diseases intercepted by quarantine operations (i.e. where an item intercepted by AFFA is actually infested with a pest or carrying a disease). There has been a marked increase in the number of interceptions since the mid-1990s (see Figure 11).

Figure 11

Total number of pests and diseases intercepted



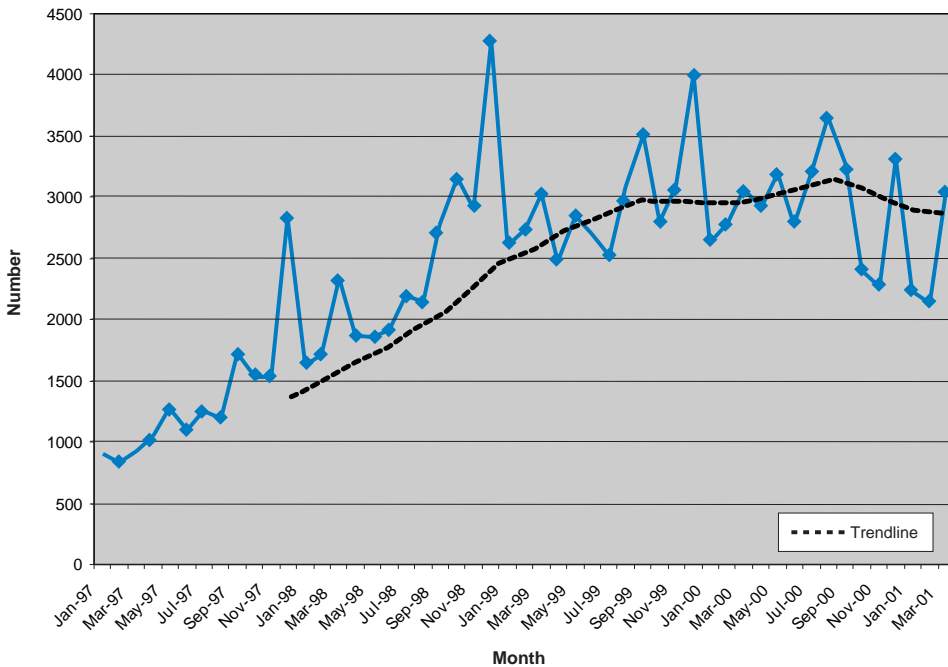
Source: AFFA

5.5 AFFA also collects information on the number of prohibited items intercepted by each of the individual programs. Prohibited items are those considered to have a high-risk of carrying pests or diseases and which are seized, treated or re-exported.⁴³ There has also been a steady rise in the number of such items intercepted. For example, the number of quarantine risk items seized from incoming international mail has

⁴³ The final composition and presentation of this data for reporting in the Annual report has yet to be determined by AFFA. For the purposes of this report, the ANAO has used common data utilised in reports to QEAC.

increased substantially since 1997 (Figure 12).

Figure 12
Mail seizures 1997–2000⁴⁴



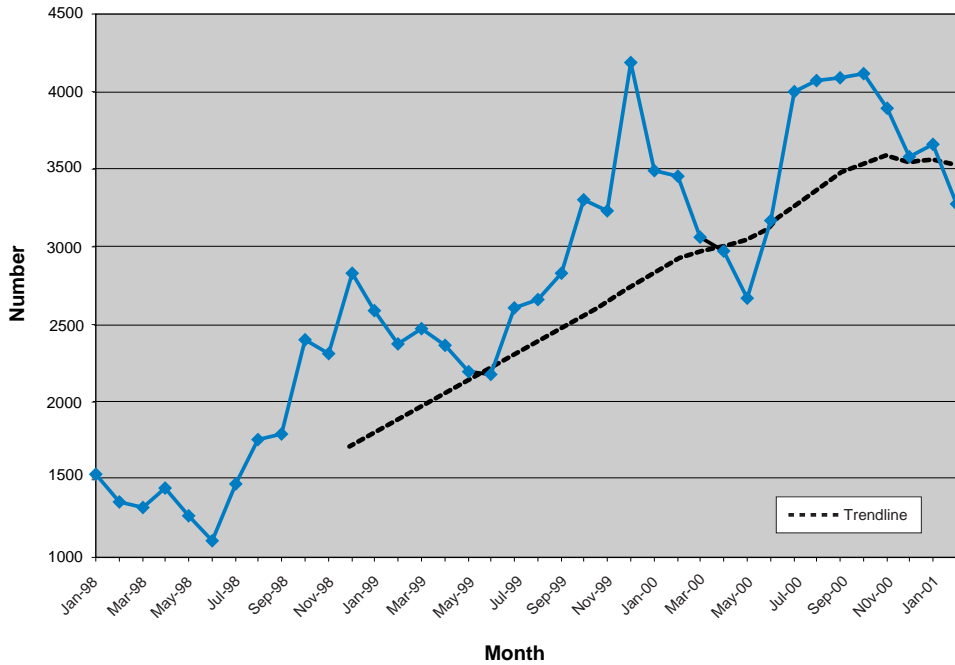
Source: AFFA

5.6 AFFA also monitors quarantine risk items seized from arriving international airline passengers. There has been, until recently, a strong upward trend in seizures of items that were not declared by passengers and seized as a result of an AFFA inspection, as described in Figure 13.

⁴⁴ The decline in seizures in the latter part of 2000 reflects changes to import protocols, which reduced the number of items to be seized.

Figure 13

Seizures of undeclared quarantine items from airline passengers 1998–2000

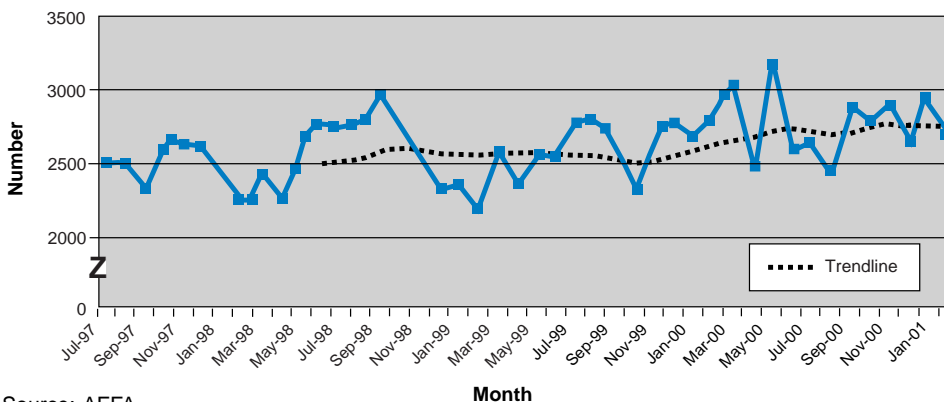


Source: AFFA

5.7 AFFA’s relevant indicator for commercial cargo imports addresses the number of remedial actions undertaken. Remedial actions arise when a consignment does not meet Australia’s quarantine requirements. The action taken may include treatments such as fumigation, not allowing the consignment entry to Australia and re-exporting it, or destroying the consignment. There has been approximately a 10 per cent increase in the number of remedial actions undertaken since mid 1997.

Figure 14

Remedial actions for cargo

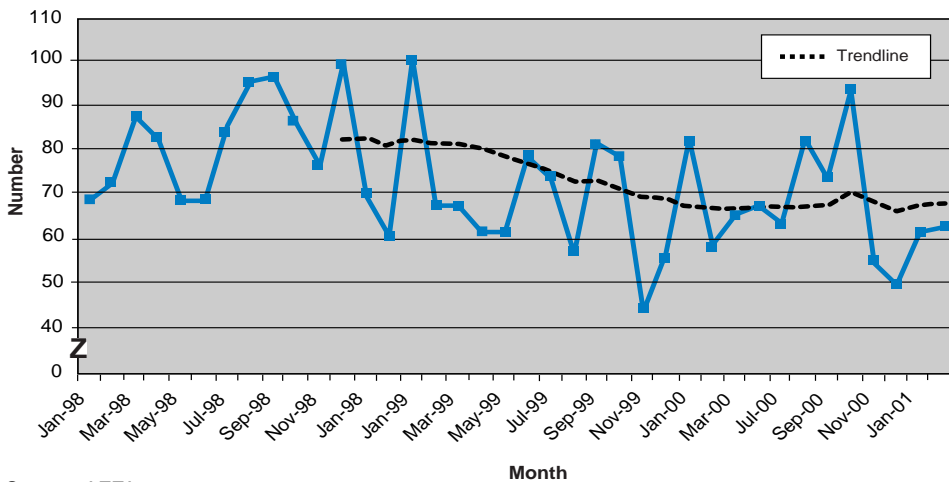


Source: AFFA

5.8 The data on the number of shipping vessels and yachts failing quarantine inspection (Figure 15) shows a different trend to those of other programs, with a general decline in failures since 1999. However, this is primarily due to a change in reporting procedures, where some vessels with only minor quarantine breaches are now classified as 'non-conformities' rather than 'failures'. Allowing for this factor, which affects some 15 to 20 vessels per month, the number of failures has been relatively stable since early 1998.

Figure 15

Vessels failing quarantine inspection



Source: AFFA

Leakage rates

5.9 Leakage rates are calculated by sampling of material that has passed through the quarantine system and is about to be released. Leakage rates measure the percentage of all items that have crossed the border and entered Australia but which still contain or possess seizable quarantine material.⁴⁵

5.10 Prior to 2000, AFFA had calculated leakage rates occasionally for the Airports Program (in December 1995, February 1998 and in December 1998) but did not calculate leakage rates for any other programs. In December 1999 AFFA and QEAC agreed leakage surveys for border programs are 'necessary...to evaluate their effectiveness'. AFFA has since commenced collecting leakage data for international mail and has undertaken data collection for airports on a more regular basis. However, comparable leakage data for cargo or vessels has not yet been collected, meaning that the effectiveness of two of the four main border programs cannot be assessed in this way.

⁴⁵ Precise leakage rate definitions and methodologies vary slightly between programs.

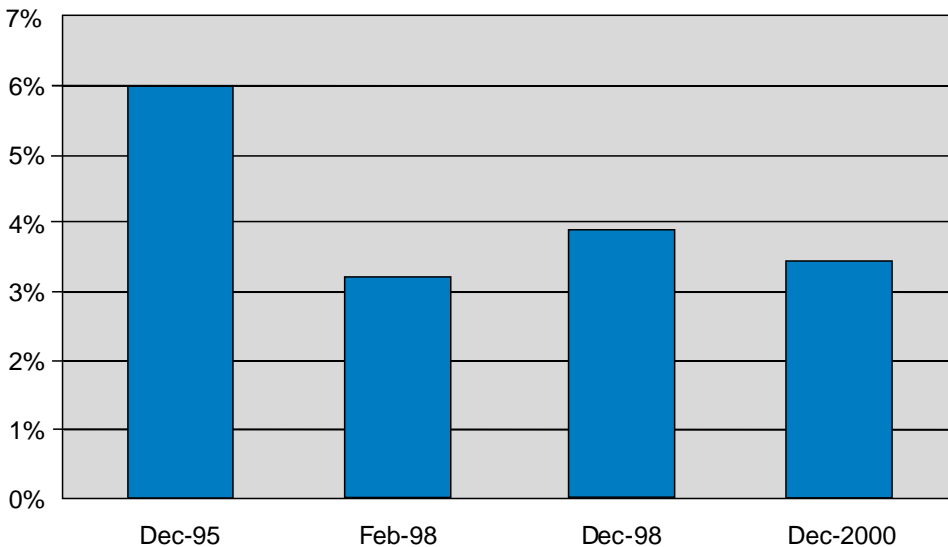
5.11 Initial estimates were that the leakage rate for international mail, based upon a random survey, was 1.7 per cent in the year 2000. However, this estimate was biased by different sampling rates for different sample strata. Allowing for this effect, a more accurate estimate is that 1.2 per cent of all mail items not referred to quarantine for inspection contained seizable quarantine material.

5.12 Leakage rates for passengers at international airports are based upon a survey of passengers leaving the airport through the Green Channel—i.e. those passengers who declare that they have no quarantine material. As such the rate gives only partial information on ‘leakage’, as approximately a quarter of passengers exit the airport through the Red Channel—i.e. they declare either quarantine or customs items.

5.13 The available information on leakage rates for international airline passengers is shown in Figure 16.

Figure 16

Leakage rates for international airline passengers



Source: AFFA

5.14 The improvement in leakage rates at airports between December 1995 and 1998 reflects implementation of the Government Response to the QRC Report, including increased inspection staffing; utilisation of quarantine detector dogs; and use of x-rays for screening passengers. Leakage rates have been relatively stable since February 1998, at between 3 and 4 per cent.

Limitations in use of volume and leakage measures

5.15 The above measures represent a substantial improvement in the information available to managers and stakeholders on quarantine performance over that available prior to the quarantine reforms. AFFA has advised that it considers that current measures are adequate, but perhaps not complete, acknowledging that they could be improved.

5.16 The ANAO considers that current performance measures have limitations in terms of their completeness and robustness. In particular, notwithstanding the importance attached to leakage rates by both AFFA and QEAC; leakage is not calculated for two of the four key programs and there is limited coverage in the measure used for airports. Importantly, current measures do not give an adequate indication of the effectiveness of the key task of intercepting and seizing quarantinable material at the border. Specifically:

- changes in the measures can be due to changes in the extent to which seizable material approaches the Australian border, changes in effectiveness of detection of quarantinable material at the border, or both; and
- low leakage rates can still result in large volumes of quarantinable material entering Australia, with the consequential risk of incursions of exotic pests or diseases. For example, the leakage rate of 1.2 per cent for international mail equates to approximately 170 000 mail items containing seizable quarantine material entering Australia annually through Sydney (Clyde) and Melbourne alone (see also 5.27).

5.17 Improved assessment of the effectiveness of border detection and interception systems requires, inter alia, two relevant considerations. The first is the likelihood that a quarantinable item arriving at the border is not detected and therefore enters Australia; the second is the consequence of such quarantine breaches (i.e. the risk that such a breach leads to a major pest or disease incursion). On the latter point, while AFFA's current data systems do not support such analysis, it has embarked on a new project to allow comparisons of relative risk across the border and the continuum (see 3.24) which, in the long run, should substantially strengthen performance information in this area. On the first point the ANAO found that there is data available which provides some information on the probability of detection of a quarantinable item. This is discussed below for airline passengers and international mail only, as relevant data are not available for vessels and cargo.

Detecting quarantinable items at the border

5.18 The ANAO used AFFA's existing data, where available, to calculate an effectiveness measure which takes account of the level of quarantinable material arriving at the border. This measure estimates the proportion of seizable material that is actually captured, and can be represented, at its simplest, as:

$$\frac{\text{the number of quarantine items seized by AFFA}}{\text{the total number of seizable quarantine items approaching the border}}$$

5.19 The measure therefore seeks to estimate the likelihood that AFFA will intercept a seizable quarantine item approaching the Australian border; its converse is the likelihood that AFFA will not detect such items and that they will enter Australia illegally. A similar approach to assessing the likelihood of intercepting quarantine material has been used by some overseas quarantine agencies (for example, in New Zealand and the United States of America) and a similar measure was also used in a 1999 evaluation of AFFA's International Mail Program.

5.20 This measure, referred to in this report as the 'seizure rate', does not suffer from some of the limitations of the current measures as it explicitly takes account of the volume of quarantine material approaching the Australian border. However, limitations in relevant AFFA data holdings do mean that a number of assumptions have to be made in arriving at these estimates, and that this measure cannot be estimated for two of the main programs.

5.21 In common with AFFA's current border effectiveness measures, the seizure rate does not address the consequence dimension of a quarantine breach, that is how 'risky' the material is, since AFFA's current data systems do not support such analysis. However, unlike current effectiveness measures, the estimated seizure rate does provide valuable insight into those areas warranting further consideration. That is, low seizure rates indicate a high likelihood of quarantinable material breaching the barrier, suggesting that this is an area where consequence assessment should receive priority.

5.22 It should be noted that the estimated seizure rates presented below reflect AFFA effectiveness at one point in the quarantine continuum—the border—and additional measures are required to assess pre- and post-border effectiveness, or the effectiveness of the quarantine system as a whole.⁴⁶

⁴⁶ The overall Indicator for quarantine effectiveness was discussed in Chapter 2.

5.23 Further discussion of seizure rate calculations can be found at Appendix 2.

International mail

5.24 The QRC Report identified concerns with the effectiveness of international mail operations, including the restrictions on screening operations and the unknown, but possibly high, risk presented by some mail items. The QRC Report recommended a review of the effectiveness of the mail quarantine system, and the Government allocated \$1.7 million over four years to upgrade operations, for example by increasing the role of detector dogs and introducing new x-ray equipment.

5.25 Notwithstanding these enhancements, AFFA faces several difficulties in operating effectively in the mail centres. For example, the Sydney Mail Handling Unit at Sydney Airport has limited space for AFFA inspectors and there are cumbersome procedures for moving mail through the centre. These difficulties were identified in Auditor-General Report No.15 1998–99 *Postal Operations* which suggested that there be a:

concerted effort by ACS [and AFFA] to negotiate its layout needs and preferences with Australia Post and to facilitate efficient effective design standards for each mail facility.

5.26 Since this report, Australia Post, ACS, and AFFA have worked together to make some improvements in mail handling at the Sydney unit, although, in practice, AFFA's ability to access mail at this facility remains limited. Key actions taken include:

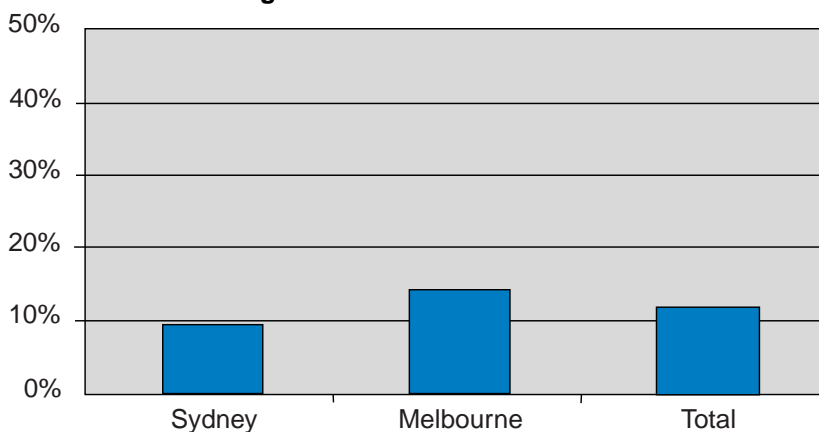
- AFFA and ACS have agreed to work together to integrate the screening processes at the Sydney Mail Handling Unit, which, when implemented, will involve joint use of upgraded x-ray technology in shared arrangements; and
- since approximately August 2000 Australia Post has been diverting some mail from the Sydney Mail Handling Unit to its Clyde operations in Sydney for customs and quarantine screening. An estimated 40–50 per cent of the Other Article⁴⁷ mail items are now being sent to Clyde for presentation to ACS for screening and subsequent intervention by AFFA/ACS including the use of x-ray technology, with this due to increase in the future.

⁴⁷ Other Article mail includes small packages weighing up to 2 kg and large letters.

5.27 Notwithstanding AFFA's efforts to improve the effectiveness of mail quarantine operations, the ANAO's analysis suggests that much remains to be done to achieve effective mail operations. The ANAO estimates that, for the Sydney (Clyde) and Melbourne mail handling facilities,⁴⁸ AFFA intercepted and seized an estimated 11 per cent of the seizable material in international mail between October 1999 and August 2000 (Figure 17).⁴⁹ Put another way, the ANAO estimates that almost 90 per cent of seizable material in mail enters Australia undetected, equating to approximately 170 000 seizable items estimated to escape detection and enter Australia in a full year through Sydney (Clyde) and Melbourne.

Figure 17

Estimated seizure rates at Sydney (Clyde) and Melbourne international mail centres: October 1999–August 2000



Source: ANAO analysis of AFFA data

5.28 The ANAO further analysed estimated seizure rates by the classes of mail handled at these international mail exchanges, which are:

- Parcels—packages greater than 2 kg in weight;
- Other Articles—packages weighing up to 2 kg and large letters;
- Letter Class—standard letters;
- Insured or registered mail; and
- Express Mail Service—trackable courier mail handled by Australia Post.

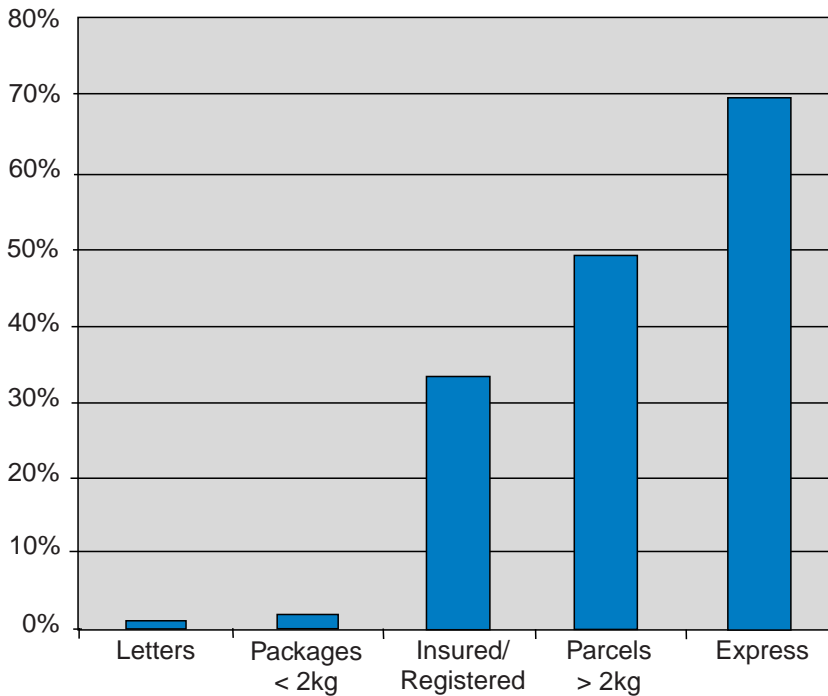
⁴⁸ Other key mail centres receiving international mail are the Sydney Mail Handling Unit at Sydney Airport, Perth, Brisbane and Adelaide. The analysis is confined to Melbourne and Sydney (Clyde), as the total mail flow data from Australia Post is only available for these centres.

⁴⁹ Relevant data was not available prior to October 1999, and the survey on which this analysis is based, was ceased due to the Sydney Olympic Games. The survey has not yet recommenced due to the quarantine commitment required in response to the Foot and Mouth Disease outbreak in the United Kingdom.

5.29 The ANAO found that there is substantial variation in the effectiveness of inspection processes for the different classes of mail. Seizure rates range from an estimated 0.5 per cent of seizable material in Letter Class mail to around 70 per cent in Express Mail (see Figure 18). AFFA advised that the lower detection rates for letters and packages less than 2 kg is likely to be due to the relatively large volumes of mail in these categories and that they are often not individually screened (rather they are screened by the bag, and thus screeners do not have access to declarations or other physical evidence on which to assess the quarantine risk of individual items in the bag).

Figure 18

Estimated seizure rate by class of mail: October 1999–August 2000



Source: ANAO analysis of AFFA data

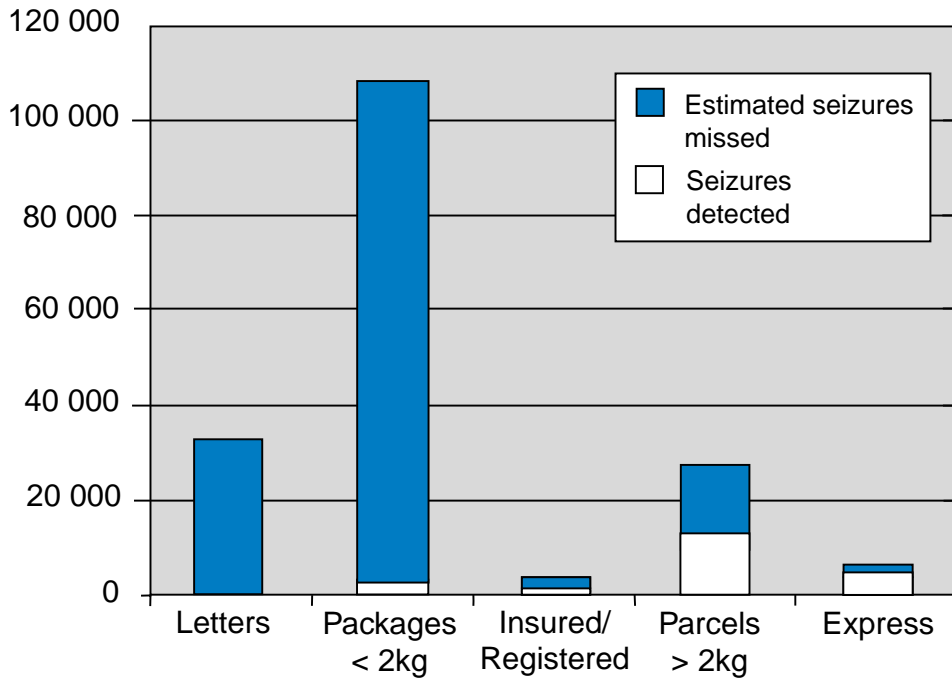
5.30 Sufficient data is not available to analyse trends in interceptions, but the ANAO notes that a small survey of parcel mail suggested a possible seizure rate of 8 per cent in 1998,⁵⁰ compared with the ANAO's estimate of some 49 per cent in 2000. AFFA attributes this apparent improvement to an increase in staff and improvements to the mail centre in Melbourne. Trend data on other classes of mail is not available.

⁵⁰ The 1998 estimates should be treated with some caution as the survey was only based on a three week sampling period, the sample sizes were relatively small and there were concerns about the introduction of bias into the sampling procedures. These factors lead to large confidence intervals for the survey results.

5.31 Figure 19 shows the estimated number of items seized, compared with seizable material actually entering Australia having escaped detection for each class of mail.

Figure 19

Seizable mail and actual mail seizures: October 1999–August 2000.



Source: ANAO analysis of AFFA data

5.32 As AFFA has not calculated seizure rates in the past, it has established no targets for this measure. Further, the above estimates do not address the consequence of the high levels of potential seizures being missed by quarantine operations in the mail, as such information is not available to AFFA. The ANAO suggests these analyses indicate that, for mail operations generally, and particularly with respect to letter class and packages weighing less than 2 kg, the need for such consideration of consequences is a priority matter. Such analysis would also inform establishment of appropriate targets for management monitoring, resource allocation and risk management purposes.

International airline passengers

5.33 Analysis of the estimated 'seizure rate' in international airports is more complicated than in international mail as:

- passengers can exit the airport through the Red Channel (for those passengers with either customs or quarantine items to declare) or the Green Channel, and can be subject to varying levels of quarantine scrutiny in each case; and
- seizable quarantine material may also be disposed of in quarantine amnesty bins prior to passengers reaching the Red or Green Channel exits.

5.34 At the time of the audit fieldwork, AFFA only had reliable leakage data on the Green Channel exit. In the absence of reliable information on Red Channel leakage and on the volume of seizable material in quarantine amnesty bins, the ANAO made some assumptions. Firstly, it was assumed that Red Channel leakage was the same as Green Channel leakage. This assumption may be conservative as AFFA has now undertaken some preliminary survey work suggesting that Red Channel leakage is approximately 1 percentage point higher than in the Green Channel.⁵¹

5.35 Secondly, and more importantly, the ANAO estimates do not include the effect of the amnesty bins at international airports as, at the time of the audit, AFFA did not have data on quarantine material deposited in the bins. Since completion of ANAO fieldwork and analysis AFFA has collected some data from a survey of material deposited in bins at Brisbane and Melbourne airports over two weeks in January 2001. AFFA consider that the sample is statistically valid and advise that the results of this survey on amnesty bins indicates that the seizure rate would increase by an estimated 8 percentage points if amnesty bins were included. The survey adds an important dimension in assessing effectiveness of operations at airports, but the ANAO notes that AFFA's analysis has required a number of substantial assumptions which limit the reliability which can be placed on the results in the short term.⁵²

⁵¹ AFFA conducted a survey over two weeks in January 2001 which suggested that Red Channel Leakage was approximately 5 per cent.

⁵² Some important factors which may limit the reliability of the results include:

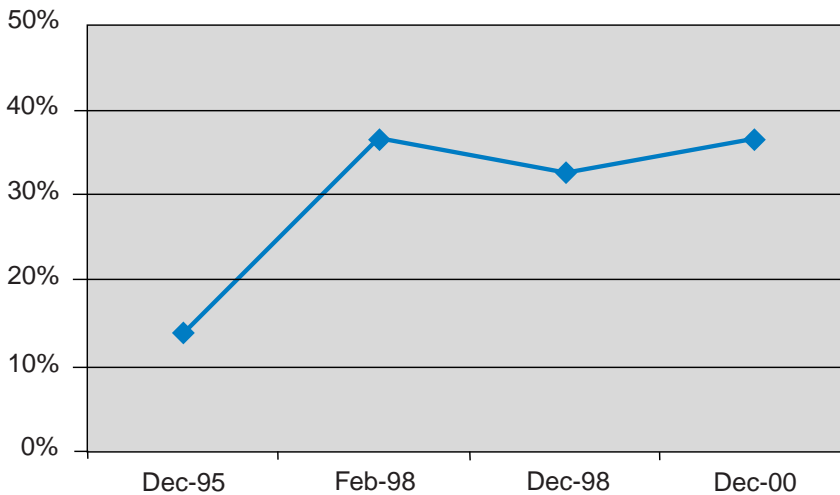
- the survey was conducted over a short period of time and only at two airports;
- important assumptions are required to convert the volume of material found in bins into estimates of the number of passengers depositing this material or a 'seizure' equivalent so that direct comparisons with existing AFFA data can be made; and
- the January 2000 survey results cannot be assumed to apply historically as the patterns of material deposited in bins are likely to vary over seasons and over years.

5.36 The ANAO estimates that, for the period July to December 2000, AFFA intercepted 39 per cent of seizable material approaching the Australian border through the major international airports (excluding material deposited in amnesty bins). In other words, in excess of half of the seizable material carried by international air passengers breaches the quarantine barrier, even allowing for AFFA's estimate that inclusion of material deposited in amnesty bins could increase the seizure rate by 8 percentage points.

5.37 As noted earlier, leakage data is only available irregularly prior to 2000 and there are no comparable estimates for amnesty bins. However, estimates based on the available data show marked improvements in effectiveness following the increased funding flowing from the Government Response to the QRC Report (see Figure 20). (It should be noted however, that the estimates for December 1995 are subject to wider estimation error than more recent estimates).⁵³

Figure 20

Estimated seizure rate at all major airports⁵⁴



Source: ANAO analysis of AFFA data

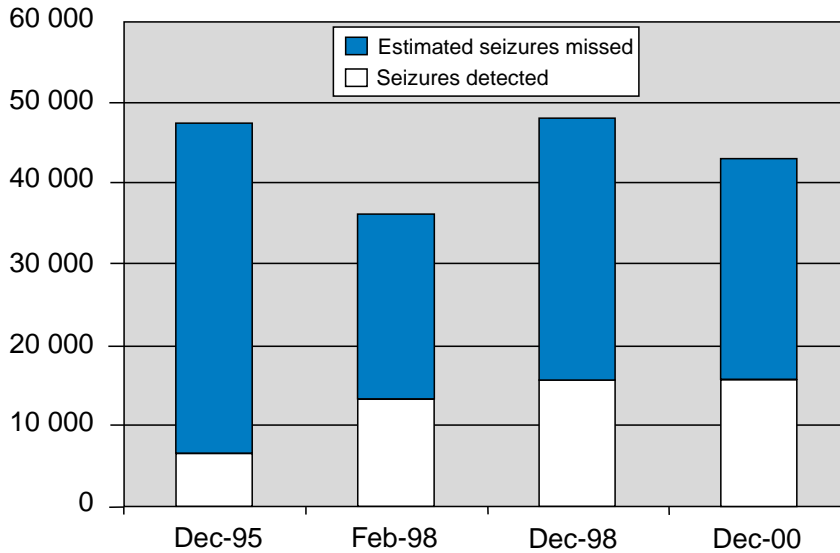
⁵³ December 1995 estimates are based on incomplete data for international airports.

⁵⁴ Months shown are the only periods for which appropriate data is available except for 2000 data. Data is available for each month from July to December 2000. December (37 per cent) chosen for presentation as data is also available for December 1998 and 1995.

5.38 Figure 21 shows the same estimates in terms of the number of items seized, compared with number of seizable items actually entering Australia having escaped detection. The December 2000 estimates equate to over 300 000 seizable items illegally entering Australia through major airports each year.

Figure 21

Potential and actual airport seizures at all major airports⁵⁵



Source: ANAO analysis of AFFA data

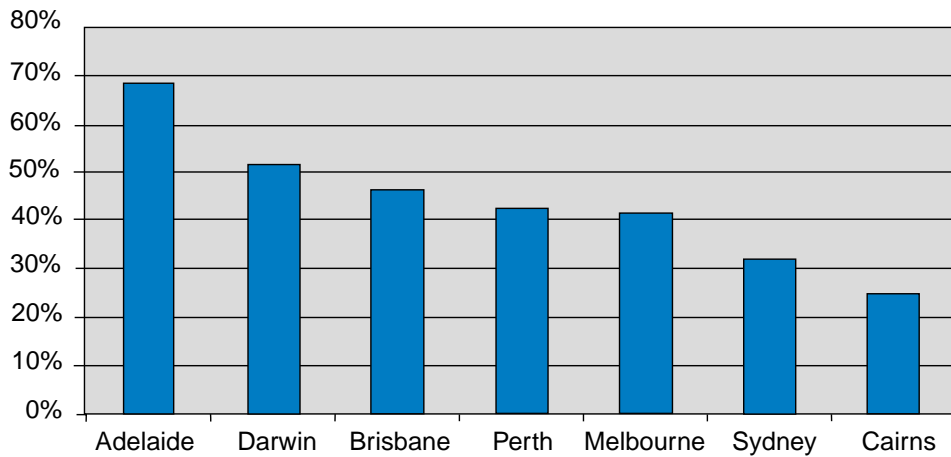
5.39 The ANAO also found that there is wide variation between airports in the estimated rate of detection and interception of seizable material. This ranges from an estimated 25 per cent of seizable material entering the Cairns airport being captured, to 68 per cent for Adelaide airport (see Figure 22). This measure suggests that, at Australia's major international airport, Sydney, an estimated 32 per cent of seizable material is captured.⁵⁶

⁵⁵ Months shown are the only periods for which appropriate data is available.

⁵⁶ All rates exclude material deposited in quarantine amnesty bins.

Figure 22

Estimated seizure rates by airport⁵⁷



Source: ANAO analysis of AFFA data

5.40 As for the seizure rate in international mail, the differences in relative effectiveness between different international airports appear to warrant further management review for the effectiveness of the systems employed.

International comparisons

5.41 It is difficult to directly compare AFFA's effectiveness with other national quarantine arrangements because, inter alia, there are differences in quarantine policies, operational approaches and resourcing. Notwithstanding this, comparisons with similar organisations provide some insight into AFFA's relative position, as a possible focus for further management review and action.

5.42 The most recent comparable data from New Zealand is based on a 1996 survey which found that, at New Zealand airports, quarantine operations detected and intercepted 52.4 per cent of seizable quarantine material. Care should be taken in interpreting these figures as the New Zealand estimates include the effect of amnesty bins, whereas the seizure rate estimates for AFFA do not. AFFA has also explained that the substantial difference between the two countries in resources allocated to quarantine at international airports, permits New Zealand to screen arriving international passengers⁵⁸ at approximately twice the rate of Australia.

⁵⁷ Data shown is for the period July to December 2000.

⁵⁸ 'Screened' includes those whose luggage is x-rayed, subject to full inspection or who declare quarantine items.

5.43 Since the 1996 survey New Zealand has developed its measurement approach to include the consequences of a breach of the quarantine barrier. On this risk weighted basis, New Zealand quarantine estimates it intercepted approximately 90 per cent of quarantine risk entering international airports in 1998. As this is a risk weighted measure, it is not directly comparable with the Australian data discussed above.

5.44 A United States Department of Agriculture audit report calculated seizure rates for entry to Miami Airport and found that in 1998, U.S. quarantine operations intercepted approximately 19 per cent of international airline passengers in possession of prohibited agricultural items.⁵⁹

Conclusion

5.45 AFFA has improved data collection and analysis in support of performance assessment of its border operations, with the measures providing indications of substantial improvement in quarantine border integrity since the commitment of additional resources by the Government.

5.46 However, only two of the four key quarantine border programs assess leakage rates of quarantinable material, and there is limited coverage in the measure used for airports. Furthermore, current measures, which focus on the incidence of interceptions of quarantine pests or diseases, numbers of seizures and leakage rates, do not give an adequate indication of effectiveness in maintaining border integrity as they do not address the likelihood of seizable material approaching and breaching the border, or the potential consequence of such an event.

5.47 Estimates of the proportion of seizable quarantine material approaching the border which is actually intercepted by AFFA provide further insight into the effectiveness of its operations. They confirm that there was a considerable improvement in AFFA's ability to intercept seizable quarantine material at international airports between December 1995 and 1998, with the rate plateauing since then. Notwithstanding these improvements, more than half of seizable material arriving at airports, and almost 90 per cent arriving by mail, enters Australia undetected. These rates, and differences in the rates between entry routes, suggests aspects of border operations warrant priority management review and action, including assessing the consequences of various types of barrier breach and setting appropriate targets.

⁵⁹ It should be noted that this survey estimated the number of passengers carrying prohibited material, not the number of items carried by those passengers. AFFA data on seizures by its inspectors suggest that passengers carrying seizable material usually carry around 1.1 items on average.

5.48 The estimated rates of detection of quarantinable material also need to be considered in a risk managed context against the background of Australia's 'highly conservative' approach to the import risk analysis process.

5.49 Only two of AFFA's border programs had sufficient data on which to estimate seizure rates. There would be substantial advantage for management purposes in AFFA acting promptly to collect and analyse appropriate information on the other areas of border operations, since these other programs are also integral to maintaining quarantine integrity. For example, a cargo shipment breaching quarantine has the potential to import an exotic pest or disease in quantities which can be distributed widely after arrival. By way of illustration, the recently detected incursion of Fire Ants near Brisbane is likely to have come about through cargo and shipping, apparently at least five years ago, rather than by means of airline passengers or mail.

5.50 Improved data collection and analysis for the Import Clearance and Seaports Programs would substantially enhance the information available to ensure that managers and stakeholders have appropriate information upon which to assess the effectiveness of its quarantine border operations.

Recommendation No. 4

5.51 The ANAO recommends that, in order to effectively support management decision making and reporting to Parliament and other stakeholders, AFFA establish more appropriate and useful effectiveness indicators for each border program (and for important elements within each program) which should:

- address the likelihood of detecting seizable material arriving in Australia through measures such as the 'seizure rate';
- address the risk consequence of quarantine items escaping detection; and
- include appropriate performance targets.

AFFA response

5.52 Agreed. As indicated in the response to Recommendation No.1, AFFA has commenced a whole of border risk management project. As part of this project AFFA will review effectiveness indicators for the quarantine border programs with a view to developing more appropriate and useful measures.

Achieving consistency in the application of quarantine protocols

5.53 Quarantine programs must be developed with a national perspective. Uniformity and consistency is essential to effective quarantine; as emphasised by the QRC *'anything less can lead to a reduction in confidence in the program by the Australian and international communities'*.⁶⁰ Accordingly, AFFA has set delivery of a nationally consistent quarantine service as a high priority and, in 1998, established the National Consistency Committee to identify areas of inconsistent performance at the border and to develop and direct strategies for improvement.

5.54 As a result, AFFA has strengthened guidance to quarantine officers by:

- updating the national database of import conditions which guides quarantine officers when processing goods at the border; and
- making AFFA's National Work Instructions available at all sites where AFFA services are delivered, both electronically and in hard copy format.

5.55 The ANAO found that AFFA staff did have a sound awareness of these guidance materials.

5.56 However, the ANAO also found that, notwithstanding these initiatives, there was evidence of inconsistent decision making for vessel and container inspections. For example, there is variation between States in the rate at which vessels fail inspections. This was most evident in comparisons between Queensland and Western Australia. The failure rate for all vessels inspected at first port of arrival in Australia (based on data for the first nine months of 2000) is consistently greater for Queensland than for Western Australia—an average 13.5 per cent compared with 5 per cent. This variation could not be explained by differences in cargo or vessel type. Such apparent variation in the standards applied can lead to unnecessary costs to ship owners or to avoidable exposure to quarantine risk.

5.57 The ANAO also found that methods of external container inspection varied markedly in the three States it visited. The differences were generally related to the operating environment at the port. Inconsistent approaches to conducting external container inspections is

⁶⁰ Nairn M.E., Allen, P.G., Inglis, A.R. and Tanner, C. (1996) *Australian Quarantine: A Shared Responsibility*. Department of Primary Industries and Energy, Canberra. p. 18.

of particular concern, as the Government allocated some \$4 million over four years to expand external container inspections to strengthen quarantine risk management. As part of this AFFA was to undertake external container inspections of all landbridged⁶¹ containers from Sydney, Brisbane and Melbourne, and provided extra staff and systems to do so. However, external container inspections are not conducted on all landbridged containers from these locations, as intended. AFFA advise that this is due to substantial difficulty in identifying which containers are to be landbridged, and that procedures for identifying such containers are in development. In the mean time, current practices present an increased quarantine risk. The ANAO considers that prior assessment of such implementation and procedural considerations is part of a sound approach to risk management.

Role of industry in border operations

Industry as partner: co-regulation

5.58 There are many lower-level quarantine border tasks that can be done more efficiently by industry, leading to reduced costs overall for the community and more targeted effort by AFFA staff at the border. The general term for such arrangements is ‘co-regulation’ defined as *‘industry involvement in traditional AQIS regulatory activities...with Compliance Agreements (including arrangements such as Quality Assurance (QA)) being the mechanisms for managing these relationships.’*

5.59 Although not providing specific funding, the Government accepted a QRC recommendation that AFFA facilitate the expanded use of industry-based quality assurance arrangements for low-risk quarantine goods and tasks. Such arrangements were to be subject to appropriate audit arrangements and to be no more complex than required to manage the assessed risk.

⁶¹ Landbridged containers are shipped overland, by rail or road, to another container depot (usually in another city) after being landed at a shipping port.

5.60 At the time of the QRC AFFA used relatively few such schemes. It has since implemented the Broker Accreditation Scheme which allows brokers to assist with low-risk quarantine procedures such as documentation checks. This scheme involved the training and certification of over 600 brokers each of whom has entered into a co-regulation agreement. At December 2000, AFFA had a total of 740 co-regulation agreements with individual brokers and other industry. This figure has been broadly static since 1998.

5.61 AFFA also has seven major co-regulation projects underway in the Import Clearance Program, a number of which are close to implementation. The Airports and Seaports Programs are also implementing new co-regulation arrangements for quarantine waste handling and treatment arrangements.

5.62 AFFA is also reviewing and upgrading all co-regulation arrangements in place prior to the QRC Report. In addition it has commenced a review to identify the scope for alternative delivery arrangements, including co-regulation. AFFA has established a Co-Regulation Steering Group to guide these processes.

Industry as stakeholder

5.63 Effective quarantine relies on governments, industry and the general public appreciating the importance of quarantine vigilance to everyday activities and responding appropriately. Accordingly, the Government seeks a 'partnership' approach to quarantine and AFFA has, in recent years, built on the framework of consultative arrangements which support cost recovery.

5.64 AFFA has a network of industry based consultative committees, which has expanded since the QRC Report. New committees have been implemented to provide coverage for the full range of appropriate industries and some existing committees were refocused to include consultation on policy and strategic issues for relevant quarantine programs. An example is the recently established AFFA/Airline Industry Consultative Committee, which now provides a forum for airlines, airport owners/operators and other relevant parties to consult on all aspects of the business of the AFFA Airports Program.

5.65 Figure 23 shows the AFFA consultative committees in operation.

Figure 23

AFFA quarantine related consultative committees

- AQIS/Airline Industry Consultative Committee
- AQIS/Grains Industry Consultative Committee
- AQIS/Industry Cargo Consultative Committee
- AQIS/Meat Industry Task Force
- AQIS/Meat Industry Charging Review Committee
- Biological Industry Consultative Committee
- Dairy Export Industry Consultative Committee
- Export Meat Industry Consultative Committee
- Horticulture Industry Consultative Committee
- Imported Foods Advisory Committee
- Live Animal Exports Consultative Committee
- Organic Product Export Certification Consultative Committee
- Post-Entry Plant Industry Consultative Committee
- Seafood Export Consultative Committee

Source: AFFA

5.66 The ANAO found that clients and other stakeholders supported the Consultative Committee structure used by AFFA for its quarantine operations. While there were sometimes areas of disagreement between AFFA and stakeholders, stakeholders were positive about the standard of communication and consultation.

5.67 QEAC commissioned a review of consultative arrangements in 2000,⁶² which found that AFFA's consultation processes were highly effective and supported by stakeholders. Notwithstanding this overall finding, the review made some recommendations aimed at, inter alia, ensuring the committees are properly representative and have more effective secretariat support from AFFA.

5.68 The ANAO concludes that AFFA/industry consultation on border operations is generally working well and that the arrangements in place provide a sound basis for the partnership approach envisaged by the QRC and the Government.

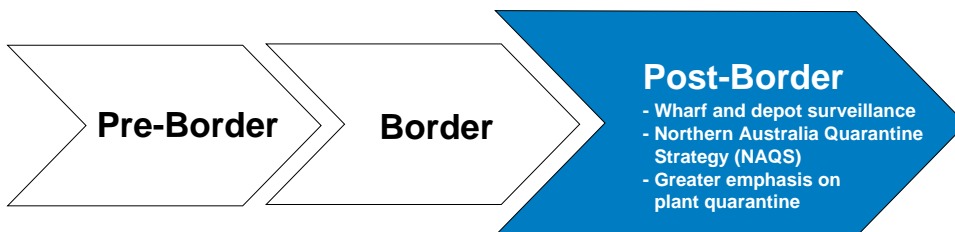
⁶² This Review specifically did not address issues associated with Import Risk Analysis.

6. Post-border Monitoring and Surveillance

This chapter examines AFFA implementation of QRC recommendations on wharf and depot surveillance and AFFA's implementation of reforms to the Northern Australia Quarantine Strategy.

Figure 24

The quarantine continuum and post-border quarantine operations



Introduction

6.1 Monitoring and surveillance for outbreaks of exotic pests and diseases are a key part of post-border quarantine and can provide valuable early warning of pest and disease outbreaks. There is a wide range of monitoring and surveillance systems in the terrestrial animal, aquatic animal and plant health sectors, managed by the Commonwealth and/or the States and Territories.

6.2 For this audit, the ANAO reviewed AFFA implementation of QRC recommendations to improve surveillance activities of the key quarantine operations programs, and also assessed AFFA's implementation of recommendations of a 1998 review of the Northern Australia Quarantine Strategy (NAQS).

6.3 Commonwealth involvement in conducting and coordinating broader monitoring and surveillance was reviewed as part of the 1999 Auditor-General's Performance audit *Managing Pest and Disease Emergencies*.⁶³ The conclusion of this audit with respect to monitoring and surveillance was that:

The effectiveness of current monitoring and surveillance systems, and arrangements for accessing diagnostic support should be reviewed, in

⁶³ Auditor-General Report No.9 1999–2000, *Managing Pest and Disease Emergencies*.

consultation with States/Territories and other relevant stakeholders, in order to identify improved means of providing early warning of a possible incursion or outbreak and of tracking its source as well improving Australia's diagnostic capability.

6.4 Following this report, the Government allocated approximately \$22 million over four years to improve Australia's emergency management capacity.

Wharf and depot surveillance

6.5 Wharf and depot surveillance seeks to:

- deter and detect inappropriate disposal of ship galley waste or removal of food from ships;
- inspect cargo which is not subject to quarantine actions as part of border clearance. For example a shipment of sheet steel presents no quarantine risk in itself and is not subject to quarantine border clearance; however, if the vessel which carried the steel last carried grain, the consignment may be contaminated with grain seeds. Such seeds present a substantial quarantine risk; and
- monitor cargo packaging on wharves and in registered premises and airfreight depots to ensure thorough inspection of high-risk packaging.⁶⁴

6.6 These activities are located close to the points of entry for quarantine risk material, such as the wharves and container depots and are focussed on detecting quarantine items that are not subject to official quarantine clearance at the border or have been through this process and have therefore cleared the border with respect to quarantine.

6.7 The QRC, concerned at the at the '*inadequate resources*' allocated to wharf surveillance, recommended that AFFA '*give a high priority to wharf surveillance.*' The Government accepted this recommendation and allocated \$1.5 million for wharf surveillance and improved signage at wharves. The Government also allocated \$5.75 million over four years to increase field staff to undertake general monitoring of packaging on wharves and in registered premises and airfreight depots to ensure thorough inspection of high-risk packaging.

⁶⁴ Particularly, wooden packaging presents a substantial risk of infection or infestation with exotic pests or pathogens.

Wharf surveillance

6.8 The ANAO found that AFFA has implemented systematic and improved wharf surveillance in all relevant States and Territories. However, resources to improve wharf surveillance in Western Australia were only assigned by AFFA at the end of 1999–2000. Until June 2000 wharf surveillance in Western Australia was undertaken on an ad hoc basis by AQIS staff between other duties and the results of surveillance were not recorded.

6.9 The ANAO found delays in fully implementing this recommendation of the QRC have occurred, despite the high priority placed on improved wharf surveillance by the QRC and the Government. It is also notable that AFFA advised QEAC in October 1998 that '*systematic wharf surveillance arrangements are being implemented across Australia..!*' notwithstanding the limited progress at the time, and that Western Australia has the second highest number of vessel inspections of any State/Territory (3389 out of a total of 11 681).

Inspection of packaging

6.10 Cargo packaging presents a substantial quarantine risk. AFFA has increased surveillance of wharves, registered premises and airfreight depots and recorded the results of inspections to determine the level of risk associated with dunnage and packaging.⁶⁵ AFFA is also planning to implement co-regulatory arrangements with container depot operators which would allow container operators to undertake routine surveillance of timber packaging. As at end-2000, 600 depot staff have received training in the identification of timber pests leading to more intense scrutiny of packaging associated with containerised sea cargo.

6.11 Break-bulk cargo⁶⁶ is a particular risk area as it has detection rates of some 14 per cent (i.e. 14 per cent includes contaminated packaging material). Break-bulk will not be part of the new co-regulatory arrangements, but will be managed through increased surveillance.

⁶⁵ Dunnage is material such as straw, mats, wood or other material used to stabilise cargo in containers or in vessels.

⁶⁶ Break-bulk cargo is uncontainerised cargo carried in the hull of ship.

Northern Australia Quarantine Strategy

6.12 NAQS is a key Commonwealth monitoring and surveillance activity. NAQS is a series of programs to monitor and survey targeted pests and diseases of plants and terrestrial animals and was established in 1989 following a major evaluation of quarantine by Professor David Lindsay.⁶⁷ It seeks to address a range of special quarantine risks specific to northern Australia, including:

- proximity to Papua New Guinea (PNG);
- ease of movement between PNG, Torres Strait and the Australian mainland;
- increasing numbers of international cruising yachts and increased domestic and international tourism;
- potential changes to agricultural practices in PNG and other neighbouring countries likely to increase pest levels; and
- the migration by natural means of pests and diseases by birds or animals.

6.13 The Quarantine and Exports Advisory Council (QEAC) undertook a review of NAQS in 1998, acting on a request of the then Minister for Primary Industries and Energy. In broad terms, the QEAC Review found that NAQS had been effective in detecting and responding to major incursions over the previous five years and recommended that funding for NAQS be maintained. It also made recommendations aimed at improving NAQS administration. Key areas addressed by the Report's recommendations included:

- interaction between Commonwealth and State/Territory jurisdictions;
- the completion of target pest lists;
- improved scientific collaboration with Papua New Guinea and Indonesia; and
- better communication and coordination between NAQS operating groups.

6.14 The ANAO found that there has been solid progress in implementing all recommendations accepted by AFFA. AFFA has maintained levels of funding, with \$12 million committed to NAQS over three years from the 1999–2000 Budget and:

⁶⁷ DPIE 1988, *Australian Quarantine Requirements for the Future: report of the Quarantine Review Committee*, Australian Government Publishing Service, Canberra.

- reached agreement with State/Territory Governments in Western Australia and Northern Territory on responsibility for pest and disease monitoring of the urban fringe;
- expects to finalise pest risk assessments for target species in early 2001;
- established a new MOU with the PNG Government on collaborative animal/plant health and quarantine matters;
- strengthened linkages with relevant PNG and Indonesian authorities and training of their quarantine professionals;
- improved the links between the policy and operational components of NAQS; and
- improved liaison with the Australian Defence Force.

Greater emphasis on plant quarantine

6.15 The QRC Report considered greater emphasis should be given to plant quarantine, as it had been relatively neglected compared to animal quarantine issues. The Government agreed, and allocated over \$4 million over four years to improve plant health infrastructure. The two major initiatives were to establish an Office of the Chief Plant Protection Officer (OCCPO) and an Australian Plant Health Council. Both bodies have a key role in surveillance, research and planning for incursions.

6.16 Both these initiatives have been implemented. The position of Chief Plant Protection Officer was established in 1998. However the APHC took some further time to be established, and was re-named to become Plant Health Australia (PHA). It is intended to be the peak body for plant health, with government and plant industries membership. PHA was established as a company, and did not meet until May 2000. As a result, some of the projects planned to be conducted have not yet commenced.

6.17 Despite these delays, AFFA has, through the OCCPO and interim arrangements, implemented initiatives such as trapping programs for exotic fruit fly and Asian Gypsy Moth, and a National Forest Pest Awareness Guide. AFFA has also been active in contributing to incursion management and response plans, such as Forest Generic Incursion Management Plan, Melon Fruit Fly Plan and state plans such those for fireblight and plum pox.

7. Management of Import Risk Analysis (IRA)

This chapter addresses AFFA's management of import risk analysis processes, including the extent to which IRAs are based on science, AFFA's relationships with stakeholders, and the timeliness of the IRA process.

Introduction

Role of import risk analysis

7.1 AFFA receives many hundreds of requests to import commodities to Australia each year. Before these requests can be processed the risks associated with that commodity must be assessed and, on the basis of this assessment, appropriate policies and protocols developed to govern its importation. Where possible, policies are developed on the basis of existing international standards, precedents or extrapolation of existing policies. However, there are often no suitable standards or precedents that address Australia's unique needs. The development of policy in such cases is called *Import Risk Analysis (IRA)*.

7.2 IRAs are conducted in response to requests from domestic stakeholders to import products or genetic material,⁶⁸ or from overseas governments seeking to export products to Australia. They are carried out in accordance with the WTO SPS Agreement and are a structured, transparent and science-based approach to developing and reviewing quarantine policies and disease or pest risks of particular commodity imports. A robust and credible IRA process is necessary for Australia to defend its conservative quarantine stance in international fora such as the WTO. Controversy over IRA decisions can delay the decision-making process and create negative perceptions about the quality and integrity of Australia's quarantine policy.

7.3 Government policy recognises that a 'zero risk' quarantine policy is neither achievable nor desirable. In its response to the QRC the Government stated that '*risk analysis is the foundation stone on which all quarantine policy and action must be built*', and allocated \$13.24 million over four years to upgrade and expand AFFA's risk analysis capacity. The Government also stated that IRAs should be:

⁶⁸ Such as breeding stock or semen.

- a scientific process, and therefore politically independent;
- harmonised through taking account of international standards and guidelines;
- consistent with both Government policy and Australia's international obligations;
- conducted in a consultative framework;
- a transparent and open process; and
- subject to appeal on process.⁶⁹

7.4 This chapter addresses AFFA's management of the IRA process in the context of the above principles, and also examines the administration of the overall process.

7.5 As at December 2000, AFFA was conducting IRAs on 47 commodities and had another 150 IRAs it planned to conduct, as resources become available. It spends some \$7 million a year on managing IRAs. The cost of individual IRAs is not identified by AFFA. However, the ANAO estimates that, at current completion rates, each IRA costs approximately \$400 000 on average to undertake.

The IRA processes

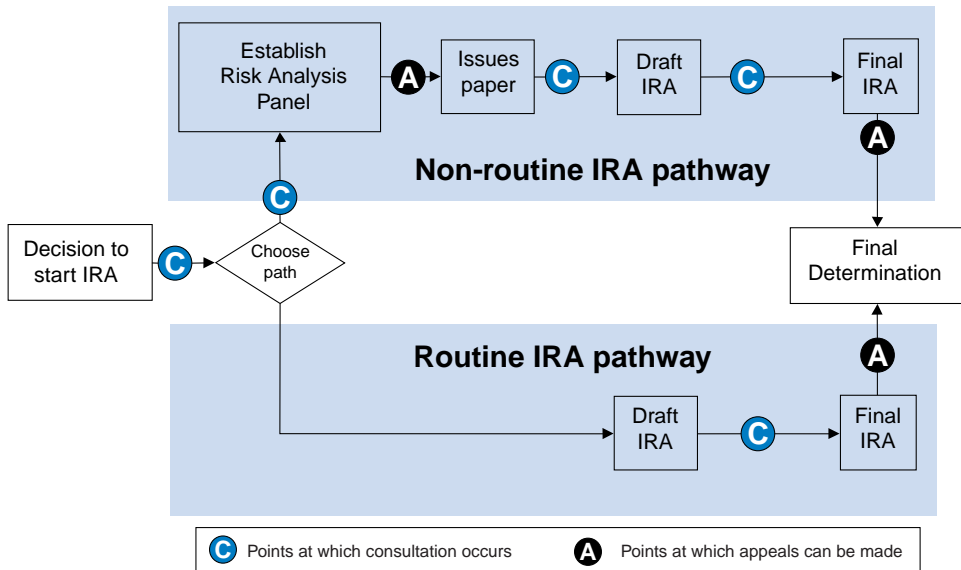
7.6 The Government Response to the QRC also set out new processes for conducting IRAs, which are now conducted in two main ways:

- **routine import risk analysis**, where it is considered that the scientific issues are less complex or is not likely to involve the analysis of new and significant risks. Such IRAs are managed by in-house teams within AFFA; or
- **non-routine risk analysis**, where there are new or complex risks to be considered. Non-routine IRAs are conducted by a Risk Analysis Panel (RAP) of three to five people, chaired by an AFFA officer and including people with expertise in quarantine risk analysis and relevant plant or animal diseases or pests. In such IRAs an issues paper on hazards and risks is circulated early in the IRA.

7.7 Figure 25 shows the key features of the two pathways. A more detailed flowchart of the IRA process is at Appendix 3.

⁶⁹ DPIE 1997, *Australian Quarantine: A Shared Responsibility—The Government Response*, p. 21.

Figure 25
Overview of IRA processes



Source: ANAO analysis of AFFA documents

7.8 Table 5 shows the number of IRAs completed and in-hand in the two routes. Twenty three of the 24 completed IRAs have used the routine process.

Table 5
IRAs completed/in hand under the revised process, 1998–2000

<i>Type of IRA</i>	<i>Completed</i>	<i>In-progress</i>	<i>Total</i>
Routine			
Animal	20	16	36
Plant	3	15	18
Total	23	31	54
Non-routine			
Animal	1	10	11
Plant	-	6	6
Total	1	16	17
Total			
Animal	21	26	47
Plant	3	21	24
Total	24	47	71

Source: AFFA

Industry perspectives on the IRA process

7.9 The ANAO consulted a range of industry stakeholders in the course of the audit. Stakeholders widely acknowledged that the new process was substantially more open and transparent than that previously used. However, some stakeholders still expressed strong concerns at the quality and appropriateness of consultation. Domestic stakeholders made several suggestions to address their concerns, which are summarised at Appendix 4. The ANAO has addressed the suggestions as appropriate in this chapter.

7.10 In November 2000 AFFA also announced a review (in conjunction with QEAC) of the IRA processes.

IRAs as a scientific process

Management of scientific inputs to IRAs

7.11 The scientific basis of IRAs comprises:

- **hazard identification:** the process of identifying the pathogenic agents that could potentially be introduced in the commodity considered for importation; and
- **risk assessment:** the evaluation of the likelihood and the consequences of entry, establishment or spread of a pathogenic agent.

7.12 Sound and credible hazard identification and risk assessment is necessary if the risk management measures proposed in IRAs are to meet Australia's international obligations and be recognised and accepted as credible by stakeholders. This audit focused on the *management* of the scientific inputs to IRAs by AFFA, not on specific scientific analyses and decisions.

7.13 The ANAO's expert quarantine advisers assessed AFFA's approach and practices and considered its management of science was sound: AFFA uses appropriately skilled staff, included relevant material in IRAs and generally analyses and presents scientific evidence appropriately.

7.14 State quarantine officials consulted by the ANAO also advised that IRAs were generally scientifically credible and rigorous.

7.15 The IRA appeals process also provides some insight into AFFA's management of the scientific issues in IRAs, since stakeholders are able to appeal on the grounds that a 'substantial' body of science has been ignored but not on the analysis and conclusions drawn on that science by AFFA. Two out of 24 completed IRAs—both conducted through the routine process—have been appealed on scientific grounds. Appellants in both IRAs considered that the science base of the IRA, in particular

the hazard identification and risk assessment, had not been comprehensive. The appeal panel dismissed the scientific aspects of both these appeals but considered that the IRAs had not been sufficiently transparent; it directed that AFFA issue clarifying documentation to explain the treatment of scientific issues and the development of risk management measures.⁷⁰

7.16 This evidence indicates that the scientific basis of IRAs has generally been sound.

7.17 However, the ANAO's consultation with local industry stakeholders found substantial concerns about aspects of the hazard identification and risk assessment processes. The ANAO considers that some of these concerns merit consideration by AFFA to see if processes can be improved to increase stakeholder confidence in the scientific basis of IRAs. These are discussed below.

7.18 One of the concerns expressed was that, in some routine IRAs, the AFFA staff undertaking the IRA had limited direct experience of the industry under consideration, notwithstanding that they had credible scientific qualifications in their particular field. One example cited was the IRA on salmon where AFFA staff had little experience of the salmon processing industry. Stakeholders considered that this can lead to analysis in an IRA (for example the choice of treatments for a particular commodity) having limited regard to current industry processing techniques. It was suggested that more regular inclusion of scientists with sound knowledge of the industry under consideration would facilitate awareness of contemporary industry practices.

7.19 Stakeholders also advised the ANAO that, because the scientific issues in a routine IRA are considered more straightforward, they often use a relatively narrow range of scientific advice, with AFFA scientists usually undertaking the bulk of the analysis. They considered that greater use of external peer review of science for routine IRAs would foster stakeholder confidence in AFFA's use of science. The ANAO found no evidence of a lower level of scientific expertise in routine IRAs; however, stakeholder confidence and participation in IRAs is consistent with the Government's principles (see paragraph 7.3). Providing greater opportunity for external peer review, whilst maintaining the administratively simpler approach offered by the routine path, merits consideration as a means of achieving this. The ANAO notes that AFFA has used external scientists to review material and provide expert input

⁷⁰ Where there are appeals against a final IRA, AFFA establishes an Import Risk Analysis Appeal Panel which is usually chaired by the Chair of QEAC.

in some routine IRAs. Furthering this approach could increase assurance that relevant issues are considered, facilitate participation by scientists with relevant industry experience and adds credibility to the IRA.

7.20 There were also stakeholder concerns that the routine path provides less opportunity than the non-routine path, for input on scientific issues. It is noteworthy that the two appeals against IRAs discussed above addressed hazard identification and risk assessment, and that the Appeal Panel considered that transparency could be improved in this regard. These are matters that would normally be addressed via a discussion paper at the beginning of a non-routine IRA, but not in a routine IRA.

7.21 Instituting a discussion paper stage in the routine process would require greater resources; on the other hand there would be benefits in reducing the likelihood of appeals and, more importantly, in engendering stakeholder confidence in the basis of the risk assessment. The ANAO suggests the costs and benefits of obtaining early input on scientific issues warrants consideration. AFFA is now considering such options, but has noted that use of discussion papers will increase the cost and length of routine IRAs.

Recommendation No. 5

7.22 The ANAO recommends that, to improve the transparency in the treatment of science in IRAs, AFFA consider:

- encouraging early discussion and agreement of scientific issues by means such as issuing discussion papers that focus on hazard identification and risk assessment; and
- arranging adequate access to experts familiar with the industry under consideration.

AFFA response

7.23 Agreed. AFFA recognises the advantages of early consultation with stakeholders on scientific issues. AFFA is now preparing and circulating a hazard scoping paper for each IRA to identify agents of potential concern and categorise them as to whether they will require risk assessment. Because it is at an early stage in the process the paper does not include details of the risk assessment. AFFA notes the need to balance consultation requirements with requirements for timely completion of IRAs. AFFA agrees that access to experts familiar with relevant industries is important to ensure a robust IRA. AFFA will therefore continue to facilitate the use of experts having regard to the availability of experts, budget and other practical limitations.

Use of quantitative risk analysis

7.24 One of the major debates in risk analysis has been over the role of quantitative methods to assess the *likelihood* of entry, establishment and spread of a pathogen or pest.⁷¹ Quantitative approaches allow the use of sensitivity analysis to identify measures which have the greatest impact on risk, as well as enabling the risk analysis to recognise the impact of volume of trade on risk. The principal constraints on greater use of quantitative modeling are the time and technical resources required, as well as the data needed for the results to be sound. Relevant international standards on risk analysis state that both quantitative and qualitative approaches to risk analysis are valid. The inquiry into the conduct of the IRA on salmon from Canada by the Senate Rural and Regional Affairs and Transport Legislation Committee recommended that, wherever possible, AFFA ‘support their qualitative analysis with quantitative risk analysis techniques’.⁷²

7.25 The ANAO found that, until recently, there was little explicit guidance for AFFA staff on the choice of method for risk analysis or how to undertake quantitative analysis. AFFA has now produced guidance to staff and members of Risk Analysis Panels and has also run training courses (for its own staff and for State Government quarantine staff) on quantitative analysis. AFFA has used quantitative analysis in some recent IRAs, such as those on apples from New Zealand and on pig meat.

Harmonisation with international standards

7.26 IRAs must meet stringent international and domestic standards. Under the SPS Agreement, IRAs must be conducted in accordance with relevant international technical standards on risk analysis and conducted in a consistent way for all animal and plant commodities.

7.27 Until recently, there was no structured internal guidance on the conduct of IRAs which would assist in providing assurance that international standards are met. Instead, staff had to rely on the relevant international technical standards; but these gave little direction on the detailed conduct or management of risk analysis. The ANAO found that, as a result, IRAs have varied markedly in their layout, presentation and approach to issues such as risk, pest or disease hazards and target level of protection. Animal and plant IRAs tended to take different approaches to risk analysis, partly reflecting different disciplines.

⁷¹ Report by the Senate Rural and Regional Affairs and Transport Legislation Committee (Parliament of Australia 2000), *An Appropriate Level of Protection?*

⁷² *ibid*, p. 187.

7.28 There have also been differences in key terminology. For example, IRAs varied between describing the target level of risk as very negligible in some cases and very low in others. Some IRAs did not indicate a target at all, only saying that the measures were intended to achieve an ‘acceptably low’ risk, but not defining what that level of risk should be.

7.29 AFFA issued internal Guidelines for Import Risk Analysis for its staff and Risk Assessment Panels to address these and other concerns. The Guidelines address relevant international standards and set out how risk analyses should be conducted to ensure they are harmonised with these standards. The ANAO’s quarantine advisers considered that the Guidelines are a comprehensive and helpful summary of risk analysis principles and practice for those involved in the process, and represent better practice in the discipline. Their use should lead to greater consistency in the approach of IRAs, and give greater assurance that the requirements of relevant international standards are met.

Achieving consistency with Government policy

Australia’s appropriate level of protection

7.30 Australia’s appropriate level of protection (ALOP) is the basic policy stance set by Government used to guide the setting of individual quarantine risk management measures. The setting of ALOP is a policy matter for Government. AFFA’s role is to achieve consistent and effective implementation and dissemination of the Government’s policy.

7.31 The report by the Senate Rural and Regional Affairs and Transport Legislation Committee *An Appropriate Level of Protection* identified the setting and implementation of ALOP as a key issue for quarantine policy.⁷³ The Committee considered that Australia’s ALOP was currently ‘*vague and unsubstantiated*’ and that it must be ‘*subject to some standards, guidelines or definition*’.⁷⁴

7.32 AFFA advised that there is no internationally accepted approach to defining ALOP, and that there are risks in Australia adopting an approach which might subsequently be found inappropriate, or which left current policies open to undue challenge. AFFA also advised that the WTO appellate body considered that Australia had determined its ALOP with sufficient precision; accordingly it considered the specification of ALOP appropriate.⁷⁵

⁷³ *ibid.*

⁷⁴ *ibid* p. 97.

⁷⁵ WTO WT/DS18/AB/R 20 October 1998, , Australia – Measures affecting importation of salmon, paragraph 207.

7.33 AFFA issued a public *Handbook on the IRA Process* in 1998 which sets out the steps followed by AFFA, and also includes the text of relevant international agreements. At that time, AFFA also ran a short series of workshops for stakeholders following the release of the Handbook to explain the IRA process and ALOP to stakeholders.

7.34 Notwithstanding these initiatives, many stakeholders consulted considered that the concept of ALOP and the process by which it is set is not well explained. Some stakeholders also lacked appropriate understanding of the role of ALOP in the IRA process, with some believing that:

- the ALOP was set at a level which guaranteed that no pests enter the country—i.e. zero risk, while the policy is in fact for very low, but not zero risk of incursion;
- the ALOP varied from industry to industry, whereas the level of protection is applied equally across all industries;
- factors such as regional impacts of industry restructuring, and the costs and benefits of increased import competition would be considered by AFFA, when the SPS Agreement does not allow these factors to be considered in the IRA; and
- IRAs focused just on the risk of a pest or pathogen entering Australia, rather than the combined risk of entry, establishment and consequences within Australia.

7.35 Stakeholders consulted by the ANAO also advised that it was often difficult to see the relationship between risk management measures proposed in an IRA and the ALOP. They sought clearer explanation for conclusions or preferred treatment options, so that they can better understand the rationale for the measures, and their relationship to ALOP. The ANAO notes that in two of the three appeals against final IRAs, the appeal panel considered that the explanation and justification of the setting of risk measures was not sufficiently transparent, suggesting that AFFA was not making a sufficiently clear link between the hazards and risks identified and the application of Australia's ALOP.

7.36 AFFA's internal Guidelines on Import Risk Assessment give greater clarity to defining ALOP than in current public documents. However, the ANAO found they give little guidance to AFFA staff on how the ALOP is to be applied in the setting of individual measures. Thus the final decision on what measures will treat a risk to a residual level consistent with ALOP are somewhat subjective. AFFA considers that this is appropriate, and that the decision on measures is subject to review by staff experienced in IRAs and in applying ALOP. Whilst

recognising that experience and the review processes give some assurance in applying ALOP, the ANAO considers that a more structured approach in such a key area would facilitate greater consistency and help ensure measures achieved Australia's ALOP.

Recommendation No. 6

7.37 The ANAO recommends that AFFA consider more effective means of communicating with stakeholders the concept, definition and application of Australia's appropriate level of protection in order to facilitate stakeholder understanding of the IRA process and achieve better outcomes.

AFFA response

7.38 Agreed. AFFA continues to seek better ways of explaining the appropriate level of protection (ALOP) to strengthen stakeholder understanding of and involvement in IRAs. No other country presents more detailed explanations than Australia. AFFA notes that the ALOP is a key concept in risk analysis that presents some difficulty in defining in practical terms. Strengthened understanding of ALOP as a concept is being examined as part of the improved partnership approach with the States and Territories. The use of technical guidelines and risk matrices will result in a more transparent application of the ALOP to the development of quarantine measures. Enhanced communications with stakeholders and improved understanding of the context and methodology of import risk analysis are key elements of intended improvements to the IRA process.

Dealing with environmental aspects of quarantine

7.39 Quarantine has an important role in protecting Australia's indigenous flora and fauna from exotic pests and diseases. One of the major directions in the QRC Report, endorsed by the Government, was that quarantine policy and operations have greater regard to environmental issues.

7.40 The *Quarantine Act 1908* and the *Environment Protection and Biodiversity Conservation Act 1999* specify various procedures for consultation between AFFA and the Environment Minister. Any advice received from the Environment Minister must be taken into account in making the relevant decision and the Environment Minister must be informed of how the advice was taken into account. Environment Australia is to be given the opportunity to comment on proposals to develop new quarantine policies.

7.41 AFFA and Environment Australia have started developing a protocol for consultation between the two departments to clarify working relationships, roles and responsibilities under the legislation. However, the development of the protocol has been delayed, and has not yet been finalised.

7.42 Environment Australia advised the ANAO that, although the protocol with AFFA had not been finalised, the current informal arrangements for liaison with AFFA were satisfactory. Notwithstanding this view, there was subsequently disagreement between Environment Australia and AFFA over the treatment of environmental issues on the IRA relating to the import of apples from New Zealand. Prompt finalisation of the protocols for consultation between AFFA and Environment Australia would help ensure that environmental issues are dealt with appropriately.

7.43 AFFA's internal Guidelines on Import Risk Assessment also provide guidance to staff on the requirement to consider environmental risks in IRAs and environmental issues have been specifically addressed in a number of import risk assessments.

Consultation, transparency and openness

7.44 The Government Response to the QRC Report considered that '*...if processes are open and transparent the potential for conflict is reduced*' and that it was essential that the process be conducted in a consultative manner.⁷⁶ AFFA has implemented several initiatives to achieve this, including:

- publishing a public *Handbook on the IRA Process* in 1998;
- consulting with stakeholders at the start of an IRA on the choice of routine or non-routine path, and later in the process, on the draft IRA;
- permitting stakeholders to comment on the content of issues papers and on membership of Risk Analysis Panels for non-routine IRAs;
- maintaining a public file on each IRA, which enables stakeholders to examine relevant AFFA and stakeholder documents and submissions; and
- establishing an electronic stakeholder register to facilitate broad distribution of IRA materials and information.

⁷⁶ DPIE (1997) *Australian Quarantine: A Shared Responsibility—The Government Response*, p. 24.

7.45 The ANAO's advisers on quarantine risk analysis considered that AFFA's consultation processes were, by world standards, comprehensive and lengthy. This was supported by stakeholders consulted by the ANAO, who considered that the current consultation processes were markedly more open, consultative and transparent than had previously been the case.

7.46 Notwithstanding the recognition by stakeholders of AFFA's initiatives and of the greater openness of the current process, their views on the quality of AFFA's consultation processes were mixed. While some Australian stakeholders were highly critical of AFFA, others were less so. Those industries who considered they would face the greatest import competition were perhaps, most concerned that there should be ample opportunity to contribute to the IRA process.

7.47 The ANAO's examination of the consultative process, and consideration of stakeholder views, suggests that there are opportunities to strengthen consultation in several areas. These are discussed below and address:

- the criteria for choosing between the routine and non-routine pathway;
- the desirability of a more flexible approach to consultation;
- clarifying the purpose of consultation in IRAs; and
- encouraging early input from stakeholders.

Choosing the routine or non-routine pathway

7.48 A key decision point in the IRA process is the choice of whether the IRA should follow the routine or non-routine path. AFFA does seek comment from stakeholders on this choice but this decision is not subject to appeal.

7.49 The choice is made by AFFA solely on the scientific aspects of the IRA. The routine path is followed when the scientific analysis is considered to be technically less complex, or the proposal appears *prima facie* not to require assessment of substantially greater or different risks than those AFFA has previously examined. Factors such as the potential consequences of an incursion are not considered in choosing the path.

7.50 AFFA has mostly used the routine path, and some IRAs which have been highly controversial have been conducted using the routine process. Examples include the IRA on apples from New Zealand, durian from Thailand and table grapes from California. However, such IRAs can still deal with pest or disease risks that may have dramatic impact on an industry, or where there is substantial controversy over treatments. Also, while scientific issues may be considered straightforward the choice of risk management measures may not be so, and stakeholders also expressed the view that these matters should be considered in the choice of path.

7.51 The ANAO acknowledges that the non-routine path is longer and more expensive than the routine path and that its use requires careful consideration of costs and benefits. However, as well as the scientific considerations, a more risk-balanced approach to choosing the IRA path could also have regard to the likely consequences of an incursion on an industry, and potential complexity or controversy of likely risk treatment options. Considering the consequences of an incursion would also improve stakeholder confidence in the final decision of which path to use and reflect that a major risk to achieving an optimal outcome is stakeholder rejection and controversy, as well as scientific uncertainty.

A more flexible approach to consultation

Targeting of stakeholders

7.52 AFFA has to manage a wide variety of interests and stakeholders. It defines stakeholders as: *'governments, individuals, community or industry groups or organisations, in Australia or overseas, that have an interest in the subject matter of an IRA.'*

7.53 AFFA considers that, in order to achieve procedural fairness, all stakeholders should be treated equally, and that this requires that no stakeholder or stakeholder group should have 'privileged' access. Accordingly, in non-routine IRAs, AFFA holds 'open' public consultations where any stakeholder can attend a meeting with the IRA Risk Analysis Panel (RAP). In practice this means that overseas interests can attend. Local industry groups advised the ANAO that the presence of overseas producers in such consultations restricted their ability to divulge commercially sensitive information. They considered that the opportunity to provide such information directly to RAPs would result in a stronger information base for the IRA and potentially better quarantine outcomes. AFFA's procedures do, in practice, allow the submission of confidential information. However, the *Handbook* and related information could give greater clarity and assurance on how such information will be treated, thus alleviating stakeholder concerns.

7.54 The ANAO found that AFFA has also treated State/Territory Governments similarly to other stakeholders. State/Territory quarantine officials consulted by ANAO expressed a desire for a closer relationship with AFFA and the IRA process which they considered would reflect their role in quarantine administration, for example, in dealing with disease incursions and setting policy for their particular jurisdiction. State/Territory quarantine officials consulted by the ANAO also expressed the desire to formally present their views on important implementation issues, or issues of regional freedom, before AFFA commenced detailed

work on the IRA. A recent meeting of the Council of Australian Governments agreed to intensify dialogue between the Commonwealth and States/Territories on quarantine policy, IRA's and other WTO-related quarantine issues.

7.55 Consumers and manufacturers also have an interest in the outcome of IRAs, as the decisions in the IRA will affect their access to products (and the price of the products). AFFA has made some approaches to consumer and importer organisations to explain the IRA process but has not developed a targeted strategy to involve them, such as by seeking submissions to IRAs, ensuring they are aware of the implications of ALOP or are represented on the stakeholder register.

Stakeholder access to information

7.56 AFFA's consultation with stakeholders is undertaken in accordance with the procedures set out in the public *Handbook on the IRA Process*. This specifies the duration for each phase of consultation, such as for comment on issues papers or draft IRAs.

7.57 Stakeholders advised the ANAO that the consultation periods are applied strictly by AFFA, notwithstanding that there are often major delays and uncertainties in the release of documents by AFFA. For example, in some IRAs important documents such as lists of the pests to be considered, or other relevant technical reports have not been available at the start of the consultation period (such as in the table grapes IRA).

7.58 Commencing the consultation only when all relevant documents are readily available would improve the effectiveness of stakeholder consultations and facilitate the aim of the consultation, which is to contribute to the best IRA outcomes.

Clarifying the purpose of consultation

7.59 The public *Handbook on the IRA Process* contains details of when consultation should occur, but provides little guidance on the role or purpose of the consultation. The ANAO also found that, despite the importance of effective consultation to the IRA process, there was no explicit guidance to AFFA staff on the aims, approach and desired outcomes for the consultation process.

7.60 There have also been differing approaches to consultation on different IRAs, and at times confusing and unsatisfactory communication with stakeholders. For example, in the apple IRA, AFFA suggested to local producers that they form an informal focus group to foster communication and provide the industry with an opportunity to contribute to the decision-making process. AFFA subsequently unilaterally changed

the role of the group to be solely a forum for AFFA to communicate progress on the IRA. The industry participants were frustrated by this as they saw it as a withdrawal of a consultative opportunity and a reduction in their capacity to contribute to the IRA. AFFA's failure to adhere to its foreshadowed consultation arrangements made further consultation with the industry difficult.

7.61 The ANAO also found that stakeholders advised they were often unclear about the purpose of a particular consultation, and about how their views would be taken up. For example, there were conflicting views on the nature and purpose of consultation on the decision to conduct the IRA by the routine or non-routine path. Some stakeholders had the impression that they were, in effect, 'voting' for a particular path; while AFFA considered the process more advisory. This undermined consultative relationships, and reduced perceived transparency of the process, as well as confidence in the outcome.

7.62 Clearer guidance for staff and stakeholders on the aims of the various parts of the consultation process would support a more consistent approach to consultation, provide stakeholders with a clearer understanding of the consultation process, and reduce the likelihood of misunderstandings and controversy. Such guidance could address issues such as the different ways to seek stakeholder input, how to give feedback on AFFA's use of such input, and the role of stakeholder advisory groups.

Encouraging early input from stakeholders

7.63 The Government Response to the QRC Report stressed that consultation should occur from the beginning of the IRA process. The benefits of early consultation are that contentious issues are identified in time for them to be addressed in the course of the IRA, and that stakeholders have time to develop their input to the process.

7.64 As previously noted, consultation with stakeholders occurs at several stages in the IRA process. However, the first point at which stakeholders can have input on the substantive content of an IRA is on the draft IRA in the routine process, and on the issues paper (which sets out the hazard assessment) in a non-routine IRA.

7.65 Stakeholders consulted by the ANAO stated that they would have more confidence in the IRA process if they had an opportunity to identify, at the start of the IRA what they considered to be, for example, the major pests and hazards, or important areas in risk management that the IRA should address. They considered this could be done without unduly delaying the process and that such input could avoid the IRA proceeding to issue papers or reports that contained errors or gaps which then required submissions from stakeholders to correct, as occurred most recently in the table grapes IRA.

7.66 AFFA has begun to respond to some of these concerns. For example in the IRA on bananas from the Philippines, AFFA met growers at the start of the IRA to seek industry views on the key issues and to discuss the approach that will be taken with the IRA. AFFA will also meet banana growers to discuss the identification of pests to be included in the IRA. However AFFA has not made such approaches a standard part of its consultation process.

Recommendation No. 7

7.67 The ANAO recommends that AFFA:

- give consideration to the costs and benefits of including the consequences of pest and disease incursions in the criteria for use of the non-routine process;
- ensure that the consultation process allows provision of commercially sensitive information, while remaining consistent with Australia's WTO obligations;
- develop and promulgate guidelines on the purpose and conduct of consultation in the IRA process; and
- seek stakeholder views on the major issues or considerations at the start of the IRA.

AFFA response

7.68 Agreed. Proposed modifications to the IRA process will remove many of the current distinctions between the routine and non-routine processes. The new process will address many of the concerns raised with respect to scientific review, early consultation and early appeal opportunity for all IRA processes.

7.69 AFFA seeks to ensure that all pertinent information is available for consideration in an IRA. Information received is placed on a public file and supporting documents not in the public domain are made available when discussion documents are released. The table of contents of each public file will be placed on the AFFA WebPages. Confidential information can be supplied and protected under the present IRA system and this option will remain in any modified system.

7.70 AFFA will clarify the purpose of each stage of consultation in the revised IRA Process Handbook. When documents are circulated to stakeholders, or meetings called, a clear statement of their purpose will be included and a description of outcomes will be circulated or placed on the public file.

7.71 The proposed changes to the IRA process will also provide for early consultation on all IRAs. This will facilitate technical input from stakeholders, including the States and Territories, where there is much scientific expertise, and assist in early identification of issues.

The appeal process

7.72 Stakeholders can appeal against the composition of RAPs, the priority accorded an IRA, and the final recommendations. The ability to appeal was a major change introduced following the Government Response to the QRC Report. Appeal panels are chaired by the Chair of QEAC and comprise the Director of Quarantine, the Chief Veterinary Officer or the Chief Plant Protection Officer (as appropriate) and one other member of QEAC.

7.73 There have been three appeals on final IRAs, as discussed above. There have been other appeals, mainly over the priority of an IRA or membership of the RAP.⁷⁷ A summary of these and their outcomes is at Appendix 5. Appeals are conducted in accordance with the process set out in the public *Handbook on the IRA Process*.

7.74 Stakeholders consulted by the ANAO questioned whether QEAC was an appropriate body to chair the Appeal panels, and were concerned that appeals were ultimately decided by the departmental decision-maker rather than an independent body. These concerns are less administrative matters and more matters for policy consideration.

7.75 The ANAO concludes that AFFA had effectively implemented the Government's policy on appeals.

Administration of import requests

Recording and accepting applications

7.76 Applications for import access can be made in a variety of ways, ranging from formal letters from foreign governments to informal requests in bilateral fora.

⁷⁷ Appeals against the scope of an IRA and RAP composition are to the Director of Quarantine (the Secretary of AFFA) who makes the determination. Appeals against the final IRA are lodged with the Director of Quarantine, and are heard by an Import Risk Analysis Appeal Panel.

7.77 The ANAO found that some requests are not well documented. For example, there are some applications where the original date of application is either unknown or listed as 'pre-1994', and which are still awaiting action. There are also applications where no documentation is available on the original import request. In such circumstances applicants will often not have fully specified the nature of the application, which creates difficulties in assessing its priority.

7.78 The lack of documentation or other supporting material for the conduct of an IRA can also make delays appear greater than they are, as processing of a request cannot start until further written information is submitted. It is also a concern for local stakeholders, who might be affected by the request and wish to understand the exact terms of the request.

Assigning priority to applications

7.79 The *Handbook on the IRA Process* sets out criteria for setting priority for applications, which include:

- availability of data;
- order of receipt of proposals;
- breadth and nature of interest in the establishment of new or revised conditions; and
- the need to consider access by a particular date.

7.80 AFFA uses these criteria to guide its decisions on which IRAs to commence over the coming year. As capacity becomes available, AFFA notifies stakeholders of their intention to conduct the IRA and seeks feedback on this decision. AFFA also informs stakeholders of its waiting list of import requests and seeks comment on the priority for these requests, but does not indicate its preferred priority for processing the requests. AFFA advised the ANAO that they obtain little comment on its waiting list. Including options for rankings (such as high, medium or low priority) may encourage greater feedback to AFFA.

7.81 As discussed in Chapter 1, State/Territory agricultural departments have a key role in quarantine policy. In some jurisdictions they administer quarantine services, their staff have substantial expertise, and the departments often work closely with affected industries. AFFA does not formally consult with State/Territory agricultural departments on setting priorities. Such consultation would make it more likely that the IRAs will be developed consistent with the partnership approach recommended by the QRC.

Recommendation No. 8

7.82 The ANAO recommends that AFFA consult with relevant State/Territory agencies on the priority of IRA applications.

AFFA response

7.83 Agreed. Proposed changes to the IRA process provide for early consultation with the States and Territory CEOs on IRAs, including on the work program of Biosecurity Australia.

Timeliness and resource management

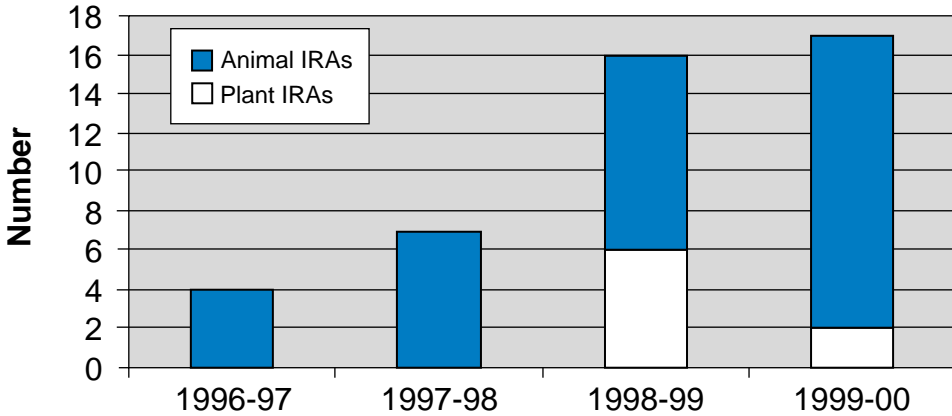
7.84 When the revised IRA process was implemented in 1998, AFFA set the target times for duration of final IRAs at 10 months for routine IRAs and 14 months for non-routine IRAs. The ANAO found that over 90 per cent of IRAs exceeded these targets. On average, non-routine IRAs have taken around 20 months to complete and routine IRAs around 19 months. However, those currently in progress are taking even longer, with an average duration of over 30 months.

7.85 The length of time taken to complete IRAs means that AFFA is only able to start a relatively small number of new IRAs each year. Only three new animal IRAs were started in 1999, and only one in 2000, compared with over 30 new requests received.

7.86 The ANAO was advised by some stakeholders that they find it difficult to plan against AFFA's work program, because deadlines are often not met. They also considered they are not kept sufficiently well informed of the progress of an IRA. For example, in one IRA the domestic industry contracted with a consultant to visit Australia and review the draft IRA. The visit was timed to coincide with AFFA's estimate of the release of the draft IRA. However the draft was not available when the consultant visited, leading to additional costs and reduced quality of input.

7.87 AFFA acknowledges that it had underestimated the resource implications of conducting IRAs under the revised process. It attempted to reduce the backlog of requests and to meet WTO obligations, but in doing so commenced too many IRAs. This then led to difficulties managing competing demands on staff. Further, as some IRAs required unforeseen effort, resources were drawn away from other IRAs, which were then further delayed.

7.88 Despite these delays, AFFA is now completing more IRAs than previously, reflecting the additional resources flowing from the Government Response to the QRC Report. Figure 27 shows the number of final IRA decisions made by AFFA in recent years.

Figure 26**IRA Decisions 1996–1997 to 1999–2000**

Source: ANAO presentation of AFFA data

7.89 AFFA advised the ANAO that it is attempting to improve its management of IRAs by greater use of ‘generic’ or global IRAs. These are IRAs that deal with requests from different countries addressing the same commodity in one IRA, and are therefore a more efficient way to deal with such requests. AFFA also considers that once the current round of IRAs are completed, it will be better able to forecast IRAs.

8. Management of Funding for Implementing the Government Response to the QRC Report

8.1 The extra funds given to AFFA to implement the Government Response to the QRC Report represented approximately 15 per cent of the total quarantine budget (including cost recovered funding) for 2000–2001. The Government allocated the funds to specific recommendations, or a particular group of recommendations. Table 6 shows the total funding by major categories identified in the Government Response to the QRC Report. The ANAO examined how well funds had been managed and whether there were sufficient mechanisms to provide assurance that the funds had been appropriately applied.

Table 6:
Expenditure approved in response to the QRC Report

<i>Category</i>	<i>\$ m</i>
Enhanced Border Activities	38.775
Improved Import Risk Analysis Processes	13.240
Community Awareness, Education & Advisory Structures	8.274
Fish Health Infrastructure	6.694
Plant Health Infrastructure	4.105
Emergency Preparedness & Response	3.604
Offshore Quarantine Preparedness	1.307
Total Funding	76.000

Source: AFFA

AFFA's approach to accounting for the funds

8.2 AFFA decided not to track expenditure on all recommendations individually or to use an activity-based accounting system for this purpose and did not conduct an explicit cost-benefit analysis in making this decision. Instead, AFFA took the following steps to account for the additional funding:

- funds for new activities were separately identified and tracked either by recommendation (where this was straight forward), or by group of recommendations where the activities were funded as a group by the Government. For example, five recommendations to expand risk analysis within what is now Biosecurity Australia were funded and, the expenditure of funding for these recommendations was tracked

and reported in aggregate, rather than for each individual recommendation;

- expenditure of funds allocated for existing activities (such as an increase in staffing, or additional dog teams) was estimated and monitored by program areas through spreadsheets; or derived indirectly through monitoring changes in program expenditure reports, rather than use of separate cost codes for specific recommendations;
- program managers were responsible for monitoring expenditure and reporting regularly to the AQIS Business and Finance Committee (ABFC), QEAC⁷⁸ and the Minister. These reports identified and explained variances in expenditure from that allocated in the Government Response at the category level (as identified in Table 6) and components within these categories, rather than by individual recommendation;⁷⁹ and
- where, in the course of implementing the Government Response, AFFA considered it necessary to reallocate expenditures between recommendations and categories, these reallocations were agreed by ABFC and notified to QEAC and the Minister.

8.3 AFFA did seek advice from its internal audit unit on this approach. AFFA's internal audit advised that where the funds were to:

... increase the scope of activities already performed by AQIS, the accounting records could not be easily substantiated due to derivation of figures. However, we found that the method and bases for deriving these figures were reasonable.

8.4 The internal audit review also considered that an adequate audit trail had been established and that the decision not to account for expenditure at the level of individual recommendation was reasonable.

8.5 However, AFFA's decision not to implement an accounting system to track expenditure by recommendation made the process of collating financial information by AFFA, and the ANAO's examination of this information, somewhat involved and time-consuming. This increases the likelihood of reporting errors and limited the extent to which the ANAO was able to test and verify the financial information provided by AFFA. Where tests were able to be conducted, the information provided by AFFA was found to be valid.

⁷⁸ QEAC is charged with overseeing implementation of the Government Response to the QRC Report.

⁷⁹ For example, the 'Education and Extension, Advisory Services' category was divided into its components of Awareness Campaign, QEAC, Register of Stakeholders and the Quarantine Development Unit.

8.6 From an accountability perspective, it is highly desirable that agencies are able to provide appropriate and reasonable assurance to Parliament and other stakeholders that specific allocations have been spent as directed by the Government. While implementation of separate accounting by recommendation would have aided transparency and accountability, AFFA did monitor expenditure of the additional funds allocated to it at aggregate levels. AFFA's overall approach was not unreasonable.

8.7 Based on the financial information provided by AFFA, the ANAO found that AFFA's expenditure of the funds allocated by the Government in response to the QRC Report was appropriate. Over the first three years AFFA spent some \$49.5 million on QRC expenditure, an underspend of \$0.75 million, or 1.5 per cent. This small underspend was due to delays in implementing some recommendations and re-phasing of some expenditures. AFFA plans to fully spend the funds by the end of the program.



Canberra ACT
7 June 2001

P. J. Barrett
Auditor-General

Appendices

Appendix 1

Recent Reviews of Quarantine.

- DPIE 1988, *Australian Quarantine Requirements for the Future: report of the Quarantine Review Committee*, AGPS, Canberra.
- Auditor-General Report No.35 1991–92, *Australian Quarantine Inspection Service*.
- Senate Rural and Regional Affairs and Transport Legislation Committee 1996, *Australian Quarantine and Inspection Service*, AGPS, Canberra.
- Nairn M.E., Allen, P.G., Inglis, A.R. and Tanner, C. 1996, *Australian Quarantine: A Shared Responsibility*, Department of Primary Industries and Energy, Canberra.
- Auditor-General's Report No.10 2000–01, *AQIS Cost Recovery Systems*.
- Senate Rural and Regional Affairs and Transport Legislation Committee 2000, *An Appropriate Level of Protection?*, AGPS, Canberra.

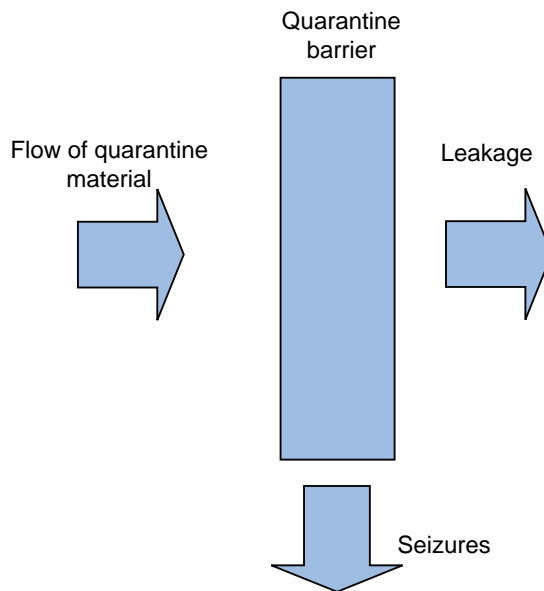
Appendix 2

Technical Background on Calculation of Seizure Rates for the International Mail and Airports Programs

1. Figure 27 presents a simplified picture of the operation of a typical border program. Quarantine material approaches the border, and seizable material is either detected and captured by AFFA systems, or 'leaks' into Australia.

Figure 27

Simplified model of AFFA data on border seizures and leakage



2. In the Airports and International Mail Programs, AFFA collects data on seizures and the amount of leakage. The leakage is calculated as a rate—for example, if for every 100 passengers/mail items leaving the border, three carry/contain material which should have been seized by AFFA, there is a leakage rate of 3 per cent. As seizable quarantine material approaching the Australian the border must be either seized or leak, the total amount of seizable quarantine material approaching the border can therefore be estimated by adding the number of actual seizures and leaked seizures—ie:

$$\text{approaching volume} = \text{number of seizures} + \text{leakage rate} * \text{number of total items exiting the border}$$

Thus, if during any one period, if there are 100 items crossing the Australian border, and AFFA seizes two items, and the leakage rate is 3 per cent, then:

$$\text{approach volume}^{80} = 2 + (3\% * 100) = 2 + 3 = 5$$

Once the total approach volume is calculated, the seizure rate can then be calculated as:

$$\frac{\text{the number of quarantine items seized by AFFA}}{\text{the total number of seizable quarantine items approaching the border}}$$

Or

$$\text{seizure rate} = 2/5 = .4 \text{ or } 40\%$$

3. The interpretation of this rate would be that AFFA intercepts and seizes 40 per cent of the seizable quarantine material approaching Australia. Conversely 60 per cent of seizable quarantine material approaching Australia enters Australia undetected.

International mail

4. The calculation of the seizure rate depends on the extent to which seizures and leakage data is valid and complete. As the flow of mail in international mail centres is relatively straightforward, the data available is relatively complete and only minor assumptions were required to complete seizure rate analysis. The key assumption made by the ANAO was that the leakage rate for mail referred to AFFA for secondary screening (x-ray and inspection) is zero. Any such leakage will reduce the ANAO's estimates of the seizure ratio, that is, this assumption is a conservative one.

International airline passengers

5. The flow of passengers at international airports and the tools used to 'seize' or capture quarantine material are more complicated and diverse. Consequential data limitations mean that it is necessary to make some assumptions to calculate the seizure rates in international airports.

⁸⁰ In reality, and in the calculations by the ANAO, instead of multiplying the leakage rate by 100, it is more appropriate to multiply the leakage rate by 100 less the number of items subject to rigorous quarantine inspection.

Seizure data

6. In airports AFFA makes use of amnesty bins to collect seizable material from incoming passengers. At the time of audit fieldwork, AFFA did not have data on quarantine material placed in the bins, and was thus not aware of how effective the bins were in preventing the flow of seizable material into Australia. As a result, the effect of amnesty bins is excluded in calculating AFFA's seizure rate. Since completion of ANAO fieldwork AFFA has collected some data from a survey of material deposited in bins at Brisbane and Melbourne airports over two weeks in January 2001. The ANAO considers that AFFA's analysis of this material has required a number of substantial assumptions which limit the reliability which can be placed on the results. Factors limiting the reliability include:

- the survey was conducted over a short period of time and only at two airports;
- substantial assumptions are required to convert the volume of material found in bins into estimates of the number of passengers depositing this material or a 'seizure' equivalent so that direct comparisons with existing AFFA data can be made; and
- the January 2001 survey results cannot be assumed to apply historically as patterns of material deposited in bins are likely to have varied over seasons and over years.

7. AFFA consider that the sample is statistically valid, and advise that were the results of the January 2001 survey on amnesty bins applied to the July to December 2000 period analysed by the ANAO, then the seizure rate would increase by an estimated 8 percentage points.

Red Channel leakage rates

8. AFFA conducts regular surveys of passengers leaving airports through the Green Channel (i.e. those who claim to have nothing to declare). According to AFFA data, over the last two years the Green Channel leakage rate has been between 3.5 and 4 per cent. However, some passengers leave the airport by the Red Channel (i.e. they have declared customs or quarantine items).

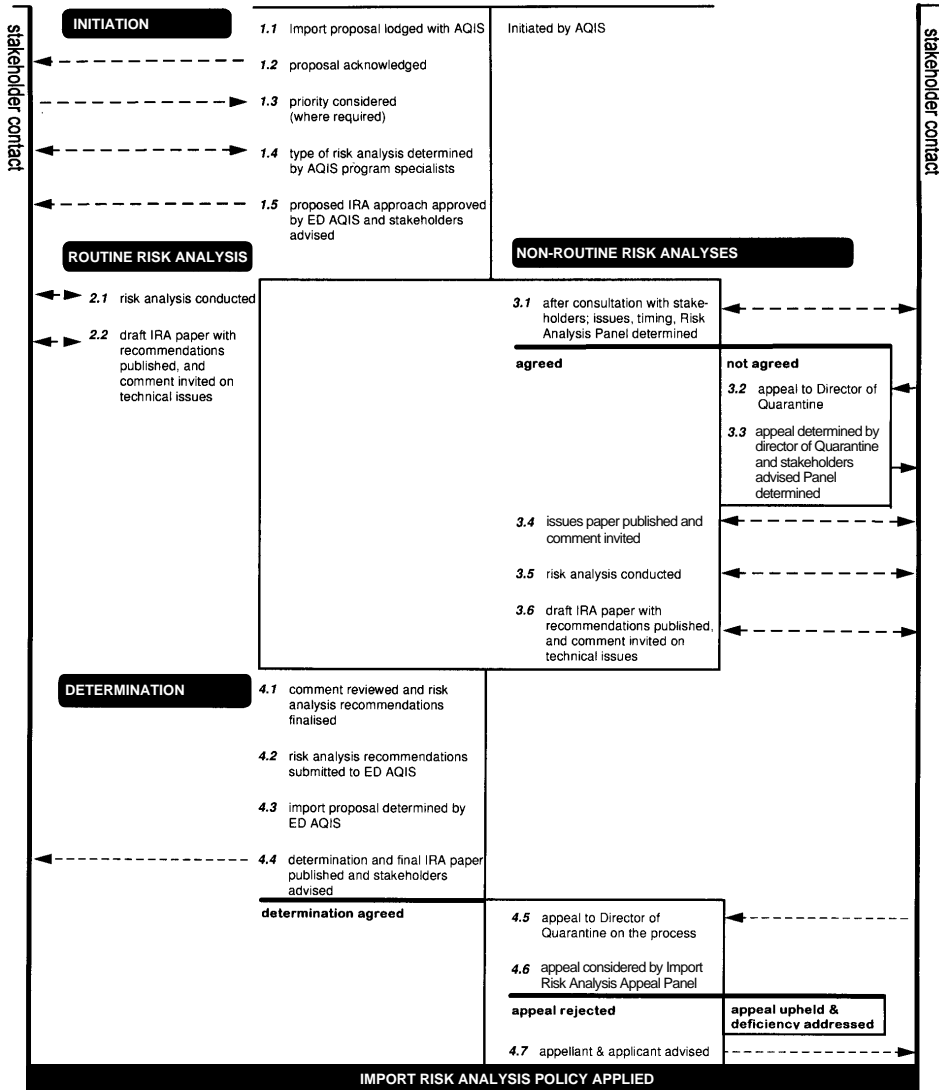
9. AFFA has surveyed these passengers, and the most recent survey (1999) found a leakage rate of 4.7 per cent, Green Channel leakage at this time was approximately 3.5 per cent. AFFA advised that it had doubts about the validity of the Red Channel survey results, and considered, based on some New Zealand data, that a Red Channel leakage rate of 1 per cent would be more robust and accurate. The ANAO considered that there was no evidence to support such an optimistic assumption in

light of its own survey. On balance, the ANAO considered that assuming the leakage rate in the Red Channel was equal to that of the Green Channel was the more appropriate and balanced assumption.

10. In January 2001 AFFA undertook another Red Channel survey in order to produce more complete data on leakage in the Red Channel. Preliminary results from this survey indicate that Red Channel Leakage is approximately 5 per cent. This suggests that the ANAO assumptions are conservative and that the estimates of actual seizure ratios are cautious.

Appendix 3

Overview of the IRA Process



Source: AFFA

Appendix 4

Summary of Frequently Suggested Changes to IRA Process by Domestic Stakeholders

– AFFA should...

Management of science

- ensure industry expertise is recognised and demonstrate knowledge of commercial/processing factors to ensure measures are realistic (7.18)
- ensure external peer review of science, including for routine IRAs to foster confidence in AFFA's use of science by stakeholders (7.19)
- stage consultation on hazard identification and risk analysis first to foster consensus on the science base of IRAs (7.20)

Consistency with policy

- Explain further the approach to ALOP so stakeholders can assess AFFA's implementation of it (7.34)
- better explain reasons for conclusions/preferred options so stakeholders can better understand the rationale for the measures, and the relationship to ALOP (7.35)

Consultation, transparency and openness

- limit the use of the routine process to IRAs where the science is known and risks are low (7.50)
- offer industry-only consultations with RAPs so domestic stakeholders can freely express views (7.53)
- ensure that all information is available (including technical working parties and pest lists) before formal consultation starts so that all information is available to stakeholders before they are asked to comment (7.57)

Appeals

- allow appeals on treatment of science to maximise transparency
- use a third party to hear appeals to ensure independence (7.74)

Handling of import requests

- import requests should be readily available so all stakeholders can understand the basis for an application (7.78)
- keep State Governments well informed and involved in the IRA process including in setting priorities, to encourage the partnership approach (7.81)
- set and meet deadlines for its production of draft IRAs so stakeholders can plan for their participation (7.86)
- keep stakeholders informed of progress in IRAs, to foster better communication between AFFA and stakeholders (7.86)

Source: ANAO analysis of stakeholder comments to ANAO

Appendix 5

Import Risk Analysis—Summary of Appeals Received Since Publication of the IRA Process Handbook in 1998

<i>Subject of IRA</i>	<i>Basis of Appeal/s</i>	<i>Appeal/s Considered By</i>	<i>Outcome</i>
Prawns and prawn products	<ul style="list-style-type: none"> • RAP membership • Consultation process 	Secretary	Dismissed
Bulk maize from the USA	<ul style="list-style-type: none"> • Priority accorded to the IRA 	Secretary	Dismissed— not an appealable matter
Psittacines	<ul style="list-style-type: none"> • RAP membership 	Secretary	Dismissed
Non-viable salmonid products	<ul style="list-style-type: none"> • Timetable • RAP membership • Scope 	–	Encompassed into a broader accelerated IRA
Live and novel veterinary vaccines	<ul style="list-style-type: none"> • Inconsistency in the final conditions 	–	Inconsistency addressed and appeal withdrawn
Non-viable bivalve molluscs	<ul style="list-style-type: none"> • RAP membership 	Secretary	Dismissed
Hatching eggs of domestic ducks	<ul style="list-style-type: none"> • No details provided 	–	Withdrawn
Edible eggs and egg products	<ul style="list-style-type: none"> • Scope • Timetable • RAP membership 	Secretary	Dismissed
Fresh durian fruit from Thailand <ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Transparency of the process <p>Risk analysis failed to consider a significant body of relevant scientific or technical information</p>	IRAAP	Upheld on transparency on the basis that AQIS had failed to fully explain four technical issues
Table grapes from California, USA	<ul style="list-style-type: none"> • Transparency of the process • Risk analysis failed to consider a significant body of relevant scientific or technical information 	IRAAP	Upheld on transparency on the basis that AQIS had failed to fully explain two technical issues
Uncooked chicken meat	<ul style="list-style-type: none"> • RAP membership • Scope • Timetable • Approach 	Secretary	Dismissed
Camelids from Chile and Peru	<ul style="list-style-type: none"> • ALOP 	IRAAP	Not an appealable matter

Source: AFFA

Index

A

airports 11, 17, 21, 25, 27, 28, 54,
62, 63, 67, 77, 81, 89, 90, 91, 92
appropriate level of protection 16,
32, 37, 110, 111, 113, 129

B

border operations 11, 13, 15-17, 22,
24, 27-29, 45, 47, 48, 69, 71, 77,
93, 94, 96, 98

C

certification 15, 23, 36, 44, 69, 70,
72-75, 97, 98
co-regulation 28, 96, 97
community awareness 24, 47, 51, 53,
75, 124
consultation 12-14, 16, 18, 32-34, 37,
44, 47, 48, 97, 98, 100, 107-109,
113-122, 135, 136
continuum of quarantine 13, 47

E

effectiveness measures 16, 26, 84
effectiveness of quarantine 12-15,
44, 46, 48, 51, 60, 77
environmental issues 113, 114
establishments 19, 51, 52

F

financial management 14

G

genetic material 11, 42, 104

I

import clearance program 56, 97
import risk analysis 18, 30, 44, 47,
49, 72, 94, 98, 104, 105, 107-109,
111, 113, 115, 117, 119-121, 123,
124, 136
incursions 11, 15, 19, 20, 29, 37, 41,
45, 46, 51-53, 56, 83, 102, 103,
116, 119
interceptions 24, 25, 58, 78, 87, 93

L

leakage 16, 25, 27, 78, 81-83, 89, 90,
93, 130-133

M

mail 11, 15-17, 20, 27, 44, 45, 54,
56-58, 60, 61, 63, 64, 67, 77-79,
81-89, 92-94, 130, 131

O

offshore supply systems 23, 71, 72
overseas certification 15, 23, 70, 72,
74

P

performance measures 12, 16, 22-24,
45, 50, 70, 72, 77, 83
post-border 12, 29, 46, 84, 99, 101,
103
pre-border 12, 15, 22, 36, 46, 69-71,
73-75
pre-inspection 22, 23, 69-72

Q

Quarantine and Exports Advisory Council (QEAC) 12, 16, 25, 29, 44, 46, 70, 78, 81, 83, 98, 101, 102, 107, 108, 120, 125
quarantine risk 15, 17, 19, 20-23, 28-30, 32, 35, 36, 43, 53-63, 65, 67- 69, 71, 72, 74-76, 78, 79, 87, 93, 95, 96, 100-102, 105, 111, 115

R

risk consequences 15, 59, 60
risk management 14, 15, 20-22, 27, 28, 31-35, 54-57, 59-63, 65, 67, 72, 76, 88, 94, 96, 107, 108, 111, 112, 115, 118
risk profiling 21, 22, 62
risk treatments 14, 15, 21, 22, 35, 54, 55, 57, 59-61

S

seizure rates 26, 27, 84, 86-88, 92, 93, 94, 130, 131
stakeholders 12, 15-19, 23, 28, 30-34, 36, 37, 44, 45, 48, 53, 72, 74, 77, 83, 94, 98, 100, 104, 107-109, 112-122, 126, 135
surveillance 19, 23, 29, 45, 46, 53, 69, 72, 73, 99-103

T

timber 15, 23, 29, 72, 73, 101

Series Titles

Titles published during the financial year 2000–01

Audit Report No.46 Performance Audit

ATO Performance Reporting under the Outcomes and Outputs Framework

Australian Taxation Office

Audit Report No.45 Performance Audit

Management of Fraud Control

Department of Family and Community Services

Audit Report No.44 Performance Audit

Information Technology in the Department of Veterans' Affairs

Department of Veterans' Affairs

Audit Report No.43 Performance Audit

Performance Information for Commonwealth Financial Assistance under the Natural Heritage Trust

Department of Agriculture, Fisheries and Forestry, Department of the Environment and Heritage

Audit Report No.42 Performance Audit

Bank Prudential Supervision

Australian Prudential Regulation Authority

Audit Report No.41 Performance Audit

Causes and Consequences of Personnel Postings in the Australian Defence Force

Department of Defence

Audit Report No.40 Performance Audit

Management of the Adult Migrant English Program Contracts

Department of Immigration and Multicultural Affairs

Audit Report No.39 Performance Audit

Information and Technology in Centrelink

Centrelink

Audit Report No.38 Performance Audit

The Use of Confidentiality Provisions in Commonwealth Contracts

Audit Report No.37 Performance Audit

The Use of Audit in Compliance Management of Individual Taxpayers

Australian Taxation Office

Audit Report No.36 Performance Audit

Municipal Services for Indigenous Communities

The Aboriginal and Torres Strait Islander Commission

Audit Report No.35 Performance Audit
Family and Community Services' Oversight of Centrelink's Assessment of New Claims for the Age Pension
Department of Family and Community Services

Audit Report No.34 Performance Audit
Assessment of New Claims for the Age Pension by Centrelink
Centrelink

Audit Report No.33 Performance Audit
Australian Defence Force Reserves
Department of Defence

Audit Report No.32 Performance Audit
Defence Cooperation Program
Department of Defence

Audit Report No.31 Performance Audit
Administration of Consular Services
Department of Foreign Affairs and Trade

Audit Report No.30 Performance Audit
Management of the Work for the Dole Programme
Department of Employment, Workplace Relations and Small Business

Audit Report No.29 Performance Audit
Review of Veterans' Appeals Against Disability Compensation Entitlement Decisions
Department of Veterans' Affairs
Veterans' Review Board

Audit Report No.28 Audit Activity Report
Audit Activity Report: July to December 2000
Summary of Outcomes

Audit Report No.27 Performance Audit
Program Administration Training and Youth Division—Business Reengineering
Department of Education, Training and Youth Affairs (DETYA)

Audit Report No.26 Performance Audit
Defence Estate Facilities Operations
Department of Defence

Audit Report No.25 Benchmarking Study
Benchmarking the Finance Function

Audit Report No.24 Performance Audit
Family Relationships Services Program (FRSP)
Department of Family and Community Services (FaCS)

Audit Report No.23 Financial Statement Audit
Audits of the Financial Statements of Commonwealth Entities for the Period Ended 30 June 2000

Audit Report No.22 Performance Audit
Fraud Control in Defence
Department of Defence

Audit Report No.21 Performance Audit
Management of the National Highways System Program
Department of Transport and Regional Services

Audit Report No.20 Performance Audit
Second Tranche Sale of Telstra Shares

Audit Report No.19 Financial Control and Administration Audit
Management of Public Sector Travel Arrangements—Follow-up audit

Audit Report No.18 Performance Audit
Reform of Service Delivery of Business Assistance Programs
Department of Industry, Science and Resources

Audit Report No.17 Performance Audit
Administration of the Waterfront Redundancy Scheme
Department of Transport and Regional Services
Maritime Industry Finance Company Limited

Audit Report No.16 Performance Audit
Australian Taxation Office Internal Fraud Control Arrangements
Australian Taxation Office

Audit Report No.15 Performance Audit
*Agencies' Performance Monitoring of Commonwealth Government
Business Enterprises*

Audit Report No.14 Information Support Services Report
Benchmarking the Internal Audit Function

Audit Report No.13 Performance Audit
Certified Agreements in the Australian Public Service

Audit Report No.12 Performance Audit
Passenger Movement Charge—Follow-up Audit
Australian Customs Service

Audit Report No.11 Performance Audit
Knowledge System Equipment Acquisition Projects in Defence
Department of Defence

Audit Report No.10 Performance Audit
AQIS Cost-Recovery Systems
Australian Quarantine and Inspection Service

Audit Report No.9 Performance Audit
*Implementation of Whole-of-Government Information Technology Infrastructure
Consolidation and Outsourcing Initiative*

Audit Report No.8 Performance Audit
Amphibious Transport Ship Project
Department of Defence

Audit Report No.7 Performance Audit
The Australian Taxation Offices' Use of AUSTRAC Data
Australian Taxation Office

Audit Report No.6 Performance Audit
Fraud Control Arrangements in the Department of Health & Aged Care
Department of Health & Aged Care

Audit Report No.5 Performance Audit
Fraud Control Arrangements in the Department of Industry, Science & Resources
Department of Industry, Science & Resources

Audit Report No.4 Activity Report
Audit Activity Report: January to June 2000—Summary of Outcomes

Audit Report No.3 Performance Audit
Environmental Management of Commonwealth Land—Follow-up audit
Department of Defence

Audit Report No.2 Performance Audit
Drug Evaluation by the Therapeutic Goods Administration—Follow-up audit
Department of Health and Aged Care
Therapeutic Goods Administration

Audit Report No.1 Performance Audit
Commonwealth Assistance to the Agrifood Industry

Better Practice Guides

Internet Delivery Decisions	Apr 2001
Planning for the Workforce of the Future	Mar 2001
Contract Management	Feb 2001
AMODEL Illustrative Financial Statements 2000	Apr 2000
Business Continuity Management	Jan 2000
Building a Better Financial Management Framework	Nov 1999
Building Better Financial Management Support	Nov 1999
Managing APS Staff Reductions (in Audit Report No.47 1998–99)	Jun 1999
Commonwealth Agency Energy Management	Jun 1999
Corporate Governance in Commonwealth Authorities and Companies–Principles and Better Practices	Jun 1999
Managing Parliamentary Workflow	Jun 1999
Cash Management	Mar 1999
Management of Occupational Stress in Commonwealth Agencies	Dec 1998
Security and Control for SAP R/3	Oct 1998
Selecting Suppliers: Managing the Risk	Oct 1998
New Directions in Internal Audit	Jul 1998
Life-cycle Costing (in Audit Report No.43 1997–98)	May 1998
Controlling Performance and Outcomes	Dec 1997
Management of Accounts Receivable	Dec 1997
Protective Security Principles (in Audit Report No.21 1997–98)	Dec 1997
Public Sector Travel	Dec 1997
Audit Committees	Jul 1997
Core Public Sector Corporate Governance (includes Applying Principles and Practice of Corporate Governance in Budget Funded Agencies)	Jun 1997
Administration of Grants	May 1997
Management of Corporate Sponsorship	Apr 1997
Return to Work: Workers Compensation Case Management	Dec 1996
Telephone Call Centres	Dec 1996
Telephone Call Centres Handbook	Dec 1996
Paying Accounts	Nov 1996
Performance Information Principles	Nov 1996
Asset Management	Jun 1996
Asset Management Handbook	Jun 1996
Managing APS Staff Reductions	Jun 1996