One Biosecurity

A working partnership

The Independent Review of Australia's Quarantine and Biosecurity Arrangements
Report to the Australian Government

BEALE | FAIRBROTHER | INGLIS | TREBECK

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The Hon Tony Burke MP
Minister for Agriculture, Fisheries and Forestry
Parliament House
CANBERRA ACT 2600

30 September 2008

Dear Minister

We are pleased to provide you with the Report of the Quarantine and Biosecurity Review Panel, entitled **One Biosecurity: a working partnership**.

Biosecurity management is a difficult and complex task. Biosecurity risks are inevitably rising with increased global interdependence. Australia's biosecurity regime should, through careful management, minimise the risk of the entry, establishment and spread of exotic pests and diseases that could harm our people, agriculture or environment.

Effective biosecurity is a sound investment and has protected the Australian people, economy and environment from significant damage—a foot and mouth disease outbreak alone could cost Australia between $8 billion and $13 billion.

Australia's biosecurity system has worked well in the past, and is often the envy of other countries. However, the system is far from perfect and recent events have exposed a number of systemic deficiencies. The Report recommends far-reaching changes to rectify these problems while enhancing the good aspects of the system.

The central theme is the development of a seamless biosecurity system that fully involves all the appropriate players—business, other nations, the states and territories and the Australian community—across pre-border, border and post-border risk management measures. The Panel has called this approach **One Biosecurity: a working partnership**.

Zero biosecurity risk is unattainable and unaffordable. Australia's agriculture was built on, and still depends on imported genetic material. Our consumers benefit from products from other countries. Our exporters depend on fair access to other markets. Tourism and travel are important for our economy and people. The primary objective of our biosecurity system must be the safe movement of animals, plants, people and cargo to and from Australia. This brings with it the need for an effective capacity to respond to incursions of pests and diseases.

Managing biosecurity risk is therefore not just about controls at the border. 'Quarantine' has a largely defensive connotation associated with isolation. It is time to move to the broader concept of 'biosecurity' with an emphasis on managed risk, not zero risk, and from a border preoccupation to encompass fully pre-border and post-border measures.

The Commonwealth has Constitutional powers to assume a much broader biosecurity reach. To manage the increasing biosecurity risks, the Commonwealth needs to take an assertive national leadership role underpinned by a strong partnership with the states and territories, businesses and the community. Modern and more comprehensive legislation is necessary.

Integration of the Commonwealth's biosecurity activities in a dedicated statutory agency—the National Biosecurity Authority—will provide the necessary coordination and focus on managing biosecurity risks. An independent expert-based panel—the National Biosecurity Commission—should make science-based Biosecurity Import Policy Determinations independent from political intervention.

It is important that the National Biosecurity Commission and the National Biosecurity Authority are guided by clear directions from the Government about the overall Appropriate Level of Protection reflecting Australia's national interest. The responsible Minister should also have the power to provide Guidelines on the principles that underpin Biosecurity Import Risk Analyses, Biosecurity Import Policy Determinations and import permit decisions. A statutory office of Inspector General of Biosecurity with comprehensive audit powers reporting to the responsible Minister will enhance community confidence in the system.

Australia's biosecurity system will be most effective if resources go to those areas of greatest return from a risk management perspective. The mandatory Increased Quarantine Intervention targets should be replaced by a system closely aligned to risk-return and backed by a comprehensive approach to quality management, verification and audit. There is a need to increase national resources for pre-border risk management and post-border monitoring, surveillance and management of national priority exotic pests and diseases.

Australia's biosecurity agencies are significantly under-resourced. To achieve **One Biosecurity: a working partnership,** a funding increase in the order of $260 million per annum—shared between business and taxpayers—is required. An investment of the order of $225 million is also required to upgrade information technology and business systems for biosecurity.

Implementing the Panel's recommendations should commence immediately and a new Biosecurity Act should be developed in parallel with the negotiation of a National Agreement on Biosecurity with the states and territories. The aim should be to complete both of these within two years of acceptance of the Panel's recommendations. While agreement with the states and territories is highly desirable, the Commonwealth should reserve the right to proceed unilaterally or with a limited number of participating states and territories, if agreement is not forthcoming within that timeframe.

Pending the passage of the legislation, administrative steps should be taken to implement the proposed structures. The increases in resources should be progressively applied, with the proposed increase in Commonwealth funding for monitoring, surveillance and management being subject to appropriate matching contributions from the states and territories. This will ensure a net increase in the national effort, rather than cost-shifting.

Yours sincerely,

Roger Beale AO
Chair of the Panel

Dr Jeff Fairbrother AM
Panel member

Andrew Inglis AM
Panel member

David Trebeck
Panel member

EXECUTIVE SUMMARY

Biosecurity management is a difficult and complex task

Australia's biosecurity regime seeks, through careful management, to minimise the risk of the entry, establishment or spread of exotic pests and diseases that have the potential to cause significant harm to people, animals, plants and other aspects of Australia's unique environment.

Australia's privileged pest and disease status confers significant economic, environmental and community benefits. It assists the competitiveness of Australia's agricultural exports in global markets. Benefits to the environment also accrue through reduction in the use of chemicals to control pests and diseases and the enhancement of all Australians' quality of life. The community values freedom from pests and diseases that cut short or affect the quality of human life in many other countries.

The task of managing Australia's complex biosecurity regime has never been easy. In recent years, it has become even more challenging, principally for the following reasons:

- globalisation, which is integrating the world economy and increasing the volume and range of products traded internationally;
- population spread into new habitats and increasingly intensive agriculture, which increases the risk of zoonoses (that is, animal diseases capable of transmission to human populations) and complicates the ability to contain, and increases the impact of, a pest or disease incursion;
- growth in tourism, passenger and cargo movements, which increases the risks of exotic pest and disease incursions despite the best efforts of border security;
- the potential risk of agri-terrorism involving animal rights extremists or political terrorist organisations;
- increasing global movements of genetic material as farmers endeavour to increase productivity, which places particular demands on pre- and post-border biosecurity services;
- climate change, which adds to the spread of pests and diseases (expanding range or habitats, changing migratory bird patterns, and weather events supporting the spread of disease vectors);

- an emerging shortage of highly qualified plant and animal pest and disease professionals—partly associated with 'baby boomer' retirements and partly the result of competing career alternatives;
- physical constraints for border interception activities, especially at major passenger airports; and
- financial constraints, as governments allocate scarce revenue among many competing demands.

In recent years, biosecurity events have received prominence in the media as never before, often for the wrong reasons:

- the 2001 outbreak of foot and mouth disease in the United Kingdom, accompanied by graphic television footage of burning pyres of livestock carcases;
- the outbreak of bovine spongiform encephalopathy (BSE) in Europe and North America, a major animal disease, which has resulted in a number of human deaths and disrupted trade;
- the emergence of a highly pathogenic zoonotic disease in poultry flocks—the H5N1 strain of avian influenza—which gave rise to concerns of pandemic risks for humans;
- the outbreak in Australia of equine influenza, which led to widespread disruptions to horse movements, thoroughbred racing and recreational equestrian events—a necessary part of what proved to be a successful, if costly, eradication campaign;
- incursions, some of which have been eradicated, of several exotic pests and diseases into Australia, such as European house borer, tramp ants, sugar cane smut, grapevine leaf rust, citrus canker, Khapra beetle, and currant-lettuce aphid; and
- controversial and at times heated exchanges, before Parliamentary Committees, in the media, in the courts, and before the World Trade Organization, involving the potential import of products such as pigmeat, apples, prawns and prawn products, bananas, salmon and chicken meat.

Against this background, the decision to commission a comprehensive review of Australia's quarantine and biosecurity systems has been timely, the previous such review (undertaken by the Nairn Committee) having reported in 1996.

Effective biosecurity is a sound investment …

There are numerous examples and extensive material available to illustrate the tangible financial benefits that result from effective investment in biosecurity

functions and facilities across the continuum. The introduction of serious exotic pests and diseases, such as foot and mouth disease and BSE, would have serious implications in terms of loss of agricultural production as well as the cost of control and eradication. The Productivity Commission estimated in 2002 the Gross Domestic Product impact of a foot and mouth disease outbreak in Australia at $2 billion to $3 billion for a short outbreak, rising to between $8 billion and $13 billion for a 12 month outbreak.

The direct cost of eradicating equine influenza within New South Wales and Queensland was $110 million, however, this figure significantly understates the costs to the community of the outbreak. It does not include government assistance payments, indirect costs associated with loss of markets or losses for associated businesses or the loss of amenity and convenience for the community. In his report into the outbreak, Commissioner Callinan noted that adequate investment in the staff and facilities associated with the importation of horses would have reduced the likelihood that a horse infected with equine influenza would enter Australia or, if it did, that the virus would have escaped into the general horse population.

... and Australia has a good biosecurity system ...

The Panel has concluded that Australia operates a good biosecurity system, indeed, one that is often the envy of other countries given its comprehensiveness, transparency, and scientific rigour. Most of its positive achievements do not attract media commentary or Parliamentary commendation, whereas shortcomings are extensively debated—an imbalance that can result in inaccurate overall perceptions. Australia's biosecurity agencies are staffed by many competent and dedicated officers.

... which nevertheless needs far-reaching change

However, the system is far from perfect. It has been subject to strenuous criticism, at home and abroad, for carelessness, opaqueness, excessive time delays, perceptions of political interference, poor communication with stakeholders, for being too restrictive and for being too liberal. The fact that some criticisms and their opposites have been made indicates that pleasing everyone is difficult. Despite rigorous scientific analysis, some issues remain inherently matters for professional judgement.

The Panel's recommendations are designed to enhance the good aspects of Australia's system and rectify its shortcomings. The essential elements should be retained, but many changes, often far-reaching, are needed to deal with operational deficiencies and the increasing challenges of trends noted earlier.

Three core principles: biosecurity continuum, science-based assessments, and shared responsibility

At the heart of the Panel's recommendations is the reiteration and strengthening of the three core principles enunciated in the Nairn Report:

- the importance of having an integrated biosecurity continuum involving risk assessment and monitoring, surveillance and response pre-border, at the border and post-border;
- risk assessment reflecting scientific evidence and rigorous analysis; and
- shared responsibility, between the Commonwealth and state governments (note, in this report, 'states' is taken to mean 'states and territories'), and between businesses and the general community.

The aim should be the development of a seamless biosecurity system that fully involves all the appropriate players pre-, border and post-border. The Panel has called this approach **One Biosecurity: a working partnership.**

Zero risk is unattainable and undesirable

As noted, Australia's plant and animal industries and its natural environment enjoy a privileged position, being free from many of the world's most injurious pests and diseases. While it is crucial that effort is made to maintain this position, there is a degree of unreality in some of the assertions and recommendations made to the Panel, as there is in the wider public debate, that Australia should adopt a 'zero risk' policy.

First, it is often forgotten that almost all the crops and animals (and much of the pastures) forming the basis of Australian agriculture were initially imported into the country. Without them, there would be no agriculture to speak of. Moreover, researchers and producers alike are constantly scouring the world for improved genetic material as part of the relentless challenge of enhancing international competitiveness, such as drought tolerant wheat varieties, new varietal budwood for apples, and the world's best thoroughbred stallions.

Second, Australian agriculture remains heavily export oriented. Australia rightly remains at the forefront of efforts to secure world trade liberalisation. It is not the case, as some have asserted, that the interests of Australia's domestic agricultural industries that compete with imports are 'traded-off' in favour of the interests of agricultural exports, but rather there is a need for consistency in the way all countries handle biosecurity issues pursuant to the World Trade Organization's Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement). Or, to put it another way, we should, as far as scientific evidence dictates, 'do unto others as we would have them do unto us.'

Third, Australian consumers have a legitimate interest in being able to purchase competitively priced, quality foods produced safely in overseas countries. Biosecurity arrangements should not lightly employ measures that interfere with these preferences. The Australian Competition and Consumer Commission recently observed that where local food supplies cannot be readily boosted by imports because of biosecurity restrictions, prices are higher and/or more volatile (such as, bananas following Cyclone Larry).

Fourth, even if Australia wanted to, it could never operate a zero risk biosecurity regime: it could not afford to intercept and thoroughly search every passenger or every container of cargo arriving in the country; nor could it prevent bird migration or disease vectors being carried by air currents. Some pest and disease incursions are inevitable, and must be managed.

Primary objective: the safe movement of animals, plants, people and cargo

The Panel has concluded that the primary objective of the national biosecurity system should be to allow the safe movement of animals and plants, genetic material, animal and plant products, people and cargo to and from Australia, and to support an effective response to any pest or disease incursions that occur. This involves a change of emphasis from a principal focus on the prevention of harmful pests and diseases entering Australia, through limitations on trade and interception at the border, towards more effective pre-border risk assessment, a still vigilant border inspection system, targeted measures to reduce risk from imports, and more integrated post-border monitoring, surveillance and response.

A shift from 'quarantine' to 'biosecurity'

As part of this change in emphasis, the Panel recommends focusing on 'biosecurity' rather than the narrower concept of 'quarantine'. Quarantine has a largely negative, defensive connotation associated with isolation, segregation and disinfection at the border. Biosecurity is a more pro-active concept, aligned with the pre-, border and post-border continuum, a multi-layered approach, a shift from zero risk to managed risk, from barrier prevention to border management, from 'no, unless ...' to 'yes, provided ...'

Biosecurity is also conducive to shared responsibility, and is consistent with contemporary business approaches to supply chain management, such as quality assurance and a focus on brands.

Shared responsibility between the Commonwealth and states and territories

The Commonwealth unquestionably has Constitutional powers that allow for a much broader biosecurity reach than it currently assumes. It could, if it wished, manage almost the entire biosecurity continuum itself. The Panel's approach is that the Commonwealth's role should extend beyond the border via a clearer partnership with the states. This would involve:

- enforcing import permit decisions so that states cannot impose additional biosecurity measures;
- developing a traceability scheme on a risk basis so that animal and plant matter of greater biosecurity interest can be tracked across the border;
- managing emergency responses through national powers where sensible;
- harmonising biosecurity requirements for interstate trade in specified circumstances; and
- information sharing between jurisdictions based on a national biosecurity risk information sharing protocol and data sharing infrastructure.

The Commonwealth should commit additional expenditure for its component of these tasks. It should also involve the states in central policy matters, such as setting the Appropriate Level of Protection, finalising Biosecurity Import Risk Analysis Guidelines, prioritising market access requests, and appointing Commissioners to the National Biosecurity Commission (all discussed shortly). These and other arrangements would be codified in a National Agreement on Biosecurity, overseen by the Natural Resource Management Ministerial Council.

Organisational structures

Good organisational structures facilitate communication between functions where there is a need for effective feedback loops, and ensure appropriate separation of functions that should be conducted at arms length. They are also essential in clarifying relationships between officials and politicians.

The Panel has concluded that the current grouping of functions and governance arrangements are sub-optimal. They do not support a clear role for the Australian Government or the Parliament. They encourage the perception of political influence in what should be science-based analysis and decision making. They detract from the sharing of information and a common mission across the Commonwealth's biosecurity agencies. They have also produced variable relationships with the states and the private sector.

The Panel has concluded that all these matters would be more effectively handled if the Australian Quarantine and Inspection Service (AQIS), Biosecurity Australia and elements of the Product Integrity, Animal and Plant Health Division (PIAPH) of the Department of Agriculture, Fisheries and Forestry (such as the Chief Veterinary Officer and the Chief Plant Protection Officer) were combined in an agency whose sole function was protecting Australia's biosecurity status and certifying its exports.

Of a number of models available, the Panel prefers a clearly independent statutory authority established under the *Financial Management and Accountability Act 1997*—the National Biosecurity Authority. The National Biosecurity Authority's functions would include protecting Australia's biosecurity status in accordance with Australia's treaty obligations and Appropriate Level of Protection. The Authority would administer the proposed Biosecurity Act including import permit decisions, pre-border and border functions and export certification. It would also manage and oversee quarantine facilities and support a national program of monitoring and surveillance of national priority exotic pests and diseases. It would be the Commonwealth's emergency response agency for incursions of pests and diseases.

The head of the Authority would be referred to as the Director of Biosecurity and would have the personnel and management powers and obligations of a Secretary under the *Financial Management and Accountability Act 1997*. The Director of Biosecurity would also undertake some of the statutory functions of the Director of Animal and Plant Quarantine set out in the *Quarantine Act 1908*, including making individual import permit decisions, either directly or by delegation.

The Panel has also recommended the establishment of an expert decision making panel, to be called the National Biosecurity Commission, to undertake Biosecurity Import Risk Analyses with the support of staff from the National Biosecurity Authority, and to make independent Biosecurity Import Policy Determinations. These decisions are currently the responsibility of the Director of Animal and Plant Quarantine. The Commission would comprise between seven and nine members and would be led by a part-time, independent chair. The Director of Biosecurity in an *ex officio* capacity would be one of the members of the Commission. In addition to making Biosecurity Import Policy Determinations, the Commission would have a role in providing expert advice to the Authority on biosecurity policy generally. It would make determinations on state biosecurity controls, determine priorities for Biosecurity Import Risk Analyses and determine the internal audit and verification program related to them.

The Minister responsible for the National Biosecurity Authority would not have a role in, or the power to influence the process or the outcome of an individual

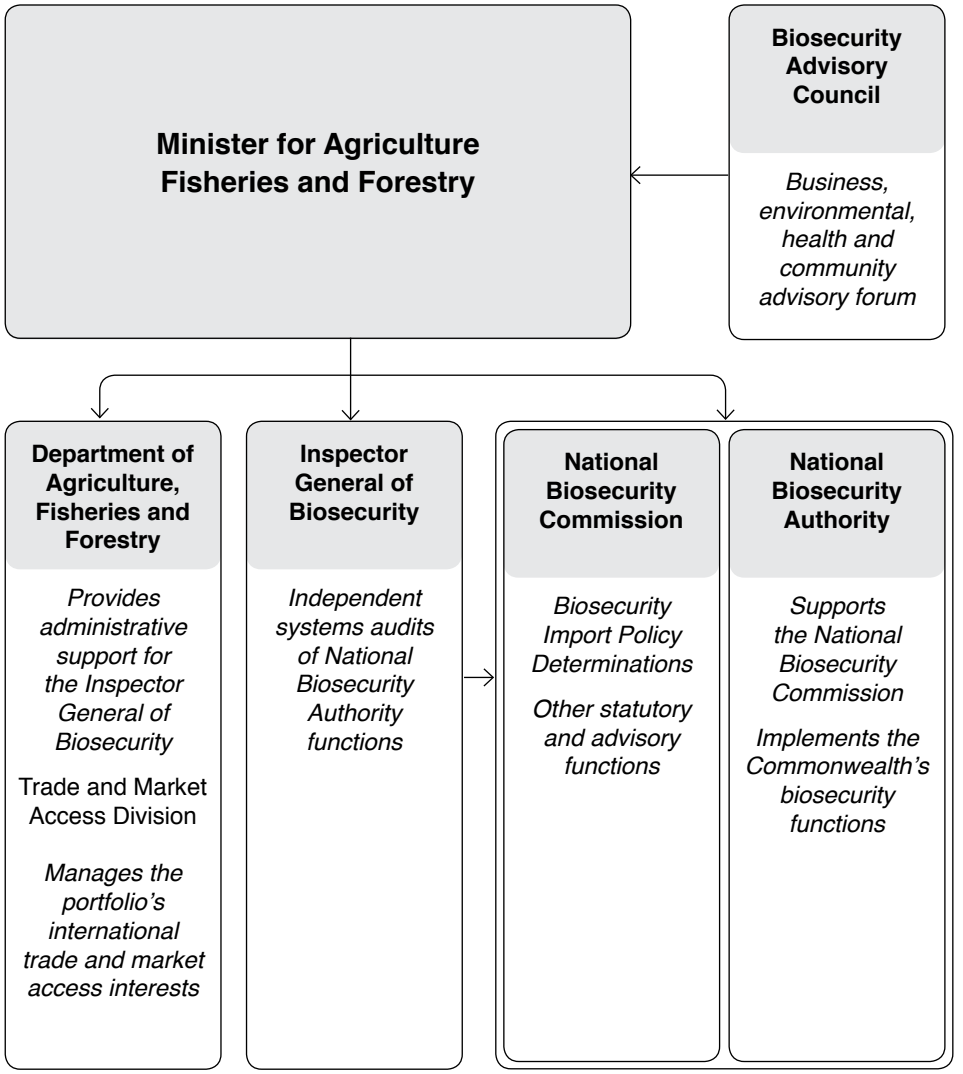
Biosecurity Import Risk Analysis. However, the Minister would be empowered to set the Appropriate Level of Protection and give the National Biosecurity Commission and the Director of Biosecurity Guidelines for the application of the Appropriate Level of Protection. The legislation would also enable the Minister to direct the National Biosecurity Commission to commence a particular Biosecurity Import Risk Analysis, and to issue directions to the National Biosecurity Authority on matters that have a bearing on Commonwealth-state relations, including monitoring, surveillance and response.

The Panel proposes a statutory office of Inspector General of Biosecurity, subsuming the Interim Inspector General of Horse Importation recently recommended by Commissioner Callinan in his report on the equine influenza outbreak. The Inspector General of Biosecurity's administrative support would be provided by the Department of Agriculture, Fisheries and Forestry. The Inspector General would report directly to the Minister, have broad powers of audit and investigation and would be responsible for conducting systems audits and reviews of the biosecurity programs carried out by the National Biosecurity Authority. The Minister would be empowered to refer matters to the Inspector General of Biosecurity for review and report.

These various functions are summarised in Table 1 below, while the organisational structure is shown in Figure 1.

TABLE 1 Proposed functional arrangements			
National Biosecurity Commission (includes Director of Biosecurity)	**National Biosecurity Authority**	**Inspector General of Biosecurity**	**Department of Agriculture, Fisheries and Forestry**
Biosecurity Import Risk Analyses and Biosecurity Import Policy Determinations (Chapter 3) Determinations on state biosecurity controls (Chapter 2) Determine priorities for Biosecurity Import Risk Analyses (Chapter 5) Biosecurity policy advice generally Decisions and advice on the Authority's internal audit program (Chapter 8)	Support for the Commission including in its conduct of Biosecurity Import Risk Analyses and development of Biosecurity Import Policy Determinations Administer Biosecurity Act (including import permit decisions, pre-border and border functions) Export certification Monitoring and surveillance for national priority exotic pests and diseases Emergency response coordination Education and awareness raising	Statutory appointment Independent systems audits of National Biosecurity Authority functions	Non-technical trade and market access negotiations (drawing on technical support from the Authority as needed) PIAPH functions not transferred to the Authority Administrative support for Inspector General of Biosecurity

Figure 1 Proposed organisational structure



Shared responsibility with businesses and the community

The establishment of Animal Health Australia and Plant Health Australia as partnership organisations, and the brokering of cost and responsibility sharing deeds for exotic pests and diseases, have been integral to Australia's biosecurity success. The deeds are formal, legally binding agreements. They represent a world first whereby businesses are closely involved in decision making and benefit from national approaches and funding mechanisms agreed in advance.

Some business organisations have not yet entered into cost sharing deeds despite holding membership with Animal Health Australia or Plant Health Australia. Others, particularly in the aquatic and environmental sectors, are not part of Animal Health Australia or Plant Health Australia or part of cost sharing deeds.

Whenever no formal cost sharing agreement exists, there is less incentive for good biosecurity practice. If governments nevertheless eradicate a disease and pay compensation to those affected, a classic moral hazard is created. The Panel strongly recommends that all industries should be involved in cost sharing agreements, and that governments must avoid socialising the costs associated with emergency responses, or unilaterally accepting risks and responsibilities that should be shared with businesses.

In the Panel's view, an important lesson to emerge from the equine influenza outbreak is the interdependence of actions by regulators and biosecurity management by the private sector. Without failures by both the AQIS staff and employees or agents of the thoroughbred owners, the equine influenza virus would not have arrived at or escaped from the Eastern Creek Quarantine Station. This demonstrates in a specific and tangible way, the impact of the failure to achieve shared responsibility.

The quality of the biosecurity system reflects the whole community's acceptance of the need for biosecurity measures and its willingness to accept responsibility for maintaining Australia's favourable pest and disease status.

In the past, the environment—terrestrial and aquatic—has received less priority than agriculture. The Panel has concluded that a more significant effort is needed in these two areas in the future, reflecting the nature of the incursion risks involved.

The Panel proposes the establishment of a Biosecurity Advisory Council, replacing the Quarantine and Exports Advisory Council, as the advisory body to the Minister, the National Biosecurity Commission and the Director of Biosecurity. Reflecting the move from quarantine to biosecurity, the Council would have a broader remit in relation to the biosecurity continuum. The Council would be non-representative and consist of expertise-based members

drawn from the Commonwealth, state governments, business and non-government organisations. Members would be appointed by the Minister and would have substantial experience across a range of disciplines, including agricultural, environmental and health sciences, risk assessment, business management and knowledge of operational aspects of biosecurity.

As part of enhancing shared responsibility and accountability, the Panel would like to see greater deterrents and improved education and awareness to reduce infringements of biosecurity law. The Panel has noted the controversy concerning the outbreak of citrus canker in Queensland in 2004. In the Panel's view, it is important that the National Biosecurity Authority have a competent investigative and prosecutorial arm.

Education and awareness campaigns are an essential component of the biosecurity system. While existing programs have been largely effective, they have often focused on specific parts of the continuum. The Panel sees the need for a broader approach to biosecurity awareness. This would include more emphasis on targeting areas of highest risk, such as individuals and businesses in peri-urban areas, and travellers prior to departing for Australia.

The Panel believes that improvements to co-regulatory arrangements for biosecurity services should encourage superior biosecurity behaviour, by importers or in relation to ballast water and biofouling management by shipping lines. Current arrangements have not recognised exemplary practices for example, by reducing rates of inspection. As a result, cost savings to both the importer and the inspection agency have been foregone. Accreditation of systems which deliver superior performance will free up resources to concentrate on higher risk areas.

Making the Appropriate Level of Protection workable

The central tenet of biosecurity, especially involving Import Risk Analysis, is the notion of a country's 'Appropriate Level of Protection'. This concept emerged as part of the Uruguay Round of multilateral trade negotiations that concluded in 1994, and is integral to the SPS Agreement. Each Member country of the World Trade Organization is entitled to set its Appropriate Level of Protection as it sees fit, taking into account the full range of national interest considerations. Having done so, a country is required to act consistently across different commodity circumstances, and to adopt risk mitigation measures that are 'least trade restrictive'.

Australia's Appropriate Level of Protection is stated as 'providing a high level of sanitary and phytosanitary protection, aimed at reducing risk to a very low level, but not zero'. The trouble is that no one really knows what these words mean in practice—how low is very low? The Panel has spent a great deal of time probing this issue.

The confusion has contributed heavily to many of the controversies that have arisen in recent years. That said, the task of providing clarity is not easy: should it be defined qualitatively; can examples be provided; is quantification appropriate or achievable; is vagueness simply 'practical'; how are important science or data gaps to be overcome; and are other countries any better?

The Panel's terms of reference did not require it to recommend what the Appropriate Level of Protection should be. That is quintessentially an Australian Government responsibility. It is not primarily a technical or scientific matter. Rather, it is a matter of values, which involves considering and articulating the Australian community's interests and thereby the national interest, balancing the advantages of trade and international travel with the risks to biosecurity which trade and travel may entail.

However, the Panel notes that the Appropriate Level of Protection is not defined anywhere in Australia's biosecurity legislation. The Panel considers that the legislation should provide the Minister with a capacity to define it.

Similarly, the Minister should have the capacity to make Guidelines for the conduct of Biosecurity Import Risk Analyses. Without Ministerial guidance, officials have attempted to develop guidelines. Unfortunately, there are several versions, all in draft, and none publicly available.

In developing the Appropriate Level of Protection and the Guidelines, the Minister should consult with the states, and more widely, to build an agreed national understanding underpinning the fundamentals of the Commonwealth's approach. The outcome would be clearer guidance for the non-political decision making processes, reducing the scope for inter-governmental, business, political and diplomatic disputes. This guidance would be expressed through non-disallowable legislative instruments. This will guarantee transparency to the Parliament, provide an opportunity for Parliamentary advice and protect the Minister's capacity to consult authoritatively with the states and other stakeholders.

The Panel has made a number of related recommendations about the detail of the Biosecurity Import Risk Analysis process: enhancing the assessment of the consequences of incursions as opposed to their likelihood; including the use of economic analysis in such assessments; strengthening the role of the Eminent Scientists Group; and requiring explicit assessment of the scope to protect areas or regions from biosecurity risks to preserve their pest and disease status.

To help clear the backlog of market access requests, the Panel believes the National Biosecurity Commission should have available to it, in addition to existing essentially in-house processes, a capacity to place the onus on the proponent to prepare risk analysis material to an appropriate standard.

This would be analogous to the Therapeutic Goods Administration model or applications made under the *Environment Protection and Biodiversity Conservation Act 1999.* It would free up resources and fast-track the completion of outstanding import market access requests.

Providing review mechanisms is designed to improve the way decisions are made and to generate public confidence. Reviews of Biosecurity Import Risk Analyses would be possible at several levels (use of external experts in the peer review of Biosecurity Import Risk Analyses, formal consultation with stakeholders, and external review by the Eminent Scientists Group). The Panel believes that having Biosecurity Import Risk Analyses undertaken, and the ultimate Biosecurity Import Policy Determination made, by the independent National Biosecurity Commission will ensure greater integrity.

The Panel considers that an additional option for merits review should be provided where the Director of Biosecurity refuses to issue an import permit application as being inconsistent with a Biosecurity Import Policy Determination. Only those making the import permit application would have the right to seek such a merits review.

Managing biosecurity risks

Australia's biosecurity system will be most effective if resources are targeted to those areas of greatest return from a risk management perspective.

The application of risk-return principles in managing Australia's biosecurity risks has been inconsistent. Relatively low risk pathways have received an undue share of resources while more threatening risk pathways have been potentially exposed. Mandatory *Increased Quarantine Intervention* targets have not been reviewed or modified since their introduction in 2001, in spite of accumulating evidence that not all the targeted pathways are high risk.

The Government should move away from the current mandated target approach and instead adopt a comprehensive risk-return approach to deciding where to direct resources across the continuum. The Panel's expectation is that consistent analysis of this type would find that more resources should be directed toward pre- and post-border activities.

The approach used to manage biosecurity risks to human health, food safety and the environment (including aquatic environments) needs to be consistent with the approach used to address risks that primarily affect the agriculture sector. However, comprehensive analysis will be required to guide precisely the measures to be applied along the continuum against specific risk pathways. Investment in information technology systems to support this analysis is a priority.

Risk management needs to be backed by strategic intelligence that is reliable and constantly updated. To support this, the National Biosecurity Authority should include an intelligence gathering unit, with a particular focus on the region and Australia's trading partners. The Authority should improve information gathering on border interceptions and also establish a post-border monitoring and surveillance program for national priority exotic pests and diseases. The national monitoring and surveillance program should incorporate and extend the Northern Australia Quarantine Strategy and include surveillance at risk areas around international airports and seaports. It should also include monitoring and surveillance needs for national priority exotic marine pests and diseases.

A managed risk approach needs appropriately skilled and trained staff. All staff must understand their responsibilities. The Authority should work with the states, professional associations and higher education providers to develop a biosecurity course to be incorporated into the curricula of relevant degrees. This course should be adapted for and delivered to all National Biosecurity Authority staff.

Improvements should also be made to ensure research efforts are better coordinated, especially in developing technologies that would better manage biosecurity risks.

System integrity

There is evidence that the lack of a rigorous auditing system identified by Commissioner Callinan with regard to the imports of horses is systemic within AQIS. The National Biosecurity Authority therefore needs clear specifications and standards for auditing, backed by robust internal and external systems. A group should be established within the Authority to undertake these tasks.

Existing external or independent audits are not continuous, are too narrowly focused on the border, not risk based and sometimes lack transparency. These inadequacies would be rectified by the Inspector General of Biosecurity who would audit or review the general program activities of the National Biosecurity Authority.

The National Biosecurity Authority should also have an investigation and enforcement group. Its remit should extend along the continuum and include sanctions to enhance performance.

Resourcing

While some efficiencies will arise from amalgamating Biosecurity Australia, AQIS and elements of PIAPH, it is impossible to escape the conclusion that the agencies are significantly under-resourced. Without additional resources,

the National Biosecurity Authority will not be capable of delivering the **One Biosecurity: a working partnership** model envisaged by the Panel. In the absence of an overdue increase in biosecurity funding, Australia would continue to be forced to rely on border interventions rather than keeping risks offshore as far as possible through pre-border activities. The post-border monitoring and surveillance effort would also remain variable, putting at risk Australia's ability to respond quickly to possible pest and disease incursions. The backlog of market access requests from other countries would persist, increasing the risk of potentially affecting bilateral relations and export market access.

The Panel considers that in order to achieve the **One Biosecurity: a working partnership** model, a funding increase in the order of $260 million per annum will be required—shared between businesses through cost recovery, and taxpayers through the Commonwealth budget, including the Passenger Movement Charge. This figure is equivalent to nearly 50 per cent of the current Commonwealth effort.

Recognising past underinvestment, the Panel also considers that an additional $225 million, or thereabouts, should be invested over a number of years through the Commonwealth Budget to upgrade information technology and business systems for biosecurity.

Cost recovery has long played an important role in funding Australia's biosecurity effort. It has efficiency and equity advantages. The general principle should be that Australians who use or consume high risk, high regulatory cost imports, pay for those costs, rather than taxpayers at large. Equally, exporters who earn income from foreign markets as a consequence of the regulatory services provided by the Australian government should pay for them. Otherwise the cost of protecting the health and biosecurity of other countries would be imposed on Australian taxpayers.

There is not a compelling case for substituting Budget funding for the existing cost recovery scheme. There is, however, a need to change the way cost recovery arrangements are administered, particularly if the Panel's recommendations regarding a risk-return approach are to be implemented effectively. As a first step, rather than having a plethora of charges supporting separate programs, 'like' activities should be aggregated across programs and the number of charges significantly reduced. A highly disaggregated cost recovery structure is administratively inefficient for both the provider and customer. In addition, having undertaken appropriate consultation with business groups, the ultimate responsibility of the Authority is to present a cost recovery package to the Minister that ensures a properly funded regulatory function, including the capital servicing costs of strategic investment in infrastructure, principally information technology systems.

The policy objectives of the 40 per cent subsidy of the costs of export inspection and certification (introduced in 2001) are unclear, and are unlikely to qualify as a community service obligation. The Panel notes that this arrangement is due to terminate on 30 June 2009 and supports a return to 100 per cent cost recovery, with an early announcement being required to enable affected businesses to make appropriate preparations. As a corollary, this change should be accompanied by greater use of co-regulatory arrangements, such as compliance agreements, to reduce the cost of the regulatory service wherever possible. In addition, the Commonwealth should enhance efforts to defend Australia's export systems and gain additional market access, including through technical market access and multilateral, regional and bilateral negotiations.

Implementing the Panel's recommendations – legislation and a new Intergovernmental Agreement

Implementing the Panel's recommendations will require significant amendments to the *Quarantine Act 1908*. The core of the *Quarantine Act 1908* was drafted over a century ago. Since that time, biosecurity risks have changed significantly, as have Australia's international trade interests and treaty obligations.

Given the difficulties that exist in the current Act, the Panel recommends that rather than trying to rework the existing legislation yet again, the opportunity should be grasped to develop a new Act—the Biosecurity Act—which draws on the full range of the commonwealth's Constitutional powers.

If the Panel's recommendations are accepted, implementation should be commenced immediately, and the Act developed in parallel with the negotiation of the new National Agreement on Biosecurity with the states. The aim should be to complete the legislation and the Agreement within a reasonable period—say two years from the acceptance of the Panel's broad recommendations. While agreement with the states is highly desirable, the Commonwealth should reserve the right to proceed unilaterally, or with a limited number of participating states, if agreement is not forthcoming within that timeframe.

Pending the passage of the legislation, administrative steps should be taken to implement the proposed structures. Functions could be grouped into a new 'interim' authority within the department and appointments made to an interim National Biosecurity Commission. The increases in resources to be applied to the pre-border and border functions could be progressively applied in advance of the completion of the National Agreement. However, the introduction of the enhanced Commonwealth support for monitoring and surveillance for national priority exotic pests and diseases should be subject to agreement on appropriate matching contributions from the states. This will ensure that Commonwealth funding represents clearly a net addition to the national effort rather than cost shifting.

RECOMMENDATIONS

Extending the Commonwealth's reach

1 The Commonwealth's biosecurity legislation should provide that authority given by the Commonwealth to import goods into Australia also authorises the goods to be imported into a state or territory on the same conditions (if any). It should provide that this authority operates to the exclusion of any state or territory law that imposes biosecurity regulation on the direct, or indirect via another state or territory, import of the goods into the state or territory.

2 The biosecurity legislation should provide necessary legislative authority for a comprehensive system of tracing imported goods, including from their production or manufacture, through Australia's biosecurity border and into the community, to ensure that, among other things, the Commonwealth is able to enforce any biosecurity conditions imposed on the goods. The specifics, including priorities for application to products or classes of product, should be developed in consultation with relevant stakeholders. Authorised officers should be provided with comprehensive and consistent investigative, enforcement and prosecutorial powers.

3 As part of this extended reach, the Commonwealth should increase its resources to support the monitoring, surveillance, investigation and, where appropriate, prosecutions associated with post-border biosecurity detections (see also Recommendation 74).

4 The Commonwealth should extend its legislative reach to cover the field with respect to international and domestic ballast water regulation.

5 In relation to biofouling, the Commonwealth's legislative reach should be restricted to international vessels arriving in Australia, with the states and territories retaining responsibility for domestic biofouling requirements. The Commonwealth should promote the development of an international convention covering biofouling through the International Maritime Organization.

6 The biosecurity legislation should continue to provide for national powers to deal with biosecurity emergencies. However, the powers should not be limited to quarantinable pests and diseases and associated measures and emergencies. They should clearly extend to biosecurity measures generally and biosecurity emergencies supported by the Commonwealth's

constitutional reach. The opportunity should be taken to rationalise and simplify the existing powers, including by providing that they may be invoked or exercised by the Minister rather than the Governor-General.

7 The biosecurity legislation should provide the Commonwealth with the capacity to override a specified law of a state or territory that imposes biosecurity controls on the use, movement, treatment or disposal of domestic goods imported into the state or territory from another state or territory. This capacity should only be available where the National Biosecurity Commission has determined that the biosecurity controls:

- **a** are not justified by an examination and evaluation of available scientific information; or
- **b** are more trade restrictive than required and so constitute a disguised restriction on interstate trade and commerce in domestic product(s).

8 The National Biosecurity Commission may only assess and make such a determination in relation to a biosecurity control under a state or territory law if an application for such an assessment and determination has been made by the relevant Commonwealth or state or territory Minister.

A national biosecurity agreement

9 A National Agreement on Biosecurity, to underpin a partnership approach between the Commonwealth and the states and territories on biosecurity, should provide for:

- **a** the Commonwealth to consult with the states and territories on the Appropriate Level of Protection and Biosecurity Import Risk Analysis Guidelines and priorities for considering market access requests;
- **b** the Commonwealth to consult with the states and territories on the appointment of members of the National Biosecurity Commission (other than the Director of Biosecurity);
- **c** emergency response policy and arrangements, including the circumstances in which the Commonwealth would utilise its national emergency management powers;
- **d** the steps preceding the Commonwealth's use of its legislative authority to override inappropriate state and territory controls on interstate trade in domestic products;
- **e** joint decisions on national priorities for investment by jurisdictions, including in monitoring and surveillance (including identifying national priority exotic pests and diseases for Commonwealth investment), research and development and biosecurity infrastructure; and

f full and automatic information sharing between jurisdictions (in a manner consistent with obligations under the *Privacy Act 1988)*, including information collected through pre-border intelligence activities, border controls (such as interception data) and information gathered through monitoring and surveillance programs (see Recommendation 54).

10 The National Agreement on Biosecurity should replace existing intergovernmental agreements such as the *Memorandum of Understanding on Animal and Plant Quarantine Measures* and the *Intergovernmental Agreement on AusBIOSEC.*

11 The aim should be to develop the Biosecurity Act (see Recommendation 43) and negotiate the National Agreement on Biosecurity within two years. While agreement with the states and territories is highly desirable, the Commonwealth should reserve the right to proceed with the Panel's recommendations unilaterally, or with a limited number of participating states and territories, if agreement is not forthcoming within that timeframe.

Independent science-based decision making

12 The biosecurity legislation should provide that Biosecurity Import Policy Determinations should be made by an expert and independent National Biosecurity Commission. The Commission's functions, basis of appointment and decision making rules should be specified under the biosecurity legislation. Its functions should include providing expert advice to the National Biosecurity Authority (see Recommendation 16) and the Government on biosecurity matters more generally.

13 The Commission should include members with expertise in natural sciences related to risks of pests and diseases in plants, animals and humans, risk assessment and management, ecology, agricultural and food production and economic assessments. The Commission should comprise no fewer than seven and no more than nine members, including the head of the National Biosecurity Authority.

14 More training should be provided to biosecurity officials on principles of proper decision making and the types of conduct that may amount to offences against them or breaches of the Australian Public Service Code of Conduct.

15 The biosecurity legislation should create a targeted offence of assaulting, resisting, molesting, obstructing, intimidating or interfering with officers in the performance of their duties, analogous to that in the *Customs Act 1901* and the *Civil Aviation Act 1988*.

National Biosecurity Authority

16 The primary biosecurity functions currently within AQIS, Biosecurity Australia and Product Integrity, Animal and Plant Health Division should be brought together in a statutory authority—the National Biosecurity Authority. The National Biosecurity Authority should be an independent authority under the *Financial Management and Accountability Act 1997* with the head of the Authority having the personnel and management powers and obligations of a Secretary under that Act. Its functions should include protecting Australia's biosecurity status in accordance with Australia's treaty obligations and Appropriate Level of Protection, as well as providing secretariat, research and administrative support to the National Biosecurity Commission in the conduct of its functions. The head of the Authority should be referred to as the Director of Biosecurity.

17 An eminent Australian should be appointed as the part-time Chair of the National Biosecurity Commission, with the Director of Biosecurity being an *ex-officio* member of the Commission.

18 The biosecurity legislation should expressly provide that the National Biosecurity Commission, and officers and other authorised personnel performing National Biosecurity Commission functions, are not subject to direction by the Government in performing their duties in relation to Biosecurity Import Policy Determinations. The legislation should also prevent the Government directing the Director of Biosecurity, or his/her delegate, in relation to an import permit decision.

19 The export inspection and certification functions of AQIS should be transferred to the National Biosecurity Authority, but trade facilitation should remain a role of the Department, with technical expertise provided by the Authority as needed.

20 The Commonwealth should establish within the Department of Agriculture, Fisheries and Forestry, a statutory office of the Inspector General of Biosecurity that will audit and report on the performance of the National Biosecurity Authority. The legislation should provide that the holder of this office have appropriate skills in relevant scientific and auditing or systems assessment disciplines. The appointment should be made by the Minister for a five year term and there should not be limitations on the appointment of persons on the grounds that they have been previously employed in the Australian Public Service or otherwise by the Australian Government.

21 The functions of the Inspector General of Biosecurity should subsume those recommended by Commissioner Callinan for the Inspector General of Horse Importation.

22 The biosecurity legislation should require that the Commonwealth obtain the support of any five of the states and territories before it can appoint the Chair and members of the National Biosecurity Commission, other than the Director of Biosecurity.

Sharing responsibility

23 A Biosecurity Advisory Council (replacing the Quarantine and Exports Advisory Council) should:

- **a** be established to provide strategic and policy advice on biosecurity issues to the Minister, to the National Biosecurity Commission and to the Director of Biosecurity; and
- **b** consist of non-representative members with a broad range of skills in biosecurity and related disciplines drawn from the Commonwealth and state and territory governments, business, academia and non-government organisations.

24 Commodity and/or sector based Industry Consultative Committees should continue to discuss operational biosecurity issues including the delivery of services and cost recovery for those services.

25 All animal, plant and aquatic industries should commit to sharing the responsibility and costs of pest and disease response actions, with those who are not signatories to the relevant cost sharing agreement meeting their share of a response, possibly by way of levy to recover costs.

26 The membership of Animal Health Australia and Plant Health Australia should be broadened to encompass environmental pest and disease issues including those affecting the aquatic and terrestrial environments.

27 To enhance biosecurity planning:

- **a** where Industry Biosecurity Plans already exist, there should be strong encouragement for their implementation at an individual business level;
- **b** industries or sectors that are vulnerable but not covered by Biosecurity Plans (for example, the aquatic wildcatch and aquaculture industries), should be encouraged to develop a Biosecurity Plan; and
- **c** governments should work with managers of land for conservation purposes to ensure that they have appropriate biosecurity plans and practices.

28 There should be:

- **a** greater consistency in the administration, auditing, and response to non-compliance of co-regulators;

b reduced regulatory burdens for businesses that maintain an excellent track record of compliance with co-regulatory agreements; and

c wider adoption of co-regulatory arrangements.

29 To enhance communications effectiveness:

a messages promoting Australia's biosecurity should cover the biosecurity continuum;

b new communication options, including those available on the Internet, should be employed by the National Biosecurity Authority; and

c particular efforts should be made in collaboration with the states and territories, local governments, community and business groups to inform peri-urban farmers, including from non-English speaking backgrounds, of Australia's biosecurity policies and to engage them in monitoring, surveillance and response strategies.

30 The National Biosecurity Authority should develop education and awareness programs for:

a all importers regarding their obligations to meet Australia's import requirements; and

b the competent inspection and certifying agencies in the exporting countries to ensure that they meet Australia's import requirements.

Australia's Appropriate Level of Protection and its implementation

31 The biosecurity legislation should:

a define the concept of 'biosecurity risk' in a manner analogous to, but broader than, section 5D of the *Quarantine Act 1908*;

b provide that the basis for a decision whether to authorise, under the legislation, an import of goods should be that the level of biosecurity risk associated with the import is acceptably low;

c provide that the Minister may determine what level of biosecurity risk is acceptably low (that is, Australia's Appropriate Level of Protection), and may make Guidelines for Biosecurity Import Risk Analyses, Biosecurity Import Policy Determinations and import permit decisions. The determination and Guidelines should be legislative instruments for the purposes of the *Legislative Instruments Act 2003*, and should not be disallowable; and

d require that decision makers under the legislation (the National Biosecurity Commission in relation to Biosecurity Import Policy

Determinations and the Director of Biosecurity in making import permit decisions) should be required to apply the Determination, and act in accordance with the Guidelines.

32 The Guidelines should:

a include a clear statement of the approach to be taken to the economic assessment of potential biosecurity threats including the appropriate use of formal economic analysis; and

b require estimation of net rather than gross costs, allowing for best practice management methods, substitution to alternative crops or husbandry techniques.

33 The National Biosecurity Commission should:

a include high level economic skills (see Recommendation 13); and

b develop a close working relationship with the Productivity Commission, the Australian Bureau of Agricultural and Resource Economics or other suitable agencies.

34 The Eminent Scientists Group should be expanded to include an economist.

35 The:

a Guidelines should include a requirement for the assessment of any relevant regional differences in biosecurity status and risk;

b states and territories should be consulted on the terms of this requirement before it is included in the Guidelines; and

c Commonwealth and the states and territories should develop a protocol on the collection and timely provision of the scientific evidence necessary to demonstrate biosecurity threat status to support both the Biosecurity Import Risk Analysis process and improved access to export markets for Australian products.

36 The biosecurity legislation should provide:

a that when an import permit application is made for which a relevant Biosecurity Import Policy Determination exists, the Director of Biosecurity should have primary regard to that Determination in deciding whether to grant the permit, unless the Director has reason to believe that granting the permit would lead to a biosecurity risk that is not acceptably low. If the Director of Biosecurity denies an import permit on these grounds he/she must immediately inform the National Biosecurity Commission of the reasons; and

b that the Director of Biosecurity have two options for dealing with market access and import permit applications for which there is no specific Biosecurity Import Policy Determination already in place:

- if the Director is satisfied that the biosecurity risk involved is acceptably low, he/she should authorise importation, with or without conditions; and
- if the Director is not satisfied that the biosecurity risk would be, or could be through imposing conditions, acceptably low, he/she should not grant a permit and should not provide market access, until the National Biosecurity Commission has made a Biosecurity Import Policy Determination following a Biosecurity Import Risk Analysis.

37 The biosecurity legislation should provide:

a for three broad Biosecurity Import Risk Analysis processes—the existing standard and expanded Import Risk Analyses and a new process under which a greater obligation to prepare detailed information about relevant biosecurity risks would be placed on the proponent / applicant;

b that, in conducting a Biosecurity Import Risk Analysis, the National Biosecurity Commission should have the power to compel the production of any relevant documents, the power to require relevant evidence to be given to it under oath and to hold public hearings;

c that in deciding priorities for Biosecurity Import Risk Analyses, the National Biosecurity Commission should consult with relevant Australian Government agencies, including the departments having responsibility for agriculture, health, environment and foreign affairs and trade, with the states and territories and with other appropriate stakeholders relevant to import access proposals; and

d the Minister with the power to direct the National Biosecurity Commission to commence a Biosecurity Import Risk Analysis, with such a direction to be tabled in Parliament.

38 The:

a Import Risk Analysis Appeals Panel should cease to exist as the review mechanism for determining whether a Biosecurity Import Risk Analysis has followed due process;

b Biosecurity Import Policy Determination should be a non-reviewable instrument;

c Eminent Scientists Group should be empowered to co-opt one or more Associate Members; and

d Eminent Scientists Group should be appointed by the Minister after consultation with the states and territories.

39 Merits review of import permit decisions should only be available where the Director of Biosecurity has made a decision to refuse to issue an import permit on the grounds that to do so would not be consistent with a Biosecurity Import Policy Determination. In addition, access to merits review should be subject to the following requirements:

a standing should be limited to the applicant for the permit;

b provisions should be established to guard against vexatious appeals; and

c there should be strict timeframes around the lodgement of appeals.

40 The National Biosecurity Commission should:

a provide stakeholders with advance notice of the release of draft Biosecurity Import Risk Analyses and issues papers to allow sufficient time to prepare responses; and

b include a draft Biosecurity Import Policy Determination with the draft Biosecurity Import Risk Analysis when it is released for public comment.

41 A memorandum of understanding should be developed between the National Biosecurity Commission and the Department of Health and Ageing to cover human health aspects of Biosecurity Import Risk Analyses.

42 The National Biosecurity Commission should have the professional capacity to assess risks to the environment and human health in a Biosecurity Import Risk Analysis to the same quality as agricultural assessments.

Legislation

43 A new Biosecurity Act should be drafted to replace the *Quarantine Act 1908* giving effect to the Panel's legislative recommendations, drawing on a much broader set of the Commonwealth's Constitutional powers and providing for modern and effective management of biosecurity risks.

Balancing risk and return

44 The balance and level of biosecurity resources across the continuum should be determined by a consistent analysis of risks and returns

across programs. The level and allocation of resources should be comprehensively reviewed against risk-return profiles at least every five years.

45 The National Biosecurity Authority, in consultation with relevant stakeholders and the Biosecurity Advisory Council, should develop a list of national priority exotic pests and diseases, with their respective pathways, on the basis of the likelihood of incursion and the consequences for businesses, human health and the environment. This list should be used to prioritise the review and development of comprehensive biosecurity risk management plans across the biosecurity continuum.

46 A new memorandum of understanding should be developed between the Department of Health and Ageing and the National Biosecurity Authority on delivery of human biosecurity services at the border, including clear operational guidelines for the Authority and procedures for validating health biosecurity measures, training and competency of inspection staff, resources, data collection, reporting and communication.

47 The Authority should enter into compliance agreements to recognise formally the food safety management systems of importing businesses. These arrangements should provide for a power of audit, inspection, suspension or removal of approvals, and penalties where appropriate for breaches.

48 The National Biosecurity Authority should be empowered to require in specific circumstances, as a condition of entry to the Australian market, that importers provide certification by the exporting country's competent government authorities that Australian food safety standards are met.

49 The National Biosecurity Authority should work with other countries and the states and territories to share pest and disease intelligence and consider working together with trading partner countries on issues such as regionalisation and compartmentalisation assessments and systems assurance.

50 The National Biosecurity Authority should establish an intelligence gathering and assessments group to monitor animal and plant pest and disease status internationally, with a particular focus on the region and our trading partners.

51 To improve the management of biosecurity risks, a sample sufficient to identify risks and risk pathways should be collected and analysed from cases where imported goods have been rejected because of suspicion of an exotic pest or disease. This should be done at the public expense.

52 The National Biosecurity Authority should undertake a continuing program of analysis of risk pathways using data collected from pre-border intelligence and border inspections at control points along the continuum. The results of this analysis should be used to update risk management strategies and measures.

53 The National Biosecurity Authority should develop and maintain, in consultation with the states and territories and business organisations, a comprehensive post-border monitoring and surveillance program for national priority exotic pests and diseases, which should include:

- **a** an enhanced Northern Australia Quarantine Strategy that extends beyond the current 20km zone to provide coverage for at-risk areas around international airports, seaports and vulnerable areas of Australia's coastline;
- **b** existing and additional port surveillance activities;
- **c** the Commonwealth's responsibility for investigating suspected post-border detections of pests and diseases in imports;
- **d** strategic surveillance to support Australia's pest and disease free export claims and the conduct of Biosecurity Import Risk Analyses;
- **e** national priority marine pests and diseases to support the Commonwealth's expanded role in relation to managing risks associated with ballast water; and
- **f** the current National Sentinel Hive Program and its eventual replacement with a more comprehensive approach based on an assessment of risks.

54 The information and analysis obtained from pre-border, border and post-border biosecurity activities should be made available for use by state and territory governments, industry and research organisations. This should be done in a manner consistent with obligations under the *Privacy Act 1988* and should be supported by a biosecurity risk information sharing protocol and data sharing infrastructure.

55 Redevelopment of biosecurity information technology systems for the National Biosecurity Authority should occur promptly. As part of this task:

- **a** information technology systems should be developed to provide intuitive and user friendly interfaces and processes;
- **b** biosecurity risk research should be supported by providing reports and data in formats that are useful for government and other researchers, preferably via a free-to-access web interface;

c paper work generated between the Authority and businesses should be eliminated wherever feasible through electronic interfaces, on-line approval systems and electronic certification; and

d connectivity with other border agencies (particularly Customs) should be central and should also be enabled where possible with trading partner authorities, particularly with New Zealand.

56 The National Biosecurity Authority should work with state and territory agencies, professional associations and higher education providers to develop a general biosecurity course to be incorporated in health, environmental, marine biology, veterinary and agriculture science curricula. All staff employed in the National Biosecurity Authority should be taught an appropriate adaptation of the general biosecurity course upon commencement of their employment in the agency.

57 The National Biosecurity Authority should develop national research priorities, including for new technologies to better address biosecurity risk, and should work with research bodies to coordinate the research effort towards those priorities.

58 The National Biosecurity Authority should ensure Australia has the laboratory capability and capacity to manage exotic pest and disease incursions of national significance. The Panel recommends that the Authority, working with the states and territories, should improve the quality and use of state and territory laboratories to support national biosecurity priorities.

59 The import of positive control samples (including the foot and mouth disease virus) for use in laboratory diagnostic research and capacity building for exotic disease pathogens is vital and should be permitted under strict import permit conditions to laboratories such as the Australian Animal Health Laboratory.

60 The Commonwealth government should move toward a unified coordinated system for the approval of quarantine facilities (for animal and plant research laboratories). This would require agreement between the National Biosecurity Authority, Australian Pesticides and Veterinary Medicines Authority and the Office of the Gene Technology Regulator for one system of approval of laboratories.

61 The Commonwealth should own and operate specialised quarantine facilities where monopoly rents might be charged if such facilities were operated privately.

62 The Commonwealth should immediately clarify its intentions with respect to the future ownership, management and operation of the quarantine facilities currently located at Eastern Creek and Knoxfield.

63 All quarantine stations that manage equivalent risks should have their performance accredited and audited to equivalent standards, irrespective of whether the quarantine station is privately or publicly owned and operated.

64 The effectiveness of the anti-smuggling subsidy for plant material should be reviewed, with other avenues explored for improving compliance with biosecurity requirements, including a review of smuggling penalties.

Ensuring the integrity of the system

65 The National Biosecurity Authority should develop quality management systems that:

- **a** incorporate consistent quality management approaches across its programs;
- **b** include periodic audit of external assurances such as official certification provided by overseas authorities and accredited third-party systems; and
- **c** include, where relevant, ISO 9000 and other quality standards in introducing these quality management strategies and systems.

66 The National Biosecurity Authority should establish an internal audit group to inquire and report on the adherence by the Authority to its policies and their adequacy to deal with risks across the biosecurity continuum.

- **a** The responsibilities of this group should include both financial and performance audits of the Authority's programs.
- **b** The internal audit program should cover the National Biosecurity Authority's activities over an audit cycle.
- **c** The audit reports should be provided to the National Biosecurity Commission and the Director of Biosecurity.

67 In relation to the National Biosecurity Authority's internal audit program, the National Biosecurity Commission should have:

- **a** a determinative role for audit activities that relate to Biosecurity Import Policy Determinations; and
- **b** an advisory role in relation to the overall internal audit program.

68 The National Biosecurity Authority should maintain an enforcement branch with the resources and expertise to investigate breaches of the biosecurity legislation, with this function being afforded a high priority. Arrangements should be made with the Director of Public Prosecutions in relation to the conduct of prosecution of offences against the biosecurity legislation including to provide:

- **a** protocols to facilitate the commencement of proceedings by the Authority in cases involving the non-payment of infringement notices which cover high-volume matters of minimal complexity; and
- **b** for the recovery of pecuniary penalties by the Authority.

69 The Minister for Agriculture, Fisheries and Forestry should be enabled under the legislation to require the Inspector General of Biosecurity to inquire into any matter which is the responsibility of the National Biosecurity Authority.

70 The Inspector General of Biosecurity should develop a program of audit on appropriate timescales (for example, five years, one year and to allow for *ad hoc* audits).

71 The Inspector General of Biosecurity should provide regular independent reports to the Minister with these reports copied to the Director of Biosecurity and the National Biosecurity Commission. These reports should be made public unless a strong contrary reason exists. The Director of Biosecurity and the National Biosecurity Commission, as relevant, should report to the Minister on actions taken on recommendations by the Inspector General. The reports and responses to them should be reflected in the National Biosecurity Authority's annual report to Parliament.

72 The Biosecurity Advisory Council should provide advice on inspection and audit activities to the Director of Biosecurity.

Resourcing the biosecurity system

73 The Commonwealth should increase its biosecurity investment by an amount in the order of $260 million per annum, subject to a full costing by departments, to meet the recommendations of this report. A significant part of this increase in resources should be funded through cost recovery and an adjustment to the Passenger Movement Charge.

74 The Commonwealth's additional post-border investment should be tied to an agreement with the states and territories on appropriate matching commitments (see also Recommendation 3).

75 Recognising past underinvestment, an additional $225 million should be appropriated through the Commonwealth Budget over a number of years for investment in information technology and business systems for biosecurity. Future cost recovery arrangements should be adjusted to cover depreciation and replacement of that infrastructure.

76 Programs that currently use cost recovery should continue in this mode but charges for like activities should be aggregated, leading to a significant reduction in the number of individual charges.

77 In developing cost recovery arrangements, the National Biosecurity Authority should consult with business groups, but have the ultimate responsibility of recommending to the responsible Minister a cost recovery package that will support the provision of an effective and efficient regulatory function including:

- **a** adequate and long-term investment in infrastructure, including information technology and information services;
- **b** appropriate funding for staff and training;
- **c** the costs of auditing pre-border and border biosecurity certification; and
- **d** the cost of diagnosing a proportion of interceptions to inform a risk-return approach to activities.

78 Cost recovery by the National Biosecurity Authority should be subject to periodic external review to ensure that:

- **a** cost recovery reflects efficient costs and provides appropriate efficiency signals to the Authority;
- **b** the cost recovery structure provides appropriate price signals for business performance;
- **c** there is no long-term over-recovery; and
- **d** costs are being aggregated wherever possible and that unnecessary constraints are not being placed on the use of revenue from a risk-return perspective.

79 Export certification functions should return to 100 per cent cost recovery as scheduled at the beginning of July 2009, noting that this would require an early decision and announcement by the Government to allow businesses to prepare for the additional costs as well as for the necessary consultation on revised fee structures.

80 The Government should enhance Budget funding for activities which support biosecurity-related technical market access for Australian exporters.

81 Funding for the Airports Program should be adjusted in future on the basis of a Workload Growth Agreement established between the National Biosecurity Authority and the Department of Finance and Deregulation that links passenger numbers with Budget appropriations.

82 The Workload Growth Agreement should reflect a risk-return strategy for managing intervention rates and make appropriate allowances for productivity.

83 In developing the detailed budget for biosecurity functions, the Government should recognise the need for a significant enhancement in senior management capacity in the National Biosecurity Authority.

84 The National Biosecurity Authority should review staff training and rotation practices to ensure that they provide an optimum balance between development of broadly skilled officers, the deepening of expertise through experience in a role and the avoidance of regulatory failure through officers developing inappropriately close relationships with the clients they are servicing.

GLOSSARY OF TERMS

Term	Meaning
Abalone Viral Ganglioneuritis	Abalone viral ganglioneuritis is a disease of abalone caused by a herpes-like virus.
Appropriate Level of Protection	The level of protection deemed appropriate by a country establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory.
Appropriation	An authorisation from Parliament to withdraw funds from the Consolidated Revenue Fund.
AQUAVETPLAN	Australian Aquatic Veterinary Emergency Plan – the national contingency planning framework for the management of aquatic pest and disease emergencies in Australia.
Asian Green Mussel	Asian green mussel (*Perna viridis)* is a marine pest that causes damage to submerged structures. Spreads to other areas as invasive species via boat hulls and ballast water.
Asian Gypsy Moth	Asian gypsy moth (*Lymantria spp.*) is a pest that causes significant damage to forest, horticultural and urban trees. May be found on shipping containers, cargo and ships' structures.
Audit	Systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which the criteria are fulfilled.
AusBIOSEC	Australian Biosecurity System for Primary Production and the Environment – joint government initiative to enhance the biosecurity system for primary production and the environment.
Avian Influenza	Highly pathogenic avian influenza is a lethal generalised viral disease in poultry. Subtypes have the potential to be a serious zoonotic disease.
Aquatic Environment	Includes freshwater, estuarine and marine environments.
AUSVETPLAN	Australian Veterinary Emergency Plan – the national contingency planning framework for the management of animal pest and disease emergencies in Australia.
Ballast Water	Water taken up by ships to assist with vessel stability and balance.

Term	Meaning
Biodiversity	The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.
Biofouling	Marine organisms that attach to objects immersed in seawater, including the hulls and ancillary gear of yachts and small-craft.
Biosecurity	The protection of the economy, environment and human health from the negative impacts associated with entry, establishment or spread of exotic pests (including weeds) and diseases.
Black-Striped Mussel	Black-striped mussel (*Mytilopsis sallei)* is a marine pest that causes damage to submerged structures and may spread to other areas via boat hulls and ballast water.
Bluetongue	Bluetongue is an arthropod-borne viral disease of ruminants (including cattle, sheep and goats).
Bovine Brucellosis	Bovine brucellosis is a highly contagious bacterial disease of cattle. Also a serious zoonotic disease.
Bovine Tuberculosis	Bovine tuberculosis is a highly contagious bacterial disease of cattle. Also a serious zoonotic disease.
BSE	Bovine spongiform encephalopathy (BSE) is a non-inflammatory nervous disease of adult cattle.
Caulerpa taxiflora	*Caulerpa taxiflora* is a green alga that is an invasive marine pest commonly used as decoration in tropical fish tanks.
Citrus Canker	Citrus canker (*Xanthomonas axonopodis* pathovar *citri*) is a serious bacterial disease of citrus trees including grapefruit, lemons, limes and oranges.
Commonwealth Authorities and Companies Act 1997	An Act regulating the financial, ethical and reporting requirements of corporate public authorities with a separate legal existence outside the Commonwealth Public Service.
Compartmentalisation	Means one or more establishments under a common biosecurity management system containing an animal or plant subpopulation with a distinct health status with respect to specific pests or diseases for which required surveillance, control and biosecurity measures have been applied.
Competent Authority	Official service or authority, established by the government of an exporting state, having the responsibility and competence for ensuring or supervising the implementation of animal, plant or public health standards.

Term	Meaning
Compliance	Status whereby all aspects of product, facilities, people, programmes, and systems meet regulatory requirements and, where applicable, importing country official requirements.
Cost Recovery	A system of fees and specific purpose taxes used by government agencies to recoup some or all of the costs of particular government activities.
Crazy Ant	Yellow crazy ant (*Anoplolepis gracilipes*) is an invasive species that causes disruption to the environment including native birds, animals and insects.
Currant-Lettuce Aphid	Currant-lettuce aphid (*Nasonovia ribisnigri)* is a significant pest that feeds on a wide range of plants including lettuce, gooseberries, petunias, black and red currants, and a range of weeds such as sow thistle.
Disinsection	Measures to eliminate insects in baggage, cargo, containers, conveyances, goods and postal parcels.
Dutch Elm Disease	Dutch elm disease (*Ophiostoma spp)* is a fungal disease of elm trees which is spread by the elm bark beetle and causes tree decline and death.
Didymo	Didymo (*Didymosphenia geminata*), colloquially called 'rock snot', is a freshwater alga (diatom) that is a highly invasive exotic pest and considered impossible to eradicate once it infests waterways.
Electric Ant	The electric ant or little fire ant (*Wasmannia auropunctata*) is an invasive species that causes disruption to the environment including native birds, animals and insects.
Emergency Pests and Diseases (in Australia)	Pests and diseases that are (a) exotic to Australia and it is considered to be in the national interest to be free of the pest/disease or (b) a variant of an endemic pest or disease (that can be distinguished by investigative and diagnostic methods) which if established in Australia, would have a national impact or (c) a serious pest or disease of unknown or uncertain cause or (d) a severe outbreak of a known endemic pest or disease, and that is considered to be of national significance with serious social or trade implications.
Emergency Response Deeds	Pre-agreed cost sharing and response framework for dealing with an incursion of an emergency animal or plant pest or disease.
Endemic Pests and Diseases	Pests and diseases affecting plants or animals, including humans, that are known to occur in a particular country or region.
Equine Influenza	Equine influenza is an acute viral respiratory disease of horses.

Term	Meaning
European House Borer	European house borer (*Hylotrupes bajulus*) is a small beetle that is a destructive pest of seasoned softwood timber.
Exotic Fruit Fly	A group of significant horticultural pests that include oriental fruit fly, Philippine fruit fly, Mexican fruit fly and papaya fruit fly.
Exotic Pests and Diseases	Pests and diseases affecting plants or animals (and possibly including humans) that do not normally occur in a particular country or region.
Financial Management and Accountability Act 1997	An Act which provides a framework for the management of public money and property.
Fire Blight	Fire blight (*Erwinia amylovora*) is a systemic bacterial disease of apples and pears that may seriously impact on tree health and fruit production in infested orchards.
FLUBORDERPLAN	National coordination plan to enhance border screening for incoming travellers for the purpose of delaying entry of pandemic influenza.
Foot and Mouth Disease	Foot and mouth disease is a highly infectious viral disease of cloven-hoofed animals.
Grapevine Leaf Rust	Grapevine leaf rust is a disease of grapevines caused by the wind-borne fungus, *Phakopsora euvitis*. Infection results in leaf drop and subsequent weakening of the vine.
Hazard Analysis and Critical Control Points	Risk management system used to identify and monitor potential hazards and implement key actions or controls to reduce or eliminate the risk of these hazards.
Hendra Virus	Hendra virus is an acute respiratory and neurological disease of horses. Also a serious zoonotic disease.
Hypothecation	The assignment of revenue received from a specific tax or taxes to the financing of a particular governmental activity.
Import Market Access Advisory Group	A high level group within the Department of Agriculture, Fisheries and Forestry that is responsible for assigning priority to import proposals and monitoring progress of Import Risk Analyses undertaken by Biosecurity Australia.
Inspection	Examination of product or systems for the biosecurity of animal, plant, food and human health to verify that they conform to requirements.
Karnal Bunt	Karnal bunt is a disease affecting wheat caused by the fungus *Tilletia indica*, which infects plants at flowering and can reduce grain quality.
Khapra Beetle	Khapra beetle (*Trogoderma granarium*) is a significant pest that may infest imports of stored products, particularly grain.

Term	Meaning
Mango Leaf Gall Midge	A group of insect pests of mango that produce wart-like galls on leaves. Severe infestation may result in tree death.
Mediterranean Fruit Fly	Mediterranean fruit fly (*Ceratitis capitata*) is a destructive pest of horticultural crops.
Monitoring and Surveillance	Activities to investigate the presence or prevalence of a pest or disease in a given plant or animal population and its environment.
Northern Pacific Seastar	Northern Pacific seastar (*Asterias amurensi*) is a large seastar, up to 50cm in diameter, that causes significant damage to coastal marine environments and commercial fisheries.
OIE	World Organisation for Animal Health (formerly known as the Office International des Epizooties).
Pest and Disease	Any species, strain or biotype of plant, animal or pathogenic agent that causes infection or is injurious to plants or animals.
PIAPH	Product Integrity, Animal and Plant Health – a division within the Department of Agriculture, Fisheries and Forestry.
PLANTPLAN	Australian Emergency Plant Pest Response Plan – the national contingency planning framework for the management of plant pest and disease emergencies in Australia.
Post-Arrival Quarantine	Isolation and observation of plants or animals on arrival in the importing country.
Pratique	Clearance given to a vessel (ship or aircraft) to enter port on assurance to authorities that the vessel and its passengers are free from contagious disease.
Pre-Export Quarantine	Isolation and observation of plants or animals prior to export.
Quarantine Approved Premise	Place approved by AQIS where post-entry quarantine requirements are met.
Quarantine	The system of measures which are used to manage risks of the entry and establishment of pests or diseases which threaten animal, plant or human health.
Queensland Fruit Fly	Queensland Fruit Fly (*Bactrocera tryoni*) is a destructive pest of horticultural crops.
Red Imported Fire Ant	Red imported fire ant *(Solenopsis invicta)* is the most notorious of the world's invasive tramp ants. It delivers painful stings and can cause significant impacts to humans, agriculture and the environment.

Term	Meaning
Regionalisation	A clearly defined part of a country (region or zone) containing an animal or plant sub-population with a distinct health status with respect to specific pests or diseases for which required surveillance, control and biosecurity measures have been applied.
Risk Analysis	Assessment of the level of biosecurity risk associated with the importation, or proposed importation of animals, plants or goods and if necessary, identification of risk management options to limit the level of biosecurity risk. Includes risk assessment, risk management and risk communication.
Risk Assessment	The evaluation of the likelihood and the biological and economic consequences of entry, establishment, or spread of a pest or disease within the territory of an importing country.
Risk Management	The process of identifying, selecting and implementing measures that can be applied to reduce the level of risks.
Screw-Worm Fly	Screw-worm fly (*Chrysomya bezziana* and *Cochliomyia hominivorax*) are parasites of warm-blooded animals, including humans. Causes serious production losses in livestock.
Severe Acute Respiratory Syndrome	Severe acute respiratory syndrome is a highly infectious viral disease of humans that was thought to originate from palm civets.
Sugar Cane Smut	Sugar cane smut (*Ustilago scitaminea*) is a serious fungal disease of sugar cane that is readily spread long-distances by aerial spores.
Surra	Surra is a chronic wasting disease of animals caused by the parasitic protozoa, *Trypanosoma evansi.*
Tomato Leaf Curl Virus	Tomato Leaf Curl Virus is one of a group of closely related viruses vectored by white flies, which causes significant damage to tomatoes, potatoes and a range of other crops.
Tramp Ants	A diverse group of highly invasive ant species (including red imported fire ants, electric ants and crazy ants) readily moved across the world through a variety of transport pathways, causing significant environmental harm.
Variant Creutzfeldt-Jakob Disease	Variant Creutzfeldt-Jakob disease is an invariably fatal neurological disease in humans that is caused by the ingestion of certain tissues derived from BSE-infected cattle.
Varroa Mite	*Varroa mite (Varroa destructor) is an external parasite that* is one of the most significant pests of honeybees around the world.

Term	Meaning
Verification	Confirmation through the provision of objective evidence that specified requirements have been fulfilled. Includes inspection and audit activities.
West Nile Fever	West Nile fever is a viral disease, spread via mosquitoes, that mainly affect birds. Also a serious zoonotic disease.
Wheat Stem Rust	Wheat stem rust (*Puccinia graminis* f. sp. *tritici*) is a fungal disease of wheat, barley, oats and rye that produces new strains causing significant damage on previously resistant cultivars under favourable environmental conditions.
Yellow (Stripe) Rust	Yellow (stripe) rust (*Puccinia striiformis*) is a fungal disease of wheat that produces new strains causing significant damage on previously resistant cultivars under favourable environmental conditions.
Zoonosis (or Zoonotic Disease)	Any disease or infection which is naturally transmissible from animals to humans.

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1 SCENE SETTING

1.1 What is biosecurity?

Biosecurity is a relatively new term. It is significantly broader than quarantine, which in a Constitutional sense is restricted to the consideration of diseases and disease agents, with an emphasis on containment and exclusion. The narrow definition of quarantine does not include pests and weeds which are not disease vectors, but are nevertheless capable of causing great economic or environmental damage.

The Panel has defined biosecurity as 'the protection of the economy, environment and human health from the negative impacts associated with entry, establishment or spread of exotic pests (including weeds) and diseases.'

1.2 Why is biosecurity important?

Australia's favourable pest and disease status is integral to its agricultural and food sector. It also contributes to the unique status of Australia's natural environment. Being an island, Australia's plants and animals evolved in isolation until relatively recently. As a result, they are vulnerable to exotic pests and diseases. Australians place a high value on the country's environment and biodiversity.

Australia's agriculture, fisheries and forestry industries make an important contribution to Australia's economic and social prosperity. In 2006-07 they contributed $38.5 billion to Australia's gross value of production (equivalent to 2.8 per cent of Gross Domestic Production) and provided employment for 272,000 people in rural and regional areas (Department of Agriculture, Fisheries and Forestry 2008).

Freedom from many of the world's major pests and diseases provides Australia's export oriented agricultural sector with a clear advantage in global markets. For example, the ability to demonstrate the absence of significant pests and diseases, such as BSE, foot and mouth disease and Karnal bunt, allows Australia to maintain favourable market access.

The introduction of a serious exotic pest or disease to Australia could have significant implications for the economy and the natural environment. For example, six years ago the Productivity Commission modelled the economic costs to Australia of a 12 month outbreak of foot and mouth disease at between

$8-13 billion (Productivity Commission 2002). Similarly, following the discovery of red imported fire ants in Queensland, the Australian Bureau of Agricultural and Resource Economics estimated the potential cost of this pest over a thirty year period to be nearly $9 billion (Kompas and Che 2001).

These figures provide a strong argument for a biosecurity system that can quickly and effectively deal with potentially dangerous and costly pests and diseases. They do not, however, provide an argument for preventing trade altogether. For example, almost all of the crops and animals (and many of the pastures) forming the basis of Australian agriculture were initially imported into the country. Only a very small amount of Australia's agricultural production incorporates the use of native flora and fauna. The ability of the agriculture sector to continue to import new genetic stock and cultivars safely is essential to its future sustainability and capacity to be competitive in domestic and international markets.

1.2.1 The global treaty framework

Australia is rightly at the forefront of international advocacy for agricultural trade liberalisation, vigorously pursuing its interests through avenues such as the Cairns Group, which Australia chairs. The Cairns Group is a coalition of 19 agricultural exporting countries. Since it was formed in 1986 the Cairns Group has been an influential voice in global agricultural trade negotiations within the World Trade Organization and its predecessor, the General Agreement on Tariffs and Trade.

Australia benefits from the application of the fair and consistent international trading rules established by the World Trade Organization. For biosecurity, the World Trade Organization's *Agreement on the Application of Sanitary and Phytosanitary Measures* (the SPS Agreement) has particular relevance. Australia was instrumental in negotiating the SPS Agreement and ensuring it provided an objective basis to challenge unjustifiable barriers to its agricultural exports.

Under the SPS Agreement, World Trade Organization Members have the right to adopt sanitary and phytosanitary measures necessary for the protection of human, animal and plant life or health. These measures must be science-based, not more trade restrictive than required and not arbitrarily or unjustifiably discriminatory against trading partners. At the core of the SPS Agreement is the concept of an 'Appropriate Level of Protection'. Australia's Appropriate Level of Protection is currently expressed as 'providing a high level of sanitary and phytosanitary protection, aimed at reducing risk to a very low level, but not to zero.'

Despite Australia's role in advocating the SPS Agreement, many trading partners now view Australia's biosecurity system as protectionist. Allegations have been

made that Australia's Import Risk Analysis process is a *de facto* trade barrier. Australia has consistently and vigorously defended its system bilaterally and within the World Trade Organization. However, these perceptions remain and put at risk Australia's trade policy credentials. They also increase the likelihood of retaliatory action by frustrated trading partners seeking to use biosecurity barriers against Australian agricultural exports in potential export markets. The Panel notes that New Zealand, Australia's close friend, neighbour and fellow trade liberalisation ally, is currently seeking to overturn Australia's measures affecting the importation of apples from New Zealand through the World Trade Organization's dispute settlement procedures.

1.3 Applying biosecurity

1.3.1 Emerging risks

A number of emerging risk factors affect the need for and nature of biosecurity. Some of these include:

- the urbanisation of rural regions, leading to a heightened risk of pest and disease incursions and zoonoses due to the increasing interaction of urban communities with agricultural production areas;
- increases in the international movement of people and goods, particularly from areas that present higher biosecurity risks, which complicates the ability to identify risks at the border;
- intensification of agriculture, affecting the ability to contain and limit the spread of a pest or disease once an incursion takes place;
- the global movement of genetic material to improve yields and support research, which presents a range of risks that requires the development of specific technologies;
- skill shortages in critical areas such as taxonomy, microbiology and entomology, placing limitations on the ability to develop biosecurity systems and respond to pest and disease incursions; and
- the challenges from climate change, including increasing numbers of viable natural pathways for exotic pests and diseases to enter Australia.

With these changes comes a greater risk of pest and disease incursions. Some recent overseas examples include: the establishment of bluetongue virus in Western Europe; the spread of tramp ant species; the spread of West Nile fever to North America; and the establishment of varroa mite in the New Zealand bee population. Recent Australian incursions include: European house borer; tramp ants; sugar cane smut; grapevine leaf rust; citrus canker; Khapra beetle; currant-lettuce aphid; and equine influenza.

1.3.2 A 'whole of continuum' approach

The world is responding to the evolving challenges by increasing the focus before and behind national borders. Examples of such responses include building intelligence networks, adopting the principles of regionalisation and compartmentalisation, shifting the emphasis from 'not known to have' pests and diseases to 'known not to have' those pests and diseases when accepting imports from a country or region, securing food chains and applying new technologies.

In some countries, there is a practical recognition that borders are porous and the principal focus needs to be on monitoring, surveillance and response to pest and disease incursions, rather than prevention and interception. Australia takes a different perspective in substantial part reinforced by its island status and consequently its greater capacity to control the movement of people, animals and plants across the border.

1.3.3 Risk management rather than risk elimination

In the past, Australia protected its shores from exotic pests and diseases through a quarantine system that used isolation, segregation, disinfection and measures to kill insects once people or products of concern were identified at the border. The task has become considerably more complex, and to accommodate this there needs to be a shift from zero risk to managed risk, from barrier prevention to border management, from 'no, unless …' to 'yes, provided …'

Adopting a multi-layered biosecurity system means that detecting an exotic pest or disease within Australia need not be a failure of the system if it is detected quickly and dealt with at low cost. This was illustrated with the detection in Western Australia of Khapra beetle within a recent immigrant's personal effects after they had cleared quarantine. Although the pest was not detected during risk mitigation activities at the border, a commercial pest controller identified its presence, notified authorities and steps were taken successfully to contain and eradicate it before it was able to spread to surrounding areas.

1.3.4 A partnership approach

Over the years there have been a number of inquiries into Australia's biosecurity system—an indicator of the importance given to a robust system. The last comprehensive review, *Australian Quarantine: a shared responsibility*, was undertaken in 1996 by a committee chaired by Professor Malcolm Nairn. One of the main themes of the Nairn Report was that responsibility for Australia's quarantine and biosecurity system should be shared between the government, business and the Australian community.

Since then, there have been a number of positive developments, such as the establishment of Plant Health Australia, the Quarantine and Exports Advisory Council, the Eminent Scientists Group, AusBIOSEC and the National Biosecurity Committee.

In February 2006, a report by the Agriculture and Food Policy Reference Group, chaired by Mr Peter Corish, was provided to the Minister for Agriculture, Fisheries and Forestry. The Report reiterated the importance of maintaining Australia's favourable pest and disease status and made recommendations on the need for a coordinated national approach, changes to the Import Risk Analysis process, independence for Biosecurity Australia and improved communication around biosecurity.

Despite these reviews, Australia has failed to build the institutions to underpin effective and comprehensive cooperative arrangements—that is, the organisational structures, information systems and resources to achieve the Nairn Report's vision. In fact, since 1996 there may have been a deterioration in these cooperative arrangements and a level of fragmentation within the Commonwealth. There is evidence of a reduced flow of biosecurity information between the Commonwealth and the states (for the purpose of this report 'states' is taken to mean 'states and territories'), and of states acting independently in some areas.

A new approach is needed which provides:

- a common understanding between the Commonwealth, the states, business and the community at large of their respective roles and responsibilities and how these will be met;
- a legal framework that can underpin a genuinely national approach for exotic pests and diseases;
- a framework to underpin a more effective approach to risk analysis, including assessment and management (monitoring, surveillance and response) of regionally established pests and diseases; and
- the institutions, protocols, information systems, programs, research, and resources (funding and skills) necessary to achieve these objectives.

1.4 The Quarantine and Biosecurity Review

The Quarantine and Biosecurity Review was announced on 19 February 2008 by the Minister for Agriculture, Fisheries and Forestry, the Hon. Tony Burke MP. The terms of reference are at Appendix B.

Following the release of an Issues Paper to prompt discussion, all interested parties were given the opportunity to participate in the Review through a formal submission process. The Panel received around 220 written submissions from a

wide range of interested parties (including a number of overseas submissions) which is a reflection of the importance the community places on Australia's biosecurity systems (a list of submissions is at Appendix D).

The Panel consulted with a broad range of domestic and international stakeholders, including participating in over 170 meetings with individuals and representatives of organisations. The Panel also sought information from trading partners on their arrangements for managing biosecurity risks. Discussions were held with government officials and business representatives in New Zealand, North America and Europe. The Panel also met with representatives from the World Trade Organization and Member countries in Geneva and overseas embassy officials based in Australia.

1.4.1 Report structure

The Panel has written the Report with a structure that will ensure the many issues raised during the consultation process are discussed and that the terms of reference for the review are appropriately covered. Most chapters describe the current position, then summarise comments received from submissions, and finally present the Panel's views, leading to specific recommendations.

Chapter 2 examines the relationship between the Commonwealth and the states.

Chapter 3 considers the organisational structures that would ensure the most effective delivery of biosecurity policy and activities.

Chapter 4 looks at improving the relationship between government, business and the community and provides recommendations to ensure the theme of the Report **One Biosecurity: a working partnership** is realised.

Chapter 5 addresses the articulation and communication of Australia's Appropriate Level of Protection and improving the Import Risk Analysis process.

Chapter 6 draws together the legislative arrangements required to give effect to the Panel's recommendations.

Chapter 7 reviews the way Australia's biosecurity agencies manage risk across the continuum.

Chapter 8 investigates mechanisms to ensure the integrity of Australia's biosecurity systems is of the highest order.

Chapter 9 discusses resourcing requirements of Australia's biosecurity agencies at the Commonwealth level and addresses management and staffing issues that were raised during the consultations.

Chapter 10 benchmarks Australia's biosecurity arrangements with systems used by trading partners.

2 ONE BIOSECURITY – THE COMMONWEALTH, STATES AND TERRITORIES WORKING TOGETHER

2.1 Introduction

One of the principal recommendations of the Nairn Report was the concept of a *quarantine continuum*, encompassing activities undertaken pre-border, at the border and post-border. The Nairn Report noted that while activities across the continuum did not have to be undertaken by a single agency, there was a need for national coordination and consistency.

As noted in the previous chapter, the Nairn Report also promoted the concept of *shared responsibility*. This chapter describes how biosecurity responsibilities are currently shared between the Commonwealth and state governments across the continuum and recommends how this partnership can be improved. Since the Nairn Report, the nature and extent of pressures on the continuum have changed, making an effective working relationship on biosecurity between the Commonwealth and the states more important than ever.

2.2 Current arrangements

2.2.1 Legal and program arrangements and the biosecurity continuum

The Commonwealth's powers to legislate arise from the Australian Constitution. The powers that are most relevant to the regulation of biosecurity are the quarantine power, the external affairs power, the international and interstate trade and commerce power and the corporations power, which form part of section 51 of the Constitution. The external affairs power is particularly relevant in the context of the SPS Agreement, International Health Regulations and environmental treaties such as the *Convention on Biological Diversity*.

To date, the Commonwealth has not exercised its full Constitutional power. Rather, the Commonwealth's legislation, the *Quarantine Act 1908*, has

primarily focused on regulating the border and pre-border activities. Examples of Commonwealth activities in these areas include Import Risk Analyses by Biosecurity Australia and quarantine screening and inspection of vessels, goods and passengers arriving at points of entry into Australia.

Post-border activities have generally been understood to be the responsibility of state governments. The Commonwealth legislation does include provisions that potentially apply to goods and persons anywhere in Australia, including beyond the border. However, these provisions by and large focus on emergency situations.

The Victorian Government submission described the relationship as follows:

> 'The prevention of the spread of exotic pests and diseases is a shared responsibility of all states and territories, industry and the community. The prevention and mitigation of these pests entering Australia is the responsibility of the Federal Department of Agriculture, Fisheries and Forestry (DAFF) through Biosecurity Australia (BA) and the Australian Quarantine and Inspection Service (AQIS).' (Victorian Government submission, p. 1)

The Commonwealth does, however, make some significant post-border program investments. These include investments in:

- improved exotic and emergency pest and disease preparedness;
- the health status of animal and plant industries through the Commonwealth's financial contributions to Animal Health Australia and Plant Health Australia;
- awareness programs aimed at the business sector and the community;
- monitoring and surveillance programs, including the Northern Australia Quarantine Strategy (see Chapter 7);
- eradication of specific emergency pests and diseases such as equine influenza, red imported fire ants and citrus canker; and
- the maintenance of significant biosecurity infrastructure, such as the Australian Animal Health Laboratory (see Chapter 7).

From the viewpoint of human health, imported food arrangements are similar to those described above, in that the Commonwealth's role under the *Imported Food Control Act 1992* is largely pre-border and border related. The Commonwealth's role ceases at the time that the food is released by the Commonwealth's authorised officer. In terms of exports, the Commonwealth employs the services of the states to conduct some inspection functions under the *Export Control Act 1982*. Commonwealth/state relationships in this area are set out in various memoranda of understanding.

2.2.2 Commonwealth/state agreements, decision making and consultative forums

A number of agreements have been developed to help clarify the respective responsibilities of the Commonwealth and state governments. Examples include the *Memorandum of Understanding on Animal and Plant Quarantine Measures* (see Box 1) and the deeds covering the emergency response arrangements (see Chapter 4).

BOX 1 Memorandum of Understanding on Animal and Plant Quarantine Measures

The *Memorandum of Understanding on Animal and Plant Quarantine Measures* was signed by the Commonwealth and the states on 21 December 1995, following Canada's successful World Trade Organization action against Australia in regard to salmon (see Box 4). It recognises that Australian governments need to work cooperatively to ensure that Australia meets its international obligations under the SPS Agreement.

The principal provisions require the states to:

- consult fully with the Commonwealth before implementing any relevant sanitary or phytosanitary measures which could inhibit trade into Australia and which may not conform with the provisions of the SPS Agreement;
- not apply measures which would not conform with the provisions of the SPS Agreement; and
- take appropriate corrective action as a matter of urgency if it is found that a measure does not conform to the SPS Agreement.

On 24 October 2002 the memorandum was extended to include more detail on Commonwealth responsibilities, including that the Commonwealth:

- is committed to addressing regional differences in pest and disease status and risk and consequent SPS measures as part of an Import Risk Analysis;
- will consult fully with the states on the Import Risk Analysis work program and on Import Risk Analyses about to commence;
- will, in conducting each Import Risk Analysis, take into account information on regional pest and disease status and risk profile provided by the states; and
- will consult with the states at every stage in the Import Risk Analysis process to resolve issues arising from regional differences in risk.

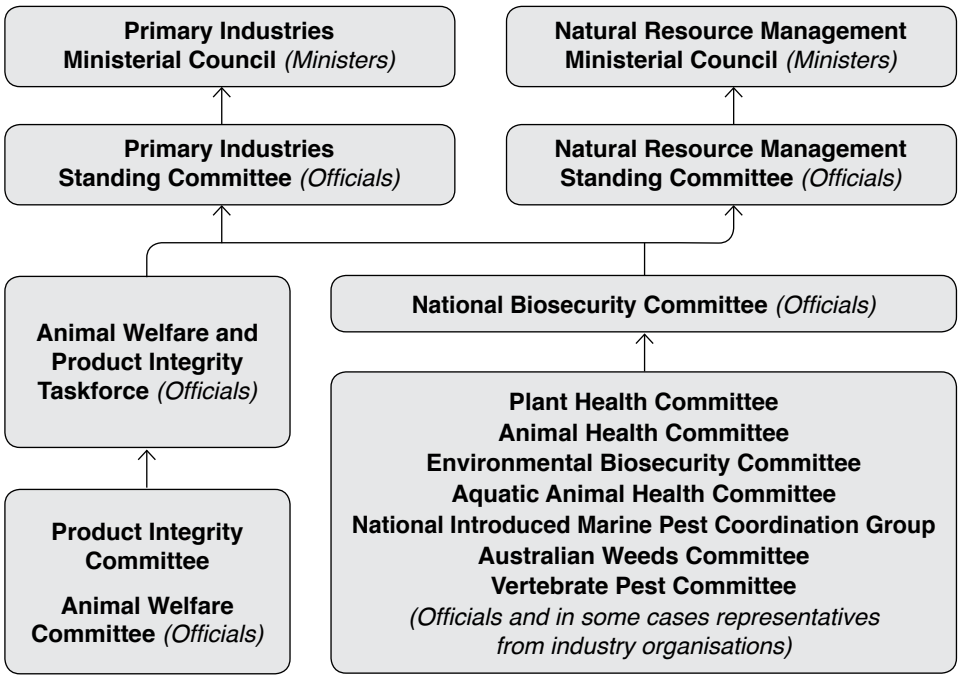
In return, the states agreed they would assist in each stage of the Import Risk Analysis process wherever possible, in particular through early and comprehensive input of regional pest and disease status and risk information and by making specialist staff available. States also agreed to work with the Commonwealth in communicating the results of Import Risk Analyses to regional businesses and communities.

In addition, governments have established institutional arrangements for joint discussion and decision making on biosecurity policy. These include the Natural Resource Management Ministerial Council, the Primary Industries Ministerial Council and subcommittees associated with biosecurity (see Figure 2). There are also other Ministerial Councils that deal with biosecurity-related matters, for example, the Australia and New Zealand Food Regulation Ministerial Council.

The National Biosecurity Committee is one of the sub-committees shown in Figure 2. Part of its responsibility is to coordinate the implementation of AusBIOSEC, a whole-of-government project to enhance the biosecurity system for primary production and the environment (see Box 2).

The Commonwealth and the states have also developed an intergovernmental agreement which establishes a national system for dealing with the risks of marine pest incursions. The national system aims to implement Australia's obligations under the International Maritime Organization's *Convention for the Control and Management of Ships' Ballast Water and Sediments*. Australia signed the Convention in 2005. It is yet to be ratified. International standards for biofouling management have not yet been established. Further detail on the national system is described in Box 3.

Figure 2 Current Ministerial Councils and subcommittees associated with biosecurity



BOX 2 AusBIOSEC

AusBIOSEC is a project being progressed under the auspices of the Natural Resource Management Ministerial Council and the Primary Industries Ministerial Council to improve the Australian biosecurity system for primary production and the environment.

One of the priorities for AusBIOSEC is to address the gaps which exist in the current system in relation to pests and diseases with environmental and social effects. National response and cost sharing arrangements are being developed through an Intergovernmental Agreement. The cost sharing arrangements include: national significance criteria; minimum information requirements; criteria for assessing the technical feasibility of a proposed response plan; and costs that may be eligible for national cost sharing under a national response plan.

In addition, AusBIOSEC encourages collaborative work across jurisdictions in areas such as: response planning; information sharing and management; research and development; communication and awareness; surveillance; reporting; biosecurity diagnostic systems; and intra- and interstate biosecurity arrangements.

The Intergovernmental Agreement is currently being considered by governments and is due to be signed in 2009.

BOX 3 National System for the Prevention and Management of Marine Pest Incursions

The National System for the Prevention and Management of Marine Pest Incursions addresses biosecurity risks by preventing pest incursions, ensuring coordinated emergency response actions, and providing for the management and control of introduced marine pests.

Under the *Intergovernmental Agreement on a National System for the Prevention and Management of Marine Pest Incursions*, which is currently being revised, the Commonwealth is responsible for ensuring international vessels comply with mandatory ballast water management requirements under the *Quarantine Act 1908*, while the states have responsibility for legislating for ballast water sourced within Australia. Victoria is currently the only state that regulates the movement of intra- and interstate ballast water.

AQIS also conducts biofouling inspections for international vessels arriving in Australia on a case-by-case basis, targeting yachts and other high-risk vessels such as slow moving dredges, drilling platforms and illegal fishing boats. Australia has developed voluntary biofouling management guidelines to assist vessel operators manage biofouling. Western Australia is the only state to have legislated to control the biosecurity risks posed by biofouling on vessels moving in domestic waters.

2.3 Current debates and views in submissions

2.3.1 Risk to Australia's treaty obligations arising from state decisions

An area of tension in the Commonwealth/state relationship is the nexus between Commonwealth Import Risk Analysis decisions and their application at a state level.

While the *Memorandum of Understanding on Animal and Plant Quarantine Measures* sets out basic requirements for the Commonwealth and the states, it is not legally binding. The potential for state-level measures to inhibit trade into Australia remains, leaving Australia at risk of breaching its treaty obligations. The end result can be significant, as was demonstrated when Tasmania took unilateral action in relation to salmon imports, leading to an additional finding of World Trade Organization inconsistency in a dispute brought by Canada against Australia. This case was described by the Department of Foreign Affairs and Trade in their submission (see Box 4).

BOX 4 Australia's experience in relation to salmon imports

'*Australia – Measures Affecting Importation of Salmon* involved a complaint by Canada against Australia's quarantine prohibition on fresh, chilled or frozen Canadian salmon. The World Trade Organization Appellate Body found that Australia's final Import Risk Analysis did not conform with SPS provisions and therefore the import prohibition was not based on a proper risk assessment. The Appellate Body also found that the different measures applied between fresh, chilled or frozen salmon and other fish having diseases in common (for which imports were not prohibited) amounted to discrimination or a disguised restriction on international trade.

Australia was accorded eight months to bring its measures into WTO consistency. During that period, Australia conducted revised risk assessments. As a result, the prohibition on wild, ocean caught Pacific salmon was replaced with a suite of quarantine measures; quarantine measures on certain other fin fish were tightened. Canada formally complained that the measures taken to comply, as well as a new quarantine measure by Tasmania, were still WTO-inconsistent. The compliance panel found that, with the exception of one of the Commonwealth's 11 quarantine measures applied to salmon, Australia's revised measures were consistent with its SPS obligations. However, the panel found that the Tasmanian measure was not based on a risk assessment and therefore was WTO-inconsistent. Australia reached agreement with Canada on an adjusted measure to replace the inconsistent Commonwealth measure and also in relation to steps that Australia would take to achieve Tasmania's observance of Australia's SPS obligations under the existing Memorandum of Understanding between the Commonwealth, States and Territories on quarantine.'

(Department of Foreign Affairs and Trade submission, p. 14)

Despite the clearly expressed views of the World Trade Organization Appellate Body, a number of states questioned the Commonwealth's ability and willingness to recognise individual pest and disease status and continue to apply state specific restrictions on imports. The combined Western Australian Government submission noted:

> 'Regional differences in pest/disease status have been inconsistently applied in risk analysis. The risk assessments often overlook or ignore the concerns of States/Territories or regions that have provided evidence of pest free status or official control being in place for a particular species of note.' (Western Australian Government submission, p. 3)

In Tasmania, this concern led the Tasmanian Government to introduce a state Appropriate Level of Protection and state-level risk analyses.

> 'Tasmania's ALOP statement is entirely consistent with that adopted nationally although it is perhaps rather more informative. Where we sometimes differ from the rest of the country, and what other jurisdictions appear to have difficulty with, is that we carefully consider the consequences of pest introduction specifically for Tasmania and the sort of Tasmania we want to project to the rest of the world.' (Tasmanian Government submission, p. 4)

2.3.2 Disagreement over responsibilities

While there is widespread support for the concept of a seamless biosecurity continuum, evidence provided to the Panel indicates that disagreement over specific roles and responsibilities is leading to gaps in the continuum, to the detriment of the overall system. Areas of contention include the Commonwealth's role in post-border investigation of pest and disease detections and monitoring and surveillance and, in particular, the provision of resources to support this activity.

The debate is illustrated in the terminology adopted by different governments. For example, in its submission, the Tasmanian Government characterises post-border detections as 'quarantine barrier breaches', proposing that responsibility for managing the breach should rest with the Commonwealth. Conversely, the Commonwealth refers to such incidents as 'post-quarantine detections' and has argued that responsibility for action rests with the relevant state biosecurity agency.

The Quarantine and Exports Advisory Council noted that there was not an effective partnership between the Commonwealth and the states in relation to monitoring post-border leakage and collaborative amendment of biosecurity measures. It suggested that:

> 'This is hampered by the limited information sharing and an attitude that AQIS systems have failed at the post-border stage rather than recognising this as an important element in the quarantine/biosecurity continuum.' (Quarantine and Exports Advisory Council submission, p. 6)

The Panel is aware that work is underway to resolve the specific issue of post-border detections, however, the examples above do indicate a lack of clarity around the Commonwealth's post-border role.

The Queensland Government noted that the relationship between the Commonwealth and the states generally works well, but was critical of the shifting relative balance between Commonwealth and state post-border responsibilities over time. Its view was that the Commonwealth should be investing more post-border to balance sharing of responsibility.

> 'Over time, the role of the States has significantly expanded from controlling or eradicating endemic pest and diseases to the prevention, surveillance and response to exotic or emergency pests and diseases that threaten trade, the environment or our way of life …
>
> The situation is further exacerbated when States have to mount and fund responses due to a breakdown in the quarantine system, as was the case with equine influenza and citrus canker.' (Queensland Government submission, p. 2)

The Victorian Government also discussed the issue of post-border responsibilities, citing as an example the import conditions set by the Commonwealth to ensure that green prawns imported for human consumption are not used for bait. This example was also raised by other states. The Victorian Government argued that in setting the import conditions, the Commonwealth had in effect shifted its risk management responsibilities to the states by imposing conditions that need post-border enforcement, a role that the Commonwealth would like the states to fill.

A similar concern was raised by Australian Pork Limited in relation to post-border compliance associated with pork imports. It argued that the Commonwealth was failing to meet its responsibilities because of a lack of appropriate mechanisms to enforce post-border requirements.

> '… APL asks how can AQIS be confident that all of the "miscellaneous" boneless frozen swine meat … being imported into Australia … is destined for ham and smallgoods production? How is AQIS able to track and verify compliance with this through its currently designed audit system (and within the remit of its responsibilities as defined by the Quarantine Act)?' (Australian Pork Limited submission, p. 39)

2.3.3 The need for collaboration

Demands on the overall system continue to increase. The volume of trade is growing and risk profiles are changing. Monitoring and surveillance needs are increasing as more trading partners move toward requiring active verification to substantiate pest and disease freedom claims (an approach described as 'known not to occur' rather than 'not known to occur'). In addition, the system faces new priorities in terms of threats to both the terrestrial and aquatic environments.

The capacity of jurisdictions to respond to these increasing demands varies, with the priority given to biosecurity depending on how much stands to be lost as a result of an outbreak and what experience governments have had with outbreaks in the past. Variable levels of commitment have implications for the national integrity of the biosecurity system.

> 'The nature of surveillance systems varies across the states and territories. Increased Commonwealth funding may provide an appropriate mechanism to standardise all the states and territories' approaches. Disparities exist with regard to staffing levels, deployment, surveillance mechanisms and data management, and need to be addressed.' (Victorian Government submission, p. 4)

Several states indicated that they were spending considerably more time responding to detections and dealing with outbreaks, with fewer resources available for longer-term investments in infrastructure, monitoring and surveillance, and capacity building. The Commonwealth and the states raised similar concerns in relation to a shortage of skilled people, appropriate infrastructure and overall resources. Recognising these demands and constraints, there was general support for enhanced collaboration between the Commonwealth and the states.

> 'Post Border quarantine requires strong partnerships between the Commonwealth and the States and Territories … It is essential that States and Territories are much better engaged with the Commonwealth at this post-border part of the quarantine and biosecurity arrangements.' (National Farmers' Federation submission, p. 4)

Many submissions noted the potential for AusBIOSEC to increase the level of collaboration between jurisdictions, with the initiative acknowledged as an important step in the right direction. However, widespread concern was expressed about slow progress in developing AusBIOSEC. Questions were asked about its capacity to develop more than emergency response agreements for environmental pests and diseases not covered by existing emergency response and cost sharing arrangements.

The Queensland Government submission pointed to a broader leadership role for the Commonwealth in identifying and funding national priorities. It proposed a national biosecurity program, linked to performance standards and formal monitoring and auditing.

> 'There is a real opportunity for the Commonwealth Government to take a leadership role in this area by ensuring a clear line of sight between national priorities and funding sources. Two suggestions which are offered for consideration to address these issues are:
>
> - Establishment of a national biosecurity program where national activities are funded through a national funding stream linked to performance standards and formal monitoring and auditing. Delivery mechanisms could continue to use a variety of Commonwealth, State and private agencies; and
> - A formal agreement between the Commonwealth and State Treasuries for funding of new national programs. This would require establishment of a much more robust approval mechanism than currently exists.' (Queensland Government submission, p. 4)

2.3.4 Variable state biosecurity requirements

A number of business organisations flagged the difficulties they face as a result of different biosecurity rules imposed by different states. While the importance of differences in pest and disease status was acknowledged, it was suggested that in some cases state biosecurity requirements were not science-based or least trade restrictive.

Nursery and Garden Industry Australia expressed concern about the costs to businesses that arise from different state approaches—including biosecurity restrictions, quarantine zones, pest and disease freedom and biosecurity protocols. A particular issue is the way in which states undertake pest and disease risk assessments, and the flow-on effects in terms of variable risk management protocols. It argued for a national risk assessment methodology to reduce red tape and compliance costs for businesses.

> '… inconsistencies across the country raise major questions surrounding the science that supports such significant differences between departmental experts. A nationally adopted and implemented process that mandates the uniform processes for plant biosecurity across Australia and ensuring the protocols are relative to the risk needs immediate action.' (Nursery and Garden Industry Australia submission, p. 12)

Nursery and Garden Industry Australia also complained about the lack of coordinated databases that set out the biosecurity requirements in different states

in relation to any given product. It said that this led to considerable overhead costs for commercial nurseries preparing product for shipment around the country.

Management of marine pest and disease risks, in particular those associated with ballast water and biofouling, is another area where business groups expressed concern about different state approaches, as well as Commonwealth/state variation. Under current arrangements for ballast water, vessels entering Australian waters are subject to requirements imposed by the Commonwealth. Subsequent coastal ballast water management is the domain of the various states. Shipping Australia expressed concern about this arrangement in terms of lack of national consistency.

> 'Victoria, for example, has introduced its own ballast water management regime for interstate and intrastate vessels and Western Australia is considering introducing its own BWM regime which raises concerns with SAL that individual State/Territory procedures will not be consistent with the national regime.' (Shipping Australia Limited submission, p. 8)

The Industry Working Group on Quarantine and Ports Australia expressed similar views.

The Panel is aware that considerable effort is being made by governments to clarify responsibilities in this area and to establish harmonised approaches. However, the Industry Working Group on Quarantine suggested that a more consistent and efficient regime would be for the Commonwealth to take responsibility for managing both international and domestic ballast water.

> '… it is the general industry view that, from the perspective of achieving the most consistent and efficient regime one national/federal body should be responsible for the management of both international and domestic ballast water.' (Industry Working Group on Quarantine supplementary submission, p. 15)

In the meantime, there have been a number of marine pest and disease incursions in Australian waters resulting in significant costs to government, business and the environment. At least ten incursions of high-profile pests and diseases are known to have occurred since 1986, including the introduction of the northern Pacific seastar in Tasmania, black-striped mussel in the Northern Territory and Asian green mussel in a number of locations.

Interstate inconsistency was not only noted by business interests. The Queensland Government proposed that model laws should be developed.

> 'A perennial issue is the difficulty in achieving timely and consistent legislation across all jurisdictions, especially when national requirements change. An aspirational objective for consideration would be the

development of model biosecurity laws for achieving this consistency in a timely fashion across all Australian jurisdictions.' (Queensland Government submission, p. 3)

Domestic food arrangements provide an example where states have agreed to adopt harmonised regulatory approaches. A Food Regulation Agreement was developed in 2002 to enable a national approach. The Agreement obliges the states to pass legislation so as to ensure consistent administration and enforcement of the Food Standards Code, including Food Safety Standards. Arrangements of this nature, sometimes underpinned by broadening the scope of Commonwealth law, exist in other regulatory fields including competition law and energy regulation.

2.4 Panel's consideration

2.4.1 The Commonwealth's Constitutional capacity

The Commonwealth unquestionably has Constitutional powers that allow for a much broader legislative base than currently exists for biosecurity matters. The Panel's assessment is that the Commonwealth could extend its reach well into the post-border elements of the continuum almost to the point of managing the entire biosecurity continuum. This broad reach would be based on a combination of the quarantine power, the external affairs power and the international and interstate trade and commerce power—with support from other powers such as the corporations power.

For example, the quarantine power is likely to support Commonwealth legislation that is designed to prevent the spread of pests and diseases from one part of Australia to another, regardless of whether the pest or disease is exotic or endemic. The quarantine power would also support measures to control and eradicate the pest or disease. Through a combination of powers, the Commonwealth could also enter the field in relation to the spread of pests and diseases, including weeds, across state borders and between regions within states.

On the basis of the external affairs power, the Commonwealth could enact legislation to ensure Australia's compliance with its international trade obligations. For example, a Commonwealth Act could confer authority for goods to be imported into Australia where the Commonwealth has given import approval from a biosecurity viewpoint and World Trade Organization obligations apply. This could override any state law that attempted to impose further biosecurity requirements on import into that state, including indirect import through another state.

The international and interstate trade and commerce power would support laws providing for biosecurity measures in relation to the movement of trade from overseas or interstate.

2.4.2 Extending the Commonwealth's legislative reach

Given the broad scope of the Commonwealth's Constitutional capacity, there is a range of options that could be considered in relation to how biosecurity responsibilities are shared across the Commonwealth and the states.

At one end of the spectrum is a solely Commonwealth approach to biosecurity, with a single Commonwealth Act and biosecurity agency covering the continuum. While the Commonwealth's powers would provide authority needed for most of a national approach, there could still be a need for some referral of powers by the states.

A Commonwealth approach would provide comprehensive coverage, bringing together pre-border, border and post-border elements under a single regulatory and service delivery agency. It would remove the debates which currently occur around roles and responsibilities. However, these benefits would come at the expense of local connections, including linkages with local business and state agricultural and natural resource management agencies. In addition, establishing these new arrangements would be difficult, distracting attention and resources from the business of biosecurity management for a significant period of time. In the Panel's view, this option is not a practical way forward.

At the other end of the spectrum would be a further withdrawal from the post-border arena by the Commonwealth. The Panel's view is that this option would not be sustainable. It would weaken Australia's monitoring and surveillance and emergency response capability and risk its ability to discharge its international treaty obligations.

The Panel's recommended approach is a **One Biosecurity: a working partnership** model, under which the Commonwealth would broaden its legislation, underpinning a partnership with the states (see below for discussion of a new Commonwealth-state compact), so as to make it quite clear that an authority to import goods into Australia under that legislation also authorises the goods to be imported into a state on the same conditions (if any). This implies that goods landed in one state should be able to be moved to another without additional biosecurity conditions being imposed. Any state law which attempted to apply conditions or restrictions on imports in excess of those applied by the Commonwealth would be invalid.

A consequence of this **One Biosecurity: a working partnership** proposal is that it would be important for differences in regional pest and disease status to be genuinely taken into account as part of the import permit decision. Another consequence is that the Commonwealth should improve its legislative capacity to enhance post-border controls of biosecurity risks as well as its operational and financial support for them.

As a corollary, the Commonwealth would need to have an enhanced capacity to enforce import permit conditions on imported products, including in relation to their movement and use beyond the border. The Commonwealth's authority would need to be expanded with systems such as a national traceability scheme developed to underpin it. The traceability scheme would be introduced progressively on the basis of an assessment of risk of classes of imports and the practicality of maintaining traceability at a reasonable cost.

The Panel observes that this would be consistent with traceability systems in Europe and North America which are progressively developing the ability to track biosecurity risk product across the border as well as within the country. While these systems received impetus from BSE and foot and mouth disease outbreaks, they are now being applied in other product areas. Increasingly, with approaches recognising area freedoms and the accreditation of food production and transport chains, these systems extend pre-border. They are relevant to Australia's exports for many commodities. For Australian beef products, the advantages of traceability for export and domestic control in the event of a disease outbreak have led to the National Livestock Identification System.

Increased power would bring with it an increased obligation on the Commonwealth to support the monitoring, surveillance, investigation and, where appropriate, prosecution of post-border biosecurity detections associated with imports. Increased Commonwealth investment should be subject to appropriate matching commitments from the states.

Recommendations

1 The Commonwealth's biosecurity legislation should provide that authority given by the Commonwealth to import goods into Australia also authorises the goods to be imported into a state or territory on the same conditions (if any). It should provide that this authority operates to the exclusion of any state or territory law that imposes biosecurity regulation on the direct, or indirect via another state or territory, import of the goods into the state or territory.

2 The biosecurity legislation should provide necessary legislative authority for a comprehensive system of tracing imported goods, including from their production or manufacture, through Australia's biosecurity border and into the community, to ensure that, among other things, the Commonwealth is able to enforce any biosecurity conditions imposed on the goods. The specifics, including priorities for application to products or classes of product, should be developed in consultation with relevant stakeholders. Authorised officers should be provided with comprehensive and consistent investigative, enforcement and prosecutorial powers.

3 As part of this extended reach, the Commonwealth should increase its resources to support the monitoring, surveillance, investigation and, where appropriate, prosecutions associated with post-border biosecurity detections (see also Recommendation 74).

2.4.3 Ballast water and biofouling

As a signatory to the International Maritime Organization's *Convention for the Control and Management of Ships' Ballast Water and Sediments*, Australia is required to ensure that nationally consistent measures are applied to vessels carrying domestically sourced ballast water. Any variation in requirements between jurisdictions should be supported by scientific evidence, including data from port surveillance and monitoring which confirms the presence or otherwise of marine pests and diseases.

The proposed national system for managing marine pests has been under development for a considerable period of time. Even with its endorsement by all jurisdictions, there is no assurance that the obligations will actually be given effect. This may result in Australia breaching international obligations, assuming the Convention is ratified, and could leave Australia with a less than comprehensive biosecurity system with respect to marine pests and diseases from ballast water.

As a result, the Panel sees merit in the Commonwealth extending its legislative reach to take responsibility for managing biosecurity risks associated with international and domestic ballast water movements. This approach is consistent with that taken for maritime safety and marine pollution. It would simplify legislative and administrative arrangements and ensure that a comprehensive system for ballast water management is implemented.

Under the scheme described above, the Commonwealth would be making science-based decisions on what is an acceptable level of risk in relation to ballast water. The Commonwealth would need to consult with the states in these decisions to ensure that regional pest and disease differences are accounted for, as per the arrangements for Import Risk Analyses described in Chapter 5.

Applying the same model to risks arising from biofouling is more complex. While the role for the Commonwealth in relation to international biofouling risks is clear, the absence of an international convention or agreed international standards makes the Commonwealth's legislative base for domestic biofouling less clear. The lack of current state regulation for many of the vessels that pose a biofouling risk would also make a national regulatory scheme particularly difficult. The Panel notes that Australia has developed biofouling management guidelines but these are only utilised on a voluntary basis.

As a result, the Panel recommends that the Commonwealth's regulatory responsibilities should be limited to biofouling requirements for the arrival of international vessels. Domestic management arrangements should remain with the states, with jurisdictions to work collaboratively to implement a voluntary national scheme for domestic biofouling in accordance with the

Intergovernmental Agreement on a National System for the Prevention and Management of Marine Pest Incursions. The Commonwealth should also promote the development of an international convention and agreed standards for biofouling management through the International Maritime Organization.

To support the proposed ballast water and biofouling regime, the Panel recommends a greater role for the Commonwealth in monitoring and surveillance for priority exotic marine pests and diseases. This is further discussed in Chapter 7.

Recommendations

4 The Commonwealth should extend its legislative reach to cover the field with respect to international and domestic ballast water regulation.

5 In relation to biofouling, the Commonwealth's legislative reach should be restricted to international vessels arriving in Australia, with the states and territories retaining responsibility for domestic biofouling requirements. The Commonwealth should promote the development of an international convention covering biofouling through the International Maritime Organization.

2.4.4 Emergency situations

Some state governments suggested to the Panel that to remove any uncertainties in handling emergency situations and to provide a more rapid response, the Commonwealth legislation should also provide for the responsible Minister to manage an emergency response nationally. Doing so would reflect agreement that to rely on clear Commonwealth powers would be preferable to relying on state powers that often have subtly different triggers, varying time-frames, and provide emergency response agencies with differing powers and different limitations on those powers. Appropriate Commonwealth powers could actually encourage a more cooperative approach with the states.

The *Quarantine Act 1908* already provides the Commonwealth with the power to manage some emergency situations. However, this power is exercised through a proclamation by the Governor-General and is restricted to the quarantine Constitutional head of power, potentially leaving certain biosecurity emergencies beyond the scope of the Commonwealth's authority. The quarantine power is restricted to the control of the entry and spread of diseases and carriers of diseases that affect people, animals or plants. It is not likely to cover other pests which are not disease vectors, but which are considerable biosecurity threats in their own right, such as Khapra beetle, which is a serious grain storage pest, and

varroa mite which can damage bee populations and hence pollination on which a number of agricultural sectors rely (see Chapter 7).

The Panel's view is that this power needs to be both broader and simpler to operate. It should continue to provide the capacity to authorise state officers to undertake activities on the Commonwealth's behalf. In most cases, this significant power would be used where agreed by the states, for example on the advice of the National Management Group that exists under emergency response arrangements. However, it should not be limited to that situation.

Recommendation

6 The biosecurity legislation should continue to provide for national powers to deal with biosecurity emergencies. However, the powers should not be limited to quarantinable pests and diseases and associated measures and emergencies. They should clearly extend to biosecurity measures generally and biosecurity emergencies supported by the Commonwealth's constitutional reach. The opportunity should be taken to rationalise and simplify the existing powers, including by providing that they may be invoked or exercised by the Minister rather than the Governor-General.

2.4.5 Harmonising state approaches

It has already been proposed that the Commonwealth remove the capacity for states to apply additional biosecurity measures to imported products moving across state borders. However, concerns have also been raised about restrictions on the movement of domestic product. As described in Section 2.3.4, variable state biosecurity requirements impose a significant regulatory burden on businesses. It has also been suggested that in some cases specific measures constitute a disguised restriction on interstate trade.

An example was the restrictions that were maintained by some states on the movement of citrus from Queensland after it had been agreed through national consultative committees that citrus canker had been contained. It was put to the Panel that this unjustifiably restricted the movement of Queensland product as well as hampering Australian arguments internationally that citrus canker had been contained. The counter argument was that the restrictions were reasonably held in place until individual states could be assured that lifting them would not have implications in terms of international market access for those states' products. Either way, a consistent national approach took time to implement.

The Panel sees a significant opportunity for Commonwealth law to facilitate harmonised approaches to state biosecurity requirements for interstate trade in

domestic products, in line with the **One Biosecurity: a working partnership** model. The Panel's view is that biosecurity requirements for interstate trade in domestic products should be science-based and not more trade restrictive than required, analogous to the requirements set for Australia under international treaty obligations and also ensuring compliance with section 92 of the Constitution.

Ideally, agreement on regional differences in pest and disease status, and harmonisation of approaches on particular biosecurity measures should be achieved by discussion between the states and the Commonwealth. However, failing agreement, the Panel recommends that the Commonwealth should be provided with a limited legislated capacity to override a biosecurity restriction on interstate trade. The power should be restricted to situations where the Commonwealth Minister has been advised by the proposed National Biosecurity Commission (see Chapter 3) that the biosecurity restriction is not based on sound science and/or is not the least trade restrictive option available. Only a state or the Commonwealth Minister would have the capacity to lodge an application with the Commission for such an assessment.

These are major changes and as outlined further in the following section, the proposed legislative power, and the circumstances in which it would be used, should be discussed comprehensively with the states as an element of an overall approach to upgrading national biosecurity laws and institutions.

Recommendations

7 The biosecurity legislation should provide the Commonwealth with the capacity to override a specified law of a state or territory that imposes biosecurity controls on the use, movement, treatment or disposal of domestic goods imported into the state or territory from another state or territory. This capacity should only be available where the National Biosecurity Commission has determined that the biosecurity controls:

   a are not justified by an examination and evaluation of available scientific information; or

   b are more trade restrictive than required and so constitute a disguised restriction on interstate trade and commerce in domestic product(s).

8 The National Biosecurity Commission may only assess and make such a determination in relation to a biosecurity control under a state or territory law if an application for such an assessment and determination has been made by the relevant Commonwealth or state or territory Minister.

2.4.6 National Agreement on Biosecurity

The Commonwealth has the Constitutional reach to take up the legislative extensions described above without the support of the states. However, to do so would render the overall system less effective. A better approach would be for the Commonwealth to act in partnership with the states under a **One Biosecurity: a working partnership** model. This would include consulting with them on central policy matters such as the Appropriate Level of Protection and the Biosecurity Import Risk Analysis Guidelines as well as the priority to be given to market access requests (see Chapter 5). Given the important role of the National Biosecurity Commission in decision making, the states should also be given a role in appointing the Commissioners (see Chapter 3).

To give effect to the **One Biosecurity: a working partnership** approach, the Panel considers that a National Agreement on Biosecurity should be developed to replace existing agreements and memoranda of understanding, setting out the roles and responsibilities of the jurisdictions, and binding the Commonwealth to consult with the states on the above matters. In addition, the National Agreement on Biosecurity should provide for:

- emergency response policy and arrangements, including the circumstances in which the Commonwealth would utilise its national emergency management powers;
- the steps preceding the Commonwealth's use of its legislative authority to override inappropriate state restrictions on interstate trade in domestic products;
- joint decisions on national priorities for investment by the Commonwealth and the states, including in monitoring and surveillance, research and development and biosecurity infrastructure;
- full and automatic information sharing between jurisdictions in a manner consistent with the requirements of the *Privacy Act 1988*, including information collected through pre-border intelligence activities, border controls (such as interception data) and monitoring and surveillance programs; and
- consideration to be given to practical and least cost mechanisms for implementing Commonwealth and state responsibilities.

One of the programs for discussion under the National Agreement on Biosecurity would be proposed investment by the Commonwealth in monitoring and surveillance for national priority exotic pests and diseases (discussed further in Chapter 7). The Panel's view is that this program should be developed and administered in consultation with the states and business.

The National Agreement on Biosecurity should be overseen by the Natural Resource Management Ministerial Council with referral of matters to the Primary Industries Ministerial Council as required. Capacity should be provided for Ministers from other portfolios, such as health, to be included in discussions as needed.

Recommendations

9 A National Agreement on Biosecurity, to underpin a partnership approach between the Commonwealth and the states and territories on biosecurity, should provide for:

- a the Commonwealth to consult with the states and territories on the Appropriate Level of Protection and Biosecurity Import Risk Analysis Guidelines and priorities for considering market access requests;
- b the Commonwealth to consult with the states and territories on the appointment of members of the National Biosecurity Commission (other than the Director of Biosecurity);
- c emergency response policy and arrangements, including the circumstances in which the Commonwealth would utilise its national emergency management powers;
- d the steps preceding the Commonwealth's use of its legislative authority to override inappropriate state and territory controls on interstate trade in domestic products;
- e joint decisions on national priorities for investment by jurisdictions, including in monitoring and surveillance (including identifying national priority exotic pests and diseases for Commonwealth investment), research and development and biosecurity infrastructure; and
- f full and automatic information sharing between jurisdictions (in a manner consistent with obligations under the *Privacy Act 1988)*, including information collected through pre-border intelligence activities, border controls (such as interception data) and information gathered through monitoring and surveillance programs (see Recommendation 54).

10 The National Agreement on Biosecurity should replace existing intergovernmental agreements such as the *Memorandum of Understanding on Animal and Plant Quarantine Measures* and the *Intergovernmental Agreement on AusBIOSEC.*

2.4.7 Legislation and implementation

Chapter 6 discusses the difficulties associated with administering the *Quarantine Act 1908*. The Panel has reached the conclusion that, rather than continuing to rework the existing legislation, inevitably making it even more complex and difficult to follow than it is now, the opportunity should be taken to develop a modernised and simplified Act—the Biosecurity Act (see Chapter 6).

If the Panel's recommendation is accepted, the Act should be developed in parallel with the negotiation of the National Agreement on Biosecurity with the states. The aim should be to complete the legislation and the intergovernmental agreement within a reasonable period, say two years, from the acceptance of the Panel's recommendations. While agreement with the states is highly desirable, the Commonwealth should reserve the right to proceed unilaterally, or with a limited number of participating states, if agreement is not forthcoming within that timeframe.

The introduction of enhanced Commonwealth support for monitoring and surveillance of nationally significant pests and diseases (see Chapter 7) should be contingent on agreement with the states on appropriate matching commitments on these functions so that Commonwealth funding is clearly a net addition to the national effort, not an exercise in cost shifting (see Chapter 9).

Recommendation

11 The aim should be to develop the Biosecurity Act (see Recommendation 43) and negotiate the National Agreement on Biosecurity within two years. While agreement with the states and territories is highly desirable, the Commonwealth should reserve the right to proceed with the Panel's recommendations unilaterally, or with a limited number of participating states and territories, if agreement is not forthcoming within that timeframe.

3 ORGANISATION STRUCTURE

3.1 Introduction

The way in which the Commonwealth's biosecurity functions are organised is important. Clarifying the scope of the organisation(s) that undertakes these functions will create a biosecurity regime giving appropriate weight to each element of the continuum, as well as facilitating market access for Australia's agricultural products.

Good organisational structures facilitate communication between functions where there needs to be effective feedback loops—for example, between risk intelligence, risk assessment and risk management, and between monitoring and surveillance of pest and disease status and export certification. Similarly, good organisation ensures appropriate separation of functions which should be conducted at arms length—for example, risk assessment/management versus the negotiation of trade access for unrelated commodities/sectors.

Good governance arrangements are essential in ensuring appropriate relationships among the Commonwealth's biosecurity organisation(s) and between them and the responsible Minister(s), the Commonwealth Parliament, the states, businesses and the general community. This will determine the nature and extent of political, as opposed to expert scientific, influence on decisions such as risk assessment and risk management. It will also assist the monitoring of pest and disease status, surveillance to identify pest and disease incursions as early as possible and respond to any such incursions.

Setting the Appropriate Level of Protection (see Chapter 5) should be the preserve of the political process. Through normal democratic processes the Government should articulate the national interest: the Australian community's balancing of the advantages of trade and international travel, with risks to biosecurity which trade and travel may entail.

Equally, Import Risk Analyses, and the measures taken to meet Australia's Appropriate Level of Protection, are required under Australia's international treaty obligations to be based on sound science and to be consistently applied. These decisions should therefore be distanced from political considerations and influences.

3.2 Current arrangements

At the Commonwealth level, nearly all biosecurity functions are encompassed within the Department of Agriculture, Fisheries and Forestry. Other agencies have specific roles, for example, the Department of Health and Ageing, Food Standards Australia New Zealand and the Department of the Environment, Water, Heritage and the Arts.

Responsible to the Minister, the Secretary of the Department of Agriculture, Fisheries and Forestry is responsible for the efficient, effective and ethical conduct of the Department's activities. In relation to Biosecurity Australia the financial, but not overall management and policy, powers are vested in the head of that organisation rather than the Secretary.

The Secretary is also the Director of Animal and Plant Quarantine for the purposes of the *Quarantine Act 1908*. This position provides the Secretary with additional powers and obligations. In deciding whether to allow particular animal or plant material to be imported and if so under what conditions, the Director of Animal and Plant Quarantine's powers are required to be exercised in accordance with specified criteria under the Act. These do not include what may be thought of as political considerations. Unlike other policy areas, the Secretary cannot be directed by the Minister in the exercise of these powers.

The extent of perceived independence from the political process in the exercise of biosecurity powers will be affected by the extent to which Secretaries are perceived to be impartial and independent. As the focus has shifted from the independence and permanency of the Australian Public Service, to being, and being seen to be, 'responsive' to the government of the day, there have been changes to the way Secretaries are appointed and can be removed. These changes have occurred progressively, but post-date the framework for the Director of Animal and Plant Quarantine. The way in which Secretaries are appointed and may be moved from their position is therefore relevant if the perception, as well as the reality, of robust independence in the face of political pressure is to be maintained.

It is now the case that Secretaries have little formal protection against dismissal during the course of their term. Governments do not have to demonstrate incompetence, illegal or inappropriate behaviour or loss of capacity—a simple conclusion that the Secretary has lost the confidence of the responsible Minister is sufficient to justify dismissal.

For their part, Secretaries have, subject to the provisions of the *Public Service Act 1999* and the Public Service Commissioner, effective control over the appointment, promotion, transfer, dismissal or the offer of a redundancy package to the senior officers of their department. In practice the Secretary has considerable discretion.

There are four groups within the Department of Agriculture, Fisheries and Forestry with responsibility for aspects of biosecurity. They are:

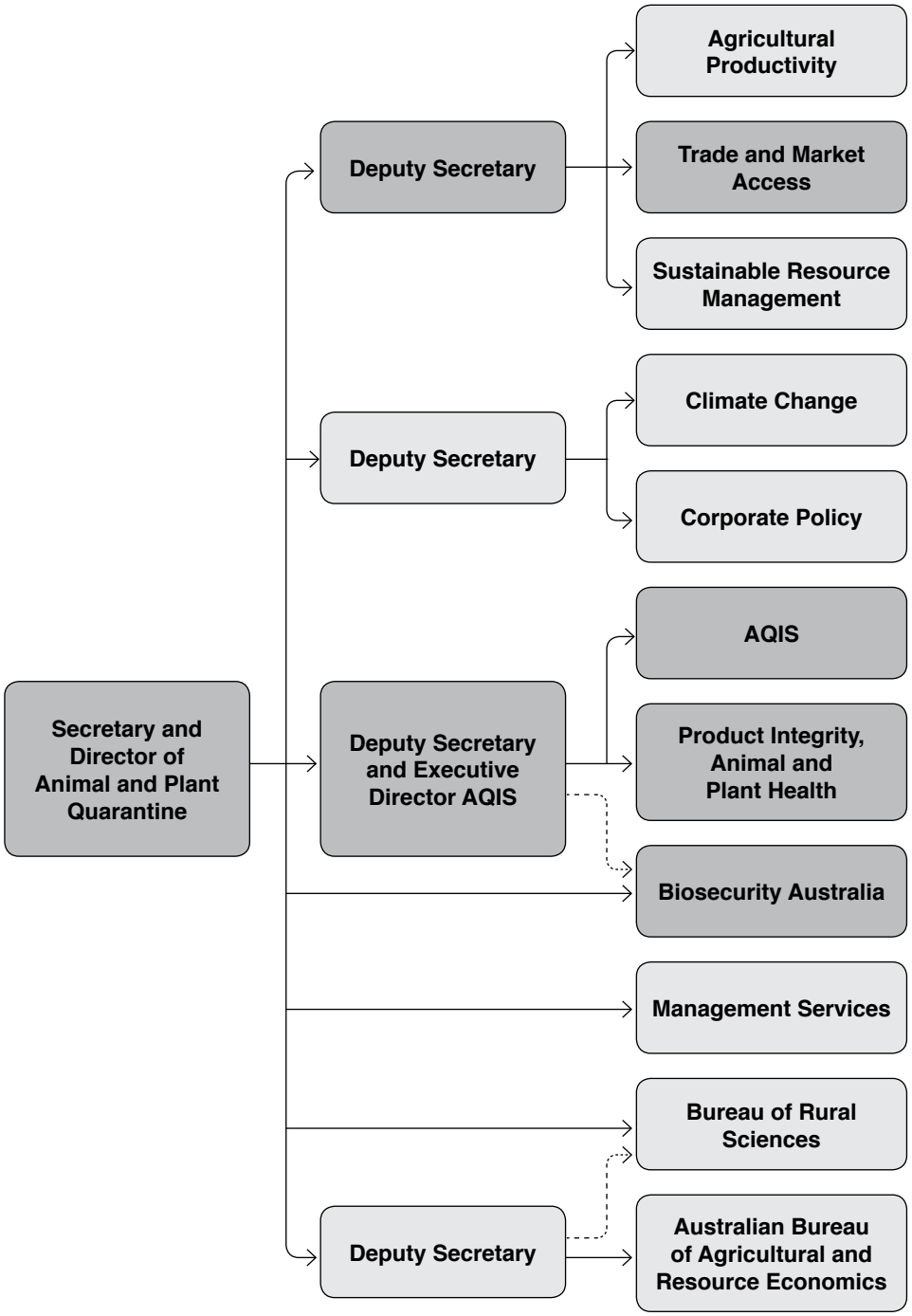
- Biosecurity Australia—which conducts risk assessments, including Import Risk Analyses, develops risk management recommendations for biosecurity policy as well as providing scientific advice to the Director of Animal and Plant Quarantine and AQIS, including in support of Australia's efforts to access international markets. Currently, there are 134 full-time equivalent officers in Biosecurity Australia;
- AQIS—which develops operational procedures for risk management, makes a range of decisions under the *Quarantine Act 1908* (including import permit decisions), provides export certification and delivers biosecurity services. There are currently 3,067 full-time equivalent officers working in AQIS;
- PIAPH—which coordinates pest and disease preparedness, emergency responses and liaison on inter- and intrastate biosecurity arrangements for the Commonwealth, in conjunction with the state governments. There are 162 full-time equivalent officers currently working in PIAPH, including the Chief Veterinary Officer and the Chief Plant Protection Officer; and
- Trade and Market Access Division—which has a role in biosecurity, including assisting efforts to gain and maintain access to overseas markets and the coordination of international agricultural cooperation and capacity building. There are currently 106 full-time equivalent officers working in the Trade and Market Access Division.

The organisation of these groups in terms of the overall Departmental structure is shown in Figure 3.

The current arrangements, in particular the separation of Biosecurity Australia from AQIS and its subsequent creation in 2004 as a Prescribed Agency under the *Financial Management and Accountability Act 1997*, reflect concern expressed by some agricultural sectors that risk assessment and risk management decisions should be explicitly separated from considerations of market access. The proponents of this change believed that the biosecurity of agricultural sectors focused principally on the domestic markets was being 'traded-off' to secure improved access to foreign markets for major exporters.

Whether that concern was justified or not, providing Biosecurity Australia with financial accounting independence from the Secretary—the principal effect of making it a Prescribed Agency—was not an appropriate response. This is because for management, policy and personnel purposes, Biosecurity Australia continues to be part of the Department and subject to the Secretary's control. Furthermore, the actual decisions which affect businesses—policy determinations, the granting of import permits and the conditions under which imports (if any) take place—continue to be taken by the Secretary in his or her role as the Director of Animal and Plant Quarantine. The Secretary

Figure 3 **Department of Agriculture, Fisheries and Forestry organisational chart (as of September 2008)**



also continues to be directly responsible for the control and direction of the Department's contribution to the negotiation of access to other markets. In short the remedy, prescribed agency status for Biosecurity Australia, did nothing to address the perceived ill.

3.3 Current debates and views in submissions

3.3.1 Recent reports

As part of its remit, the Panel has been asked to review the recommendations of earlier reviews—the most comprehensive and notable of which was the Nairn Committee review. On the question of structure, the Nairn Report's recommendations were clear—the functions concerned with biosecurity at the Commonwealth level should be drawn together in a statutory authority (Nairn *et al*. 1996). Its relevant recommendations are shown in Box 5.

BOX 5 Nairn Report recommendations regarding the structure of biosecurity administration

Recommendation 9: The Government establish a statutory authority, to be named Quarantine Australia, to provide quarantine policy and services in accordance with Government policy.

Recommendation 10: Quarantine Australia assume all the functions and responsibilities of the Australian Quarantine and Inspection Service, with the exception of meat inspection.

Recommendation 11: Quarantine Australia and the Australian Customs Service continue to work in close collaboration but remain as separate agencies for the time being.

Recommendation 12: Policy and operational direction for Quarantine Australia be determined by a Board of Directors appointed by and responsible to the Minister for Primary Industries and Energy.

Recommendation 13: The Board of Quarantine Australia assume the responsibilities of the Quarantine and Inspection Advisory Council as they relate to the charter of Quarantine Australia.

Recommendation 14: The Board of Quarantine Australia comprise up to nine members:

- a Chairperson appointed by the Minister for Primary Industries and Energy;
- up to seven members appointed by the Minster following an independent competitive selection process based on skills criteria; and
- a Managing Director appointed by the other members of the Board.

Recommendation 16: The Chairperson of the Board of Quarantine Australia be the Director of Animal and Plant Quarantine under the *Quarantine Act 1908*.

Source: Nairn *et al*. 1996

The Nairn Report considered that a separate entity would serve as a catalyst for a new culture, responding to concerns raised in submissions regarding the performance of Australia's quarantine service. Reasons for recommending an independent statutory authority included: functional independence from the department; a suitable structure for engendering cultural change; potential for greater staff satisfaction; clearer identification of Ministerial and authority responsibilities in enabling legislation; competitive management; greater resource efficiency and flexibility; financial independence; greater community ownership and responsiveness to stakeholders; and more public accountability.

The Agriculture and Food Policy Reference Group also commented on the Commonwealth's organisational arrangements for biosecurity. Its view was that Biosecurity Australia's independence from the policy machinery of government could be enhanced by making it a statutory authority with an independent board. This recommendation was made to address perceptions of political interference in the import decision process (Agriculture and Food Policy Reference Group 2006).

3.3.2 The Callinan Report

The most recent review that the Panel has been asked to consider is the Report of the Equine Influenza Inquiry conducted by the Hon. Commissioner Callinan AC. Commissioner Callinan made no specific recommendations in relation to the way in which the biosecurity function should be structured, his terms of reference being restricted to the particular circumstances associated with the outbreak of equine influenza in Australia. Nevertheless, he found that the structural separation of AQIS and Biosecurity Australia had caused communication and cooperation difficulties between the two organisations, a fact which contributed to the circumstances of the outbreak of equine influenza. For example, he found that:

> 'With that independence [separation of Biosecurity Australia's decision makers from the operational arm of AQIS], an absence of a protocol for regular consultation with AQIS with respect to horse imports, and a general lack of familiarity with actual activities on the ground … has come a degree of remoteness from the risks of equine infection and the measures necessary to prevent it.' (Callinan 2008, p. 50)

To help overcome these difficulties in the short term, Commissioner Callinan recommended that the Secretary appoint an officer with overall responsibility for the implementation of biosecurity measures for the importation of horses, and an Inspector General of Horse Importation, whose responsibility should be to check that those measures are being implemented.

3.3.3 Views from submissions

In its Issues Paper, the Panel sought comment on organisational structure, governance and the appropriate relationships with the responsible Minister (Quarantine and Biosecurity Review Panel 2008). In doing so it focused on Import Risk Analyses and the Director of Animal and Plant Quarantine's role in making policy determinations about proposed imports and import permit decisions. It described two different approaches, one in which decisions are taken by a democratically elected Minister acting on advice, such as occurs with the *Environment Protection and Biodiversity Conservation Act 1999* and the *Foreign Acquisitions and Takeovers Act 1975* and one in which decisions are placed in the hands of either a public servant, or a Tribunal/Authority with appropriate security of tenure.

The role of the Minister in decision making was discussed in numerous submissions to the Panel, with recommendations for either a greater or lesser involvement, particularly in decisions relating to Import Risk Analyses and associated import policy determinations. Where greater involvement was suggested, it tended to be linked with the need for broader community views to be included in the decision making process. For example, the Australian Chicken Meat Federation argued that while risk analysis should be science-based, significant judgements were required involving social, environmental, commercial and economic parameters. On that basis the Federation supported decision making by the Minister.

> 'It is for this very reason that ACMF strongly supports the view that the ultimate decision should be vested in the Minister for Agriculture who is best placed to weigh the various elements based on the advice from his department and other experts.' (Australian Chicken Meat Federation submission, p. 3)

Apple and Pear Australia Limited also supported a model where responsibility for decisions rests with the Minister. Its view was that the *Quarantine Act 1908* was the responsibility of the Parliament, and that Ministers should take responsibility for decisions being made under that Act. Shipping Australia and the Australian Food and Grocery Council also shared this view.

> 'The decision making and the responsibility for the decisions must ultimately rest with the Minister and with the government of which s/he is a member.' (Apple and Pear Australia Limited submission, p. 16)

> 'In Shipping Australia's view, ultimate decision making power on risk policy and import permits should rest with the Minister.' (Shipping Australia Limited submission, p. 6)

> 'It is essential that the Minister, acting on behalf of all stakeholders and the community, is directly involved in this decision making process …' (Australian Food and Grocery Council submission, p. 8)

Other groups argued for decision making that is independent of political considerations, at least in regard to import decisions. This was seen as important in the context of international treaty obligations and the potential flow-on effects if Australia were perceived to be making decisions based on sectional interests rather than scientific analysis.

Groups that opposed Ministerial involvement in import decision making were more forthcoming in their oral comments to the Panel than in their written submissions. Some pointed out that there were export access consequences to import decisions that were perceived by trading partners to be politically rather than scientifically based. These groups were often unwilling to go 'on the record' because of concerns that doing so would further affect bilateral relations and export trade access. That there were consequences, in terms of speed and priority given to market access requests, was also heavily hinted at in the Panel's international consultations, although interlocutors were careful to avoid any suggestion that this amounted to 'retaliation' which would not be consistent with their obligations under the SPS Agreement.

The joint submission from the Australian Dairy Industry Council and Dairy Australia was one that did openly discuss the issue of perceived political interference and implications for market access. The submission described the dairy industry's experience with the reinstatement of butteroil access to Thailand following Australia's decision to restrict prawn imports. It argued that the perception of political interference in the prawn decision resulted in a very slow resolution of an issue affecting the dairy industry.

> 'They [the Thai authorities] were very clear that in their minds the [Australian] process is neither scientific nor timely but political and designed to protect a local industry from cheaper, more competitive imports. Whether or not this is true, it is the perception in Thailand and it resulted in a very slow resolution of an issue affecting the Australian dairy industry. Australian exports of butteroil to Thailand are worth $A10 to 20 million per year.' (Australian Dairy Industry Council and Dairy Australia submission, p. 7)

Potential or perceived conflicts between Australia's market access objectives and biosecurity decision making were raised by a number of organisations. The NSW Farmers' Association proposed that to overcome possible conflicts, AQIS and Biosecurity Australia should be separated from the Department of Agriculture, Fisheries and Forestry. Australian Pork Limited also noted the potential for trade considerations to affect biosecurity decisions and argued for the role

of the Director of Animal and Plant Quarantine to be separate from that of the Secretary of the Department.

> 'Trade and quarantine issues are separate and the administration of these issues should be separate and distinct functions. The Director of Animal and Plant Quarantine should be separated from the role of the Secretary of the Department.' (Australian Pork Limited submission, p. 30)

The Quarantine and Exports Advisory Council provided arguments in favour of a model where the decision making body has a level of independence from political government, akin to the Reserve Bank or the Australian Competition and Consumer Commission.

> 'QEAC now takes the view that putting all of biosecurity in a Statutory Authority can be a very good solution, provided … It is truly independent and seen to be so in the way that the Reserve Bank and ACCC are seen by all …' (Quarantine and Exports Advisory Council supplementary submission, p. 4)

Poor communication between AQIS, Biosecurity Australia and to a lesser extent, PIAPH was another issue of widespread concern. Many of the Panel's interlocutors pointed to an increasing tendency for AQIS and Biosecurity Australia to behave defensively rather than collaboratively in their decision making. They felt that policy and operational elements of the Department had become disconnected. Some believed that Biosecurity Australia was not sufficiently aware of the practical difficulties of implementing its recommendations, while others argued that AQIS failed to provide Biosecurity Australia with up-to-date intelligence on border interceptions and post-border incursion data. Some illustrative observations from submissions are shown in Box 6.

Business representatives pointed to 'buck passing' between the organisations. Commissioner Callinan found:

> '… [there is] uncertainty about the role Biosecurity Australia has in relation to AQIS operational and procedural matters.' (Callinan 2008, p. 95)

State governments and the business organisations claimed that since the repositioning of the Chief Veterinary Officer and Chief Plant Protection Officer into PIAPH, AQIS had 'lost interest' in post-border arrangements to the great detriment of the biosecurity continuum. All pointed to difficulties in effectively communicating and consulting with the Commonwealth on biosecurity issues.

BOX 6 Observations in submissions regarding institutional structure

Quarantine and Exports Advisory Council

'In QEAC's opinion, issues are now referred to BA for formal advice that would have been quickly dealt with inside the one organisation prior to BA's formation … BA's removal, however, from the operational aspects and industry pressures on the day to day implementation of these policies, has left AQIS as the interface with industry … For these reasons, QEAC believes there are arguments for putting quarantine and biosecurity all back together.' (Quarantine and Exports Advisory Council submission, p. 9)

Growcom

'Growcom is keen to see a strengthening of the relationship (communication and consultation) between BA and AQIS. Industry appreciates the reasons for the current 'arms'-length' relationship. However, we believe it is critical to maintain integration between quarantine policy and operational functions, which currently appears to be absent or poor.' (Growcom submission, p. 17)

CropLife Australia

'When dealing with both AQIS and BA, it is evident that there is little communication between the two agencies and so efficiency and communication may be improved by amalgamating the agencies.' (CropLife Australia submission, p. 2)

Food and Beverage Importers Association

'From our perspective, the current structural arrangements are not working and do not provide an adequate framework for assessing and managing risk across the continuum of quarantine … In our view there should be a greater integration of functions and responsibilities in quarantine administration. AQIS, BA & PIAPH should be brought together into one functioning unit.' (Food and Beverage Importers Association submission, p. 8)

A related point was that AQIS had lost its scientific and technical 'champions' with the segregation of scientific risk assessment skills into Biosecurity Australia, the Chief Veterinary Officer and Chief Plant Protection Officer in PIAPH. Linked with the greater management challenges flowing from the large increase in staff numbers brought about by the Increased Quarantine Intervention (see Chapter 7) and a greater reliance on cost recovery, it was argued that this had led to AQIS being an organisation led by managers rather than people who understood the fundamentals of the scientific and professional issues associated with biosecurity.

> 'The significant increase in recruitment of Quarantine Officers as part of the Increased Quarantine Intervention was not matched by an increase in recruitment of scientific staff in the Operational Science Program (OSP). This was despite the increase in training load, diagnostic samples and requests for advice that followed the increase in inspection capacity and intervention rates in line with the growth in size of the Quarantine Inspectorate.' (Dr Phillip Widders submission, p. 4)

> 'Historically AQIS has had a strong science based and scientific operational capacity within the Grains Program. Prior to the establishment of BA, AQIS had their own scientific staff and an experienced and knowledgeable operational staff, with over 100 years of experience in grain exports.' (GrainCorp Operations Limited submission, p. 5)

It was generally agreed that AQIS, Biosecurity Australia and PIAPH should be more closely integrated. However, there was not a unanimous view on the institutional arrangements that would achieve this most effectively. Bringing them together in a single unit was supported, either in the Department or as a separate statutory agency. The National Farmers' Federation did not have a strong view on the matter, pointing instead to the principles for the system.

> 'On the subject of structures within government … NFF does not have a strong view on this, rather we believe that the focus of the Government should remain on ensuring the effectiveness of the system through improving the work culture within relevant agencies and by making other necessary improvements to the system.' (National Farmers' Federation submission, p. 7)

One submission made to the Panel in-confidence suggested the merger of AQIS functions with the Australian Customs Service, creating a single border agency. This would be akin to the approach taken in the United Kingdom, Canada and the United States (see Chapter 10) where responsibility for all border activities has been devolved to a single, multi-functional border agency. During the Panel's overseas consultations concerns were raised by biosecurity officers involved that this approach severed a valuable link between the development of biosecurity risk management strategies and the setting of priorities at the border. The Panel also heard that while some of the predicted benefits of this approach were realised, unpredicted costs were also incurred, such as the difficulty associated with maintaining a detailed and timely flow of information between these multi-functional single border agencies and the agencies responsible for developing and implementing biosecurity risk management measures.

3.4 Panel's consideration

The Panel has concluded that the current grouping of functions and governance arrangements does not facilitate the **One Biosecurity: a working partnership** approach favoured by the Panel. In particular, it believes the current arrangements do not support:

- a clear role for the Government and the Parliament in setting Australia's Appropriate Level of Protection and Import Risk Analysis guidelines;
- an appropriate distancing of science-based analysis and decision making in relation to Import Risk Analyses and import measures from political influence;
- sharing of information and a common mission across the Commonwealth's biosecurity agencies; and
- relationships with the states and the private sector that are as effective as they could be in supporting the working partnership embodied in the notion of **One Biosecurity: a working partnership**.

The Panel believes that structural and governance changes are a necessary, although not sufficient, condition to underpin a more integrated and focused approach to biosecurity.

One model is a single border agency, modelled on the approach taken by the United Kingdom, the United States and Canada, drawing together the border functions of AQIS, the Australian Customs Service and the Department of Immigration and Citizenship. The Panel does not support this option. Where adopted overseas, it has tended to decrease the focus on conventional biosecurity issues with more emphasis placed on security, terrorism, narcotics and illegal immigrants. In addition, it creates a greater disjunct between the elements of the biosecurity continuum, which is at odds with the integrated approach the Panel is convinced is essential.

3.4.1 Independent science-based decision making on import permits and measures to protect biosecurity

In the Panel's view, there is an unmistakable and widespread perception among Australia's trading partners—and in many quarters in Australia as well—that there has been a high level of political intervention in the Import Risk Analysis process, as well as in relation to market access requests and the application of import permit conditions (risk management measures). The issue was explicitly raised by the majority of international stakeholders with whom the Panel consulted.

Furthermore, it became clear during oral representations to the Panel that a senior representative of a major agricultural organisation was actually under

the incorrect impression that the Minister did indeed currently make, or was capable of directing the Secretary in relation to import permit decisions and associated conditions. Other agricultural organisations underlined the importance of decisions being made by the Secretary, of the Secretary's responsibility to the Minister, and of the Minister's responsibility to the Parliament—as providing a critical chain of political accountability. This approach had the advantage, they believed, of ensuring a broad rather than a narrow view of the probability and consequences of a biosecurity risk arising from proposed imports. By contrast, they believed that decisions made by an independent statutory panel or body would have too narrow a focus on the science and too narrow an economic approach to assessing consequences.

The perception that the current process is responsive to political pressures might well have been created in part by statements made by Ministers of the previous Government or by the robust attitude adopted by some members of the Senate Committee on Rural and Regional Affairs and Transport in the media and in the course of hearings. Statements by Ministers reported in the press—and independently reported multiple times to the Panel in its overseas consultations—include the following:

> 'When Downer took the microphone [at a dinner in New Zealand attended by his New Zealand counterpart] other diners recollected, he said "I just want you all to know that all Australian quarantine decisions are science-based" - pause - "it's called political science."' (Peter Hartcher, *Vale Alexander the not so great*, Sydney Morning Herald, 4 July 2008, p. 13)

Ministers responsible for the quarantine function appear to have been appropriately proper in their public statements, carefully distinguishing their role from that of the Secretary in relation to the actual statutory decision. The separation of powers between the Executive and the Parliament is not always well understood, either domestically or by our trading partners. Accordingly, robust comments and questioning by members of Parliamentary committees from within the same party as the government of the day are sometimes given more credence as statements of government policy or inclination than they actually deserve.

It is not necessary for the Panel to reach a conclusion on whether there has been actual political intervention in decision making processes, which would be inconsistent with Australia's treaty obligations (for example, Articles 2.2 and 5.2 of the SPS Agreement) or the *Quarantine Act 1908*. Certainly no such finding has been made by the Australian courts or the World Trade Organization Appellate Body or dispute panels. It is sufficient for the Panel to note that it would be possible to put beyond question the independence of the process by changing the governance structure in relation to these decisions. In the Panel's view, this would have significant benefits.

Independence could be assured by amending legislation to provide for an expert decision making panel to make Biosecurity Import Policy Determinations (see Chapter 5) on the basis of criteria consistent with Australia's treaty obligations. The legislation should provide the expert decision makers, to be called the National Biosecurity Commission, with sufficient security of tenure—that is, length of term and protection from dismissal other than for specified reasons such as loss of capacity or improper or illegal behaviour—to guarantee a robust independence.

The Panel also recommends the establishment of a National Biosecurity Authority (see Section 3.4.3) which will have the executive powers necessary to implement Biosecurity Import Policy Determinations made by the National Biosecurity Commission. Beyond making Biosecurity Import Policy Determinations, the Commission would have a role in providing expert advice to the Authority and the Government on biosecurity policy more generally. Additional functions conferred on the Commission in this Report include:

- making determinations on state biosecurity controls (see Chapter 2);
- determining priorities for Biosecurity Import Risk Analyses after appropriate consultation (see Chapter 5); and
- determining and advising on the National Biosecurity Authority's internal audit and verification program (see Chapter 8).

The National Biosecurity Commission would be skills-based, not representative. Relevant skills to be specified in the legislation would include natural science skills related to risks of pests and diseases in plants, animals and humans, risk assessment and management, ecology, agricultural and food production and economic assessments. To ensure its efficient and effective operation, the Panel recommends that it comprise between seven and nine members – one of these members will be the head of the National Biosecurity Authority. The Authority will be responsible for providing secretariat and research support to the Commission. The reasons for and functions of the Authority are set out in Sections 3.4.2 and 3.4.3.

Recommendations

12 The biosecurity legislation should provide that Biosecurity Import Policy Determinations should be made by an expert and independent National Biosecurity Commission. The Commission's functions, basis of appointment and decision making rules should be specified under the biosecurity legislation. Its functions should include providing expert advice to the National Biosecurity Authority (see Recommendation 16) and the Government on biosecurity matters more generally.

13 The Commission should include members with expertise in natural sciences related to risks of pests and diseases in plants, animals and humans, risk assessment and management, ecology, agricultural and food production and economic assessments. The Commission should comprise no fewer than seven and no more than nine members, including the head of the National Biosecurity Authority.

It is important that the Commissioners and the staff assisting them are protected from undue duress in what can be a highly contested environment. The Panel was told of multiple instances where Departmental, AQIS or Biosecurity Australia staff have been subjected to commentary and questions from Members of Parliament, business representatives, or members of the public, which were more than vigorous and verged on the abusive.

The Panel understands the importance of parliamentary privilege and parliamentary scrutiny. The Panel is not in any sense suggesting that the normal robust nature of the Australian parliamentary relationship with officials, in the context of formally constituted parliamentary hearings, is inappropriate, and it understands that the Parliament takes great care in managing its behaviour. It is important, however, that senior politicians including Ministers, and if necessary the Prime Minister, intervene with a Member or Senator if they believe a line has been crossed leading to robust presentation and questioning becoming abuse, or where they believe that inappropriate direct approaches to public servants are being made and pressure is being applied by Members or Senators.

It seems to the Panel that departmental staff appeared resigned to being subject to potentially inappropriate behaviours from some Parliamentarians, members of the public, business people and their representatives. In the Panel's view they should not have to accept such behaviour. There are Commonwealth laws (principally the Criminal Code) that already criminalise threatening or intimidating behaviour. Relevant offences under the Criminal Code include unwarranted demand with menaces, causing harm to, or obstruction or bribery of, Commonwealth public officials. These laws apply to Parliamentarians acting outside the area covered by parliamentary privilege, as well as to the public at large.

In addition, section 30K of the *Crimes Act 1914* makes it an offence for a person to compel or induce a public servant to surrender or depart from his or her employment where the offender engages in violent conduct, issues spoken or written threats, or intimidates without reasonable cause or excuse.

Under the *Public Service Act 1999* it is clear that Ministers do not have a role in the promotion or transfer of officers below the level of Secretary. This is a cornerstone of the protection of an impartial public service based on merit. Staff employed in Ministers' offices under the *Members of Parliament (Staff) Act 1984* similarly have no role in these personnel decisions.

The Panel is not in a position to judge whether any of the behaviours drawn to its attention exceeded the threshold for criminality or breach of the *Public Service Act 1999*. The Panel understands the passion that many feel if they believe their business, or the businesses of their constituents, are to be subject to the possibility of pests or diseases associated with import competition. The Panel also understands the distress caused to members of the public when subjected to extensive delays or the seizure of goods at the border.

However, that is no excuse for inappropriate behaviour. Inappropriate behaviour is unfair to public officials trying to discharge their duty. Moreover, it induces cautious, defensive, non-communicative and legalistic responses which are inimical to good risk management and which in turn were the subject of widespread criticism to the Panel. It is important that officials are educated to enable them to identify the types of conduct that may amount to offences against them or breaches of the law or the Australian Public Service Code of Conduct. They should also be provided with mechanisms to raise such behaviour with the most senior officers of the agency. This could be in the context of more detailed training on the principles of proper decision making, so that officers can understand what are, and what are not, relevant matters to be taken into account.

There is also precedent for individual statutes to create specific offences of assaulting, resisting, molesting, obstructing, endeavouring to intimidate and interfering with officers in the performance of their duties. For example, both the *Customs Act 1901* and the *Civil Aviation Act 1988* create such offences.

Recommendations

14 More training should be provided to biosecurity officials on principles of proper decision making and the types of conduct that may amount to offences against them or breaches of the Australian Public Service Code of Conduct.

15 The biosecurity legislation should create a targeted offence of assaulting, resisting, molesting, obstructing, intimidating or interfering with officers in the performance of their duties, analogous to that in the *Customs Act 1901* and the *Civil Aviation Act 1988*.

3.4.2 Sharing information and a common mission across the Commonwealth's biosecurity agencies.

Current arrangements have made communications and the sharing of a common approach and mission between AQIS, Biosecurity Australia and PIAPH more difficult than necessary. While all three are housed within the one department, they have been allowed, and to some extent encouraged, to develop separate identities. If the biosecurity continuum is to be implemented effectively, there must be close communication between these functions, access across boundaries to skills and a closely coordinated sense of purpose between policy, scientific and operational roles.

The Panel has reached the conclusion that these issues—communication and the development of a critical mass of scientific and professional skill sufficient to change the managerial emphasis of the organisation—would be more effectively handled if all the functions were combined in an agency whose sole function is protecting Australia's biosecurity status and certifying its exports.

The Panel considered a number of options for governance of this agency.

Option 1: Separate Department of State
Under this option, a separate Department of Biosecurity would be established, responsible to the Minister for Agriculture, Fisheries and Forestry. The National Biosecurity Commission would be established as a statutory, non-executive, decision making and advisory body supported by the Department. The Commission would have the functions discussed in Section 3.4.1.

Under this model the chief executive of the Department would be a Secretary appointed under the *Public Service Act 1999*, usually for a term of three to five years. As is the case with other Secretaries, he or she would have limited protection from dismissal. The Secretary would not appropriately be a member of the Commission.

The members of the Commission would be appointed for fixed terms on the basis of expertise (and desirably after consultation with the states, see Section 3.4.4) and with comprehensive protections against arbitrary dismissal. The staff of the Department would be employed under the *Public Service Act 1999* and its financial management would be subject to the *Financial Management and Accountability Act 1997*.

Option 2: Statutory Authority under the *Financial Management and Accountability Act 1997*
Under this model, a statutory authority—the National Biosecurity Authority—would be established under the *Financial Management and Accountability Act 1997*.

The head of the Authority would be a statutory office holder appointed by the Minister for a term of not less than five years with comprehensive protections from arbitrary dismissal. The National Biosecurity Commission would be appointed on the same basis and in the same manner as for Option 1.

Under the *Financial Management and Accountability Act 1997* the normal practice would be for the head of the Authority to chair any board appointed to assist him/her. Accordingly, if the standard model were to be applied in this case, the head of the Authority would chair the Commission. The Commission would have the same specified decision making and advisory powers as for Option 1 and would not be a management board for the Authority.

However, in this case the Panel believes that the credibility and independence of the Commission would be further enhanced if an eminent Australian were to be appointed as part-time, independent chair of the Commission, rather than having the head of the Authority fill dual roles. The Panel understands that this would be a departure from normal practice, but notes that there have been a number of exceptions to the rule. These include the provision of an independent part-time chair for the Australian Fisheries Management Authority. The head of the Authority would be an *ex officio* member of the Commission.

The role of the Director of Animal and Plant Quarantine would be split between the head of the Authority and the National Biosecurity Commission. The head of the Authority would undertake the statutory functions of the Director of Animal and Plant Quarantine set out in the *Quarantine Act 1908*, including making individual import permit decisions either directly or by delegation. Recognising this important role, the head of the Authority would be referred to as the Director of Biosecurity. The role of making Biosecurity Import Policy Determinations will be undertaken by the Commission.

The legislation would provide for the Minister to give the Commission and the Director of Biosecurity directions through a legislative instrument(s) in relation to the Appropriate Level of Protection and Guidelines for its application (see Chapter 5). Similarly the Minister could direct the Director of Biosecurity in relation to policy matters generally, providing that these directions are published in the Authority's Annual Report and tabled in the Parliament. This could be important in relation to those matters bearing on Commonwealth-state relations, monitoring and surveillance and response, as well as priorities on the conduct of Biosecurity Import Risk Analyses in order for Australia to meet its bilateral trade commitments.

The Minister would not have a role or power to direct the Commission in relation to the conduct or outcome of an individual Biosecurity Import Risk

Analysis or Biosecurity Import Policy Determination, including measures to be applied to proposed imports. The legislation would also prevent the Minister directing the Director of Biosecurity, or his/her delegate, in relation to an import permit decision.

The Authority would be a statutory agency for the purposes of the *Public Service Act 1999*. The staff of the Authority would be employed under the *Public Service Act 1999* and its financial management would be subject to the *Financial Management and Accountability Act 1997*. As mentioned earlier, the staff of the Authority would provide secretariat and research support to the Commission.

Option 3: A *Commonwealth Authorities and Companies Act 1997* body
This is the option recommended in the Nairn Report. It would see the biosecurity body being provided with greater independence from the Government in relation to its governance. The Commission, rather than being a body whose responsibilities are restricted to specified decisions and advice, would be a governance board. It would have an independent chair, and the Commission would appoint and if necessary dismiss a Chief Executive. The Commission would continue to be subject to directions from the Minister and be subject to the normal obligations to report to the Parliament. The staff of the body need not be employed under the *Public Service Act 1999*, and it would similarly have greater flexibility in relation to financial matters.

3.4.3 Consideration of the options

Each of these options has advantages and disadvantages. Option 1 involves the smallest degree of change. It continues to provide a strong link through a Minister to the Parliament. It provides for independence in relation to critical decisions but appropriate Ministerial accountability and powers of direction in relation to others. It would facilitate close relationships and interchange with other Commonwealth departments. Its principal disadvantage is that it is not as clearly independent as the other two options.

Option 2 symbolises this independence more clearly, while providing for an appropriate level of Ministerial oversight. It has the advantage of more secure tenure for the Director of Biosecurity. This could be important in providing stable leadership as the skills base and effectiveness are rebuilt over the years ahead.

Option 2 enables the Director of Biosecurity to participate in the Commission without any conflict of responsibilities to the Minister. The appointment of an independent part-time chair for the Commission would further underline its independence and credibility. *Public Service Act 1999* employment and the

conduct of financial affairs under the *Financial Management and Accountability Act 1997* are consistent with the National Biosecurity Authority's status as part regulator and part program deliverer. The Authority would develop a culture and commitment consistent with its focus on biosecurity, while distinguishing itself from the Australian Public Service more broadly.

Option 3 would symbolically and practically provide the greatest degree of autonomy. It would distance day-to-day and strategic management from the Minister, while allowing the Minister appropriate powers of direction. It would encourage different management approaches, possibly drawing on private sector models, and offer the greatest employment and financial management flexibility. It might provide a firmer basis for power sharing with the states (discussed below). On the other hand, this is a governance structure more appropriate to a commercial environment rather than a regulatory and program delivery environment.

In the Panel's view, Option 2 offers the best balance between independence on the one hand, and Ministerial and Parliamentary accountability on the other. It best provides for effective performance of program related and regulatory biosecurity functions.

Recommendations

16 The primary biosecurity functions currently within AQIS, Biosecurity Australia and Product Integrity, Animal and Plant Health Division should be brought together in a statutory authority—the National Biosecurity Authority. The National Biosecurity Authority should be an independent authority under the *Financial Management and Accountability Act 1997* with the head of the Authority having the personnel and management powers and obligations of a Secretary under that Act. Its functions should include protecting Australia's biosecurity status in accordance with Australia's treaty obligations and Appropriate Level of Protection, as well as providing secretariat, research and administrative support to the National Biosecurity Commission in the conduct of its functions. The head of the Authority should be referred to as the Director of Biosecurity.

17 An eminent Australian should be appointed as the part-time Chair of the National Biosecurity Commission, with the Director of Biosecurity being an *ex-officio* member of the Commission.

18 The biosecurity legislation should expressly provide that the National Biosecurity Commission, and officers and other authorised personnel performing National Biosecurity Commission functions, are not subject to direction by the Government in performing their duties in relation to Biosecurity Import Policy Determinations. The legislation should also prevent the Government directing the Director of Biosecurity, or his/her delegate, in relation to an import permit decision.

There are a number of functions within PIAPH that could either remain within the Department or transfer to the new Authority. Working through these issues in detail will be an important role for government. However, based on an initial assessment, the Panel's view is that the following PIAPH functions should remain in the Department:

- policy development in relation to Codex Alimentarius Commission standards and guidelines;
- domestic food regulatory functions;
- the governance role in relation to the Australian Pesticides and Veterinary Medicines Authority; and
- animal welfare policy issues.

In addition to coordinating responses to emergency pests and diseases, the Authority should take on the collaborative role that PIAPH plays in relation to endemic pests and diseases of national significance. This role involves working with Animal Health Australia, Plant Health Australia, the states and business groups and is closely linked in a skills sense to the role the Authority will have for exotic pests and diseases.

Different views were presented to the Panel about whether export inspection and certification functions should be included in a statutory authority, or whether they should best remain within the Department. While the functions are currently separate from the import side of AQIS, there are overlaps in the inspection and management approaches used and skills of officers in terms of technical expertise and business experience. In addition, there are commonalities in the knowledge base of officers with regard to issues such as inspection, auditing and verification.

To a large extent export certification is based on the biosecurity status of Australia, and can be seen as the mirror image of the importing system. The value to be gained through information and system sharing across the two areas is significant. For example, the proposed expansion of Commonwealth programs for post-border monitoring and surveillance of national priority pests and diseases would have relevance for both import and export risk management strategies (see Chapter 7). As a result, the Panel recommends that the export inspection and certification functions should be transferred to the new Authority.

Given the significant concerns expressed about the potential for conflict between trade facilitation and import decisions, the Panel's view is that non-technical trade facilitation functions should remain within the Department of Agriculture, Fisheries and Forestry, with technical advice and representation on market access issues provided by the Authority as required. A standing agreement should be developed between the Authority and the Department on how this would occur in practice.

Recommendation

19 The export inspection and certification functions of AQIS should be transferred to the National Biosecurity Authority, but trade facilitation should remain a role of the Department, with technical expertise provided by the Authority as needed.

The Panel considers independent audits provide invaluable assistance in verifying the performance of individual programs and providing an objective overview of the organisation. With this in mind, the Panel recommends the establishment of a position of Inspector General of Biosecurity to undertake independent audits of the biosecurity continuum. The Inspector General of Biosecurity (see Chapter 8) and a small supporting unit would be located in the Department of Agriculture, Fisheries and Forestry. The Inspector General of Biosecurity should be appointed by the Minister for a term of five years.

The functions and powers of the Inspector General of Biosecurity should be set out in the legislation. These should focus on conducting independent system audits of the biosecurity functions for which the National Biosecurity Authority is responsible.

The Inspector General of Biosecurity would have a broader role than that proposed by Commissioner Callinan for the Inspector General of Horse Importation (outlined on p. xxviii of Commissioner Callinan's report). The Panel recommends that the role of Inspector General of Horse Importation should be subsumed within the Inspector General of Biosecurity. To reflect the broader scope of Inspector General of Biosecurity, the person selected for the role could have a wider range of skills than those recommended for the Inspector General of Horse Importation. In particular, it would be desirable for the person to have knowledge of auditing techniques and risk management systems across the biosecurity continuum, in addition to a relevant science/professional background.

Recommendations

20 The Commonwealth should establish within the Department of Agriculture, Fisheries and Forestry, a statutory office of the Inspector General of Biosecurity that will audit and report on the performance of the National Biosecurity Authority. The legislation should provide that the holder of this office have appropriate skills in relevant scientific and auditing or systems assessment disciplines. The appointment should be made by the Minister for a five year term and there should not be limitations on the appointment of persons on the grounds that they have been previously employed in the Australian Public Service or otherwise by the Australian Government.

21 The functions of the Inspector General of Biosecurity should subsume those recommended by Commissioner Callinan for the Inspector General of Horse Importation.

The National Biosecurity Commission/National Biosecurity Authority would continue the relationships and agreements that exist between AQIS/Biosecurity Australia and the Department of Health and Ageing, the Department of the Environment, Water, Heritage and the Arts and Food Standards Australia New Zealand. While the Panel has made some recommendations to improve the effectiveness of these agreements (see Chapters 5 and 7), it is not proposing changes to the organisational relationships.

A summary of the proposed arrangements is shown in Table 2 below.

TABLE 1 Proposed functional arrangements

National Biosecurity Commission (includes Director of Biosecurity)	National Biosecurity Authority	Inspector General of Biosecurity	Department of Agriculture, Fisheries and Forestry
Biosecurity Import Risk Analyses and Biosecurity Import Policy Determinations (Chapter 3) Determinations on state biosecurity controls (Chapter 2) Determine priorities for Biosecurity Import Risk Analyses (Chapter 5) Biosecurity policy advice generally Decisions and advice on the Authority's internal audit program (Chapter 8)	Support for the Commission including in its conduct of Biosecurity Import Risk Analyses and development of Biosecurity Import Policy Determinations Administer Biosecurity Act (including import permit decisions, pre-border and border functions) Export certification Monitoring and surveillance for national priority exotic pests and diseases Emergency response coordination Education and awareness raising	Statutory appointment Independent systems audits of National Biosecurity Authority functions	Non-technical trade and market access negotiations (drawing on technical support from the Authority as needed) PIAPH functions not transferred to the Authority Administrative support for Inspector General of Biosecurity

Deciding the portfolio location of the National Biosecurity Authority is not the prerogative of the Panel. The Panel notes that in Europe, the equivalent body is located in the Directorate-General for Health and Consumers. However, this decision appears to have been made on the basis of possible zoonotic consequences of BSE and imported food safety. While these issues are important for Australia, biosecurity threats to primary production and the environment have a higher priority. On that basis, the Panel can see no logic in moving the National Biosecurity Authority from the Agriculture, Fisheries and Forestry portfolio, provided that there is regular and appropriate consultation with other portfolio Ministers.

3.4.4 State role in appointments

As discussed in Chapter 2, the Panel received extensive advice regarding improvements that should be made to the Commonwealth/state relationship in relation to biosecurity. The Panel has recommended a new integrated national approach to biosecurity to enhance this comprehensively.

To be effective and enduring, it will be important for the states to have full buy-in to decisions taken by the Commission. This would be assisted by providing the states with a role in making appointments to the Commission. This is desirable given that the Commission would be empowered under Commonwealth legislation to make nationally applicable decisions in relation to Biosecurity Import Risk Analysis and associated measures to ensure Australia's Appropriate Level of Protection.

There are several precedents for state involvement in appointments including the Australian Competition and Consumer Commission, the National Water Commission and the Murray-Darling Basin Authority. The Panel recommends that the Commonwealth's appointment of the Chair and members of the Commission, other than the Director of Biosecurity, be subject to the support of the Commonwealth and any five of the states and territories. The appointment of the Director of Biosecurity would be a decision for the Commonwealth alone.

Recommendation

22 The biosecurity legislation should require that the Commonwealth obtain the support of any five of the states and territories before it can appoint the Chair and members of the National Biosecurity Commission, other than the Director of Biosecurity.

3.4.5 Implementation

Pending the passage of the enabling legislation for the new body, administrative steps could be taken to commence implementation of the proposed structures. Functions could be grouped into a new 'interim' authority within the department and appointments made to an interim, advisory National Biosecurity Commission (see Chapters 2 and 6).

4 ONE BIOSECURITY – A NEW PARTNERSHIP WITH BUSINESS AND THE COMMUNITY

4.1 Introduction

The Australian response to many complex issues that face the community is to adopt a consultative approach that incorporates shared responsibility. Shared responsibility includes both commitment and obligation. This has been an enormous strength in accomplishing favourable outcomes for many issues where there may otherwise have been divergent opinions and approaches.

The establishment of partnership organisations such as Animal Health Australia and Plant Health Australia, and the brokering of cost and responsibility sharing deeds for many of the major pests and diseases that are exotic to Australia, give testament to the success of this approach. These models, and Australia's successful exotic pest and disease eradication campaigns, are envied by many of our trading partners.

Shared responsibility was a major theme in the Nairn Report, as represented by its title: *Australian Quarantine: a shared responsibility*. The report stated that:

> 'It is time for a new focus on quarantine to ensure that the vigilance that has characterised Australia's approach to quarantine protection is not diminished. This report provides the blueprint for a fresh approach to Australian quarantine based on a shared responsibility.' (Nairn *et al*. 1996, p. 6)

The Nairn Report recommended a nationally coordinated quarantine strategy with the entire Australian community responsible for its development, implementation and funding:

> 'Effective quarantine relies on all stakeholders—governments, industry and the general public—appreciating the importance of quarantine vigilance to everyday activities and responding accordingly.' (Nairn *et al*. 1996, p. 34)

The concept of biosecurity being a shared responsibility has been incorporated into Australia's biosecurity programs for many years. The commitment and sense of cooperation has been amply demonstrated during the efforts to eradicate exotic pests and diseases that threaten businesses, the environment or the community. For example, the successful eradication of bovine tuberculosis and brucellosis was only achieved through effective cooperation between all levels of government, beef producers and the wider rural community. Australia is the only major beef producing country to have achieved freedom from these major zoonotic diseases.

Similarly, the eradication of grapevine leaf rust would not have been possible without the cooperation of governments, local agricultural businesses and the people of Darwin. The same can be said for eradication of the papaya fruit fly outbreak in north Queensland. If the current campaign against red imported fire ants in south east Queensland is to be successful, it will require the cooperative efforts of Commonwealth and state governments, business and the wider community.

Animal Health Australia was established in the mid 1990s as a partnership between governments and industry to facilitate a common approach to animal health systems in Australia. Subsequent to the Nairn Report, Plant Health Australia was established and emergency response deeds were developed in order for governments and businesses to share responsibility for the eradication of exotic plant pest and disease incursions.

The Panel has concluded that the notion of shared responsibility needs to be reinforced and extended into new areas. The recent experience following the equine influenza outbreak has highlighted that all appropriate parties in relevant business sectors should come under the aegis of emergency response agreements in order that effective, equitable and cooperative responses can be conducted. It is also imperative that these agreements cover terrestrial and aquatic environments currently outside the scope of existing responsibility sharing deeds.

4.2 Current arrangements

4.2.1 Who has a responsibility for biosecurity?

'Responsibility', when used in the context of Australia's biosecurity systems, can mean different things to different people. Everyone has some degree of responsibility for maintaining and improving Australia's biosecurity. Currently governments and businesses have specific responsibilities along the biosecurity continuum. Governments, as regulators, have prime responsibility for the development, implementation, monitoring and enforcement of the system.

At the broadest level, the quality of biosecurity reflects the community's acceptance of the need for biosecurity measures and its willingness to accept responsibility for maintaining Australia's favourable pest and disease status. It also depends on the level of trust the community has in the regulatory and program frameworks that underpin the nation's biosecurity systems.

Government agencies check and provide official certification of goods, whilst industry organisations are involved in emergency preparedness and response arrangements. International travellers are responsible for ensuring that they do not carry plant or animal products or other materials that represent a biosecurity risk into Australia. Exporters of goods to Australia must ensure that their product meets the country's biosecurity import requirements. Transport and tourism operators have a role to ensure that their customers understand, respect and share the responsibility for maintaining Australia's unique biosecurity status. Members of the general community are made aware of biosecurity threats and contribute by cooperating with authorities along all points of the biosecurity continuum. The community also has an important role in providing input into public debate and policy development on the issue.

4.2.2 The responsibilities of governments—Commonwealth, state and local

The Commonwealth has generally limited its regulatory responsibilities to the pre-border and border elements of the biosecurity continuum (as described in Chapter 2). Some post-border exceptions include components of the Northern Australia Quarantine Strategy, the National Sentinel Hive Program and national surveillance programs for some exotic pests such as papaya fruit fly. The Commonwealth also shares the funding with industry groups and the states, and provides scientific input for various pest and disease control and surveillance programs that are conducted through Animal Health Australia and Plant Health Australia.

The Commonwealth regulates the export of major agricultural commodities. Enforcement activities are shared between the Commonwealth and the states.

State governments are responsible for animal and plant health within their jurisdictions, and participate with the Commonwealth and businesses at a national level in the coordination of national programs.

Local governments are responsible for providing municipal services to communities. In the biosecurity context these responsibilities include assisting with controls for domestic animals, feral animals, weeds and wildlife. Local council participation and cooperation in regional emergency pest and disease responses is essential and includes activities such as disposal of biosecurity waste material in the event of a pest or disease outbreak.

4.2.3 Farmers and agribusiness contribution to biosecurity

Businesses at all levels are actively involved in biosecurity. Through their national representative organisations, farm industries are members of Animal Health Australia and Plant Health Australia which have developed, or are in the process of developing, cost sharing agreements and biosecurity plans for each of their represented industries. Biosecurity planning ranks the most likely threats posed by exotic pests and diseases, and adopts measures that mitigate the risks across the continuum rather than simply at the border. AUSVETPLAN for terrestrial animals, AQUAVETPLAN for aquatic animals and PLANTPLAN for plants provide incursion management guidelines that outline the procedures, roles, and responsibilities of all parties in the event of an incursion.

Many farm and food businesses may already be adopting elements of a biosecurity plan without realising it. For example, farmers are generally careful to ensure that only stock or new plant varieties with a known and sound health status are introduced into their farming systems. Although not all farmers will have a documented plan, good farming practice incorporates sound biosecurity measures.

Those working in agricultural businesses are often the first to notice a change in circumstances in their crop, feedlot or packing shed and therefore need to know who to notify and what to do in the event of a suspected exotic pest or disease incursion. Biosecurity planning involves educating and training staff in pest and disease preparedness, recognition and response.

Many larger farming or agricultural processing businesses have more developed biosecurity plans. National Vendor Declarations and the Australian Standard for Hygienic Rendering of Animal Products used in the livestock industry may be incorporated into general business plans. Mandatory and voluntary quality assurance programs also serve a biosecurity function. For some businesses, particularly in the meat, dairy and poultry sectors, food safety management systems incorporating Hazard Analysis and Critical Control Points are mandatory for assuring food safety.

Industry Biosecurity Plans represent an important part of the commitment that Australia's farm industries have made in signing up to emergency response deeds. Government signatories have committed the resources required to manage emergency responses, along with statements outlining biosecurity policies and programs. Business groups and governments have accepted responsibility for a continuing process of risk mitigation.

Plant industries, from apples to viticulture, avocadoes to vegetables, have established Industry Biosecurity Plans with the assistance of Plant Health

Australia and government agencies. A similar process has been undertaken in the animal sector. Aquatic industries are not as far advanced in their thinking on biosecurity planning but recognise the need to do so.

Industry Biosecurity Plans involve threat identification, pest and disease risk reviews, incursion management funding arrangements, risk mitigation plans, response management procedures and detailed communication programs. Some business groups have appointed biosecurity officers to ensure that the Industry Biosecurity Plans are communicated to producers, and are being effectively practiced. Similarly, a joint initiative between Animal Health Australia and Plant Health Australia is increasing the adoption of biosecurity plans by farmers. The *Farm Biosecurity, secure your farm: secure your future* program conveys animal and plant farm biosecurity messages to farmers across rural Australia. The Australian Chicken Meat Federation's biosecurity plan is discussed in Box 7.

BOX 7 Biosecurity planning in the chicken meat industry

The Australian Chicken Meat Federation's National Biosecurity Manual was approved by a Sub-Committee of Animal Health Australia in 2002. The Manual is based on a Hazard Analysis Critical Control Points program that provides chicken meat farmers with an agreed set of biosecurity standards. Implementation of the Manual is left to the discretion of individual businesses, but it is generally a contractual requirement that growers comply with these standards. Most companies sourcing chicken meat conduct audits of their contract growers' facilities including checking for compliance with procedures outlined in the National Biosecurity Manual. A recent study by the Australian Chicken Meat Federation found there to be a high awareness and level of implementation of biosecurity, with 93 per cent of birds having been grown commercially under these biosecurity arrangements.

The National Livestock Identification System is mandatory for individual cattle (and flocks of sheep and goats) and is an important component of dealing with biosecurity incidents. The system enhances livestock identification and traceback, which are essential in managing animal disease outbreaks, responding to food safety incidents or providing assurances to consumers and markets about the integrity of Australia's livestock and livestock products. Such a system would not have been implemented but for an effective partnership between government and business.

4.2.4 Other businesses

Businesses and individuals involved in importing products to Australia, including importers, customs brokers, freight forwarders, managers of

Quarantine Approved Premises, retailers and others along the supply chain also have an important role to ensure the biosecurity of their product.

Along with the Australian Government, travel agents, airlines, shipping operators and doctors (particularly travel medicine specialists) have a significant role in risk communication, providing information to the travelling public about potential threats and means to avoid pests and diseases.

4.2.5 The role of the broader community

By adhering to biosecurity requirements, people travelling between countries and regions can prevent the introduction of new pests and diseases. Within Australia, people moving into the Fruit Fly Exclusion Zone are responsible for ensuring they are not transporting any fruit fly host commodities that could introduce fruit flies.

Individuals assist by keeping an eye out for the unusual and reporting findings of suspected exotic pests and diseases, or events that may be a consequence of such incursions. This can be a particularly valuable contribution from those working in shipping, on docks and wharves and in the airline industry. The community can help raise awareness of biosecurity issues more broadly and lobby business and government to develop sound biosecurity policies. A number of individuals and small businesses have been nominated for Quarantine and Exports Advisory Council Quarantine Awards in recognition of the contribution they have provided to maintaining Australia's biosecurity.

The important role that business and the community play in the early detection of high-profile pests is exemplified most recently by the detection of Khapra beetle in Perth and mango leaf gall midge on Horn Island in north Queensland. Khapra beetle was recognised by a commercial pest controller whose services were sought after a recent immigrant to Australia noted the presence of beetles, larvae and cast skins in their personal effects. The incident marked the first occasion where the Emergency Plant Pest Response Deed was applied with businesses and governments sharing the cost of the incursion response. In August 2008, a resident of Horn Island discovered a species of mango leaf gall midge after seeing a photograph of symptoms in the Northern Australia Quarantine Strategy calendar.

Another example of public involvement can be seen in Queensland where members of the community continue to play an important role in notifying authorities of the presence of red import fire ant nests and the nests of other exotic tramp ant species on their properties (see Box 8).

BOX 8 Community engagement is important for biosecurity success

Community awareness of red imported fire ants in Brisbane has led to the detection of further ant colonies. Under Queensland legislation, fire ants are a notifiable pest and suspected sightings must be reported.

Fire ants have been found through a combination of 'passive' detections by members of the public reporting ants to Biosecurity Queensland and by 'active' detections by Biosecurity Queensland staff, often near where passive detections have been reported. Without community engagement, it would be extremely difficult to find fire ants without a substantial increase in resources.

Examples of the community engagement strategies used by Biosecurity Queensland include *Find the Fire Ant Days*; a Schools Program; Volunteer Fire Ant Ranger groups and a reward scheme. The reward scheme paid a $500 reward for reports that led to the detection of new infested sites. In the two month period of the scheme, 29 rewards totalling $14,500 were paid. The scheme greatly improved the public participation rate, with ant samples submitted by the public in that period increasing ten fold.

Researchers at Monash University found that even small increases in passive detection rates have a high value in reducing search costs by governments and increasing the probability of eradication (Schmidt, D. and Spring, D. unpublished research).

Biosecurity awareness varies throughout Australia, with some communities more aware and actively engaged than others. For example, the Tasmanian community demonstrates a high level of awareness reflecting the value it places on biosecurity in securing market access into quality conscious, high value and niche markets, especially overseas.

> 'The high level of public cooperation with the Tasmanian quarantine agency has lead Fruit Growers Tasmania to believe that there is possibly a higher level of understanding in Tasmania than appears to exist in most other regions of Australia that quarantine is a shared responsibility.' (Fruit Growers Tasmania submission, p. 3)

The community also needs to be prepared to cooperate with state government agencies during pest and disease emergencies. This includes providing access to properties for surveillance purposes and understanding the need for such measures as movement restrictions, such as those used during the equine influenza outbreak to halt the movement of horses.

4.2.6 Incentives to share the responsibility

There are a number of incentives for members of the community and businesses to be involved in the development of biosecurity policy. Farmers, processors and

exporters are keen to minimise costs and maintain access to overseas markets for their agricultural commodities, especially where they obtain price premiums for pest and disease free status. For the community, biosecurity is essential for protecting the environment against exotic threats, for maintaining livelihoods by safeguarding the health status of rural industries, and providing protection against zoonotic diseases.

Farmers and other agricultural businesses face huge risks should a major pest or disease be introduced into Australia. Many of these pests and diseases cause direct losses due to decreased yields of crops or stock losses. There may also be increased production costs because of a greater reliance on pesticides, chemicals or drugs used to control the introduced pest or disease. One of the major concerns for most Australian agricultural industries is the potential loss of export markets that rely on Australia's favourable health status. Pest and disease outbreaks do not just impact on farmers and agricultural business. They also impact upon importers and other businesses along the supply chain. All of these factors constitute incentives for farmers and related businesses—individually and collectively—to observe sound biosecurity principles and practices.

4.2.7 Biosecurity consultative forums

A number of forums promote discussion of biosecurity issues, some of which are summarised in Box 9. Most involve representatives from the Commonwealth and state governments and relevant business groups. Some have broadened their membership to include representatives from wildlife or environmental groups.

BOX 9 Examples of biosecurity consultative forums

Quarantine and Exports Advisory Council

The Quarantine and Exports Advisory Council was established by the Australian Government following the Nairn Report. It provides advice to the Minister and the Director of Animal and Plant Quarantine on major quarantine and export certification policy issues and strategic directions for AQIS. It also ensures effective consultation between AQIS, business and other stakeholders. Its membership is skills-based and represents a broad coverage of the policy and technical aspects of quarantine and exports of agriculture-based commodities.

Animal Health Australia

Animal Health Australia is a partnership of governments and livestock industries that was established in 1996 to improve Australia's animal health control systems. It is a not-for-profit public company funded by its members through annual subscriptions. Its collaborative national animal health programs support animal and human health, food safety and quality, market access, animal welfare, livestock productivity and national biosecurity.

Plant Health Australia

Plant Health Australia is a partnership of governments and plant industries that has a structure and purpose equivalent to Animal Health Australia. Its programs help to protect Australia's plant industries from the risks posed by pests and diseases through the implementation of exclusion, eradication and control measures.

Aquatic Animal Health Committee

The Aquatic Animal Health Committee is the primary business/government interface for policy, communication and awareness on aquatic animal health issues. Its members represent Commonwealth and state departments responsible for aquatic animal health, the Australian Animal Health Laboratory, the commercial and recreational fishing industries, the finfish, mollusc, and crustacean aquaculture industries, and the ornamental fish industry.

Australian Wildlife Health Network

The Australian Wildlife Health Network is an initiative of the Australian Government which is hosted by the Zoological Parks Board of New South Wales and New South Wales Agriculture. It promotes collaborative links in the investigation and management of wildlife health in support of human and animal health, biodiversity and trade. The Network maintains a national database of wildlife health surveillance and diagnostic information, develops wildlife management protocols, coordinates surveillance information, advances education and training, and prioritises surveillance and research activities.

AQIS Industry Consultative Committees

AQIS has 14 Industry Consultative Committees covering each of its major programs. Their purpose is to maintain close contact with business clients to ensure efficient and effective service delivery. The Industry Consultative Committees are the principal advisory forums for AQIS to consult with businesses on biosecurity and export issues including certification, market access and operational concerns. Members can be representatives of business organisations, or be appointed on a skills basis. All Industry Consultative Committees have an AQIS and Quarantine and Exports Advisory Council representative.

4.2.8 Cost and responsibility sharing deeds

Animal Health Australia and Plant Health Australia's cost sharing arrangements are set out in the Emergency Animal Disease Response Agreement and the Emergency Plant Pest Response Deed respectively. They are formal, legally binding agreements between all parties and cover the management and funding of responses to exotic pest and disease incidents.

These arrangements represent a world first whereby businesses are closely involved in the decision making process and benefit from national approaches and funding mechanisms agreed in advance.

The Emergency Animal Disease Response Agreement significantly increases Australia's capacity to prepare for and respond to emergency animal pest and disease incursions. All parties commit to fund the eligible costs of responding to an emergency animal pest or disease which affects them. The costs to be shared are generally linked to the category of the pest or disease and relevance to particular industry sectors.

Similarly Plant Health Australia's core funding is shared equally by its plant industry members, the Commonwealth, and state government members. Plant industry membership subscriptions are calculated on the farm gate value of each industry. Core funding is used to develop preparedness to respond to exotic pest and disease threats through industry biosecurity plans and initiatives such as the National Plant Health Surveillance Strategy.

Compensation payments, or owner reimbursement costs, paid to producers to meet the direct costs of an emergency response, including livestock or plants destroyed under a pest or disease eradication program, are shared by the Commonwealth and state governments and business in accordance with the terms of the cost sharing agreements. Claims for consequential loss (for example, future breeding value of livestock) are not covered.

In addition to all governments, most of Australia's agriculture and forestry industries are members of Animal Health Australia and Plant Health Australia. However, not all business members are signatories to the appropriate cost sharing deed.

4.2.9 Compliance Agreements and third party arrangements

Sections of the *Quarantine Act 1908* provide for legal agreements to be made between AQIS and businesses, allowing them to perform certain biosecurity tasks on AQIS's behalf. This is referred to as co-regulation. There are currently over 8,400 individuals with AQIS accreditation under such arrangements.

AQIS has export certification arrangements in place with business that illustrate varying degrees of shared responsibility. These arrangements include third party inspection (such as those for organic or halal certification); shared responsibility between business, the Commonwealth and the states for inspection and certification for dairy exports (see Box 10); and quality assurance systems whereby export meat businesses are required to comply with AQIS requirements and are audited on that basis.

BOX 10 Export inspection functions – shared responsibility

Commercial organic and biodynamic certification bodies can apply to AQIS for accreditation to perform assessments of organic production systems for exporters. There are defined organic standards recognised for export and enforced by certification bodies (for example, the National Association for Sustainable Agriculture Australia). AQIS's function is to verify that the organic certification bodies continue to meet their obligations.

Since 1998 the majority of export dairy inspection work has been performed by state dairy inspection agencies. AQIS has a Dairy Review Unit responsible for performing audits of state authority systems to ensure export standards are met. The arrangement has several advantages to businesses, state authorities and AQIS, primarily in removing potentially duplicative inspection.

A compliance agreement is the legal instrument used to regulate the operation of a co-regulatory arrangement. Compliance agreements are entered into voluntarily by businesses and only cover low risk activities and commodities. For example, AQIS has compliance agreements covering the collection, transportation, storage and disposal of biosecurity waste from ships; and for the disinsection of aircraft entering Australia. AQIS also has compliance agreements with a number of state government operated facilities responsible for inspecting and certifying post-entry quarantine material. Proclaimed quarantine stations or premises at which procedures are authorised under a compliance agreement are monitored and audited by AQIS officers.

The three main types of co-regulatory arrangements for import clearance processes are described in Box 11.

BOX 11 Co-regulatory arrangements for import clearance processes

1. Documentary schemes such as the Broker Accreditation Compliance Agreement Scheme, allow accredited customs brokers to review documentation on goods subject to quarantine, such as packing declarations and fumigation certificates.

2. Quarantine Approved Premises schemes such as the Class 1 Sea and Air Freight Depot Scheme, allow a business party to open and unpack shipping containers without AQIS supervision.

3. There are also a number of activity-based schemes such as the Onshore Quarantine Fumigation Scheme and the Processing of Imported Uncooked Pigmeat Scheme.

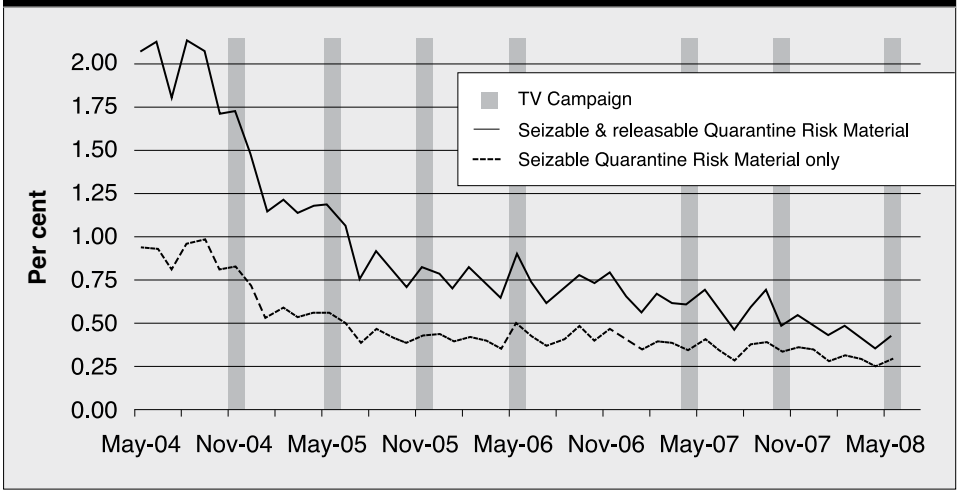
Further information on these schemes can be found at: www.daff.gov.au/aqis

4.2.10 Community communication and awareness campaigns

Education and awareness programs directed to the general community are essential components of shared responsibility, promoting the significance of effective biosecurity for agriculture production and the environment. Either inadvertently or deliberately, people can introduce pests or diseases into the environment which may threaten native plants and animals or seriously damage amenities.

Consistent with the recommendations of the Nairn Report, AQIS has spent in excess of $34 million to increase awareness over the past eleven years. The centrepiece has been the *Quarantine Matters!* campaign. Television advertising was introduced in 2002 and remains the most important information source for the target audience, supported by print advertising and airport signage. Recent analysis has shown that *Quarantine Matters!* has been extremely successful in increasing biosecurity awareness and behaviour at the border. Since 2004, the level of undeclared quarantine risk material by Australian citizens returning through airports has declined by as much as two-thirds, with the most notable reductions occurring following television advertising campaigns (see Figure 4).

Figure 4 Proportion of quarantine risk material that is undeclared by Australian citizens at Australian international airports



(Source: AQIS International Airport Program)

The *Big Bugs* television advertising campaign was launched in March 2007 as the latest phase of *Quarantine Matters!*. The *Big Bugs* campaign has created an even higher level of awareness and the community's ability to recall seeing the advertisements is retained for longer periods than previous campaigns. Television programs such as *Border Security* have also proved effective in

raising community awareness. Independent research commissioned by AQIS has shown that 80 per cent of people have watched the program, contributing to a significant increase in awareness of quarantine regulations, the need to declare items on return to Australia and the penalties for not declaring quarantinable items.

The internet, brochures and pamphlets help fill the gaps. Some examples include:

- public awareness activities associated with the Northern Australia Quarantine Strategy;
- using travel agents as distribution points for literature to travellers (in multiple languages); and
- publications such as the *AQIS Bulletin*.

Education and awareness is a central component of biosecurity plans developed by Animal Health Australia and Plant Health Australia. The organisations, in collaboration with the Australian Government, have developed the Emergency Animal Disease Watch Hotline (1800 675 888) and the Exotic Plant Pest Hotline (1800 084 881) to provide businesses and the community with an avenue for reporting suspected exotic pests and diseases. The hotlines are supported by the *Spotted Anything Unusual?* awareness campaign to promote vigilance in early detection and reporting across businesses and regional communities. The *Quarantine Matters!* campaign includes a recent initiative to raise awareness of the major quarantine pests associated with the cargo industry, and targets those businesses at the frontline of the post-border environment including stevedores and transporters of imported goods. The Panel also notes the efforts by the Rural Industries Research and Development Corporation and others who produce multi-lingual newsletters with information on biosecurity for growers in the crucial peri-urban areas.

4.3 Current debates and views in submissions

Debate on shared responsibility focuses on deficiencies in consultation arrangements, a lack of support for cost sharing—and therefore responsibility—by some parts of business, constraints on co-regulatory arrangements, and the need for greater community involvement.

4.3.1 Contrasting views on who are responsible for biosecurity

Border biosecurity functions are only one component of the biosecurity continuum. Although there has been a greater emphasis on pre-border and post-border activities since the Nairn Report, recent events such as the equine influenza outbreak suggest there still remains a mindset within parts of the

community and business that responsibility for biosecurity lies at the border and is purely a government responsibility. Similar arguments occur between Commonwealth and state governments over their respective roles (see Chapter 2).

4.3.2 Business and government consultation on biosecurity is not ideal

The Panel heard from a range of groups on processes for consultation between business and government. Formal mechanisms are not always comprehensive in their coverage of issues. It has been suggested that the consultation process needs to be refreshed to ensure there is an effective sharing of views and information.

> 'Federal agencies generally have a poor record of developing effective consultation mechanisms with industry on the ground, too often relying heavily on "formal" Canberra based consultative mechanisms … Few Government agencies have shown any sign of understanding how best to interact with industry bodies, and as a result are often deprived of valuable information.' (Queensland Farmers' Federation submission, p. 10)

Consultation relating to the Import Risk Analysis process is considered in Chapter 5.

Some submissions questioned the effectiveness of Industry Consultative Committees as a mechanism for engaging with business.

> 'The Industry Consultative Committees (ICCs) are very important for their interchange of information, needed direction and identification of mutually agreed priorities.
>
> ... some ICCs are working well, whereas others are not, and one has been disbanded altogether.' (Quarantine and Exports Advisory Council submission, p. 30)
>
> 'Even with this formal mechanism in place, the industry is increasingly concerned about the lack of a constructive consultative engagement between AQIS and industry.' (Australian Livestock Exporters Council submission, p. 7)

The Panel suspects that some concerns stem from the fact that Industry Consultative Committees are not always intended to be a consultation forum on the full range of biosecurity issues. Conversely, it is understandable if a focus on cost recovery has created expectations amongst business representatives that a corollary is a formal role in the decision making process.

As noted earlier, the Quarantine and Exports Advisory Council was established by the Australian Government following the Nairn Report. The Council has acknowledged that its own focus has evolved beyond being simply an advisory body to the Minister. Its members are strongly of the view that the Council plays an important role with room to improve its effectiveness. This is a view shared by others.

> 'A revised QEAC that is independent and appropriately skills based would provide a more effective vehicle to monitor/evaluate and recommend improvements to the current operations of the quarantine and biosecurity system. The revised QEAC should have a modified mandate with greater public communication.' (Cooperative Research Centre for Plant Biosecurity submission, p. 15)

The increasing maturity and effectiveness of both Animal Health Australia and Plant Health Australia are evidenced by their growing membership and achievements. The organisations have been instrumental in bringing government and business closer together.

One concern expressed in some submissions was that consultative arrangements do not include businesses that have environmental interests, such as zoos and aquariums, or the aquatic sector. The Australian Wildlife Health Network and the Aquatic Animal Health Committee provide mechanisms for business and government interaction on these broader issues.

> 'Looking at various consultative committees and text in the Issues paper, there is no reference to the zoo industry as a stakeholder or being represented in consultations.' (Australasian Regional Association of Zoological Parks and Aquaria submission, p. 3)

There is also a need to broaden the scope of business/government shared responsibility beyond primary industries to include other sectors such as tourism and transport.

4.3.3 The risk of moral hazard: compensation without commitment

The Panel notes that some industries, such as some vegetable industries and the plantation timber industry, have not entered into cost sharing deeds or agreements despite holding membership with Animal Health Australia or Plant Health Australia. When no formal agreement exists to determine how costs will be shared in the event of an exotic pest or disease outbreak, there is reduced incentive for businesses to adopt good biosecurity practices. This is particularly relevant if governments still eradicate the pest or disease and pay compensation to those affected, such as occurred in the case of equine influenza. However, the Panel notes and supports the recent introduction of legislation establishing a

compulsory levy to recoup costs in the event of an emergency disease outbreak affecting the horse industry in the future.

A range of other industries, such as the aquaculture and ornamental fish industries, are not part of Animal Health Australia or Plant Health Australia and therefore do not share responsibility for monitoring and surveillance projects or cost sharing agreements. The Panel supports the aquaculture sector's consideration of joining Animal Health Australia and embracing its shared responsibility, rewards and obligations.

The Panel was told of a gap in responsibility sharing in the aquatic environment. In its submission to the Panel, the Australian Maritime College stated that this lack of responsibility affects Australia's capacity to respond to biosecurity incidences.

> 'The current cost-sharing arrangements between Commonwealth, state governments and affected industries, that apply in the event of a pest or disease incursion, are not appropriate. For example, the cost sharing agreement for culling down of aquaculture stock appears to be lacking, resulting in (at least in some States) a reluctance to order compulsory slaughter. Again, the outbreak of herpesvirus in abalone is a good example, in this particular case an immediate compulsory slaughter could have prevented spread of this pathogen.' (Australian Maritime College submission, p. 7)

Some industries have told the Panel that 'unique circumstances' make it inappropriate for them to become signatories to the Emergency Plant Pest Response Deed. Concerns such as these will always exist in the minds of particular sectors, but the Panel hopes that businesses not currently Deed signatories will recognise the importance of committing to a shared responsibility, and the associated benefits for producers.

The importance of the business dimension of shared responsibility was graphically demonstrated in the equine influenza outbreak. Evidence given to the Callinan Inquiry revealed that some staff involved with the thoroughbred stallions at Eastern Creek Quarantine Station (for example, farriers, grooms and private veterinarians) realised they were obliged to shower and disinfect their clothing before and after attending the horses but claimed they did not do so because they were not told to, presumably by AQIS staff (Callinan 2008). As Commissioner Callinan concluded:

> 'What is most likely, is that the virus escaped from Eastern Creek Quarantine Station on the person, clothing or equipment of a groom, veterinarian, farrier, or someone else who had contact with the horses and then left the Quarantine Station without adequately cleaning or

disinfecting himself or herself, or his or her clothing or equipment.' (Callinan 2008, p. 309)

The Panel emphasises that without failures by both the AQIS staff and employees or agents of the thoroughbred owners, equine influenza would not have arrived at or escaped from the Eastern Creek Quarantine Station. This demonstrates in a specific and tangible way, the consequences of a failure to share responsibility. In the Panel's view, an important lesson to emerge from the equine influenza outbreak is the interdependence of action by regulators and biosecurity management by the private sector. Unless the lesson is learnt, in horses as in other contexts, unnecessary risks to Australia's biosecurity status will remain.

4.3.4 Compensation as an incentive for good biosecurity practice

The incentive to share responsibility varies between business groups, reflecting a diffuse ability for businesses to capture benefits. This may even be the case for businesses with an export focus as the following two submissions noted:

> 'Market drivers for biosecurity are not clearly defined for growers resulting in biosecurity being either unknown or considered as a secondary issue at best. Incentives to conduct surveillance and biosecurity risk mitigation activities are not well defined and while they can include financial, (e.g. the ability for grain companies to sell grain to new markets or for growers to receive increased premiums), legal (e.g. regulations or policy to require surveillance to be undertaken and recorded) or social (e.g. increased biosecurity awareness leading to a desire to improve the industry or community), these are not well identified or communicated.' (Australia Grain Industry Alliance submission, p. 9)

> 'One of the main difficulties in getting wide-scale improvements in risk mitigation on the ground is that growers lack a meaningful and immediate incentive to improve on-farm biosecurity practices. Certainly the market is not providing strong signals to growers to lift standards at this point in time.' (Nursery and Garden Industry Australia submission, p. 8)

The Panel has heard concerns from a number of business groups in relation to compensation arrangements in the event of an eradication program. Compensation arrangements recognise inherent tensions between the costs and benefits of notifying a pest or disease outbreak. Appropriate notification will attract compensation for direct costs, but consequential losses (which could be widely distributed across an industry, its service sectors and the community) do not attract compensation. This is an issue of concern for a number of horticultural businesses and peak bodies.

> '… while there are some provisions for owner reimbursement costs in the EPPRD [Emergency Plant Pest Response Deed], these are minimal and relate only to the actual costs of an EPPR. There is no provision for recoupment of costs not directly related to the EPPR including produce harvested but not yet sold which must be destroyed, loss of income as a result of destruction of trees, wages for staff during non-production periods and so on. An affected grower would therefore suffer serious financial and operational impact if they were to be caught up in an EPPR, even if they were eligible for owner reimbursement payments.' (Growcom submission, p. 12)

Under these arrangements, those that incur direct losses from pests and diseases are compensated to the overall benefit of business and the community. Business and community losses are minimised by rapid containment and early eradication of the threat. The parties being compensated do not profit under the arrangements, but should be sufficiently incentivised to report suspicion of a pest or disease at an early stage.

In most instances the ramifications of an incursion of an exotic pest or disease extend well beyond the direct impact on producers. Most participants along the value chain, such as harvesters, packers, processors, transporters, and even wholesalers and retailers, may be affected. Much of this impact will be consequential but responses to an incursion could lead to indirect losses with no provisions to compensate those businesses—beyond the farm gate—who are not signatories to Animal Health Australia's and Plant Health Australia's cost sharing agreements.

Some business groups, including members of Growcom, argued that consideration should be given to providing businesses with a means of covering losses not directly related to an emergency pest or disease incident, for example via an insurance scheme.

> 'Growcom seeks an investigation into innovative government-supported insurance programs that would allow growers to access affordable insurance to protect themselves against events outside their control.' (Growcom submission, p. 13)

Similarly, Horticulture Australia Limited suggested that:

> 'Government underwriting of insurance to cover additional losses following an incursion linked to the implementation of on farm biosecurity requirements may be an option to address this issue and promote the widespread adoption of on farm biosecurity.' (Horticulture Australia Limited submission, p. 14)

4.3.5 Commercial and community involvement

The scope of biosecurity has grown with prominence now given to environmental issues. Escape of exotic pests and diseases through commercial businesses highlights the need for greater business involvement. Under current arrangements, once a product such as timber furniture has arrived in Australia, businesses do not have any responsibility for biosecurity along the supply chain. However they have an important role to play being at the forefront of the post-border environment. Commercial business involvement should be focused on promoting and practicing good biosecurity. The Panel heard from the Quarantine and Exports Advisory Council on this very point—that biosecurity should be built into business practice along the supply chain.

> 'The responsibility of managing risk should not be a sole AQIS responsibility but be spread across corporate Australia. There should be a legislative mechanism to ensure corporate Australia and importers take responsibility for managing the risk by ensuring appropriate systems and procedures are in place.' (Quarantine and Exports Advisory Council supplementary submission, p. 3).

Businesses that deliberately breach Australia's biosecurity system should attract substantial penalties where offenders can be identified. However, it is often difficult to find transgressors and even more difficult to mount successful prosecutions. Those business sectors whose dealings may represent a biosecurity threat, including those with a history of biosecurity breaches, should be subject to targeted education and awareness campaigns. This would ensure the requirements and their obligations are clearly understood, thereby improving compliance.

Awareness of biosecurity, let alone shared responsibility, is frequently lacking in the peri-urban environment. A number of recent biosecurity incidents have occurred in peri-urban areas including the first reported occurrence and subsequent spread of tomato leaf curl virus near Brisbane and periodic outbreaks of Hendra virus in Queensland. Involvement of small business, community groups and individuals in these areas is limited and represents a gap in the biosecurity continuum. This view was echoed in a number of submissions the Panel received, including from Plant Health Australia.

> 'Another area of significant concern is the present disconnect from biosecurity matters of urban and peri-urban growers.
>
> …
>
> Being close to border entry points, usually less aware of the risk posed by exotic pests and diseases to their livelihoods or lifestyles, often having cultural or language barriers, with little knowledge of peak

industry representation, and sometimes in close proximity to larger-scale commercial operations, these groups pose a significant biosecurity threat.' (Plant Health Australia submission, p. 25)

Uptake of farm and business biosecurity plans varies. Businesses that are regionally concentrated are more likely to invest heavily in biosecurity plans. However, the uptake is less widespread where incentives are less tangible and costs likely to be spread more widely.

> 'The current biosecurity system and market signals provide little incentive to growers to improve on-farm biosecurity practices. While integration of biosecurity into existing Farm Management System programs and quality assurance systems will provide a driver, cost will be a factor in uptake ... it appears that biosecurity is not something that growers generally see as a prime consideration in how they operate their businesses, partly die [sic] to the lack of meaningful incentives to improve on-farm biosecurity practices.' (Queensland Farmers' Federation submission, p. 9)

The Panel's view is that peak business groups should more strongly advocate the biosecurity message to their membership, including farmers.

The adoption of food safety management systems that incorporate Hazard Analysis and Critical Control Points by many of Australia's agricultural businesses reflects the commitment shown to ensuring food quality and safety. The systems are mandatory in some sectors and in addition to the food safety controls provided, they confer significant biosecurity benefits. These include traceability and labelling which are important elements of any biosecurity plan. The skills and expertise of the corporate sector needs to be better harnessed and its biosecurity preparedness recognised.

4.3.6 Compliance agreements

Compliance agreements and other co-regulatory arrangements provide for businesses and individuals to provide services and undertake biosecurity activities on behalf of AQIS. As the Quarantine and Exports Advisory Council submission indicated, co-regulatory arrangements work well when quarantine requirements provide commercial incentives.

> '… there are clear incentives for service providers such as fumigators (staying in business!) to get it right. Delays in the clearance of goods at the border add significantly to costs to importers and cause disruption through the logistics chain. It is therefore in the interests of importers to ensure that they get it right from a quarantine perspective to avoid these delays.' (Quarantine and Exports Advisory Council submission, p. 8)

The Panel heard that there is an inconsistent approach to the administration of co-regulatory schemes, mostly in relation to audits, reporting, rewards and penalties for appropriate and inappropriate actions. Audit arrangements are discussed further in Chapter 8. The Panel also heard that existing co-regulatory arrangements involve unnecessary administration with the requirement for biennial and even annual re-registration processes, and a lack of recognition of businesses with an excellent compliance history, for example, customs brokers with a long history of adhering to the requirements of a compliance agreement. The Customs Brokers and Forwarders Council of Australia noted this in its submission to the Panel.

> 'There are many entities operating under CA's [compliance agreements] who are highly compliant (i.e. without a compliance breach) however they continue to be subject to intervention which results in on going high referral of AQIS entries (i.e. with attendant cost and delays in clearance).' (Customs Brokers and Forwarders Council of Australia submission, p. 10).

4.3.7 Education and awareness campaigns are not comprehensive

Concerns were raised with the Panel regarding the underlying messages and effectiveness of current biosecurity awareness campaigns. It heard that despite these campaigns, there remains limited awareness of Australia's biosecurity requirements among many incoming travellers, as well as among businesses that ship or post items to Australia. Existing campaigns mainly target travellers *en route* to Australia with awareness material provided via in-flight magazines and videos alerting visitors to the importance that Australia places on biosecurity. For cost reasons, targeting visitors through airlines and travel agents operating overseas has rarely occurred. The Panel also found little in the way of education campaigns targeting Australia's trading partners (government authorities), overseas exporters, Australian importers or the growing number of people transacting business over the Internet.

Post-border awareness is developing amongst businesses as a result of initiatives by governments, Animal Health Australia and Plant Health Australia. However, it is seriously underdone for the aquatic environment, despite significant recent biosecurity incidents such as outbreaks of abalone viral ganglioneuritis and Asian green mussel.

> 'In regard to the Spotted Anything Unusual? Campaign, a similar program could be exceptionally beneficial in regard to biofouling marine pests if targeted at those undertaking vessel maintenance. Some similar programs have been implemented in some States but focused on detecting exotic species in the marine environment.' (Australian Shipowners Association submission, p. 6)

4.4 Panel's consideration

4.4.1 The imperative of One Biosecurity: a working partnership and shared responsibility

Engagement with business and the general community on biosecurity must occur consistently and continually at several levels, from policy setting through co-regulatory alternatives to actions by individuals and companies, before, at and after the border.

The message of **One Biosecurity: a working partnership** needs to be made available to a wide audience. Effective awareness campaigns and education that target all facets of the biosecurity continuum are essential, but particularly focusing on areas that have lacked representation in the past. These include aquatic and environmental biosecurity, travellers from non-traditional countries and Internet business transactions. This will require a more concerted involvement from the general community, the environment sector, organisations and businesses with a direct interest in the aquatic environment, airlines and travel agents, and Internet business providers.

4.4.2 Improving business and government consultation

To rectify a fairly consistent pattern of criticism from both government and business, the Panel proposes a fresh strategic direction to national biosecurity consultation that builds on the theme of 'shared responsibility' across the biosecurity continuum.

The Panel recommends that a new Biosecurity Advisory Council be established as an advisory body to the Minister for Agriculture, Fisheries and Forestry, the National Biosecurity Commission and the Director of Biosecurity. The Biosecurity Advisory Council should have an independent chair appointed by the Minister in consultation with the states. Other members of the Council should also be appointed by the Minister for terms that are staggered to ensure continuity.

The Council should consist of skills-based members drawn from the Commonwealth and state governments, business (through Animal Health Australia and Plant Health Australia), academics and non-government organisations. Membership should be non-representative, consisting of individuals with substantial knowledge or experience across a range of disciplines, including agricultural, environmental and health science, risk assessment, business management and operational aspects of biosecurity. The skills base is essential to ensure that the Council is able to provide frank and unbiased advice to the Minister and the National Biosecurity Commission.

Recommendation

23 A Biosecurity Advisory Council (replacing the Quarantine and Exports Advisory Council) should:

a be established to provide strategic and policy advice on biosecurity issues to the Minister, to the National Biosecurity Commission and to the Director of Biosecurity; and

b consist of non-representative members with a broad range of skills in biosecurity and related disciplines drawn from the Commonwealth and state and territory governments, business, academia and non-government organisations.

The Council should operate as a biosecurity advisor and should consider the functions of all agencies with an interest in biosecurity across the continuum. These agencies include those providing pre-emptive biosecurity programs offshore, those conducting risk assessments to underpin biosecurity policy, those implementing the policy, and those conducting post-border monitoring, surveillance and response activities for national priority exotic pests and diseases and any other issues associated with the Commonwealth's extended reach (see Chapter 2). The Council should also provide advice on the management of emergency pest and disease incursions and the controls for endemic pests and diseases of national significance. The Council should subsume the role of the Quarantine and Exports Advisory Council with administrative support provided by the National Biosecurity Authority.

Establishment of the Biosecurity Advisory Council will provide a forum for discussing significant biosecurity issues not part of the remit of Industry Consultative Committees. The Panel considers that Industry Consultative Committees should maintain their current functions—that is, consultation on cost recovery and other operational issues.

Recommendation

24 Commodity and/or sector based Industry Consultative Committees should continue to discuss operational biosecurity issues including the delivery of services and cost recovery for those services.

4.4.3 Business involvement in cost sharing agreements

As discussed earlier, the Panel has observed that a number of industries are not currently involved in cost sharing deeds or agreements even though they may

be members of Animal Health Australia or Plant Health Australia. This raises an equity issue and perverse incentives in that some industries would not share all the costs of response activities for emergency pests and diseases but may share the benefits of an effective response. Furthermore, non-signatories are not obliged to enter the risk mitigation commitments that are integral components of the Emergency Animal Disease Response Agreement and the Emergency Plant Pest Response Deed. This increases the risk for all, including those who do accept their biosecurity obligations under the agreements, as well as those who are 'free riders'.

The Panel strongly believes that, in the spirit and the practice of shared responsibility, all industries should be involved in cost sharing agreements, and that governments must avoid socialising the costs associated with emergency responses, or unilaterally accepting risks and responsibilities that should be shared by government and business. For governments to do so would be the antithesis of shared responsibility.

Governments also need to consider the role of the Aquatic Animal Health Committee and associated committees with an interest in aquatic biosecurity. At present aquatic businesses and their organisations are not members of Animal Health Australia or Plant Health Australia and as a consequence there is no agreement on how costs and responsibilities would be divided in the event of an exotic pest or disease incursion. The Panel's view is that those who are not signatories to the relevant cost sharing agreements should contribute to their share of an emergency response by way of a levy to recover costs.

Recommendation

25 All animal, plant and aquatic industries should commit to sharing the responsibility and costs of pest and disease response actions, with those who are not signatories to the relevant cost sharing agreement meeting their share of a response, possibly by way of levy to recover costs.

Furthermore, importers may avoid much of the cost associated with eradication or control of exotic pest and disease incursions but continue to benefit from trade in commodities that may pose a biosecurity risk to the environment, business and the broader community. It is essential that importers continue to ensure that product originates from legitimate sources, complies with Australia's import requirements, and that imported product is on-sold for the intended end-use purposes. The National Biosecurity Authority should consider greater use of pecuniary penalties in these circumstances (discussed further in Chapter 8).

4.4.4 Compensation

While the Panel has sympathy for the arguments that consequential losses may place a heavy and unfair burden on affected businesses, the case for government subsidised insurance arrangements is complex, with a range of prudential considerations to be taken into account. The Panel does not consider it has the information or expertise to make a judgement on the merit or commercial viability of such a scheme. The lack of a commercial insurance option implies that it is unlikely to be viable as a stand-alone product. The Panel also notes a similar debate over many years regarding a multi-peril crop insurance scheme, which has also failed to become established commercially or attract the interest of governments to subsidise it.

In principle, a government subsidised or mandatory scheme would amount to a form of risk sharing across the community. It could be thought of as being analogous to other forms of compulsory insurance, such as third party motor vehicle insurance. Arguments in favour of any such scheme would include equity and possibly the scope it may enable for a less risk averse approach to managing import biosecurity risks. It could, however, equally be argued that it would be costly and create a disincentive for good biosecurity management across the continuum, including by the private sector.

In the absence of further information, the Panel does not have sufficient grounds to support a government backed insurance scheme to cover some of the consequential losses of an emergency response.

4.4.5 Biosecurity plans for vulnerable sectors not covered by existing arrangements

The Panel sees a number of areas where responsibility for biosecurity is inadequate or lacking commitment by relevant parties. Involvement by non-government and non-business stakeholders will be essential if Australia is to address biosecurity threats to the environment, amenities and other areas valued by the community.

Agriculture dominates the membership and agenda of both Animal Health Australia and Plant Health Australia. The Panel considers there is an immediate need for the inclusion of the aquatic wildcatch and aquaculture industries, nature conservation property managers and indigenous land managers into these organisations, as full members, associate members, or as observers according to the body concerned.

The Panel recognises the value of Industry Biosecurity Plans but notes that these plans have not been universally adopted by farmers and businesses. Businesses

and individuals are more likely to establish biosecurity plans where they have clear incentives to do so. The benefits of adopting Industry Biosecurity Plans need to be actively communicated to farmers and other businesses. The Panel endorses the initiative of several industries to employ industry biosecurity officers. These positions are valuable for promoting the adoption of biosecurity plans and raising awareness of biosecurity more broadly. They also serve as a contact point for members and other stakeholders who need further information on pests and diseases, and surveillance and monitoring activities in their sector. Ultimately, if there is not general adoption of industry biosecurity planning, it may be necessary to apply eligibility conditions for reimbursement of costs under cost sharing arrangements.

While customs brokers, freight forwarders, importers and retailers do not have a formal place in existing industry biosecurity plans, they play an important role in the management of the biosecurity chain. The Quarantine and Exports Advisory Council suggested to the Panel that biosecurity obligations should be formally recognised under corporate regulatory arrangements as a duty of company directors, which would cover this sector as well as agribusinesses. The Panel believes that such a broad obligation for company directors would be difficult to support and implement. It agrees however, that more attention should be given to promoting the need for sound biosecurity management to all those who play a part in the import and export chain. This can be reinforced through more effective use of compliance agreements, feedback of information particularly in relation to post-border detections of exotic pests and diseases and appropriate penalties.

Recommendations

26 The membership of Animal Health Australia and Plant Health Australia should be broadened to encompass environmental pest and disease issues including those affecting the aquatic and terrestrial environments.

27 To enhance biosecurity planning:

- a where Industry Biosecurity Plans already exist, there should be strong encouragement for their implementation at an individual business level;
- b industries or sectors that are vulnerable but not covered by Biosecurity Plans (for example, the aquatic wildcatch and aquaculture industries), should be encouraged to develop a Biosecurity Plan; and
- c governments should work with managers of land for conservation purposes to ensure that they have appropriate biosecurity plans and practices.

As part of enhancing shared responsibility and accountability, the Panel recommends greater deterrents to breaches of biosecurity law. The legislation should provide penalties that are proportionate to the threat posed by a breach. The Panel was provided with information that when New Zealand introduced a non-discretionary $200 'on-the-spot' fine for an incorrect declaration on passenger arrival cards, the number of interceptions of prohibited items halved. The AQIS system provides for 'on-the-spot' fines, however the Panel has heard that these are applied in a discretionary manner and their application is left to individual officers. The Panel believes that consideration should be given to making them non-discretionary for all undeclared and misdeclared quarantinable items.

Education is very important in reducing misdeclarations by incoming passengers but it is essential that fines are consistently applied and administered. Automatic non-discretionary fines are the most effective way to guarantee a change in traveller behaviour. It is recognised, however, that they would raise some concerns from tourism and travel businesses, and administrative arrangements at major airports at peak times would have to be developed to ensure that their application and collection can be managed efficiently. It is important to provide airlines, cruise lines, and tour group organisers with suitable awareness material in a variety of forms that can be provided to their customers before they depart for Australia. Good educational material including sufficient warnings of Australia's fine regime are required so that incoming passengers are clearly aware of the consequences of incorrectly declaring quarantinable items on arrival.

The Panel has closely reviewed the outbreak of citrus canker in Queensland in 2004. This matter and the events leading to it were reported upon in 2006 by a Senate Rural and Regional Affairs and Transport Legislation Committee—*The Administration by the Department of Agriculture, Fisheries and Forestry of the Citrus Canker Outbreak*. In the Panel's view it is important that the National Biosecurity Authority have a strong investigative arm with appropriate links to Commonwealth law enforcement and prosecutorial authorities. In addition, less complex and more modern biosecurity legislation would support effective investigative and prosecutorial powers and reduce the risk of technical error.

Encouragement and acknowledgement of good biosecurity practice within the community should be provided through a continuation of programs such as the Quarantine Awards currently run by the Quarantine and Exports Advisory Council. A National Biosecurity Award program should be the flagship of a campaign to raise the profile of biosecurity and recognise actions of individuals and the broader community that go well beyond expected compliance.

4.4.6 Improving and expanding co-regulation

The Panel considers there should be improvements to existing arrangements for co-regulation of biosecurity services that would enable them to be more widely used.

Incentives should be available where they can reasonably be offered to encourage superior biosecurity behaviour on the part of importers and shipping companies. The Panel has heard examples of outstanding performance by certain companies importing products, as well as performance in relation to ballast water and biofouling management by some shipping lines (including those providing regular services to some of Australia's major resource exporting industries). However, current arrangements do not allow recognition of exemplary practices by reducing prescribed rates of container inspection. As a result, cost savings to both the importer and the inspection agency have been foregone.

There should be a concerted effort by the National Biosecurity Authority to provide greater incentives for businesses with excellent compliance histories. By using risk profiling to identify importers, brokers and commodities with an excellent track record of compliance, similar to that adopted for inspection of exports, the Authority would free resources to devote to areas of higher risk. This is discussed further in Chapters 7 and 8.

Recommendation

28 There should be:

- a greater consistency in the administration, auditing, and response to non-compliance of co-regulators;
- b reduced regulatory burdens for businesses that maintain an excellent track record of compliance with co-regulatory agreements; and
- c wider adoption of co-regulatory arrangements.

4.4.7 Communicating Australia's biosecurity arrangements

The Panel considers that biosecurity education programs have been quite effective but could be better targeted to those areas where biosecurity awareness is lacking. Communicating Australia's biosecurity arrangements requires a strategy that is consistent and targeted.

Pre-border communication should inform trading partners and travellers on Australia's biosecurity status and the measures adopted to maintain this status. Communication with exporters to Australia should focus on the commercial

benefits and imperatives of complying with Australia's biosecurity requirements. Given that most trading partners are aware of the costs and inconvenience of compliance failures (especially having cargo held up pending assessment or, in the ultimate, rejected), the target audience should be receptive. The Australian Fumigation and Accreditation Scheme (see Chapter 8) should be used as a model.

Awareness programs directed at travellers entering Australia have proved successful in reducing the rate of seizure of undeclared items, a trend that continues downward. While higher on-the-spot fines for undeclared items that are seized may change behaviour among high-risk passengers, it would be preferable to educate all travellers on Australia's biosecurity conditions prior to their departure. There has been mixed success in educating visitors to date but efforts to discourage foreign travellers from leaving home with items of biosecurity concern should continue. The Internet provides avenues for informing international travellers of their responsibilities to support Australia's unique biosecurity status. Consideration should be given to other options for disseminating awareness material including greater utilisation of airlines and travel agents, but recognising the likely costs of these approaches and difficulties achieving comprehensive coverage.

Border biosecurity activities should reinforce the messages delivered in national campaigns and programs directed to travellers, importers and other businesses. The Panel notes the beneficial contribution provided by the *Quarantine Matters!* campaign and supports the continuation and expansion of such exercises.

The Panel considers that post-border communication campaigns, such as utilising the profile of the late Steve Irwin, have increased recognition of Australia's biosecurity status. The focus in future should be on interaction with leading business groups, environmental organisations, and community bodies that influence public opinion. The National Biosecurity Council should be involved in extending the biosecurity message.

These initiatives by and large already exist, but need to be reinvigorated. With the appropriate level of support and encouragement they would provide a more valuable conduit for information flow to the relevant constituencies. Continual monitoring of awareness campaigns have demonstrated their ongoing effectiveness and should be continued.

Peri-urban areas represent a biosecurity risk that will remain a challenge to address, but one that justifies greater effort to tackle given the potential risk posed. Individuals and businesses in peri-urban areas may not be members of industry groups nor signatories to cost sharing arrangements and therefore will remain distanced from developments in biosecurity preparedness and response. Existing programs should be expanded to communicate biosecurity

responsibilities to hobby farmers and small part-time producers. These programs should utilise community leaders, cultural groups and focal points such as farmers' markets in order to heighten biosecurity awareness in peri-urban areas.

Recommendations

29 To enhance communications effectiveness:

- a messages promoting Australia's biosecurity should cover the biosecurity continuum;
- b new communication options, including those available on the Internet, should be employed by the National Biosecurity Authority; and
- c particular efforts should be made in collaboration with the states and territories, local governments, community and business groups to inform peri-urban farmers, including from non-English speaking backgrounds, of Australia's biosecurity policies and to engage them in monitoring, surveillance and response strategies.

30 The National Biosecurity Authority should develop education and awareness programs for:

- a all importers regarding their obligations to meet Australia's import requirements; and
- b the competent inspection and certifying agencies in the exporting countries to ensure that they meet Australia's import requirements.

5 AUSTRALIA'S APPROPRIATE LEVEL OF PROTECTION AND IMPORT RISK ANALYSIS

5.1 Introduction

The SPS Agreement defines the concept of an 'Appropriate Level of Protection' as the level of protection deemed appropriate by a World Trade Organization Member when establishing a sanitary or phytosanitary measure to protect human, animal or plant life or health within its territory. When setting its Appropriate Level of Protection, a World Trade Organization Member may consider the full range of national interest considerations that reflect community expectations. However, under the SPS Agreement, World Trade Organization Members must ensure that biosecurity measures are not more trade-restrictive than required to achieve the Appropriate Level of Protection, and that the Appropriate Level of Protection is applied consistently.

The Panel's terms of reference do not require it to consider what Australia's Appropriate Level of Protection should be. Rather, the Panel is required to consider 'the appropriateness, effectiveness and efficiency of current arrangements to achieve Australia's Appropriate Level of Protection.'

Australia defines its Appropriate Level of Protection as 'providing a high level of sanitary and phytosanitary protection, aimed at reducing risk to a very low level, but not to zero' (Department of Agriculture, Fisheries and Forestry 2007). The Panel has encountered much confusion over what this qualitative statement means and how it is operationalised. As a consequence, the Panel has explored the issue in some depth. The struggle to define the Appropriate Level of Protection is not unique to Australia.

A country's Appropriate Level of Protection is applied through its decisions on whether to allow imports, and if so, under what conditions. The Import Risk Analysis process is how Australia makes its decisions on more complex market access proposals. It has been suggested to the Panel that the Appropriate Level of Protection can be considered as 'an emergent property of a sequence of Import Risk Analyses and decisions taken based on them' (Prof. Mark Burgman

2008, pers. comm.). The Import Risk Analysis process is squarely within the Panel's terms of reference.

Consistency in the application of the Appropriate Level of Protection through import decisions, and associated sanitary and phytosanitary measures, is crucial. Failure to apply the Appropriate Level of Protection consistently has lead to appeals to the World Trade Organization, for example, Canada's successful appeal against Australia's Import Risk Analysis for Canadian salmon.

The Import Risk Analysis process and some of the decisions made by successive Directors of Animal and Plant Quarantine, including those based on the recommendations of Import Risk Analyses, have been extensively criticised by domestic stakeholders and international trading partners alike. New Zealand's challenge in relation to import conditions of New Zealand apples is a recent example.

There are over 175 separate import requests awaiting consideration by Biosecurity Australia on the basis of current requests. The vast majority are formal market access requests received from trading partners and businesses wishing to bring products into Australia but include others, such as the Import Risk Analysis for horses recommended by Commissioner Callinan in his equine influenza report. Some of these market access requests are awaiting information sought from the applicant or initiating country. Biosecurity Australia also conducts risk assessments following requests from AQIS to review existing policy as a result of changes to scientific knowledge or levels of risk associated with particular commodities or products.

5.2 Current arrangements

5.2.1 Australia's Appropriate Level of Protection

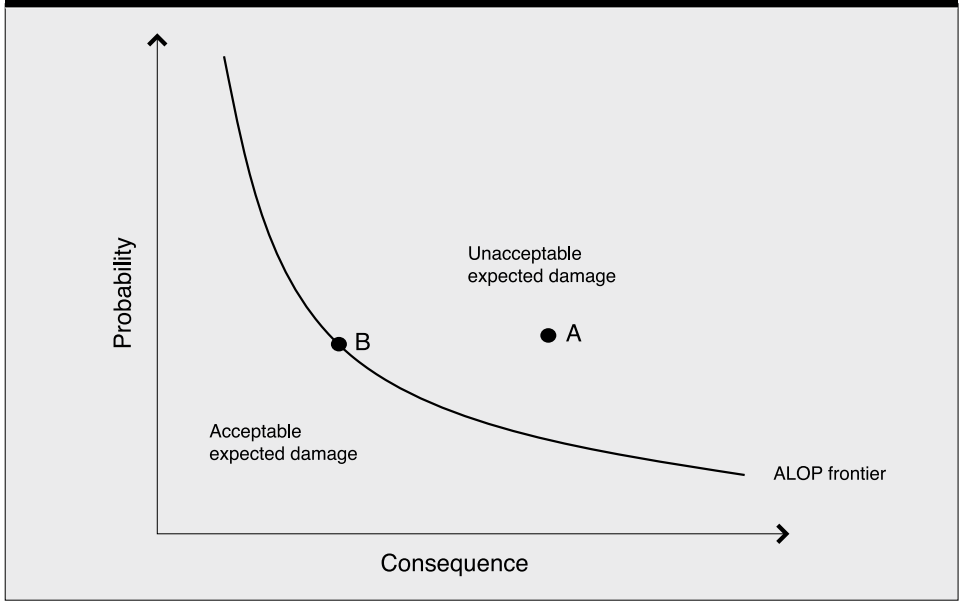
Australia's Appropriate Level of Protection was set by the Government following lengthy consultations through the Agriculture and Resource Management Council of Australia and New Zealand, and the Primary Industries Ministerial Council. It does not reflect a formal cabinet or ministerial decision. The definition followed a 2000 Senate Rural and Regional Affairs and Transport Legislation Committee report *An Appropriate Level of Protection?—The Importation of Salmon Products: A case study of the Administration of Australian Quarantine and the Impact of International Trade Arrangements*.

The Committee recommended that the Commonwealth Government, in consultation with the community and the states, be responsible for establishing a more explicit Appropriate Level of Protection. The Primary Industries Ministerial Council then agreed that the draft guidelines for risk analysis, developed by Biosecurity Australia and which illustrated the concept by way

of a risk estimation matrix, adequately met Australia's needs and that further definition was not a Ministerial Council priority (Primary Industries Ministerial Council 2002, Meeting 1, Resolution No. 1.3).

Figure 5 schematically, and somewhat simplistically, illustrates the Appropriate Level of Protection in the form of an indifference curve that reflects the *probability* of a pest or disease incursion combined with the anticipated *consequence* of such an event. In Figure 5, the curve, marked 'ALOP frontier', expresses the future consequences of an incursion at various probabilities of its occurrence. Point A represents a commodity that poses an unacceptable expected damage if imported in its current form. Point B represents the same commodity that, following the application of biosecurity measures, has reduced the biosecurity risk to a level consistent with the Appropriate Level of Protection. While in theory this ALOP frontier could be expressed in dollar terms—the Net Present Value over a nominated period of time of the probability adjusted consequences—in fact this has never happened. In part this is for reasons of the practical difficulty of quantifying probabilities and consequences, and measuring non-economic impacts in dollar terms.

Figure 5 Schematic presentation of Appropriate Level of Protection



Few, if any, other countries have a more explicit statement of their Appropriate Level of Protection than Australia, although some countries are attempting to address the ambiguity of their definition. Some examples of other definitions are shown in Box 12 (see also Section 10.2).

BOX 12 Definitions of Appropriate Level of Protection used in other countries

European Commission - 'For serious threats to human health and the rural economy, we must strive to reduce the risk to a negligible level.'

Japan - 'Its level of protection is that achieved by the import prohibition.'

United States of America - 'Reasonable certainty of no harm – that must be applied to all pesticides used on food commodities.' (Used in the context of food safety)

Source: European Commission 2007; World Trade Organization 2001; http://www.epa.gov/pesticides/regulating/laws/fqpa/ fqpa_implementation.htm

5.2.2 The Import Risk Analysis process

The Appropriate Level of Protection is given practical expression through:

- Biosecurity Australia's Import Risk Analysis process;
- import policy determinations and any associated conditions determined by the Director of Animal and Plant Quarantine (or his/her delegate); and
- decisions made under delegation in relation to individual import applications.

Australia uses risk analysis to assess whether a proposed import can be brought into the country in a way that meets the Appropriate Level of Protection and under what conditions consistent with its obligations under the SPS Agreement. Risk assessments vary in complexity, from a straightforward assessment associated with minor changes to an existing import policy decision through to a full blown Import Risk Analysis following steps set out in regulations under the *Quarantine Act 1908*.

While the formal Import Risk Analysis process applies to only a small proportion of import requests considered by Australia, it attracts the bulk of criticism regarding Australia's risk assessment system. Within the formal process are a smaller number of remaining 'legacy' Import Risk Analyses being conducted—chicken meat, prawn and prawn products, and bananas from the Philippines. These have been under consideration for a long time, have consumed disproportionate resources both within government and business, and have attracted widespread media and political attention in Australia and abroad. Outside this group, many of the Import Risk Analyses conducted by Biosecurity Australia go largely unnoticed (see Box 13).

BOX 13 Import Risk Analyses and related assessments conducted by Biosecurity Australia in 2007-08.

Market access requests awaiting consideration end 2007-08: 175

Market access requests received in 2007-08: 13 (plant), 7 (animal)

Import Risk Analyses finalised in 2007-08: 0

Import Risk Analyses in progress: 13 (plants), 12 (animals)

Risk Assessments referred by AQIS: 530 (plant), 450 (animal), 337 (weeds)

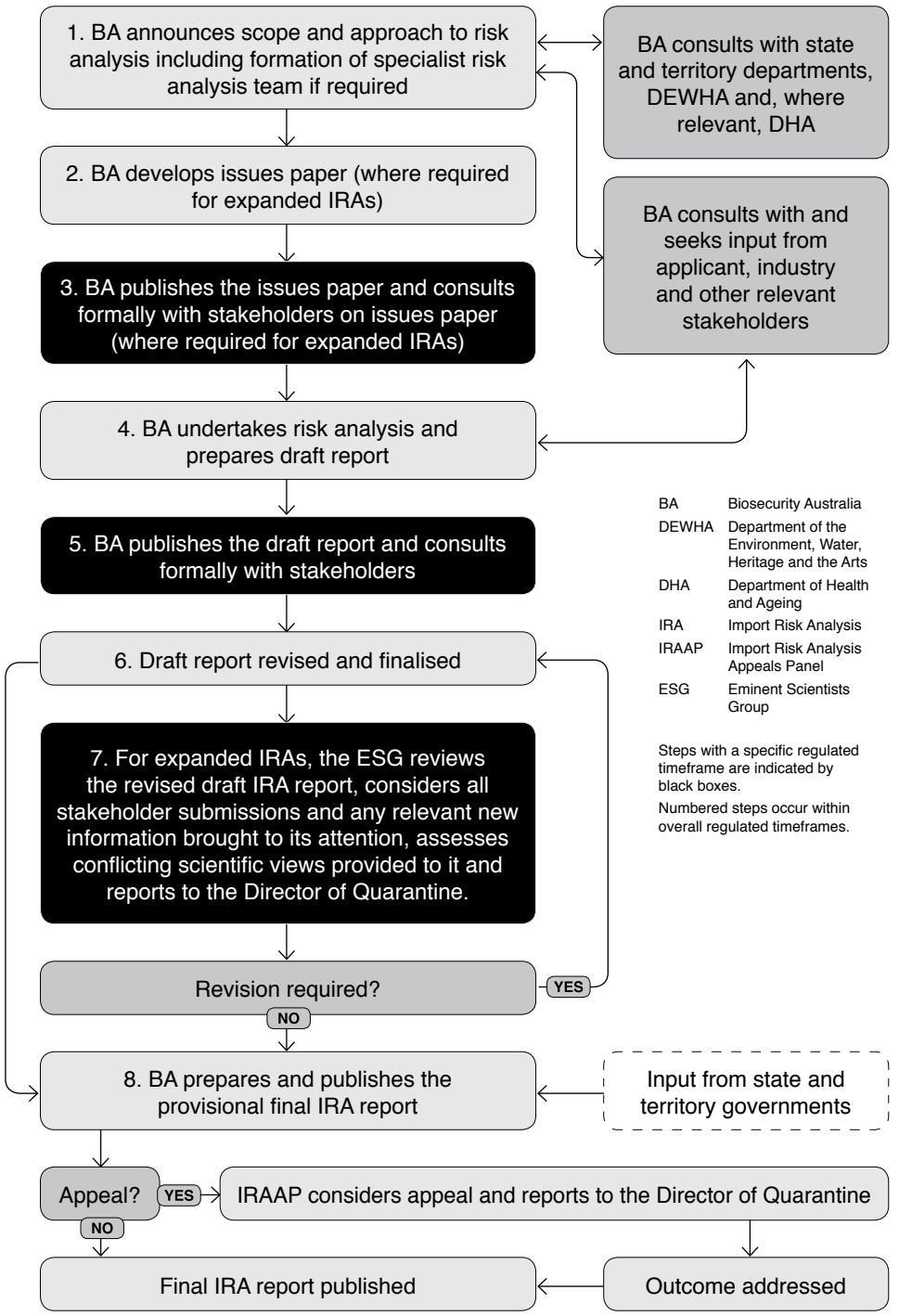
Biosecurity Australia also conducts risk assessments following requests for policy advice from AQIS on a range of routine import permit decisions. This generally occurs in relation to imported products for which AQIS has identified a biosecurity risk and requires clarification of import policy related to that product.

A fundamental requirement of the SPS Agreement is that risk management measures be based upon a risk assessment and not maintained without sufficient scientific evidence. Risk assessment is defined in Annex 5 of the SPS Agreement as 'the evaluation of the likelihood of entry, establishment or spread of a pest or disease and of the "associated" biological and economic consequences'. This is a definition that falls short of a conventional national interest assessment. Only biological and economic consequences that are 'associated' with the entry, establishment and spread of the pest or disease are deemed to be relevant. Importantly, Import Risk Analyses do not involve consideration of the broader economic and social issues arising from the impact of competition between imported and domestic products that may be taken into account in a full national interest test (for example, the beneficial effect on consumer prices or choice of import competition or the loss of jobs in rural communities as a result of imports).

The *Import Risk Analysis Handbook 2007* outlines the steps in the Import Risk Analysis process (see Figure 6). Australia's process is consistent with the SPS Agreement, and with international guidelines and standards on risk assessment developed under the Codex Alimentarius Commission, the International Plant Protection Convention and the OIE. Once the Import Risk Analysis Report is finalised, the Chief Executive of Biosecurity Australia provides it, and a recommendation for a policy determination, to the Director of Animal and Plant Quarantine.

The Australian Centre of Excellence for Risk Analysis was established in the School of Botany at the University of Melbourne in 2006, as a Commonwealth Government election commitment. Funding is managed by the Department

Figure 6 Import Risk Analysis Flowchart



Source: Australian Government Department of Agriculture, Fisheries and Forestry 2007

of Agriculture, Fisheries and Forestry. Its purpose is to develop risk analysis methods and communicate its findings to governments and others engaged in risk analysis.

In September 2007, significant changes to the Import Risk Analysis process were implemented when regulations made under the *Quarantine Act 1908* formally took effect. These changes were made in response to domestic and international criticisms. The changes enhanced the scientific scrutiny and transparency of Import Risk Analyses, improved timeliness, and formalised consultation arrangements for stakeholders. They:

- specified timeframes for the Import Risk Analysis process;
- established an Import Market Access Advisory Group to determine priorities for considering import proposals; and
- established a stronger role for the Eminent Scientists Group.

The Import Market Access Advisory Group is chaired by a Deputy Secretary of the Department of Agriculture, Fisheries and Forestry, and comprises the Chief Executive of Biosecurity Australia, the Executive Director of AQIS, and the Executive Managers of Trade and Market Access Division and PIAPH. It formulates its views on priorities based on the national interest, export country considerations and practicalities such as availability of technical information.

The Eminent Scientists Group existed prior to the 2007 reforms. Its role was to examine final drafts of Import Risk Analysis reports prior to their release and consider whether Biosecurity Australia had properly taken account of all technical issues in submissions received. This role has now been enhanced to include consideration of whether the conclusions of Import Risk Analysis reports are scientifically reasonable, based on the material presented. To this end, the Eminent Scientists Group is able to co-opt additional expertise, for example in economics, statistics or specialised scientific disciplines.

Under its terms of reference, the Eminent Scientists Group is only involved in what are termed ‘expanded’ Import Risk Analyses. An expanded Import Risk Analysis is used for those import proposals that the Chief Executive of Biosecurity Australia considers will raise significant differences in scientific opinion or the possibility of significant harm to people, animals, plants or the environment were they to be approved.

The Eminent Scientists Group provides scientific review but it does not constitute an appeal mechanism. Appeal options arise once a provisional final Import Risk Analysis report has been published, but then only in relation to the process rather than the final decision. This non-judicial review is conducted by an Import Risk Analysis Appeals Panel which provides its report to the Director of Animal and Plant Quarantine. The Import Risk Analysis Appeals Panel

may offer advice to the Chief Executive of Biosecurity Australia on ways of overcoming any identified deficiencies.

Because an Import Risk Analysis is not an administrative decision in relation to a specific import, it is not subject to judicial review under the *Administrative Decisions (Judicial Review) Act 1977*.

5.2.3 Dealing with the environment and human health

Under current arrangements, permits for all imports are issued by the Director of Animal and Plant Quarantine, who in the process considers the likelihood and consequence to human health and the environment that could be caused by issuing the permit.

When assessing the risks of an import that may have implications for human health or the environment, Biosecurity Australia and/or AQIS consults the relevant Commonwealth agencies—the Department of Health and Ageing, via the Chief Medical Officer (who holds the position of Director of Human Quarantine under the *Quarantine Act 1908*), or the Department of the Environment, Water, Heritage and the Arts in the case of the import of live species which may fall under the *Environment Protection and Biodiversity Conservation Act 1999*.

The arrangement by which Biosecurity Australia and/or AQIS considers human health risks varies according to the nature of the item that is proposed for import whether it be a biological material, including human therapeutics, human remains, or food commodities.

5.2.4 Food risk assessments

Food Standards Australia New Zealand conducts all food risk assessments for Australia. These are not in the scope of Biosecurity Australia's Import Risk Analysis process. The process is triggered by an application for an amendment to the Australia New Zealand Food Standards Code, which can be made by Food Standards Australia New Zealand itself, individuals, businesses or governments. The process, stipulated in the *Food Standards Australia New Zealand Act 1991*, is transparent with opportunities for comment at several points in the risk assessment process as well as the subsequent separate development of risk management options.

Very few food risk assessments have dealt specifically with issues related to imported food—examples are raw milk cheeses (Roquefort and some Swiss varieties) and beef and beef products that may contain the BSE agent that causes variant Creutzfeldt-Jakob disease in humans.

5.3 Current debates and views in submissions

5.3.1 Appropriate Level of Protection

The Panel has found that there is no agreed understanding of the practical implications—as distinct from the simple verbal description—of Australia's Appropriate Level of Protection among governments, businesses and the wider community. In 2005, Australian Pork Limited and a pork producer challenged the policy determination made by the Director of Animal and Plant Quarantine and the subsequent issuance of an import permit for pork from the United States. During the course of this case, the Federal Court of Australia referred to the Appropriate Level of Protection as 'the imponderable standard of acceptable lowness' (*Director of Animal and Plant Quarantine vs Australian Pork Limited (2005))*.

The complexity underlying the Appropriate Level of Protection was noted by Plant Health Australia in its submission to the Panel:

> 'Defining the ALOP for Australia is undoubtedly a complex and dynamic task. The interests of Australia's agricultural industries must be taken into account, as must considerations about national, jurisdictional and regional post-border risk mitigation and emergency plant pest response capability. Balanced against this, consideration must also be given to international and bilateral trading rules, especially adherence to standards governing acceptable quarantine restrictions and controls.' (Plant Health Australia submission, p. 9)

Equally, the Panel found that regardless of views that Australia's Appropriate Level of Protection may be set too high or too low, there exists almost universal confusion about what the Appropriate Level of Protection actually is as distinct from what it is not—zero, that is, it is 'not zero risk'.

A number of submissions, particularly those from private individuals, argued that it would be preferable to have a zero risk tolerance as the *aim*. AgForce representatives told the Panel that there should be a zero risk approach to compensate for what they perceive as a lack of confidence in the regulator. Some submissions argued that the public expects an Appropriate Level of Protection that is close to zero, whereas others acknowledged that some level of risk is unavoidable. Many submissions stressed that the Appropriate Level of Protection was poorly understood by officials, businesses and the public.

> 'The logical conclusion is that while Australia may not always be able to maintain zero quarantine risk with tourists, it has the power to establish zero disease risk from international trade by a total blockage of suspect imports.' (P Phillips submission, p. 1)

> 'While we cannot have zero risk with tourists, we can have zero risk with trade by blocking imports. This not only protects local plants and animals it also protects local producers.' (B Bowtell submission, p. 1)

In 1995, the Agriculture and Resource Management Council of Australia and New Zealand considered the issue. It concluded that quarantine decisions cannot be based on a zero risk policy, nor can decisions be influenced by the desire to keep out competition (ARMCANZ 1995, Meeting No.6, Resolution 2D).

The Department of Foreign Affairs and Trade and others highlighted that a zero risk policy is neither achievable nor desirable.

> '… a zero risk stance is impractical, as it would mean no tourists, no international travel and no imports.' (Department of Foreign Affairs and Trade submission, p. 5)

Animal Health Australia argued that the purpose and focus of Australia's biosecurity system should be to allow the safe passage of animals, plants and people across Australia's borders.

> 'The primary role of quarantine is to allow the safe import of commodities (live animals, animal and plant genetic material, animal and plant products, food) and the safe movement of people for the benefit of the country.' (Animal Health Australia submission, p. 11)

The Panel heard from some stakeholders that the Appropriate Level of Protection was not adequate to protect Australia from biosecurity threats, while others, including the Australian Food and Grocery Council, were satisfied with the current setting.

> 'The AFGC considers that Australian's Quarantine and Biosecurity systems appropriate to maintain its ALOP, providing a considered balance of what is a reasonable risk while taking into account the necessary impediments to trade.' (Australian Food and Grocery Council submission, p. 5).

5.3.2 Views about Import Risk Analyses

In practice it is difficult to talk about the meaning of the Appropriate Level of Protection without considering decisions made to implement it. Australia's system is judged domestically and internationally by the measures used to operationalise the Appropriate Level of Protection. While conceptually the Appropriate Level of Protection can be distinguished from a measure,[1] many

1 'Appropriate Level of Protection' can be described as the 'objective' (what you are aiming for) and the 'measure' as the way in which you achieve that objective.

argue that it is best observed by examining the accumulation of import policy decisions taken after the conduct of Import Risk Analyses.

In the Panel's view, there is an inconsistency in an argument that the Appropriate Level of Protection is passively determined by the accumulation of Import Risk Analyses and related decisions. This lies in the factors which are taken into account in considering the Appropriate Level of Protection on the one hand, and the Import Risk Analysis on the other.

As noted earlier, under the SPS Agreement a full range of national interest factors can be taken into account in setting the Appropriate Level of Protection—including the benefits of trade and travel. Conversely, advice to the Panel by the Australian Government Solicitor indicates that the factors appropriately considered in an Import Risk Analysis and related decisions are limited to 'evaluation of the likelihood of entry, establishment and spread of a pest or disease and of the associated biological and economic consequences'. Some submissions recognised this limitation and argued that to the extent a 'national interest' test is excluded from an Import Risk Analysis, it results in poor policy and if constrained by the SPS Agreement, means that this Agreement is flawed.

One of the dominant themes in comments received by the Panel concerned the way Australia conducts its Import Risk Analyses. The Panel heard a range of views including that Import Risk Analyses:

- advantage export focused agricultural industries at the expense of domestic industry interests;
- result in the fast-tracking of market access requests to the detriment of biosecurity—a concern that was expressed in most cases by businesses who see Free Trade Agreements as providing such a trade-off;
- are subject to political interference (argued by New Zealand in its appeal to the World Trade Organization in relation to measures affecting the importation of apples);
- are subject to lengthy delays;
- do not provide adequate review processes;
- fail to address genuine regional differences in pest and disease status within Australia; and
- do not adequately address the broader issues of human health and the environment.

Without doubt, some elements of agriculture and the wider community are convinced Australia should be taking a more conservative approach

to biosecurity, with accusations that risk management measures proposed in some Import Risk Analyses fail to meet Australia's Appropriate Level of Protection.

Conversely, other agricultural interests, especially those more export focused, plus some of Australia's trading partners and importers, openly complain about a process they see as being overly trade restrictive and inconsistent with international obligations. For example, trading partners have accused Australia of failing to conduct Import Risk Analyses in a timely and transparent manner, introducing measures that are 'more trade restrictive than required', failing to reflect international standards in import conditions, and using Import Risk Analyses as a means of protecting domestic industries from import competition.

> 'The United States' perspective is that Australia has occasionally adopted measures that are significantly more trade-restrictive than required to achieve the ALOP.' (United States Department of Agriculture submission, p. 3)

> 'There is a clear perception that the conservative interpretation [of the Appropriate Level of Protection] is increased for products where there is a vocal domestic industry opposed to imports, while the interpretation appears to be less rigorous for products that Australia wishes to import and which may suffer from the same threat from pests or diseases.' (European Commission submission, p. 10)

The Panel notes that unlike the Australian Competition and Consumer Commission authorisation and notification process, and the Australian Energy Market Commission's rule change process, draft determinations are not released for public comment.

5.3.3 Debate about Import Risk Analysis methodology

Both before and after the September 2007 reforms, Australia has gone further than many countries in setting out its Import Risk Analysis process in the public arena. However, while the steps in the process are clear, there is still uncertainty and debate surrounding the risk analysis methodology used by Biosecurity Australia.

Guidelines have been prepared by Biosecurity Australia to take officers through the steps and issues involved in determining the likelihood and consequences of a pest or disease entering, establishing and spreading in Australia. The guidelines amplify the risk analysis methodology—beyond the broad information available publicly in the *Import Risk Analysis Handbook 2007*. The guidelines are not made public. The Panel is concerned that while these guidelines are updated

periodically, they have never been finalised as a single agreed set of instructions. Currently there are several sets of draft guidelines extant and being used by Biosecurity Australia to conduct various Import Risk Analyses. Conceivably, this could affect Biosecurity Australia's ability to be consistent across Import Risk Analyses. It almost inevitably adds to uncertainty about methodologies used. None of these draft guidelines have been submitted to the Minister for consideration and approval, unlike the Import Risk Analysis Handbook.

Biosecurity Australia's consequence estimation, which appears to place significant emphasis on the national impact of the pest or disease, has attracted considerable comment from those making submissions to the Panel. For example, if the *probability* of entry, establishment or spread and relative impact on unit production costs is the same for a pest that might affect a small industry as a large industry, the *consequence* for the large industry will, by definition, be higher than for the small industry, and so therefore will the overall *risk* estimate. Many domestic agricultural groups are unhappy with this approach because they claim the assessment process means their (smaller) industries receive less biosecurity protection.

Similar concerns were also expressed in regard to highly regionalised or specialised industries.

> 'In order to assess the level of impact of the establishment of a disease, Biosecurity Australia discounts the effects of diseases which impact on industries that are concentrated in one state only ... It is a direct consequence of this matrix that even a significant impact on a state-based industry sector would not register as significant on a national scale. Thus the wipe-out of the Australian salmonid farming sector based almost entirely in Tasmania, or the Southern Bluefin Tuna farming sector based almost entirely in South Australia, would not register as significant enough on a national scale to contravene Australia's ALOP.' (Tasmanian Salmonid Growers Association submission, p. 4)

Conversely, other groups thought that too much attention might be given to industries where the economic impact was marginal—either a significant impact on a very small industry, or a broader but very modest impact. The Productivity Commission proposed to the Panel that one way of giving Import Risk Analyses a quantitative anchor would be to use an expected cost threshold (effectively a quantification of the ALOP indifference curve), below which measures would not be considered.

> 'For example, where an imported product is assessed in an import risk analysis to have "a high likelihood of a $X million cost arising from a

> pest or disease incursion", then quarantine measures would apply … Using an expected cost threshold for the determination of (measures to maintain the) ALOP would demand quality economic consequence studies to be incorporated in import risk analyses, performed by institutions with credibility.' (Productivity Commission, correspondence to the Panel, 2008).

Biosecurity Australia uses a range of methods for its risk analysis, from qualitative to quantitative assessments, depending on the circumstances, such as data availability. A number of industry organisations expressed a preference for quantitative analysis on the basis that qualitative analysis lacked the required rigour. For example, Seafood Services Australia argued that:

> '… the current model of applying qualitative definitions in risk assessments is being increasingly questioned by the Australian seafood industry … it is evident to SSA that there is justification in moving to a more scientifically based quantitative risk management model.' (Seafood Services Australia submission, p. 4)

Australian Pork Limited also expressed a preference for quantitative analysis.

> 'The methodology applied in assessing risk management procedures and unavailability of necessary scientific knowledge underpin APL's ongoing concerns with the Pigmeat IRA, including the preference for quantitative risk assessment over a qualitative risk assessment.' (Australia Pork Limited submission, p. 21)

Over recent years, Biosecurity Australia's risk analysts have concluded that in some cases the lack or inconclusiveness of fundamental science, or the lack of data, or where data reliability is questionable, means that quantitative risk analyses cannot be sensibly undertaken. Where this is the case, expert opinion is used, combining knowledge of trade with other countries, knowledge of the biology of the pests and diseases of concern, and experience with similar products and pests and diseases. Biosecurity Australia argues that this approach has proven much more useful than attempting to provide numerical estimates for the many parameters needed for quantitative risk analyses in a way that might give rise to spurious accuracy.

Similarly, Biosecurity New Zealand explored the issue to the point of adopting a quantitative approach to risk analysis. However, recognising the same difficulties, it has now reverted to a more qualitative approach. The Panel was also told by the Department of Foreign Affairs and Trade that the World Trade Organization Appellate Body in considering the *European Commission – Hormones* case clarified that both qualitative and quantitative approaches were acceptable.

5.3.4 Addressing regional differences

As noted earlier, a concern was expressed by several state governments and business groups about the way in which regional differences in pest and disease status are accounted for in the Import Risk Analysis process. The Tasmanian Government's submission argued this issue particularly strongly.

> 'It is the Tasmanian Government's view, based on experience of the last five years, that in dealings of risk analysis, there has been a less than consistent approach shown by other jurisdictions, including the Australian Government, in acknowledging and addressing regional differences issues …
>
> If regional differences in pest status, likelihood and consequence were to be reflected more comprehensively in Biosecurity Australia risk analysis and the subsequent determinations by the Australian Director of Plant and Animal Quarantine, then most of the quarantine disputes between the Australian and State and Territory Governments would fall away.' (Tasmanian Government submission, p. 7)

As noted in Chapter 2, the *Memorandum of Understanding on Animal and Plant Quarantine Measures*, signed by the Commonwealth and the states, was amended in 2002 to require the Commonwealth to address regional differences in pest and disease status and risk, and the consequent introductions of appropriate SPS measures as part of risk analysis.

The Western Australian Government advised the Panel that Biosecurity Australia has improved its recognition of regional differences in recent Import Risk Analyses but that further collaborative work would be beneficial. It argued that the routine entry into the Import Conditions database (also known as ICON) of regional differences in pest status and associated controls on imports was essential.

5.3.5 Conduct of Import Risk Analyses, backlogs and delays

As noted earlier, one of the major complaints by Australia's trading partners is the time taken for Import Risk Analyses (see also Chapter 10). For example, the Philippines complained to the Panel about delays in completing the Import Risk Analysis for bananas from the Philippines which commenced over 8 years ago. Similar views were expressed by Thailand and the United States.

> 'As the record shows, it is occurred to our consideration that the timeframe for Import Risk Analysis (IRA) conducting is extensive and not appropriate. This is reflected in the case of Chicken Meat and Prawn and

> Prawn Products IRA, which to date have lasted for more than 10 years.' (Royal Thai Embassy, correspondence to the Panel)
>
> 'Timeliness has been of concern to the United States regarding both plant and animal market access issues. Key examples of our longstanding market access issues include access for U.S. stone fruit, which first was discussed in 1993, and access for U.S. apples, first discussed in 1989.' (United States Department of Agriculture submission, p. 5)

While these Import Risk Analyses may have involved complex scientific assessments, the Panel's judgement is that the time taken is difficult to justify. The Panel notes that in other equally complex areas such as therapeutic goods and major project approvals involving environmental issues, the time for assessments has been much less than in the biosecurity context. The Panel also notes that the time taken by trading partners to assess Australia's market access requests could also be considered to be excessive in some cases (see Chapter 10).

The 2007 changes to the regulations governing Import Risk Analyses require that assessments are handled within much tighter timelines. Biosecurity Australia is now required to complete a standard Import Risk Analysis within 24 months and an expanded Import Risk Analysis within 30 months. These timeframes start with an announcement by the Chief Executive of Biosecurity Australia of the commencement of an Import Risk Analysis.

While the Panel noted support for these changes by Australia's trading partners, residual scepticism remained based on the possibility of the 'bottleneck' being transferred to the commencement of the process. In other words, if Biosecurity Australia continues to conduct the bulk of assessment work in-house and its resources are not significantly increased, there will be considerable delays in 'getting onto the queue' for an Import Risk Analysis. This in turn will transfer lobbying effort to ensuring that the Import Market Access Advisory Group recommends a high priority for a proposed import application.

5.3.6 Review of Import Risk Analyses and consequent decisions

Despite the provision for procedural review since 1998, and the more recent strengthening of the Eminent Scientists Group's role, a number of submissions questioned the adequacy of existing review mechanisms.

> 'The ESG needs to be given the responsibility to review all available science in order to assure the Australian government and people that full range of science that could impact on the outcome of an IRA has been taken into account. To do this it should also be given freedom to delve into

> the science independently to decide if anything of significance has been overlooked by BA or the industry. The ESG should also have a significant say in whether or not the available science is an appropriate base upon which to make any decision to permit importation and, if it is not, to make recommendations on further research that needs to be carried out to achieve an appropriate level of scientific confidence.' (Apple and Pear Australia Limited submission, p. 6)

Some submissions criticised the Import Risk Analysis Appeals Panel in terms of its independence and limited terms of reference. For example, Apple and Pear Australia Limited argued that it was time for a truly independent appeal process and a real judgment on whether or not Biosecurity Australia had followed its own processes and policies. A similar argument was also put by Australian Pork Limited who expressed frustration about the fact that the final Import Risk Analysis is not challengeable in the courts.

> 'Of great concern to APL is the lack of opportunity in the appeals process to legitimately challenge the veracity of the scientific data used by BA in the IRA process. Under the current IRA process there is no body at all to adjudicate on the quality of the work done in the IRA (outside of the ESG), unlike other segments of the law involving regulations determined by public agencies. In other fields involving complex science, such as decisions on the registration of medicines by the Therapeutic Goods Administration or regulations from the Fisheries Management Authority, decisions can be questioned in the Administrative Appeals Tribunal.' (Australian Pork Limited submission, p. 30)

The 2005 Federal Court case *Director of Animal and Plant Quarantine v Australian Pork Limited* highlighted the difficulties in challenging the Import Risk Analysis process. The Import Risk Analysis is an internal administrative exercise that is not taken under statute. While it might make a recommendation on a proposed import policy determination, an Import Risk Analysis does not of itself constitute a decision that affects the rights or interests of a party and therefore there is no provision for challenging it under Administrative Decisions Judicial Review. For similar reasons, an import policy determination by the Director of Animal and Plant Quarantine might not be reviewable. However, specific decisions by the Director of Animal and Plant Quarantine to issue/not issue an import permit, informed by a risk assessment and in accordance with an import policy determination, are subject to judicial review.

Australian Pork Limited also commented on the apparent discrepancy between the appeal opportunities afforded to international stakeholders through World Trade Organization dispute mechanisms and the opportunities for domestic challenge.

> 'Australia's trading partners have recourse to challenge the import protocols through the IRA process and via the WTO. However, following the ruling of the High Court (sic), no such challenges are available to domestic industries through law …
>
> On the other hand, each of the successful WTO challenges under the SPS agreement has been on the basis of some aspect of the content of quarantine measures – so trading partners can challenge on content, but domestic industries cannot.' (Australian Pork Limited submission, p. 29)

Concern about review mechanisms was also expressed by Professor Kearney, in relation to his experience with the process used for the Import Risk Analysis for the importation of prawns and prawn products. He argued:

> 'The inference … that the Import Risk Analysis Appeals Panel is an active part of the process again demonstrates the discrepancy between perception and reality. This Panel does not play any part until the Draft IRA is finalized and has been considered by the Eminent Scientists Group. In the case of the prawn IRA management measures which have totally destroyed all trade in prawns with some countries have already been introduced (and several smaller importers have already been put out of business) and there are not even dates for completion of the draft IRA, let alone involvement of the Eminent Scientists Group, which are both required before any appeals are allowed. The delays are interminable and appear part of deliberate intent to restrain trade.' (Professor R Kearney submission, p. 10)

To date, the use of the Import Risk Analysis Appeals Panel and the Federal Court as mechanisms for challenging Import Risk Analyses and import permit decisions has been limited. The most recent Import Risk Analysis Appeals Panel was convened in early 2007 to consider appeals made in relation to the provisional final Import Risk Analysis for apples from New Zealand. Previously, Panels have also been convened to consider appeals in relation to policy determinations on pig meat imports, durian from Thailand, and California table grapes from the United States. The pigmeat case is the only occasion to date where a quarantine decision has been challenged in the Federal Court.

5.3.7 Consideration of environmental and human health concerns

When issuing import permits the Director of Animal and Plant Quarantine (or his/her delegate) is required to consider the likelihood and consequence of impacts on human health and the environment. To help in doing this, the Director consults with other Commonwealth Government agencies.

Mechanisms exist in the Import Risk Analysis process to assess risks to the environment. This includes consultation between Biosecurity Australia and the Department of Environment, Water, Heritage and the Arts codified in a Memorandum of Understanding. However, the effectiveness of these mechanisms has been questioned by a number of stakeholders.

> 'There has long been a strong bias in biosecurity and quarantine towards invasive species of potential harm to agriculture over environmental weeds and pests. There is still insufficient focus on environmental risks and inadequate competency within Biosecurity Australia to assess and manage these risks.' (Invasive Species Council submission, p. 1)

CSIRO provided the Panel with its analysis in relation to assessment of biosecurity risks to the environment, concluding that environmental biosecurity capacity lagged well behind business-related capacity across the biosecurity continuum. It acknowledged the complexity in predicting the impact on natural ecosystems and argued that capacity in this area needed to be built.

> 'Globally, invasive species are regarded as a major threat to biodiversity, along with climate change and habitat destruction. Our national capacity to assess and manage biological threats to biodiversity will need to grow as global trade increases the rate of movement of species … In parallel we suggest there is merit in DEWHA and BA building their joint capacity for analysing the environmental risks of biosecurity threats.' (CSIRO submission, p. 8)

It was suggested to the Panel that the Commission should use the precautionary principle in assessing biosecurity risks to the environment, similar to the approach taken under the *Environmental Protection and Biodiversity Conservation Act 1999*.

While Biosecurity Australia seeks information from the Department of Health and Ageing in relation to human health risks that should be taken into account during an Import Risk Analysis, the Panel observes that there is no equivalent Memorandum of Understanding to the one that exists with the Department of Environment, Water, Heritage and the Arts in relation to the conduct of risk assessments. As the Department of Health and Ageing does not have Biosecurity Australia's expertise in biological risk assessment, nor the scope of health expertise at times to respond to particular Import Risk Analyses, it seeks input from expert advisers or committees.

5.4 Panel's consideration

5.4.1 The role of Ministers and the Parliament

As described earlier, the Appropriate Level of Protection in principle balances the costs and benefits of travel, trade and consumer interests arising from the movement of people and goods with the risk to human health, businesses and the environment resulting from the introduction of pests and diseases. Inherent in the Appropriate Level of Protection concept are human health, economic, social, and environmental gains and losses.

The Panel believes it is important for the community to understand that not only is an Appropriate Level of Protection of 'zero' unachievable, it is also undesirable. For example, current arrangements provide businesses with access to improved genetic material that is crucial to Australia's agricultural productivity and allow consumers access to a range of products not readily or economically available domestically. They can also impose costs on consumers and the economy. This message was confirmed in the recent Australian Competition and Consumer Commission report on grocery prices which found that:

> 'While quarantine laws are important for protecting Australia's economic wellbeing, there are a number of tradeoffs for both producers and consumers. For example, an obvious trade-off with an import ban is between the benefits of reducing a particular pest or disease risk and the benefits from obtaining cheaper or different products.' (Australian Competition and Consumer Commission 2008, p. 38)

Indeed it is appropriate to remind ourselves that the foundations of Australian agriculture—and the national economic and consumer benefits they confer—rest on genetic material that was at one stage imported from elsewhere in the world.

Against that background, setting Australia's Appropriate Level of Protection is quintessentially a Government responsibility. It is not primarily a technical or scientific matter. Rather, it is a matter of values, which involves considering and articulating the Australian community's interests and thereby the national interest. It is critical that the democratically elected Government, and in particular the Minister responsible to Parliament, makes this decision which underpins biosecurity administration.

The Panel notes that the practical achievement of Australia's Appropriate Level of Protection is based on a sequence of Import Risk Analyses and decisions based on them. The framework for decisions is set out in the *Quarantine Act 1908* (see Box 14).

BOX 14 Import decision framework under the *Quarantine Act 1908*

Section 5D of the *Quarantine Act 1908* states that:

'A reference in this Act to a *level of quarantine risk* is a reference to:

(a) the probability of:

(i) a disease or pest being introduced, established or spread in Australia, the Cocos Islands or Christmas Island; and

(ii) the disease or pest causing harm to human beings, animals, plants, other aspects of the environment, or economic activities; and

(b) the probable extent of the harm.'

The *Quarantine Regulations 2000* define *import risk analysis* and *risk analysis* as follows.

'*Import risk analysis*, or *IRA*, means a risk analysis conducted under this Part.'

'*Risk analysis* means the assessment of the level of quarantine risk associated with the importation, or the proposed importation, of animals, plants or other goods and, where necessary, the identification of risk management options to limit the level of quarantine risk to one that is acceptably low.'

The *Quarantine Proclamation 1998* provides that:

'In deciding whether to grant a permit to import a thing into Australia … a Director of Quarantine:

(a) must consider the level of quarantine risk if the permit were granted; and

(b) must consider whether, if the permit were granted, the imposition of conditions on it would be necessary to limit the level of quarantine risk to one that is acceptably low; and

(ba) for a permit to import a seed of a kind of plant that was produced by genetic manipulation — must take into account any risk assessment prepared, and any decision made, in relation to the seed under the Gene Technology Act; and

(c) may take into account anything else that he or she knows that is relevant.'

The Panel notes there is no reference in the legislation, regulations or proclamation to the Appropriate Level of Protection as it has been defined by successive governments. The legislative guidance given to officials is sparse. It is therefore logical, given the importance of consistency in decisions, and the importance of those decisions, that officials have attempted to develop more detailed guidelines (of which there are several drafts extant, but none finalised).

These guidelines attempt to explain how to establish the probability of a pest or disease being introduced, established or spread in Australia, causing harm to humans, animals, plants, other aspects of the environment, or economic

activities, and the probable extent of the harm. The guidelines also explain how those probabilities can be used to develop a draft Import Risk Analysis report—including any measures to reduce risk to an acceptable level.

The Panel's view is that the guidelines need to explain how probability will be described (such as quantitatively or qualitatively, or probability 'intervals' associated with different qualitative descriptions) and how harm from a pest or disease to human beings, animals, plants, and other aspects of the environment and economic activities will be described and estimated (quantitatively or qualitatively, what dimensions of the harm to human beings, the environment and economic activity will be estimated, and whether the estimates are in gross or net terms).

More fundamentally, the guidelines should provide rules about how these estimates are to be combined to reach a decision. For example, it needs to be decided how much weight should be given to the impact on an endangered species compared with the impact on economic activity or human health. Similarly, guidance needs to be provided on the weight to be given to a concentrated regional economic impact against one of a similar size that is spread across the nation.

The analysis and consequent decisions on measures are usually taken in a climate of uncertainty. Uncertainty can arise from many factors, including a lack of understanding of the science, the complexity of natural systems, or simply a lack of data. There are many ways of making decisions under uncertainty—different decision rules may lead to different and material practical effects on decisions as to whether to allow an import, and if so what if any measures should be applied to reduce risk. It is important that the same approach is taken to dealing with uncertainty in successive assessments in order to maintain consistency. These issues are among those that should be covered in the guidelines.

These issues are complex and involve describing the science and risk estimation techniques that are used to underpin decisions, and requires important judgements about values. The Panel believes that if the guidelines were finalised (as opposed to remaining in draft) and made public, it would enhance consistency in Import Risk Analyses and import permit decisions, and reduce the scope for controversy and dispute between parties, whether domestic or international.

The Panel has concluded that the Government and the Parliament should set Australia's Appropriate Level of Protection and the principles that underpin import risk assessment. In the Panel's judgement, the Government should have the capacity in legislation to determine the Appropriate Level

of Protection and make Guidelines for the conduct of Biosecurity Import Risk Analyses, Biosecurity Import Permit Determinations (see Section 5.4.5) and import permit decisions. The determination and Guidelines would best take the form of a legislative instrument under the *Legislative Instruments Act 2003*, but should not be disallowable. This means that they will be transparent to the Parliament and can be the subject of review and debate, but the Parliament has no capacity to stop them coming into effect, other than by persuading the Government of the day that some amendment would be appropriate.

This approach recognises that fundamental policy settings are appropriately determined at a political level with the opportunity for Parliamentary discussion and debate. In the lead-up to the discussion, the responsible Commonwealth Minister would have the opportunity to consult the states—and more widely—to build an agreed national understanding underpinning the fundamentals of the Commonwealth's approach. This would provide the basis for a genuinely national commitment to biosecurity. The outcome would be clearer guidance for the non-political science-based decision making processes in relation to individual Import Risk Analyses and import permits. It would reduce the scope for inter-governmental, business, political and diplomatic disputes.

Recommendation

31 The biosecurity legislation should:

- a define the concept of 'biosecurity risk' in a manner analogous to, but broader than, section 5D of the *Quarantine Act 1908*;
- b provide that the basis for a decision whether to authorise, under the legislation, an import of goods should be that the level of biosecurity risk associated with the import is acceptably low;
- c provide that the Minister may determine what level of biosecurity risk is acceptably low (that is, Australia's Appropriate Level of Protection), and may make Guidelines for Biosecurity Import Risk Analyses, Biosecurity Import Policy Determinations and import permit decisions. The determination and Guidelines should be legislative instruments for the purposes of the *Legislative Instruments Act 2003*, and should not be disallowable; and
- d require that decision makers under the legislation (the National Biosecurity Commission in relation to Biosecurity Import Policy Determinations and the Director of Biosecurity in making import permit decisions) should be required to apply the Determination, and act in accordance with the Guidelines.

5.4.2 Import Risk Analyses and the national interest

As discussed in Section 5.3.2, some submissions to the Panel suggested that Import Risk Analyses should be based on a full national interest test, allowing them to consider trade and consumer benefits and costs as well as the potential harm arising from pests or diseases. The Panel has instinctive sympathy for this view. It would allow a more complete analysis—leading to a more informed view—of the costs and benefits of an import proposal, analogous to the approach taken in other regulatory areas such as the *Environment Protection and Biodiversity Conservation Act 1999*, the *Foreign Acquisitions and Takeovers Act 1975* and the *Productivity Commission Act 1998*.

However, the Panel notes that such an approach would not be consistent with Australia's obligations under the SPS Agreement, which limits the factors that can be taken into account in imposing measures on imports. Perhaps paradoxically, but quite intentionally, the SPS Agreement excludes consideration of economic losses or gains arising from the import itself as distinct from the potential harm from pests or diseases. This, together with the requirement that any measures should not be more trade restrictive than required, ensures that trade issues are not brought to bear in a way that increases the risk of SPS measures being used as non-tariff barriers.

Given Australia's strong interest in a less restrictive agricultural trade environment and the risk that any move to amend the SPS Agreement could result in a more restrictive approach, the Panel has concluded that it does not support an Import Risk Analysis approach that includes a national interest test. Of course, as discussed previously, a full national interest test is integral to the determination of Australia's Appropriate Level of Protection.

5.4.3 Content of the Import Risk Analysis Guidelines

The Panel has been surprised by the heavy emphasis in both the Import Risk Analysis guidelines and the actual Import Risk Analyses it has reviewed on the estimates of the *likelihood* of entry and establishment or spread of pests and diseases relative to their consideration of the *consequences* of entry.

It is also perplexed by the lack of use of formal economic analysis, including Computable General Equilibrium analysis, to quantify the likely consequence of a pest and disease incursion. This is despite the considerable use of such analysis in Australia in determining the economic consequences of incursions of exotic pests and diseases, including whether or not to

attempt eradication and in choosing between management options where an incursion has actually occurred. For example, the Australian Bureau of Agricultural and Resource Economics has utilised such analysis in determining the feasibility of eradicating papaya fruit fly from north Queensland (Bhati *et al*. 1996), alternatives for managing outbreaks of foot and mouth disease (Abdalla *et al*. 2005) and the economic impacts of an incursion of Karnal bunt (Elliston *et al*. 2004). The Panel also notes regular use of these tools to assist decisions even in areas where estimates have to be made of the monetary value of non-market commodities (for example Integrated Assessment Modelling to assist climate change policy analysis, cost-benefit analysis as part of environmental impact assessment and project approvals) or where economic values are integrated into multi-attribute analysis.

It is important that the Guidelines deal with real economic consequences, not merely transfer payments. Estimates of consequences should take into account alternative enterprises or other adjustment options available to producers in the event that they were affected by a pest or disease incursion. By focusing on the gross rather than net consequences, there would be an inbuilt bias to overestimate pest or disease consequences and hence favour more conservative decisions in relation to import approvals than may be appropriate.

Similarly, it is important that a uniform approach to scaling the economic impact of potential pest and disease incursions is applied.

A decision needs to be taken and consistently followed as to whether Import Risk Analyses emphasise the absolute net value of production at risk against the setting of the national economy, or the relative impact on a particular industry. On balance, the Panel would favour looking at the absolute net value of production at risk. As noted earlier, the Productivity Commission has raised the possibility of providing a quantitative anchor in the form of an absolute expected cost threshold below which measures would not be considered.

The Panel further notes that while Biosecurity Australia and the Eminent Scientists Group possess high-level scientific skills, neither group has significant skills in economic analysis or direct access to a reputable and relevant economic model. In the Panel's view this should be remedied by ensuring that the National Biosecurity Commission encompasses high level economic skills and by expanding the Eminent Scientists Group to include an eminent economist. In addition, the National Biosecurity Commission should develop a relationship with the Productivity Commission, the Australian

Bureau of Agricultural and Resource Economics or other suitable public or private sector agencies, to assist in the estimation of the economic costs of potential pest and disease incursions.

Recommendations

32 The Guidelines should:

- a include a clear statement of the approach to be taken to the economic assessment of potential biosecurity threats including the appropriate use of formal economic analysis; and
- b require estimation of net rather than gross costs, allowing for best practice management methods, substitution to alternative crops or husbandry techniques.

33 The National Biosecurity Commission should:

- a include high level economic skills (see Recommendation 13); and
- b develop a close working relationship with the Productivity Commission, the Australian Bureau of Agricultural and Resource Economics or other suitable agencies.

34 The Eminent Scientists Group should be expanded to include an economist.

5.4.4 Recognising regional differences

Consideration of regional differences in pest and disease status and risk can enable greater flexibility in allowing imports, while preserving the biosecurity status of regions at a relatively lower cost, and in a less trade restrictive way than via other measures.

The Panel's view is that an assessment of regional differences should be explicit in the Import Risk Analysis process. Establishing regional differences will require close cooperation between the National Biosecurity Commission and the states, particularly given the more explicit timeframes for Import Risk Analyses. It would be assisted by improved state-based surveillance and monitoring to ensure that states have the data to support their claims. This approach would be consistent with Australia's treaty obligations, especially Article 6 of the SPS Agreement.

Recognising domestic differences in pest and disease status will also facilitate improved access to export markets.

Recommendation

35 The:

a Guidelines should include a requirement for the assessment of any relevant regional differences in biosecurity status and risk;

b states and territories should be consulted on the terms of this requirement before it is included in the Guidelines; and

c Commonwealth and the states and territories should develop a protocol on the collection and timely provision of the scientific evidence necessary to demonstrate biosecurity threat status to support both the Biosecurity Import Risk Analysis process and improved access to export markets for Australian products.

5.4.5 Import permit applications

The Panel is conscious that under the approach outlined in Chapter 3, the National Biosecurity Commission will be making decisions that have an important influence on subsequent decisions by the Director of Biosecurity in relation to import permit applications. The Commission's decisions—to be referred to as Biosecurity Import Policy Determinations—will provide the framework within which specific import permit decisions will be made. This approach combines the current role of Biosecurity Australia in undertaking Import Risk Analyses and the Director of Animal and Plant Quarantine's role in making import policy determinations.

The Panel recommends that the biosecurity legislation provide that when the Director of Biosecurity (or delegate) considers an import permit application for which a relevant Biosecurity Import Policy Determination is in place, the Director of Biosecurity should have primary regard to that Determination in deciding whether to grant the permit. This requirement would apply unless the Director of Biosecurity has reason to believe that granting the permit would lead to a biosecurity risk that is not acceptably low. If an import permit is denied on these grounds, the Director must immediately inform the National Biosecurity Commission of the reasons. Circumstances in which the Director of Biosecurity could reach a decision not to grant a permit in accordance with a Biosecurity Import Policy Determination would include notification of a change in the disease or pest status on which the Biosecurity Import Policy Determination was based—for example, new science, or new information on the effectiveness of the biosecurity measures required under it.

In the absence of a Biosecurity Import Policy Determination, the Panel recommends that the Director of Biosecurity have two options for dealing with

market access and import permit applications. If the Director of Biosecurity is satisfied that the biosecurity risk involved is acceptably low, the Director should authorise importation, with or without conditions. This decision may also be informed by experience and policies in relation to analogous goods. Alternatively, if the Director is not satisfied that the biosecurity risk is acceptably low, the Director should refuse to issue an import permit and ensure that a Biosecurity Import Risk Analysis is conducted and a Biosecurity Import Policy Determination made before an import permit is granted.

Recommendation

36 The biosecurity legislation should provide:

a that when an import permit application is made for which a relevant Biosecurity Import Policy Determination exists, the Director of Biosecurity should have primary regard to that Determination in deciding whether to grant the permit, unless the Director has reason to believe that granting the permit would lead to a biosecurity risk that is not acceptably low. If the Director of Biosecurity denies an import permit on these grounds he/she must immediately inform the National Biosecurity Commission of the reasons; and

b that the Director of Biosecurity have two options for dealing with market access and import permit applications for which there is no specific Biosecurity Import Policy Determination already in place:

- if the Director is satisfied that the biosecurity risk involved is acceptably low, he/she should authorise importation, with or without conditions; and
- if the Director is not satisfied that the biosecurity risk would be, or could be through imposing conditions, acceptably low, he/she should not grant a permit and should not provide market access, until the National Biosecurity Commission has made a Biosecurity Import Policy Determination following a Biosecurity Import Risk Analysis.

5.4.6 Backlogs and delays

In the past Australia's Import Risk Analysis process has been criticised for extensive delays. The Panel agrees that these delays have been extraordinary compared to equally complex science-based decisions in other regulatory fields, but also notes that Import Risk Analyses conducted by some of Australia's trading partners occur over similar timeframes. The Panel also notes that, responding to these concerns, the regulations under the *Quarantine Act 1908* now require that Import Risk Analyses are completed within 24 – 30 months depending on whether they are considered as a standard or expanded Import Risk Analysis. However, the regulated timeframe does not start until an Import

Risk Analysis has formally commenced—applications might still wait for many months or years until Biosecurity Australia is ready to commence an Analysis.

Regardless of the type of Import Risk Analysis, the current process imposes significant resource demands on Biosecurity Australia. The agency is currently faced with a backlog of import market access requests, some dating back decades. Again the Panel notes that Australia is not alone in this regard with many countries struggling to process market access requests in a time of ever expanding global trade. Australia's agricultural exporters are familiar with the frustration of having to wait in a long queue before access to new markets is granted by Australia's trading partners.

A situation in which access can be effectively denied for decades because of resource constraints on the Government agency may well invite disputes with trading partners and the risk of the World Trade Organization dispute resolution processes being invoked. Neither is desirable nor in Australia's interests.

The Panel examined the risk analysis task in other science-based, or otherwise technical, regulatory areas to see if they offered alternative approaches. The regimes examined included the *Environmental Protection and Biodiversity Conservation Act 1999*, the *Food Standards Australia New Zealand Act 1991*, the *Therapeutic Goods Act 1989* and the Australian Energy Regulator. Under each of these processes, the regulator retains a significant analytic capacity, but it is usual to place a considerable responsibility (and hence a heavier resource demand) on the proponent to conduct or assemble required scientific analysis. Some of these regimes have graduated assessment processes with an ascending degree of 'in house' involvement by the regulator.

The Therapeutic Goods Administration model for listing of goods in the Australian Register of Therapeutic Goods involves a mix of responsibility between the regulator and applicant. In other instances, the majority of the responsibility rests with the applicant. For example, under the *Environment Protection and Biodiversity Conservation Act 1999*, the onus is placed on the applicant to provide the information needed to assess its application. Similarly, under the *Food Standards Australia New Zealand Act 1991*, applications to vary the Australia New Zealand Food Standards Code rest primarily with the applicant.

The Panel believes that the National Biosecurity Commission should similarly have an approach available to it which would place greater obligations on the proponent to prepare the major risk assessment material to an appropriate standard and to meet any Guidelines made by the Minister to govern the risk assessment process. This would free up resources, reduce the assessment burden and enable the Commission to address the large backlog of market access requests.

This approach would not be available as of right. When an application is made the proponent would be required to furnish the Commission with its proposed scope and planned methodology for developing what the Panel has referred to as a Biosecurity Import Risk Statement. The Commission would be empowered to assess within set timeframes whether it believed that the proponent's scope of review and proposed methodology was acceptable, and whether the Commission had the resources to carry out its associated supervisory and assessment task. If the Commission approves the use of this avenue, it will inform the proponent of the terms of reference for the review covering matters such as pests and diseases and other biosecurity risks of concern, their ecology and epidemiology, and proposed risk management measures with evidence supporting their efficacy. It will advise the proponent of any specific requirements in relation to methodology for preparation of the draft Biosecurity Import Risk Statement. The Commission would also be obliged to publish the Biosecurity Import Risk Statement for the information of domestic and other stakeholders.

The intention is that the Biosecurity Import Risk Statement should provide the National Biosecurity Commission with the information required to complete a Biosecurity Import Risk Analysis and a draft Biosecurity Import Policy Determination.

In preparing a Biosecurity Import Risk Statement, the proponent would bear the responsibility for, and meet the costs of, providing material to meet requirements specified by the National Biosecurity Commission. The time taken to prepare a Biosecurity Import Risk Statement would be entirely in the hands of the proponent. Once satisfied with its Statement, the proponent would submit it for consideration by the Commission. Once approved by the Commission as meeting the Guidelines, the Biosecurity Import Risk Statement would be released for public comment at a stage analogous to the release of an issues paper by the Commission. This marks the start of the regulated timeframe and the point at which the application is referred from the proponent to the National Biosecurity Commission for preparation of a draft Biosecurity Import Risk Analysis.

Having received comments from the public on the Biosecurity Import Risk Statement, and a final Statement from the proponent responding to those comments, the National Biosecurity Commission would be required to prepare and post its draft Biosecurity Import Risk Analysis and draft Biosecurity Import Policy Determination for a further round of public comment before finalising its decision. Each step involving decisions by the National Biosecurity Commission or periods for public comment and submission would be subject to statutory timelines—where appropriate the opportunity should be taken to bring the steps and timelines under the Biosecurity Act and the *Environment Protection and Biodiversity Conservation Act 1999* into consistency, so that to the greatest

extent possible Biosecurity Import Risk Analyses can meet all the requirements for an acceptable assessment for decisions taken under the *Environment Protection and Biodiversity Conservation Act 1999*.

This approach would allow more strategic use of the available scientific expertise within the Authority, with process management directed to staff with more general skills. It would also expedite lower priority and less complex risk analyses—including those from the veterinary medicine sector whose ability to bring products into Australia has often been hampered by Biosecurity Australia's lack of sufficient technical staff with experience in specific scientific disciplines.

5.4.7 A power to conduct public hearings and take evidence on oath

Under the various regulatory regimes—environmental, therapeutic goods and economic—reviewed by the Panel, the regulator has considerable choice about the type of assessment process they employ, ranging from assessing the application based on the 'referral information' through to assessment by a Public Inquiry. They have a capacity to take evidence on oath. The regulator can require the production of relevant material and it is usually an offence to supply misleading or false information knowingly.

The Panel believes that the National Biosecurity Commission should have these options available to it. It should have the capacity to hold hearings, require the production of material and documents, require sworn evidence and qualify and examine witnesses (typically expert witnesses) under oath. The Commission should be given the power to summons a person to appear before a Public Inquiry similar to provisions granted to the Australian Competition and Consumer Commission under the *Trade Practices Act 1974*.

Interested parties and technical experts would be invited to make statements, and then be questioned directly by Commissioners, in a formal and open environment, similar to the process adopted by the New Zealand Commerce Commission. The Panel envisages that this process would only be utilised in circumstances where the Commission is of the view that it would be a useful way to clarify or obtain further information.

The decision to establish a Public Inquiry should be at the Commission's discretion. There should also be appropriate provisions to enable the National Biosecurity Commission to determine whether material provided to it is to be held in confidence and in relation to this material to place on the Commission an obligation to protect its confidentiality. Such material could relate to matters of commercial value or issues relevant to Australia's foreign relations.

5.4.8 Setting priorities for Biosecurity Import Risk Analysis

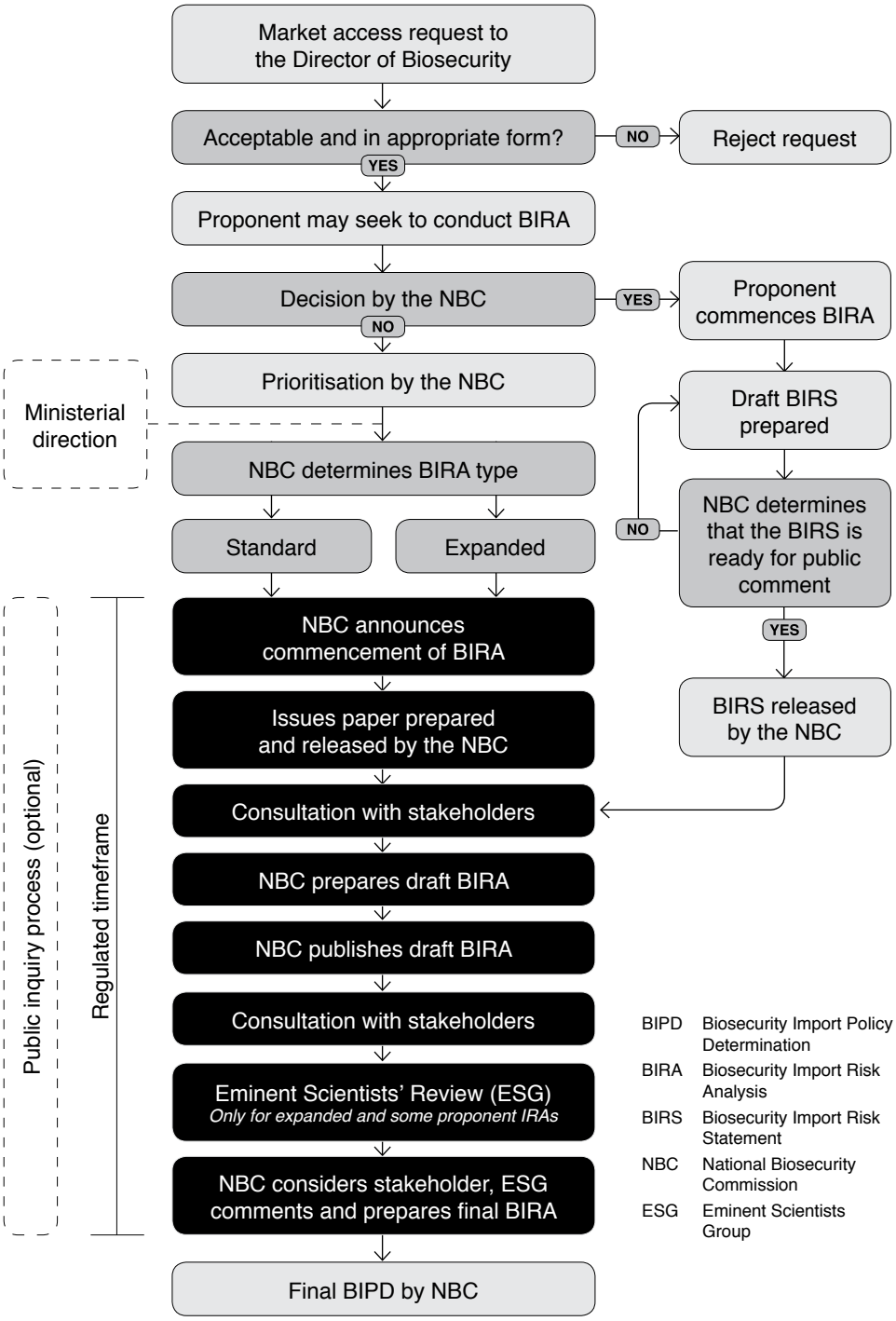
Even with these changes, the National Biosecurity Commission is likely to face a demand for Biosecurity Import Risk Analysis that will exceed its resource capacity. This is regrettable, but by no means unusual in many other countries around the world. This means that before it starts the clock by formally announcing the commencement of a Biosecurity Import Risk Analysis it needs to have carefully considered priorities and resources. The Panel believes that in addition to placing greater emphasis on the proponent to conduct Biosecurity Import Risk Analyses, the Authority should be provided with more resources (see Chapter 9) to help the Commission deal with the backlog of Import Risk Analyses and market access requests.

The prioritisation function of the existing Import Market Access Advisory Group should be performed by the National Biosecurity Commission. In determining its priorities, the Commission should consult with Commonwealth Government's agriculture, health, environment, foreign affairs and trade departments, with the states and with appropriate stakeholders relevant to import access proposals. Consultations with overseas governments should continue to be handled by the relevant departments.

The legislation should provide the Minister with a power to direct the National Biosecurity Commission to commence a Biosecurity Import Risk Analysis. This will provide the Minister with an avenue to ensure that undertakings given to trading partners under Free Trade Agreements or as a result of other bilateral negotiations are met. It will also enable matters which the Minister believes require a Biosecurity Import Risk Analysis to be referred to the Commission. This could include matters where the Minister has independently received advice of a change in biosecurity risk conditions. In no way would this provide the Minister with the capacity to prevent the commencement of a Biosecurity Import Risk Analysis or influence the priorities assigned by the Commission. Any direction by the Minister to commence a Biosecurity Import Risk Analysis should be tabled in Parliament. The Panel's recommended Biosecurity Import Risk Analysis process is illustrated in Figure 7.

In relation to proponent-based Biosecurity Import Risk Analyses, the Panel notes that some developing country proponents may not have the capacity to carry out analysis to the same standard as those in developed countries. Under Article 9 of the SPS Agreement, Australia is obliged to provide technical assistance to permit developing countries to maintain or expand market access. The Panel also notes the extensive program of technical assistance the Australian Government provides to developing countries in relation to SPS capacity building and Import Risk Analysis worth over $1.2 million in 2007-08. Consideration should be given to expanding regional assistance programs to ensure that developing countries can develop the capability to access this mechanism.

Figure 7 Proposed Biosecurity Import Risk Analysis process



Recommendation

37 The biosecurity legislation should provide:

a for three broad Biosecurity Import Risk Analysis processes—the existing standard and expanded Import Risk Analyses and a new process under which a greater obligation to prepare detailed information about relevant biosecurity risks would be placed on the proponent / applicant;

b that, in conducting a Biosecurity Import Risk Analysis, the National Biosecurity Commission should have the power to compel the production of any relevant documents, the power to require relevant evidence to be given to it under oath and to hold public hearings;

c that in deciding priorities for Biosecurity Import Risk Analyses, the National Biosecurity Commission should consult with relevant Australian Government agencies, including the departments having responsibility for agriculture, health, environment and foreign affairs and trade, with the states and territories and with other appropriate stakeholders relevant to import access proposals; and

d the Minister with the power to direct the National Biosecurity Commission to commence a Biosecurity Import Risk Analysis, with such a direction to be tabled in Parliament.

5.4.9 Review mechanisms

In a democratic society, governments must be accountable to the public for the way they exercise their powers. Providing appropriate review mechanisms aims to improve the way that decisions are made and generate public confidence in government administration (Administrative Review Council 2007). As it currently stands, the Import Risk Analysis process includes several points of potential review. These include:

- peer review during the Import Risk Analysis, including by external experts included on the risk analysis panel;
- formal consultation with stakeholders on the draft Import Risk Analysis report and other technical documents;
- external scientific review of a revised draft Import Risk Analysis report by the Eminent Scientists Group; and
- review of the Import Risk Analysis process by the Import Risk Analysis Appeals Panel.

Apart from the potential for prerogative writs under section 77(v) of the Constitution, review by the courts is only available in relation to the individual import permit decisions taken by the Director of Animal and Plant Quarantine (or delegate). In those cases, for example the *Director of Animal and Plant*

Quarantine v Australian Pork Limited, the decision is subject to judicial review under the *Administrative Decisions (Judicial Review) Act 1977*. There is no opportunity for merits review to determine whether the 'right' decision was made.

In the context of its overall recommendations, the Panel has considered what review mechanisms should be provided and what should be subject to review.

The Administrative Review Council states that as a principle, where an administrative decision will, or is likely to, affect the interests of a person, it should be subject to merits review (Administrative Review Council 2005). The objective of allowing merits review is to ensure that administrative decisions are correct. More broadly, merits review can improve the quality and consistency of decisions over the longer-term, enhancing the openness and accountability of governments.

Conversely, merits review processes can impose significant time delays and costs for the parties and the regulator. Specialist topics—as are involved here—require a review body with relevant skills. Moreover, history suggests that unless care is taken, applicants will treat the appeal panel as an alternative regulator and seek to 'game' the process by withholding crucial information until the appeal stage. Stringent requirements—such as restricting the information that can be considered by an appeals panel and specifying tight statutory time constraints—may help, but merits review inevitably involves costs and time. The hope is that these costs are justified by more rigorous decision making and a process seen by all parties to be manifestly fair.

The Eminent Scientists Group provides one form of reassurance of the quality and independence of a Biosecurity Import Risk Analysis. The Eminent Scientists Group provides scientific, external peer review during the Import Risk Analysis process—and it is proposed that this role would be preserved in the Biosecurity Import Risk Analysis process. Its continuation would enhance confidence in the Biosecurity Import Policy Determinations made by the National Biosecurity Commission.

The Panel also sees value in strengthening the Eminent Scientists Group. Expansion to include an eminent economist has already been recommended. In addition, the Eminent Scientists Group should be empowered to draw on both domestic and international experts by appointing them as Associate Members for particular cases (much as the Productivity Commission does). The Eminent Scientists Group should be apolitical, expert and appointed by the Minister after consultation with the states.

Merits review is generally available for administrative decisions which grant rights or impose costs. Biosecurity Import Policy Determinations set a policy

framework and would not of themselves grant rights or impose costs. They would therefore fall outside the limits of what would normally be regarded as administrative decisions for the purpose of merits review. The provision of an open process, with clear guidelines, an expanded and clearly independent Eminent Scientists Group to provide high level comment on the quality of material, and the provision for the final decision to be taken by an independent Commission provide ample avenues to all stakeholders to ensure that their views and evidence are considered. In the judgement of the Panel, this makes Biosecurity Import Policy Determinations analogous to the decisions of the Australian Energy Markets Commission and other independent authorities which make policy determinations. Accordingly, the Panel is not persuaded that these Determinations should be subject to merits review.

Similarly, the expanded Eminent Scientists Group and the National Biosecurity Commission, both of which are independent, allied with open processes requiring the publication of draft Biosecurity Import Risk Analyses, would remove the need for the purely procedural review provided by the current Import Risk Analysis Appeals Panel process. The Panel recommends that it should be removed.

Biosecurity Import Policy Determinations have to be applied through import permit decisions made by the Director of Biosecurity. The Panel considers that it would be desirable to provide an option for merits review of a restricted class of import permit decisions taken by the Director of Biosecurity. Merits review should only be available where the Director had made a decision to refuse to issue an import permit on the grounds that to do so would not be consistent with the existing Biosecurity Import Policy Determination. The applicant must be able to demonstrate that there is an existing Biosecurity Import Policy Determination relevant to that commodity from that location. The Panel believes it is important that merits review is restricted to permit decisions made pursuant to an existing Biosecurity Import Policy Determination to avoid the possibility of merits review being used to accelerate consideration of a Biosecurity Import Risk Analysis. The legislation should make it clear that a Biosecurity Import Policy Determination is not the subject of review, only its application through an import permit decision.

In addition:

- standing should be limited to the permit applicant;
- provisions should be established to guard against vexatious appeals; and
- there should be strict timeframes around the lodgement of appeals.

These merits appeals would be considered by the Administrative Appeals Tribunal. The Tribunal would need to appoint additional panel members with relevant expertise for this purpose.

Some import permit decisions may be taken by the Director of Biosecurity in the absence of a Biosecurity Import Policy Determination. These decisions should not be subject to merits review.

Recommendations

38 The:

- a Import Risk Analysis Appeals Panel should cease to exist as the review mechanism for determining whether a Biosecurity Import Risk Analysis has followed due process;
- b Biosecurity Import Policy Determination should be a non-reviewable instrument;
- c Eminent Scientists Group should be empowered to co-opt one or more Associate Members; and
- d Eminent Scientists Group should be appointed by the Minister after consultation with the states and territories.

39 Merits review of import permit decisions should only be available where the Director of Biosecurity has made a decision to refuse to issue an import permit on the grounds that to do so would not be consistent with a Biosecurity Import Policy Determination. In addition, access to merits review should be subject to the following requirements:

- a standing should be limited to the applicant for the permit;
- b provisions should be established to guard against vexatious appeals; and
- c there should be strict timeframes around the lodgement of appeals.

5.4.10 Improving the consultative process

Consultation and communication are built into the risk analysis process at a number of stages, both informally and formally. For example, there is consultation prior to the announcement of the commencement of an Import Risk Analysis, with the release of an issues paper (for an expanded Import Risk Analysis) and with the release of a draft Import Risk Analysis report. Communication occurs through a number of channels, including notifications to registered stakeholders, media releases, newsletters, web publications, and stakeholder meetings.

Those involved in the process generally acknowledge that Biosecurity Australia disseminates information well but complain they have limited time to provide views and that their views are not always taken into account. While it is inevitable that some stakeholders will be dissatisfied with decisions, it is important they believe that their concerns have been fairly considered.

Several stakeholders expressed frustration about large Import Risk Analysis documents being released with no prior notice and limited time to respond. Some business groups told the Panel that given the scientific complexity of these documents, it is necessary for them to engage experts (who may not be instantly available) to assist them in the preparation of responses and that the short notice jeopardised their capacity to respond adequately. The Horticulture Australia Council submission commented that an Import Risk Analysis can take up to two years to produce, while only 60 days is available to respond to it. The Council cited the experience with the New Zealand apple Import Risk Analysis, where it was unable to bring together input from relevant experts in the time allowed.

Balancing consultation needs and timely decision making is difficult—a fact that the Horticulture Australia Council acknowledged in its submission. The current Import Risk Analysis process attempts to reconcile these two objectives by setting the 60 day timeframe, but also providing for a 60 day extension where the Chief Executive of Biosecurity Australia considers that stakeholders may not have had reasonable opportunity to comment within the normal consultation period. In addition, for expanded Import Risk Analyses, the regulated process provides for the release of an issues paper which should start preparing stakeholders for the likely issues associated with the Import Risk Analysis.

The Australian National Audit Office, in a 2005-06 report *Managing for Quarantine Effectiveness—Follow-up*, recommended that Biosecurity Australia incorporate a period of notice to be given prior to the release of Import Risk Analysis reports (Australian National Audit Office 2005-06). The recommendation was accepted by Biosecurity Australia, but does not appear to have been fully implemented.

The Panel's view is that the time limits set in the regulations achieve a reasonable balance between the opportunity for consultation and timeliness. However, improvements could be made to help stakeholders prepare to meet the consultation deadlines. For example, more use could be made of issues papers and, as recommended by the Australian National Audit Office, greater effort should be made to provide advance notice of draft document release dates. This would allow stakeholders to start consulting with members and engage experts required. Similarly, consultation needs to go beyond affected domestic businesses to include market access proponents and importers.

The hearings process proposed by the Panel would also allow parties to examine and comment on other evidence.

The Panel proposes that the National Biosecurity Commission be subject to similar consultation requirements as other major regulators in making Biosecurity Import Policy Determinations. To achieve this the Commission should be required to include a draft Biosecurity Import

Policy Determination with the draft Biosecurity Import Risk Analysis when it is released for public comment.

Recommendation

40 The National Biosecurity Commission should:

a provide stakeholders with advance notice of the release of draft Biosecurity Import Risk Analyses and issues papers to allow sufficient time to prepare responses; and

b include a draft Biosecurity Import Policy Determination with the draft Biosecurity Import Risk Analysis when it is released for public comment.

5.4.11 Environmental risks

The Panel considers that the current biosecurity framework is not being effectively used to analyse and manage the risks to the Australian environment. A Memorandum of Understanding has been established between Biosecurity Australia and the Department of Environment and Heritage (now the Department of the Environment, Water, Heritage and the Arts) to facilitate communication between the two groups. However, to some extent this seems to have led to a greater reliance on environmental agencies to assess risks than they are capable of delivering, rather than supporting the development of competence to deal with these issues within Biosecurity Australia. In addition, current arrangements do not appear to be achieving a coordinated approach in relation to import assessments for live animals or plants under the *Environmental Protection and Biodiversity Conservation Act 1999* and the *Quarantine Act 1908*.

To improve this situation, the Panel recommends that the Biosecurity Import Risk Analysis Guidelines should require that assessments are adequate to meet the requirements, including timelines and consultation, of the *Environmental Protection and Biodiversity Conservation Act 1999*. As part of this, and as part of the broader biosecurity approach recommended by the Panel, the National Biosecurity Commission will need the capacity to assess environmental risks as part of a Biosecurity Import Risk Analysis. The Director of Biosecurity will need to ensure that the staff assisting the Commission have skills in this area. This will have resourcing implications, as discussed in Chapter 9. In addition, once the National Biosecurity Commission commences a Biosecurity Import Risk Analysis, it should advise the agriculture, environment and health Ministers of the terms of reference and coverage.

It was also suggested to the Panel that the Commission should use the precautionary principle in assessing biosecurity risks in the terms in which it

is set out in section 391(2) of the *Environmental Protection and Biodiversity Conservation Act 1999*: 'the precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage'. It was suggested to the Panel that this would enable a full harmonisation of approvals under the *Quarantine Act 1908* and the *Environmental Protection and Biodiversity Conservation Act 1999*.

While the Panel is sympathetic to this suggestion, using the precautionary principle as it is set out in the *Environmental Protection and Biodiversity Conservation Act 1999* to justify SPS measures is unlikely to be consistent with the requirements of the SPS Agreement.

Article 5.7 of the SPS Agreement sets out an explicit statement of the manner in which scientific uncertainty is to be managed by Parties to the Agreement: 'in cases where scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organisations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary and phytosanitary measure accordingly within a reasonable period of time'.

The Panel is of the view that to the extent that adopting in the Biosecurity Act the definition of the precautionary principle in the *Environmental Protection and Biodiversity Conservation Act 1999* led to different outcomes to those that would arise from applying Article 5.7 of the SPS Agreement, there is a risk that Australia would be in breach of its obligations under that Agreement and hence would be open to challenge through the World Trade Organization dispute settlement procedures.

This will mean that there will still be some differences in the decision criteria that apply to some matters covered by the *Environmental Protection and Biodiversity Conservation Act 1999* in addition to the *Quarantine Act 1908*.

5.4.12 Human health risks

The Panel considers that the roles and responsibilities for collaboration on Biosecurity Import Risk Analyses that involve human health elements should be formally defined between the Commission and the Department of Health and Ageing. The Commission should consult the Department of Health and Ageing with respect to proposed biosecurity measures to protect human health. These issues are most likely to arise from concerns about transmission of zoonotic diseases.

Recommendations

41 A memorandum of understanding should be developed between the National Biosecurity Commission and the Department of Health and Ageing to cover human health aspects of Biosecurity Import Risk Analyses.

42 The National Biosecurity Commission should have the professional capacity to assess risks to the environment and human health in a Biosecurity Import Risk Analysis to the same quality as agricultural assessments.

5.4.13 'Legacy' Import Risk Analyses

The majority of risk analyses and assessments are completed without controversy, and trade is able to be facilitated whilst meeting Australia's Appropriate Level of Protection.

As discussed earlier, there are, however, a relatively small number of Import Risk Analyses that have generated a lot of public and political scrutiny over the last decade or more, detracting from Australia's reputation for science-based risk analysis and consuming a disproportionate amount of the resources available for assessing import access proposals. These are termed 'legacy' Import Risk Analyses and include import proposals for bananas from the Philippines, as well as chicken meat, and prawns and prawn products. The Import Risk Analysis relating to the import of apples from New Zealand did fall within this category until relatively recently. This small group of Import Risk Analyses has done much to generate international perceptions of trade restrictiveness, unreasonable delays and questionable science.

In six cases[2] the concerns of trading partners have advanced to the point of a World Trade Organization SPS dispute. Each of these disputes has challenged the scientific basis of Australia's biosecurity measures and some have alleged that Australia's measures were more trade-restrictive than required. The dispute over measures affecting the importation of salmon is the only one that has been finalised by the World Trade Organization Appellate Body to date. The other disputes have either been settled by mutual agreement or could be reactivated

2 DS18 - Measures Affecting the Importation of Salmon (Complainant: Canada); DS21 - Measures Affecting the Importation of Salmonids (Complainant: Canada); DS270 – Certain Measures Affecting the Importation of Fresh Fruit and Vegetables (Complainant: Philippines); DS271 – Certain Measures Affecting the Importation of Fresh Pineapple (Complainant: Philippines); DS287 – Quarantine Regime for Imports (Complainant: European Communities); and DS367 – Measures Affecting the Importation of Apples from New Zealand (Complainant: New Zealand).

at any time. In the *Australia-Salmon* dispute, the Appellate Body found Australia's import restrictions violated SPS Agreement requirements (Department of Foreign Affairs and Trade submission, p. 11).

Not only are these disputes damaging to Australia's reputation, they tie up extensive resources in defensive, reactive activities. This point is made in the Department of Foreign Affairs and Trade's submission.

> 'Defending Australia's position in WTO disputes is a significant responsibility which engages the Government's limited international trade law and scientific resources for lengthy periods of time. For example, there are currently three [Department of Foreign Affairs and Trade] lawyers plus one administrative officer working full time preparing Australia's defence to New Zealand's WTO challenge on apples ...
>
> This also means fewer resources can be devoted to prosecuting Australia's offensive interests either by providing scientific muscle to our own market access requests, or in bringing forward WTO disputes where our own trade is adversely affected by measures imposed by our trading partners.' (Department of Foreign Affairs and Trade submission, p. 11)

The legacy Import Risk Analyses have also been extremely contentious for the domestic industries involved, and relationships between these groups and Biosecurity Australia have been strained by disagreements over science, Import Risk Analysis methodology and consultative processes. There can be no doubt that over time, this has had an impact on the outlook of the organisation and the Australian government more broadly.

The Panel's view is that until the legacy Import Risk Analyses are completed, they will continue to be a thorn in the side of Biosecurity Australia. It is important that they be completed as soon as possible. The new regulated process recommended by the Panel will go a long way to avoiding the creation of future 'legacy' Import Risk Analyses.

6 COMMONWEALTH LEGISLATION

6.1 Introduction

Throughout the Report, the Panel has made recommendations that have legislative implications. Giving effect to these recommendations in the *Quarantine Act 1908* would require significant amendments to that Act. The question is whether the opportunity should be taken to overhaul the legislation to make it modern and simpler to administer.

6.2 Current arrangements

The Commonwealth's primary biosecurity legislation is the *Quarantine Act 1908* with a number of subordinate pieces of legislation including the *Quarantine Regulations 2000*, the *Quarantine Proclamation 1998*, the *Quarantine (Cocos Islands) Proclamation 2004*, the *Quarantine (Christmas Island) Proclamation 2004*, the *Quarantine Service Fees Determination 2005* and the *Quarantine Service Fees (Australia Post) Determination 2005*.

The *Export Control Act 1982*, the *Imported Food Control Act 1992* and the *Australian Meat and Livestock Industry Act 1997* are also relevant to biosecurity. Other related legislation includes the *Environment Protection and Biodiversity Conservation Act 1999* and the *Gene Technology Regulation Act 2000*.

As mentioned in Chapter 2, the states also have biosecurity legislation.

6.3 Current debates and views in submissions

The core of the *Quarantine Act 1908* was drafted over a century ago. Since that time, biosecurity risks have changed significantly with modern trade and movement of goods and people. As a result, in its Issues Paper, the Panel posed questions around whether the Act was still relevant and effective or whether it should be rewritten and modernised (Quarantine and Biosecurity Review Panel 2008).

Many submissions argued for a comprehensive modernisation of the Act. For example, Ms Meryl Stanton, a previous Executive Director of AQIS with experience in administering the Act, argued that:

> 'The Quarantine Act is a century old and looks it. How much better it would be to have a coherent law, with easily tracked regulations, that could serve as a tool for policy makers, operational managers and staff in their decision making, as a clear guide to importers and exporters (most of whom are keen to comply) and as a compliance tool for law enforcers.' (Meryl Stanton submission, p. 2)

Other submissions put a similar view.

> 'The Quarantine Act 1908 (as amended) should be re-written and modernised, simply because the dynamic times we live in have outpaced the Act's scope and reach.' (Australian Institute of Agricultural Science and Technology submission, p. 1)

> 'It [the Act] needs to be rewritten and modernised. A revamp about once a century would be the minimum you can get away with one would think.' (DigsFish Services Pty Ltd submission, p. 3)

However, the view was not unanimous. The Quarantine and Exports Advisory Council noted the power and flexibility that the current Act offers, and suggested that it should only be comprehensively rewritten if it was preventing AQIS from achieving its functions.

> 'The test here would be to ask whether AQIS is prevented in any way from delivering its quarantine functions by gaps, weaknesses or ambiguity in the current legislation. From QEAC's perspective this appears not to be the case.' (Quarantine and Exports Advisory Council submission, p. 19)

Others supported this more conservative approach, suggesting more minor amendments to the Act.

> 'There does not appear to be a compelling case for a complete restructure and rewrite of the Quarantine Act (1908). Some improvements in searching through the Act for sections related to human health and animal health might be made if those were put into separate sections.' (Australian Horse Industry Council submission, p. 7)

> 'One amendment to the legislation that we believe is essential is the inclusion of a clause setting out the object or purpose of the Quarantine Act. Such a clause might help in ensuring that interpretations of sections of the Act were realistic and cognisant of operational requirements.' (Food and Beverage Importers Association submission, p. 7)

Some submissions suggested a legislative amendment to separate out human health from animal and plant health.

> ‘The human health aspects of the Act should be removed and placed into different legislation.’ (Department of Primary Industries and Resources South Australia submission, p. 5)

Others argued that a single piece of legislation was the best approach because it removed duplication and avoided demarcation disputes.

> ‘… it is an arbitrary distinction to separate out the human health aspects, with potentially significant implications in terms of ensuring efficiency and consistency in implementation of the quarantine and biosecurity system.’ (Western Australian Government submission, p. 5)

The separation of human and animal and plant health has been considered in the past. In 1984, a process was started to separate the *Quarantine Act 1908* into a Human Quarantine Act and an Agricultural Quarantine Act. However, it was deferred in 1993 because of competing pressures and a lack of demand for the change. This experience provides some insight into the costs, risks and distractions that a significant legislative process can involve.

Some state governments have already started the process of modernising their biosecurity legislation. For example, Western Australia has the *Biosecurity and Agriculture Management Act 2007* which brings together regulation that was previously spread across 17 different Acts. The *Biosecurity and Agriculture Management Act 2007* will come into effect once the associated regulations have been drafted. The Queensland Government may also move in this direction, having noted the need to develop more contemporary state legislation in a recent biosecurity discussion paper.

6.4 Panel’s consideration

The *Quarantine Act 1908* is not a modern piece of legislation and it shows. There is no consistent logic in the placement of provisions. The interrelationship between the Act, the Proclamations and the Regulations makes the whole package difficult to understand. The intent of the Act is unclear, in part due to the fact that unlike more recent legislation, there is no statement of objectives which flows through into the individual provisions. There is no description in the legislation of Australia’s Appropriate Level of Protection and no provisions to enable the Minister to determine Guidelines for the conduct of Import Risk Analyses.

The Act was clearly constructed to rely principally on the Commonwealth’s Constitutional quarantine power. It is focused accordingly on pests and diseases that can be vectors of disease transmission, and in particular on control of the border. Biosecurity is a much broader concept than this. In places the drafting of the existing legislation is not sufficiently broad to call up biosecurity relevant

powers enlivened by Australia's treaty obligations, or the Commonwealth's powers in relation to corporations and international and interstate trade and commerce.

The core of the *Quarantine Act 1908* was drafted a century ago. Since that time, biosecurity risks have changed significantly as have Australia's international trade interests and treaty obligations. The Act has been progressively amended to cater for these changes, leading to overlapping provisions and powers. In some cases, activities are now supported by more than one source of authority, while in others, apparently similar provisions require specific steps to be followed if the actions taken are to be lawful. Some specific examples of administrative complexity are shown in Box 15.

BOX 15 *Quarantine Act 1908* – examples of administrative complexity

Example: Section 67 establishes offences for importing goods in contravention of the Act. The illegal items may be seized under section 68 of the Act. However, for a successful prosecution, related goods may also need to be seized, for example suitcases constructed to hide the goods. Section 68 does not permit the seizure of those related goods. The only other relevant provision is section 66AD, but the powers in that provision can only be exercised if the premises have been entered under section 66AB. Section 66AB is linked to the exercise of specific powers set out in section 66AA. It is not clear whether premises that have not been entered with the express purpose of exercising powers set out in section 66AA would be premises entered under section 66AB. The complexity in relation to premises is even greater when the seizure is occurring at an airport.

Example: In managing risks arising from the entry into Australia of an overseas vessel, quarantine officers need to gain ready access to overseas vessels at the port of entry. An example of such a power is section 70 of the Act, which provides that an officer may board and examine things found on the vessel at a port or place in Australia. However, to board a vessel, the officer must first obtain entry to the port. Many first ports are now privately owned. The ability of the officer to enter private premises without consent it limited to places described in section 66AB of the Act, which does not include privately owned ports. Therefore, the officer has to obtain either consent or a warrant to enter these ports.

The complexity and variation in the Act is not just an issue for the lay reader. More importantly, it makes the Act very difficult to administer. The Panel has been advised that AQIS often has to seek legal advice on how to interpret individual provisions and which provisions to use in different circumstances. This complexity not only adds costs in terms of legal advice, but increases the training burden for the regulatory agency, induces unduly cautious reactions by management and reduces the likelihood of successful prosecutions for breaches of the Act.

Many of the Panel's recommendations have legislative implications (see Box 16). Implementing them within the current Act would be a significant undertaking, particularly given the existing complexity of that Act. Even small changes are likely to involve significant consequential amendments. The Panel's view is that rather than trying to rework the legislation yet again, the opportunity should be grasped to develop a new Act—the Biosecurity Act.

BOX 16 Recommendations requiring legislation

- Extending the Commonwealth's legislative reach beyond the border and to implement fully its treaty obligations (Recommendations 1, 2 and 4-8).
- Establishing the National Biosecurity Commission and the National Biosecurity Authority (Recommendations 12, 13, 16-18, 22 and 33).
- Establishing the Inspector General of Biosecurity (Recommendations 20 and 69).
- Establishing the role for the Minister in setting the Appropriate Level of Protection and making Guidelines for decision making on whether the Appropriate Level of Protection can be met (Recommendation 31).
- Process for making import permit decisions (Recommendation 36).
- Process for Biosecurity Import Risk Analyses (Recommendation 37).
- Providing for merits review in specific circumstances (Recommendation 39).
- Creating a targeted offence for interfering with officers in the performance of their duties (Recommendation 15).

As the title suggests, the Biosecurity Act would draw on the broad set of Commonwealth Constitutional powers to move from a narrow 'quarantine' focus to the management of biosecurity risks in a modern trading environment. The Act would start with a clear statement of objectives to this effect, which would flow through into broader yet simpler provisions that provide the powers needed to manage risks across the continuum effectively. Ideally, the new Act would be clear and unambiguous for the regulator and for those being regulated.

The Panel's view is that the Biosecurity Act should incorporate human health elements, providing a comprehensive approach to biosecurity risk management. To give effect to this proposal, the Department of Health and Ageing would need to be closely involved in developing the new legislation.

Links with other Commonwealth legislation would also need to be considered. For example, in the Panel's view it would be appropriate to draw into the Biosecurity Act the provisions of the *Imported Food Control Act 1992*. In addition, thought would need to be given to the treatment of biosecurity and the

relationship with existing legislation such as the *Environment Protection and Biodiversity Conservation Act 1999,* the *Gene Technology Regulation Act 2000* and relevant export legislation.

As discussed in Chapter 2, if the Panel's recommendations are accepted, the Act should be developed in parallel with the negotiation of the new National Agreement on Biosecurity with the states. The aim should be to complete the legislation and the Agreement within two years from the acceptance of the Panel's recommendations.

Pending the passage of the legislation, administrative steps should be taken to commence implementation of the proposed structures (Chapter 3). Functions could be grouped into a new 'interim' authority within the Department of Agriculture, Fisheries and Forestry and appointments made to an interim, advisory National Biosecurity Commission. The increases in resources to be applied to the pre-border and border functions (Chapter 9) could be progressively applied in advance of the completion of the legislation and intergovernmental agreement.

Recommendation

43 A new Biosecurity Act should be drafted to replace the *Quarantine Act 1908* giving effect to the Panel's legislative recommendations, drawing on a much broader set of the Commonwealth's Constitutional powers and providing for modern and effective management of biosecurity risks.

7 MANAGING BIOSECURITY RISKS

7.1 Introduction

Managing risks, with the ultimate aim of safeguarding Australia's privileged biosecurity status, is the fundamental purpose of Australia's biosecurity arrangements. The arrangements, from their legislative and jurisdictional settings, to systems for inspection, auditing and verification, are all concerned with responding as necessary to biosecurity risks to allow the safe movement of people and goods across the border. This Chapter reviews the way Australia's biosecurity agencies perform their risk management tasks and makes recommendations for improvement.

In the course of the Panel's consultations and in considering the many submissions received, a number of themes concerning shortcomings of current arrangements emerged. The themes have been grouped as follows:

- the balance of risk management activities along the biosecurity continuum;
- the collection, sharing and analysis of information on biosecurity risks;
- the state of information technology systems used to collate, analyse and share this information;
- the skills needed for risk management; and
- research and development to support risk management.

7.2 Current arrangements

7.2.1 Risk management across the continuum

Australia's approach to managing the risk of incursions of exotic pests and diseases is multi-layered, involving complementary measures applied along the biosecurity continuum—at pre-border, border and post-border points.

Pre-border activities seek to prevent biosecurity risks reaching Australia's border. This task involves understanding global risks, working with foreign governments, the private sector (overseas and in Australia) and engaging with travellers about Australia's biosecurity requirements. Specific pre-border

activities include cooperation in multilateral forums, Import Risk Analyses, intelligence gathering and audit activities. Examples of pre-border activities are briefly described in Box 17.

BOX 17 Examples of pre-border activities

The Australian Government's **multilateral efforts** include its participation in international standard-setting organisations. These include the formal frameworks established for animal health (the OIE), food safety (Codex Alimentarius), plant health (the International Plant Protection Convention) and human health (the World Health Organization). This engagement includes meeting strict obligations to notify incursions of emergency pests and diseases, and report endemic status of pests and diseases.

Australia's **intelligence gathering and information sharing** activities involve establishing networks with the biosecurity agencies of trading partners and monitoring and surveillance of other sources of information about global pest and disease status.

A number of **capacity building and joint surveillance** programs conducted with developing countries in the region, such as the South East Asia Foot and Mouth Disease Campaign and a number of capacity building projects including the Australian Fumigation Accreditation Scheme, the Northern Australia Quarantine Strategy, and various other training and awareness raising activities.

AQIS's Offshore Development Unit is responsible for several other specific schemes, such as the Canadian Accredited Timber Scheme, the Ethylene Oxide Offshore Treatment Providers Scheme and the Gamma Irradiation Offshore Treatment Providers Scheme.

Border activities seek to intercept biosecurity risks that present at airports, seaports, mail centres and along Australia's coastline. Border activities include import permit decisions, inspection of passengers, goods, vessels and mail, audit activities and post-arrival quarantine. AQIS's post-arrival quarantine functions for live animals and plants are managed through government and privately operated facilities throughout Australia (see Box 18). These facilities allow monitoring and management of possible biosecurity risks which may not have been addressed prior to importation.

Finally, in the event that a pest or disease of biosecurity risk passes through Australia's pre-border and border measures or arrives naturally, **post-border** arrangements are designed to reduce the chances that the pest or disease will become established in Australia. Examples of post-border activities include Australia's monitoring and surveillance activities for exotic animal and plant pests and diseases, and emergency preparedness and response. Formal national arrangements exist for managing responses to emergency animal and plant pests and diseases, and food safety issues in aquatic and terrestrial environments. Details on these arrangements are available at www.outbreak.gov.au.

BOX 18 Australia's post-arrival quarantine facilities

AQIS operates four post-arrival animal quarantine stations—Eastern Creek (New South Wales), Spotswood (Victoria), Byford (Western Australia) and Torrens Island (South Australia). Dogs and cats represent the most significant proportion of imported animals at the stations in New South Wales, Victoria and Western Australia. Other animals that may be housed at quarantine stations include bees, horses, birds, hatching eggs and ruminants. Three private quarantine stations are approved to handle specific species. Sandown (Victoria) is approved for horses and there are two private hatching egg facilities (Bartter Enterprises and Ingham's).

Post-arrival quarantine for imported laboratory animals (mice, rats and insects) and zoo animals is conducted in specialised privately owned and operated facilities approved by AQIS.

There are two AQIS operated post-arrival plant quarantine stations—at Eastern Creek (New South Wales) and Knoxfield (Victoria). There are also several state government post-arrival plant quarantine stations—Kingston (Tasmania), South Perth (Western Australia), SARDI (South Australia), Berrimah (North Territory), South Johnston and Eagle Farm (Queensland). These provide post-arrival quarantine disease screening of high risk imported plants and seeds for government and private enterprise under compliance agreements with AQIS.

Increased Quarantine Intervention

The Nairn Report recommended that AQIS use risk-based approaches in determining its border inspection priorities. However, in 2001, mandated border inspection targets were implemented as a reaction to a sense of crisis engendered by the United Kingdom foot and mouth disease outbreak. This initiative is referred to as the Increased Quarantine Intervention. The specific targets associated with the Increased Quarantine Intervention are shown in Table 3. In response to the targets, over 1200 staff were recruited by AQIS over a period of four years, along with investment in an additional 46 detector dog teams and 64 x-ray machines.

These targets were based, at best, on a broad assessment of the biosecurity risk arising from foot and mouth disease. They had no particular regard to other threats, did not embody formal risk analysis and have remained unchanged over the subsequent seven years. The targets include a requirement for 81 per cent of all arriving passengers to have their baggage physically inspected, x-rayed or screened by detector dogs at peak arrival times and 100 per cent at non-peak times, regardless of the country of origin or its pest or disease status.

TABLE 3	Increased Quarantine Intervention and effectiveness targets		
IQI program	**Description of activity**	**Intervention target %**	**Effectiveness target %[a]**
Airports Program - passengers	X-ray or physical inspection of incoming passengers, crew and their baggage, conducted at international airports upon arrival into Australia.	81	Higher risk: 87 Risk: 50
Import Clearance Program - air containers	Physical inspection of the external surface of all air cargo containers, conducted at airports as air containers are unloaded from the aircraft.	100	96
Import Clearance Program - sea containers	Physical inspection of the external surface of all shipping containers performed prior to the sea cargo containers leaving the wharf areas on trucks or trains.	100	96
Import Clearance Program - High Volume Low Value cargo	High Volume Low Value air cargo is carried by a small number of express carriers. Inspection regime involves x-ray examination of cargo items at on-site x-ray facilities at the four major international air courier companies.	100	96
International Mail Program	X-ray or detector dog inspection of mail items at Australia Post mail centres that process arriving international mail.	100	Higher risk: 96 Risk: 50
Seaports Program - vessel inspection	Physical inspection of vessels occurs at proclaimed first port of entry when vessel is docked at close to arrival time as practical.	100	96
Seaports Program - passengers	Inspection regime involves x-ray, physical or detector dog examination at proclaimed first port of entry when vessel is docked.	100	Higher risk: 87 Risk: 50

a 'Higher risk' are those items that, if released, would cause the most serious quarantine consequences. Other items that would cause a significant, but lower quarantine consequence, are classified as 'Risk'.

7.2.2 Monitoring and surveillance activities

Historically, Australia had extensive state government networks for animal and plant pest and disease surveillance. However, over the past two decades there has been a reduction in the extent and scope of these surveillance networks in most states.

Monitoring and surveillance for incursions and possible establishment of pests and diseases enables Australia to direct and scale its response strategies. It also provides for the effectiveness of border and pre-border biosecurity arrangements to be assessed. Pest and disease information also allows Australia to support its claims regarding pest and disease status—which is particularly important given the trend towards a 'known not to occur' rather than a 'not known to occur' assurance. For its part, Australia frequently demands equivalent information from its trading partners, particularly when they claim area freedom from pests and diseases which they wish to see recognised in Australia's import decisions.

Domestic pest and disease surveillance can be separated into active and passive activities. Active surveillance involves deliberate, coordinated searching, diagnosis and reporting of pests and diseases. Passive surveillance involves reporting observations by farmers and/or investigations of pest and disease occurrences by private or government veterinarians or agricultural plant specialists.

A number of active monitoring and surveillance programs are managed and coordinated by Animal Health Australia for diseases such as BSE and to confirm continuing freedom from bovine tuberculosis. In comparison, and with the exception of surveillance for a number of fruit fly species, there are few specific programs for plant pests and diseases. The main active plant surveillance activities are incorporated in the Northern Australia Quarantine Strategy (see Box 19).

BOX 19 Northern Australia Quarantine Strategy

The Australian Government is responsible for the Northern Australia Quarantine Strategy which contains pre-border, border and post-border elements. This program conducts quarantine surveillance activities for plant and animal (but not marine) pests and diseases along Australia's northern zones from Broome to Cairns, including Torres Strait—with a 20km inland limit on the conduct of activities. As part of the program collaborative surveys and quarantine capacity building projects have been conducted in Indonesia, East Timor and Papua New Guinea.

The Northern Australia Quarantine Strategy uses sentinel cattle herds in northern Australia to monitor for a number of important animal diseases, including bluetongue virus, surra and screw-worm fly. The herds have recently been expanded with the establishment of a herd in the Northern Territory, complementing those already present in far north Queensland and northern Western Australia. Sampling the new herd for exotic diseases is due to commence in December 2008 at an Arnhem Land property managed through the Indigenous Pastoral Program. This will help to extend AQIS's engagement with indigenous communities, members of which already provide ranger services to enhance border surveillance for exotic pests and diseases.

The information flowing from Australia's animal disease monitoring programs is collated by Animal Health Australia in the National Animal Health Information System. This information is used to support trade in animal commodities and to meet Australia's international animal health reporting obligations. For plant health, a national database (called the National Plant Surveillance Reporting Tool) has recently been developed and will be used for collecting and recording plant surveillance information.

A new initiative, the Australian Biosecurity Information Network, has been developed to share monitoring and surveillance data between jurisdictions. The benefits are still to be realised and will be dependent on the quality of the data supplied by contributing parties.

7.2.3 Risks to the environment

Environmental biosecurity risks relate to pests and diseases in native and introduced flora and fauna, aquatic pest and disease incursions and invasive weeds. The biosecurity of the environment is a concern not only for the sake of Australia's environmental assets, but also because of the scope for wild animals and plants to act as a reservoir for pests and diseases that have broader effects. Feral pigs are a good illustration (see Box 20).

BOX 20 Feral pigs as reservoirs for pests and diseases

Feral pig populations exist over close to 40 per cent of mainland Australia—mainly large tracts of northern and eastern Australia. There are estimated to be between 4 and 23 million feral pigs in Australia, depending on environmental variables such as drought. They are the second most damaging animal (after rabbits) to Australia's agricultural industries, causing damage of around $106 million to livestock, habitats, fences and water sources each year.

Not only do feral pigs affect other animals, plants and the landscape, they also provide a potential reservoir for at least 20 exotic diseases. For example, pigs are susceptible to foot and mouth disease. If the disease were to arrive in Australia and spread to feral pigs, it would be extremely difficult to eradicate. This is because the feral pig population is largely beyond the reach of disease control measures.

Source: Invasive Animals Cooperative Research Centre 2007

Arrangements for dealing with risks to environmental biosecurity are not as well developed as those for risks to primary production—a fact which led in part to the establishment of AusBIOSEC (see Chapter 2). Other existing arrangements which relate to environmental biosecurity include:

- the Australian Wildlife Health Network, a small organisation established in 2002 to improve the investigation and management of wildlife health;
- the National Weeds Strategy, which includes a list of Weeds of National Significance; and
- the Defeating the Weed Menace Program, which operated for four years up to 2007-08.

Australian governments, aside from the Australian Capital Territory and NSW, signed an intergovernmental agreement in 2005 which establishes arrangements for dealing with risks to the marine environment. The *Intergovernmental Agreement on a National System for the Prevention and Management of Marine Pest Incursions* outlines responsibilities for implementing prevention strategies, emergency management and ongoing management and control of marine pests. Surveillance activities mainly rely on the states implementing targeted programs to an agreed standard in priority locations. The Intergovernmental Agreement is currently being revised with a view to signing in 2009.

The freshwater alga *didymo* is an example of an aquatic pest that has the potential to cause considerable harm to Australia's freshwater waterways (see Box 21).

BOX 21 Didymo: a potential environmental threat

Didymo (*Didymosphenia geminata*), colloquially called 'rock snot', is a freshwater alga that is widespread in the Northern Hemisphere. Although not present in Australia, it is a significant threat as it is highly invasive and considered impossible to eradicate once it infests waterways. A single drop of contaminated water contains sufficient inoculum to enable the pest to spread. The cells attach to rocks and submerged plants, multiplying quickly to form massive blooms, smothering streams and lake beds. These blooms adversely affect water quality, aquatic invertebrates and fish stocks, and are a hazard for hydro-electricity generation, irrigation and recreation.

Once assumed to be solely a Northern Hemisphere pest, it was discovered in New Zealand in 2004. The entire South Island is now considered a controlled area for didymo. It is continuing to cause major concern for fisheries managers and recreational fishers in New Zealand.

Anglers visiting Australia or returning home from a fishing trip overseas must declare and present all used fishing equipment for inspection. Any potentially contaminated fishing or other freshwater equipment (kayaks and wetsuits for example) may be seized and treated by AQIS staff, at the owner's expense.

7.2.4 Human health risks

Mitigating biosecurity risks to human health occurs at each stage of the continuum. The Department of Health and Ageing is responsible for policy development for matters related to human health and biosecurity. Border control measures are implemented by AQIS on behalf of the Department of Health and Ageing under a Memorandum of Understanding between that Department and the Department of Agriculture, Fisheries and Forestry.

The border measures implemented by AQIS focus on identifying people who are likely to have a listed serious disease, preventing the entry of insect vectors of human disease, and managing risks associated with the importation of biological material such as therapeutics, laboratory samples and human remains. Pratique arrangements apply to all aircraft and ships entering Australia. Positive pratique is a measure available to the Director of Human Quarantine if the threat of an exotic human health disease outbreak emerges (as occurred with severe acute respiratory syndrome) or when it is suspected that an airline or commander is failing to meet their automatic pratique responsibilities.

The Department of Health and Ageing and the states jointly determine monitoring and surveillance requirements for exotic human disease and disease vectors and collaborate in preparedness for emergency management of disease outbreaks.

7.2.5 Food safety risks

Controls on imported food are applied across the continuum. Pre-border and border controls are managed by AQIS through the *Imported Food Control Act 1992*. The states are responsible for any imported food controls post-border, through relevant state legislation.

The *Imported Food Control Act 1992* provides for the negotiation of certification arrangements with the competent authorities of countries that export to Australia. Such arrangements are voluntary on the part of the exporting country and are developed only where AQIS is satisfied that appropriate risk management measures are enforced by the competent authority of the exporting country.

The *Imported Food Control Act 1992* provides for an inspection scheme that targets foods differentially according to risk. Risk assessments are conducted by Food Standards Australia New Zealand, with 21 foods classified as 'risk food'. If risk food sourced from a particular foreign supplier consistently complies with food safety standards, border inspections of products from that supplier are reduced. The scheme stipulates that 5 per cent of all other food consignments be randomly sampled for compliance with the Food Standards Code.

The *Trans Tasman Mutual Recognition Act 1997* allows products made or imported into New Zealand that meet New Zealand's requirements also to be sold in Australia, and *vice versa*. Risk foods remain subject to inspection. In this respect the safety of food in Australia depends in part upon the effectiveness of controls implemented by the New Zealand authorities.

7.2.6 Research activities

Research improves Australia's understanding of the science of pests and diseases and assists with developing management strategies (see Box 22).

BOX 22 Research supports good biosecurity outcomes

A new strain of wheat stem rust was detected in Uganda in 1999. Since then it has spread through Kenya and has most recently been detected in Iran. The strain has overcome most existing resistance genes and will likely move around the world. India is particularly vulnerable as it grows limited varieties of wheat, most of which are susceptible to the disease. Recognising this threat, Australia is working with international breeding programs to identify sources of resistance to prevent the crop losses expected in the Far East. Should losses occur as anticipated, India may need to import wheat which could destabilise the international wheat market. Australian scientists have identified resistant genes in Australian varieties and will plan to ensure availability of stocks in case the new strain arrives.

CSIRO, as Australia's national science agency, is active in research and development of biosecurity technologies. CSIRO operates Australia's premier animal health laboratory, the Australian Animal Health Laboratory, in Geelong. The laboratory plays a vital role in animal disease diagnosis, research and policy advice.

No equivalent high security containment facility is available to the plant sector to undertake the full range of research and development into new diagnostic technologies for high risk exotic pests and diseases. There are however, facilities available in Australia, including some state laboratories, suitable for diagnosing most exotic plant pests.

Research on biosecurity aspects of animal and plant health is also supported by a number of Cooperative Research Centres and various academic and private sector research institutions. These Centres have been established to strengthen scientific capacity in priority areas including plant biosecurity and invasive animal species.

7.3 Current debates and views in submissions

7.3.1 Managing risk along the continuum

Concern was expressed to the Panel about how consistently Australia manages risks along the biosecurity continuum. The Panel heard that some risk pathways receive disproportionate levels of resourcing and others too little, with questions asked about whether resources could be used more strategically and effectively by applying risk-return principles. A risk-return approach means considering both the risk posed by alternative pest and disease pathways, and the likely reduction that could be achieved by applying additional resources across the continuum or changing risk management measures.

> 'Previously, there has been a disproportionate emphasis on the prevention of harmful organisms and pests entering Australia and the protection of the border, with insufficient effort directed at post-border activities – to the detriment of the biosecurity system as a whole.' (Animal Health Australia supplementary submission, p. 1)

The view was frequently expressed that biosecurity efforts at the border should be evaluated to ensure that priorities are determined by evidence-based risk assessments. Essentially, this would involve moving away from rigid and arbitrary intervention inspection targets. Box 23 describes the current limitations in more detail from the perspective of the Airports Program.

> 'QEAC has a number of significant concerns about the current deployment of resources at the border and recommends that AQIS to be given the authority to apply resources according to the relative assessment of quarantine risk.' (Quarantine and Exports Advisory Council submission, p. 25)

> 'AQIS's regime of intervention targets [should] be reviewed to determine whether a more focused risk-based inspection system might deliver greater net benefits to Australia.' (Plant Health Australia submission, p. 22)

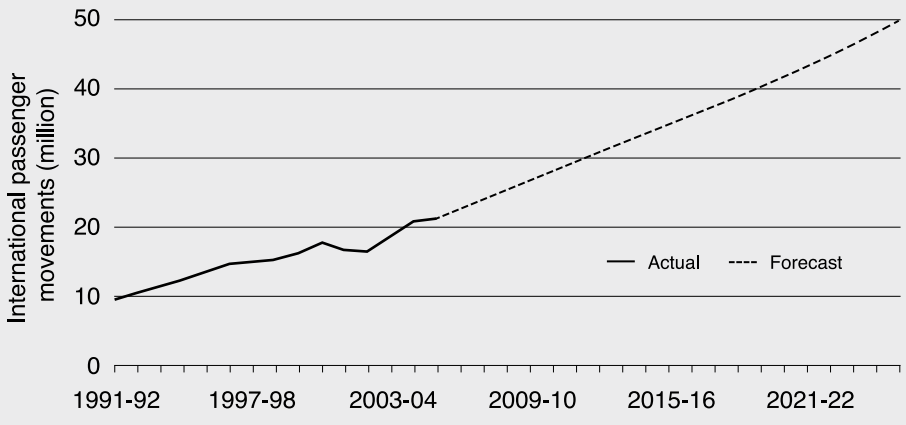
The Panel was provided with examples of how pre- and post-border activities could be changed to improve Australia's biosecurity. For example, more use could be made of offshore auditing of production facilities and pre-export quarantine locations. The off-shore risk-based program used for imported fertiliser is an example of where this already occurs (see Box 24).

Other areas for improvement post-border include animal and plant quarantine, monitoring and surveillance activities for national priority exotic pests and diseases, and planning and preparation for mounting appropriate responses to new detections and incursions.

BOX 24 Risk profiling

AQIS staff work under pressure at Australian airports to clear arriving passengers. The number of arriving international passengers is forecast to rise (Figure 8), meaning that the pressure on AQIS staff will increase if mandated intervention targets and current staffing levels are maintained. Currently, AQIS has little discretion to adjust staffing activity to respond to different levels of risk. More sophisticated risk profiling techniques (such as consideration of passenger's country of embarkation, the time of year, the frequency of visits to Australia and a passenger's compliance record), combined with technology improvements (such as transmission and analysis of pre-flight baggage x-ray images from departure airports) would enable AQIS to better utilise its resources at airports.

Figure 8 International air passenger movements (arriving and departing), all Australian airports



(Source: Bureau of Infrastructure, Transport and Regional Economics 2008)

BOX 25 Risk-based inspection improves biosecurity

Risk-return is used under the current system for fertiliser imports. The fertiliser scheme allows companies to reduce the biosecurity risk of imported fertilisers by implementing supply chain procedures and quality assurance that significantly reduce the risk of contamination. Since the introduction of this scheme in 2004, no fertiliser shipments have required re-export and no consignments have been imported with significant contamination. In 1996, prior to the introduction of the fertiliser scheme, the rate of contamination for fertiliser shipments was 18 per cent. This rate has now dropped to less than 2 per cent.

7.3.2 Dealing with the risks to the environment

A number of submissions pointed out that Australia has a relatively poor knowledge of the biosecurity threats to its natural environment. This is largely a function of the absence of commercial incentives to research and monitor environmental pests and diseases. As a result, the principal responsibility for biosecurity research as it relates to the natural environment lies with governments and the community. These activities have not received a high priority for funding. Unlike incursions that impact on primary production, where active engagement by business is motivated by self-protection, the effort required to respond to an incursion affecting the environment must be provided primarily by governments.

> 'The quarantine and biosecurity framework may not be adequate to analyse and manage risks to the environment. There are a lot of risks to environment and wildlife which are not fully understood or taken into account. There is a lack of research in this area.' (Australian Maritime College submission, p. 6)

> '… we lack national capacity to respond to pathogen and invertebrate threats to environmental biosecurity … a holistic approach covering all biosecurity threat types and both industry and environmental sectors developed through regular reviews of risk prioritisation …will be required. Research and development relevant to urban and environmental risks, as identified under AusBIOSEC, are unlikely to attract industry support.' (CSIRO submission, p. 16)

A tragic and salient reminder of Australia's vulnerability to pest and disease interactions with the natural environment occurred during the course of the Panel's Review. Hendra virus is understood to have crossed from fruit bats to a number of domestic horses before again crossing the species barrier to infect staff at a Brisbane veterinary clinic, where it killed one of the clinic's vets in August 2008. There are similar concerns that highly pathogenic avian influenza could affect Australia's native bird population and then transfer to domestic poultry and ultimately to humans. Efforts to understand these zoonotic risks and plan appropriate responses are not well resourced.

> 'In a global environment where approximately 60% of all human pathogens are zoonotic, 75% of emerging and re-emerging human diseases in the past 30 years have been zoonotic, and most of the emerging diseases over the past 10 years have originated in wildlife, there has never been more interest in wildlife health … Historically, wildlife and invasive species health surveillance in Australia has fallen into gaps between agriculture, conservation and human health agencies ... We lack an integrated policy approach, along with operational tools, and critical

> resources for nationally coordinated wildlife health surveillance, risk assessment, education, communication and research.' (Australian Registry of Wildlife Health submission attachment, p. 1)

The need for improved surveillance in this area was noted.

> 'The [Australian Wildlife Health Network] provides an effective surveillance framework for Australia for diseases with feral animals and native wildlife as part of their ecology that may impact on human and animal health, trade and biodiversity. However, it urgently needs support in both personnel and resources to make the services it provides both systematic and comprehensive for the nation.' (Australian Wildlife Health Network submission, p. 3)

In addition to concerns about biosecurity affecting the terrestrial environment, a number of submissions expressed concern about the management of aquatic biosecurity issues. There have been fewer controls and less understanding of risks to Australia's aquatic environment and associated businesses.

Submissions raised concern about the potential for pests and diseases to be transferred as a result of wildcatch fishing and aquaculture operations. The practice of flushing water tanks used to move live fish was raised as a potential risk, as was the transfer of pests and disease through fish stock movement, equipment and feeding practices (for example, feeding imported pilchards to tuna).

Concern was also expressed about the management of risk associated with ornamental fish and aquarium plants. There have been significant infestations of *Caulerpa taxiflora* in coastal lake systems arising from the inadvertent release of these organisms into the wild. The Panel was also alerted to the risk posed by the trade in 'live rocks' (artificial or natural rocks on which coral is grown) for the aquarium trade, which may introduce exotic species if unsafely discarded. Many of these invasive species, if established, could have dire consequences for aquatic environments.

Monitoring and surveillance to detect aquatic incursions early is more difficult than for terrestrial incursions. Response strategies, once an incursion has occurred, are similarly less likely to succeed than in the terrestrial environment. Some, including the Australian Shipowners Association, argued that as a result, more proactive vector management was needed to address the risks associated with exotic marine species. There was a consistent call in submissions for Australian Government leadership to address these issues.

> 'ASA considers that AQIS needs to assume a primary responsibility in, not only pre-border and border management of marine biosecurity, but

also in the post-border, uniform implementation of domestic measures to manage the risks associated with translocation of established, but not yet widespread, invasive marine pest species within Australian marine waters.' (Australian Shipowners Association submission, p. 2)

7.3.3 Human health

The Panel received little information to indicate problems with AQIS's administration of human health biosecurity. Qantas did raise an issue in relation to the change to positive pratique during the severe acute respiratory syndrome outbreak of 2002-03. Under that arrangement, airline commanders were required to provide a report of the health status of the passengers and crew rather than receiving the normal automatic access to the airport.

> 'This form of pratique is known as "Pratique by exception" but it was replaced by "Positive Pratique" during the SARS outbreak – that is, all aircraft report the status of all passengers and crew prior to arrival. The FLUBORDERPLAN provides for the introduction of Positive Pratique should the need arise. Qantas strongly supports the decision to implement a report by exception regime.' (Qantas submission, p. 3)

The Department of Health and Ageing supports the report by exception regime but argued that, in circumstances of an elevated international public health threat, measures such as a move to positive pratique were vital in reducing the threat to the Australian public.

7.3.4 Information to support risk management

A number of submissions highlighted the need for Australia to improve its pre-border pest and disease intelligence networks to increase awareness of emerging biosecurity threats. Submissions noted the traditional reliance on the international animal and plant health organisations for this information but suggested that due to increased trade and the potential rapid spread of major pests and diseases, more reliable information should be collected from other sources. Some submissions suggested that this could be achieved by building stronger links with neighbouring countries and major trading partners to share biosecurity information.

> 'The balance between being pro-active (new thinking about preparedness) and reactive (managing an outbreak) requires readjusting. More development and reliance on pre-border intelligence will be required …' (Australian Institute of Agricultural Science and Technology submission, p. 1)

> ‘Australia should show greater international leadership in forging a cooperative approach to biosecurity amongst major trading partners and regional neighbours.’ (CSIRO submission, p. 12)

Collection of biosecurity risk information at the border also received considerable comment—particularly around the availability of information relating to quarantine detections in imported material. Submitters argued that more effort should be made to diagnose organisms in intercepted material, with that information used to inform Import Risk Analyses and associated risk management measures. For example, Horticulture Australia Limited stated that:

> ‘Information regarding barrier interceptions is not routinely available and if provided often does not contain sufficient detail to determine if the intercepted organism is of quarantine concern ... This lack of information at the barrier makes it extremely difficult to determine if the initial risk analysis and subsequent import conditions are appropriate.’ (Horticulture Australia Limited submission, p. 12)

Plant Health Australia argued that the information should not only be collected, but should be more widely available.

> ‘PHA understands that while interception data is still collected it is not widely available, is not uniformly recorded and often predicated on visual diagnosis only, a procedure which may not be appropriate for the detection of all pests.’ (Plant Health Australia submission, p. 15)

Collection of information through post-border monitoring and surveillance programs was also advocated to enable early detection and assessment of pests and diseases. The argument was that early detection would increase the chance of control and eradication. CSIRO compared the cost of red imported fire ant and European house borer outbreaks—which were widespread by the time a response occurred—with the costs of an electric ant outbreak, which was quickly identified.

> ‘A lack of timely detection and rapid response mechanisms can result in considerable costs once an invasive species if found. For example, eradication and/or containment has cost Australia more than $123m on fire ants and $9m on European House Borer both which were widespread by the time a response was coordinated. Once tramp ant control mechanisms and awareness was raised, the outbreak of electric ants in Cairns required only $2m.’ (CSIRO submission, p. 11)

Similar case studies are provided in Box 25.

BOX 25 A small preventative effort spares a large incursion cost

To avoid a repeat of the incursion of papaya fruit fly in Cairns, and Philippines fruit fly in Darwin, the Torres Strait fruit fly trapping and response program was initiated. The program aims to detect seasonal incursions of fruit fly, allowing early responses to eradicate flies found on the islands of the Strait. A small investment ($200,000) each year has prevented expensive response actions ($35 million and $7 million respectively).

An outbreak of grapevine leaf rust in 2001 in Darwin cost approximately $2.5 million over 4 years to eradicate. Surveillance for the disease is now included in the Northern Australia Quarantine Strategy. Offshore changes in distribution are monitored and mitigation action taken as appropriate to prevent establishment on the mainland. Preventing large scale infestation and avoiding a response saves money.

Submissions also linked surveillance programs with Australia's ability to substantiate claims of pest and disease status as an exporter. For example, the Panel was advised that surveillance information collected in Western Australia enabled Australia to establish its freedom from Karnal bunt disease of wheat in 2003 following allegations of its presence in Australian wheat exports by Pakistan. As a result, the impact on Australia's other wheat markets was limited and temporary. In spite of these successes, the scepticism and scrutiny of Australia's claimed disease status—and its capacity to demonstrate it—that can now be expected is clearly illustrated in the European Commission submission to the Panel.

> 'Despite claims of being disease free, there are often questions over the veracity of these claims, particularly, over whether the Australian surveillance systems are capable of discovering all relevant pests or diseases on the premise that if you do not look for it, you are unlikely to find it.' (European Commission submission, p.10)

One particular surveillance program that received extensive comment was the National Sentinel Hive Program. This Program aims to detect foreign bees and the pests and diseases they can carry. Submissions that referred to the National Sentinel Hive Program unanimously supported its continuation if not enhancement, particularly because of the significant risks that honeybee disease would pose for those industries that rely on honeybee pollination services (see Box 26).

The House of Representatives Primary Industries and Resources Committee recently released a report *More Than Honey: the future of the Australian honey bee and pollination industries* (2008). This report described challenges facing the honeybee and related pollination industry in Australia and in particular the

BOX 26 Examples of support for honeybee monitoring and surveillance

'Due to this widespread reliance on honeybees for pollination, an incursion into Australia of a serious pest or disease affecting honeybees, such as *Varroa destructor*, will have a devastating impact with an estimated total impact of $3.7 billion.' (Australian Almonds submission, p. 1)

'The industries most at risk are those that have critical reliance on honeybee pollination, including almonds, apples and pears, avocadoes, melons, dried prunes and much of the summerfruit and vegetable industries.' (Pollination Australia submission, p. 1)

'The prime purpose of the National Sentinel Hive Program is early detection of a pest incursion, targeting the relevant border vicinity. This role is consistent with current post-border functions within AQIS, to wit, under the Northern Australia Quarantine Strategy (NAQS) "to develop and implement measures for the early detection of targeted pests and diseases."' (Pat Boland submission, p. 3)

'The Boland review of the National Sentinel Hive Program should be updated to take account of current risks and should include a recommendation on the case for including "baited" hives at some or all locations. On the basis of this review the National Sentinel Hive Program should be revised to reflect the recommendations of the updated Boland review.' (Australian Honeybee Industry Council submission, p. 3)

risk of the inadvertent importation of the highly destructive varroa mite that has had a devastating impact on populations of farmed and feral European honeybees when it has entered a new country. The Minister for Agriculture, Fisheries and Forestry formally referred this report to the Panel and asked that consideration be given to its biosecurity recommendations, in particular, the future of the National Sentinel Hive Program.

7.3.5 Information sharing

Numerous submissions indicated concern about the willingness of Australian Government agencies to share biosecurity information. The Quarantine and Exports Advisory Council raised the issue and suggested that a defensive approach had arisen in part because shared biosecurity information can be used to find fault with the system rather than to promote improved risk management.

> 'It has also resulted from an adversarial approach taken by State/Territory agencies, where data is sought more to find fault with the AQIS system rather than as a partnership approach to risk mitigation along the risk pathway.' (Quarantine and Exports Advisory Council submission, p.18)

The importance of sharing border information was particularly highlighted, with Plant Health Australia and others linking such information to detection of new and emerging pests and diseases and evaluating the biosecurity system.

> 'Up until 2003, detection information at the species level was available through the Pest and Disease Interception (PDI) database operated by AQIS. Since then, there has been a winding back of resourcing for routine confirmatory diagnostic work which is undermining the effectiveness of PRA processes and reducing capability to detect new and emerging pest species and strains.' (Plant Health Australia submission, p. 15)

A number of submissions noted the potential value of the Australian Biosecurity Information Network in promoting information sharing across the continuum. The importance of AQIS and Biosecurity Australia involvement in the initiative was emphasised by some submitters.

> '… the development of the Australian Biosecurity Intelligence Network (ABIN) is underway. It is proposed that ABIN will enable a virtual community of those involved in all sectors of biosecurity research / preparedness / surveillance / response and enable access to shared expertise, linked data sets and improved communication.' (Horticulture Australia Limited submission, p. 14)

> '… the Australian Biosecurity Intelligence Network (ABIN) project … will provide a workspace (both physical and virtual) where data and information can be shared across organisations, jurisdictions and sectors to support the delivery of improved biosecurity outcomes in Australia. Data and expertise held by AQIS and BA would be invaluable to this project and contribute directly to many of the proof-of-concept projects.' (Growcom submission, p. 23)

7.3.6 Information technology systems

As discussed earlier, the Panel heard about a lack of critical analysis of border information and limited feedback loops into risk management policy and measures. These activities are not only limited by available data, but by the systems needed to undertake proper risk analysis. The Quarantine and Exports Advisory Council identified AQIS information technology systems as a major obstacle to implementing comprehensive risk profiling and reporting, and argued for a comprehensive modernisation process to address this shortcoming.

> '... there is an urgent, critical need for the modernisation of AQIS's Information Technology systems. Other Commonwealth service delivery agencies, including Customs, Centrelink, the Australian Taxation Office and the Department of Immigration and Citizenship have been funded by Government for the modernisation of their IT systems in very recent years. The need for a significant capital injection for AQIS for this purpose is now overdue.' (Quarantine and Exports Advisory Council submission, p. 4)

Other submissions included similar comments.

> 'The [Customs Brokers and Forwarders Council of Australia] suggests a fully Government funded IT initiative be provided to address the upgrade of the current AQIS IT systems and the interconnectivity with the ICS and industry systems.' (Customs Brokers and Forwarders Council of Australia submission, p. 12)

> 'AQIS IT systems, which are old, do not facilitate the collection and analysis of data that would be required to direct operations with a risk focus.' (Food and Beverage Importers Association submission, p. 6)

The Panel was advised that investment in AQIS's information technology systems compared poorly with analogous Commonwealth service agencies. Investment in information technology averages around 4 per cent of total AQIS expenditure and has not had significant renewal since the AQIS Export Documentation system, implemented in 1992. A number of business clients have more technically advanced systems and complained of the amount of paperwork that AQIS still requires, rather than electronic data interchange, and the constraints that the current AQIS systems place on business effectiveness. The Panel was provided with a number of examples where AQIS could make greater use of technology to improve risk management and, at the same time, reduce costs to businesses and customers.

> 'Shipping lines are progressively introducing Electronic Import Delivery Orders and an issue has arisen in identifying electronically coastal shipping containers that would not have to be inspected for possible external contamination. AQIS is presently unable to accommodate that request from an IT perspective …' (Shipping Australia Limited submission, p. 7)

> '… existing Cargo Management processes are, in the CBFCA's opinion, neither efficient or necessarily effective and rely heavily on face to face interaction by industry with AQIS front counter staff in documentary assessment.' (Customs Brokers and Forwarders Council of Australia submission, p. 7)

The Panel was told that Australia's biosecurity system could be enhanced if an electronic import certification system was developed to provide advanced notice of goods being imported to enable more rigorous risk assessment. This system would effectively be an import counterpart of E-cert (Australia's export certification system) which allows trading partners to conduct better risk profiling of goods coming from Australia.

The AQIS Import Conditions database (generally known as 'ICON') was recognised as an extensive resource for importers on the conditions against which they must comply. However, the Panel received comment that it is cumbersome in comparison to Australian Customs Service systems which have benefited from recent investment and renewal.

The Panel is aware that AQIS recently commissioned a review of its information technology systems, which is intended to be a precursor to a major redevelopment.

7.3.7 Skills shortages

Numerous submissions highlighted the difficulties in attracting and retaining staff with the skills needed to support effective biosecurity risk management. As is the case in several other fields, the Panel heard that many skilled staff are approaching retirement in the next few years, with a shortage of new people entering important fields such as diagnostics, taxonomy, epidemiology and entomology. The impact of this trend on Australia's ability to deal with a significant emergency disease outbreak was highlighted.

> 'There is a shortage of people with appropriate quarantine and biosecurity skills. Significant numbers of quarantine and biosecurity experts have left the system or are nearing retirement and students coming out of university do not have the broad based experience to meet the immediate needs of peak industry bodies, government departments, research centres and university teaching and research positions.' (Horticulture Australia Limited submission, p. 22)

> 'Australia is facing declining capability in biosecurity expertise diagnostics and the underpinning research. There is a major shortage of skilled young talent coming into the field, and declining opportunities for those who do.' (CSIRO submission, p. 14)

Increased training was identified as one way of addressing skills shortages. CSIRO's submission identified some existing training initiatives, but noted that training was not the whole solution and recommended that Australia develop a national strategy to overcome the shortage of skilled diagnosticians.

> 'The National Plant Biosecurity CRC (NPBCRC) and the Invasive Animal CRC are trying to address the training crisis through education programs, with courses at a number of levels … However, offering training is only part of the solution. Attractive positions for graduates must be made available within the jurisdictions.' (CSIRO submission, p. 15)

Similar strategic approaches were recommended by other submitters, such as Plant Health Australia.

> ‘That a national biosecurity succession, training and resourcing plan be developed and agreed by governments and industry to ensure Australia has the essential skills and personnel to effectively meet commitments under the Emergency Plant Pest Response Deed and National Plant Health Strategy.’ (Plant Health Australia submission, p. 33)

Several submissions also observed that the Increased Quarantine Intervention program with its mandatory intervention rates had diminished the need, and as a result, capability of AQIS staff to evaluate risk.

7.3.8 Research needs

The Panel heard a range of views regarding the coordination of national priorities and strategies for biosecurity research to support risk management. In some cases, AusBIOSEC was noted as an initiative that would promote coordination and cooperation, particularly in relation to environmental biosecurity.

> ‘Support the adoption and promulgation of AusBIOSEC research priorities to increase the strategic alignment and impact of the national biosecurity research effort on environmental biosecurity.’ (CSIRO submission, p. 19)

Other groups suggested there was no consistent arrangement for prioritising and coordinating biosecurity research at the national level, and argued that a mechanism should be established for this to occur.

> ‘There is a need for a national strategic R&D plan for quarantine and biosecurity, which needs to be implemented within an overarching R&D management framework.’ (South Australian Government submission, p. 11)

> ‘At present there appears to be no identifiable resource or process for establishing research priorities for quarantine and biosecurity within DAFF ...’ (Quarantine and Exports Advisory Council submission, p. 33)

Issues were also raised in relation to facilities for biosecurity research. The Panel was told that there are a number of standards that need to be met before quarantine facilities (for animal and plant research laboratories) can be approved. CSIRO indicated that the ability to gain accreditation for research facilities had become problematic, citing as an example, a facility in Perth that has been constructed but remains unused partly due to the complex nature of the approval and accreditation process (CSIRO submission, p.13).

Access to research material was also raised, particularly in relation to exotic pathogens of concern to the community. Submitters such as Horticulture Australia Limited pointed to the need for protocols for handling samples for research, but argued that the ability to develop and validate these protocols was limited by the restrictions on importation and distribution of these materials.

> 'However, the ability to develop and validate these protocols faces difficulties with current importation and distribution restrictions of positive and negative controls of plant-related microbial isolates and strains in place.' (Horticulture Australia Limited submission, p. 23)

Access to plant facilities with a suitable level of containment to handle such material was also raised.

> '… if research is to be conducted on an exotic plant pest there is no current facility that is suitable and would provide the required level of containment. Cost limitations in building and operating such facilities for research would suggest that consideration should be given to undertaking such research off shore in countries where the pest is endemic and there is no need to contain.' (Cooperative Research Centre for National Plant Biosecurity submission, p. 11).

Support was also provided for greater investment in research into technologies to assist biosecurity risk management. There have been significant advances in the tools used to detect, prevent, analyse and eliminate pests and diseases. Risk management policies as reflected in import conditions need to be modified to take into account technological changes.

> 'Australia's quarantine and biosecurity agencies … need to reassess constantly the shifting nature of the risks being faced and improvement in the tools at our disposal to combat these risks.' (Quarantine and Exports Advisory Council submission, p. 2)

7.3.9 Post-arrival quarantine stations

The Panel received a number of views about Commonwealth-run post-arrival quarantine stations. The operation of the stations, and in particular the Eastern Creek Quarantine Station near Sydney, was scrutinised by Commissioner Callinan in his Report into the outbreak of equine influenza. In addition, the Panel received views on aspects of quarantine facilities operated by state governments, along with privately-operated quarantine stations and Quarantine Approved Premises. Views covered the Commonwealth's security of tenure and ownership of its facilities, cost recovery and resourcing arrangements, the appropriateness of privatised or outsourced facilities, auditing arrangements and the relationship of the Commonwealth's facilities to those operated either

privately or by state governments. Each has, to a greater or lesser degree, a bearing on the way Australia manages biosecurity risks associated with imported plants and animals.

One general theme was that AQIS needs to provide clear policy and management of post-arrival quarantine stations. The Panel notes that these establishments represent a significant investment, handle a range of plants, animals and associated risk materials, and are an important biosecurity control measure to prevent the introduction of quarantinable pests and diseases.

Facilities for post-arrival quarantine of plants received particular attention in several submissions, with concern expressed about the future status of the two Australian Government-owned and operated facilities.

> 'Currently the Australian Government operates two high-health post-entry quarantine facilities at Eastern Creek in Sydney and Knoxfield, in Melbourne. PHA is aware that the leases on these two facilities are coming to an end and that they will not be renewed. There is a need within Australia for facilities that can house high risk nursery stock as the risk posed by nursery stock is far greater than for produce.' (Plant Health Australia submission, p. 15)

> '… the Commonwealth and states should actively cooperate to ensure an efficient and effective network of post-entry plant quarantine facilities for Australia.' (Peter Lawrence and David Spence submission, p. 5)

7.3.10 Export certification

The Panel heard concerns from state food inspection agencies about the export certification standards required by AQIS. These agencies questioned the implementation of aspects of the review of the *Export Control Act 1982*, conducted in 2000, which recommended that domestic standards should form the first tier of export standards (Frawley *et al* 2000). The NSW Food Authority stated:

> '[N]on recognition of the domestic system has resulted in Australian food businesses having to comply with stringent export requirements which are generally the EU or US importing standards. This standard even applies to businesses wishing to export to countries that have food safety standards below the Australian domestic system. More effort is required by AQIS to promote and support the Australian domestic regulatory system to export customers with a need to shift the regulatory focus from the "product" to the overall system.' (NSW Food Authority submission, p. 3)

Some commodity sectors, most notably the dairy sector, supported this line of argument.

> 'Australian industries are concerned Australia's highly safe food standards be recognised and accepted worldwide for food exports. The Australian Standards should be promoted as the platform for export of highly safe Australian food internationally.' (Australian Dairy Industry Council and Dairy Australia submission, p. 25)

Conversely, some meat export businesses argued that allowing exports from businesses that only meet domestic standards would be retrograde.

> 'Some 8 years ago it became government policy to permit meat exports from "domestic" plants where a market was willing to accept this standard. The standard is the Australian Standard which relies on company controlled meat inspectors without the presence of a government veterinarian. On the face of it, it is an unsatisfactory system which has resulted in market failure ...' (Fletcher International Exports submission, p. 2)

The reasons given in the Fletcher International Exports submission included non-uniform application by state authorities of the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696: 2007), and anecdotal reports that AQIS staff are uncomfortable about the variable level of hygiene in domestic plants.

The Panel also heard from the live animal export industry that while some improvements were needed to improve the export regulatory system, the (Commonwealth) government should continue to provide oversight.

> '… the industry is firm in its resolve that the Government should continue to play a key role in the export of livestock. While the industry desires to move to a more co-regulatory approach in the future, current arrangements provide valuable assurance to exporters and customers alike.' (Australian Livestock Exporters' Council submission, p. 3)

7.4 Panel's consideration

7.4.1 Balance of activities—managed risk

The international movement of people and goods will continue to grow, increasing the associated biosecurity risks. Enabling this increased movement of people, live animals and plants, genetic material, animal and plant products, activities and services to and from Australia to occur safely will significantly increase the biosecurity risk management task. This makes it even more important that Australia is clever in the way it develops risk management strategies and deploys inevitably scarce resources.

The Panel envisages a biosecurity system where activities along the continuum are conducted on the basis of risk-return assessments. Strategies and resources must be targeted at those areas that will produce the greatest reduction in the probability and consequence of an outbreak or incursion of an exotic pest or disease, for the least cost to the community. Prevention or early detection significantly reduces the probability and costs of pest or disease outbreaks. Knowing where to apply resources using an evidence-based risk approach should provide considerable savings for the Australian economy.

Depending on the pest or disease, the cost savings from promptly and appropriately responding to an incursion can be large. In 2002, the Productivity Commission modelled the impact of different scenarios of an outbreak of foot and mouth disease in Australia. In a hypothetical scenario where a small single point outbreak of foot and mouth disease took three months to control and eliminate, the losses to the national economy were estimated to be around $2 billion to $3 billion. However, in a scenario where a multi-state outbreak took 12 months to control, the losses to the economy rose to $8 billion to $13 billion. From this research, it is clear that effective investment in post-border surveillance and emergency response arrangements can yield substantial benefits in terms of the avoidance of even larger economic losses (Productivity Commission 2002).

The inspection regimes for sea (shipping) cargo containers and air canisters (air cargo containers) mandated under Increased Quarantine Intervention illustrate the current mismatch between biosecurity risk and effort. At present, AQIS is required to physically inspect 100 per cent of the outside of sea cargo containers and air canisters. While inspection of sea cargo containers appears to address some potential risk—for example, in 2005-06, 23 per cent of sea containers were found to have some actionable contamination (Ernst & Young 2007)—only a tiny proportion of air canisters have presented a biosecurity concern. While some of those air canister finds could be significant, it is quite likely that the resources involved, applied elsewhere (including through an enhanced post-border surveillance program at and near ports), would have a higher pay-off in terms of management of risk.

The mandated targets also fail to address what is already known to be a risk area—that is the consignments carried in sea cargo containers. At the moment, AQIS inspects or treats around 12 per cent of sea cargo consignments, yet AQIS surveys indicate that approximately 8 per cent of the consignments cleared on the basis of documentation alone (in other words, not inspected) were found to have a quarantine issue. It is thought that the vast majority of pests and diseases that have entered Australia are likely to have arrived inside containers or in timber shipments.

Increased Quarantine Intervention targets have not been modified since their introduction seven years ago, in spite of accumulating evidence that not all the pathways are high risk. In its review of Increased Quarantine Intervention activities in July 2004, the Quarantine and Exports Advisory Council noted that biosecurity needed to be more automated, conducted offshore and be more selective or targeted using the best and most recognised global risk management principles (Quarantine and Exports Advisory Council 2004). The Panel agrees with this conclusion.

On that basis, the Panel recommends that the government should move away from the current mandated target approach and instead adopt a comprehensive risk-return approach to deciding where to direct resources across the continuum. The Panel's expectation is that consistent analysis of this type would find that more resources should be directed toward pre- and post-border activities, and that resources at the border should be focused on higher risk pathways.

The transition to a risk-return approach will take some time, as much of the data and analysis on which crucial decisions depend do not yet exist. In addition, it will require the development of an analytical framework for assessing risk. Ironically, reliance on mandated intervention rates has reduced the incentive and competence of AQIS to collect the relevant data and systematically analyse it. While adjustment of strategies and resources on a risk-return basis should happen continuously, the Panel sees merit in a comprehensive review of resource allocation against risk-return profiles every five years. The initial resourcing implications of this change are discussed in Chapter 9.

Australia's approach to managing the risks for the entry of pests and diseases recognises that these can come from many different sources. One important potential source is agri-terrorism, that is, the deliberate use of harmful agents, including biological, chemical or radiological agents, to damage animal or plant health or the food supply. Australia uses an 'all-hazards' approach to managing biosecurity threats which means the same prevention and response principles are used no matter the pest or disease and host or target, or whether the event is deliberate, accidental or natural. The Panel considers that the National Biosecurity Authority should continue to work collaboratively with relevant portfolios, including the police and intelligence agencies, on these issues. These potential biosecurity threats highlight the need for well developed pest and disease emergency preparedness plans.

To help focus attention on the most potentially serious risks, the Panel recommends that the National Biosecurity Authority should develop a national priority list of exotic pests and diseases and, as far as practical, align its

monitoring and surveillance systems with the list. Animal Health Australia and Plant Health Australia can assist in the development of the priority list, which should also include pests and diseases affecting terrestrial or aquatic environments.

Recommendations

44 The balance and level of biosecurity resources across the continuum should be determined by a consistent analysis of risks and returns across programs. The level and allocation of resources should be comprehensively reviewed against risk-return profiles at least every five years.

45 The National Biosecurity Authority, in consultation with relevant stakeholders and the Biosecurity Advisory Council, should develop a list of national priority exotic pests and diseases, with their respective pathways, on the basis of the likelihood of incursion and the consequences for businesses, human health and the environment. This list should be used to prioritise the review and development of comprehensive biosecurity risk management plans across the biosecurity continuum.

7.4.2 Risks to the environment and human health

Adoption of risk-return principles across the continuum should extend to the environment as well as agricultural production. For the National Biosecurity Authority to undertake this effectively, it will need staff with expertise in environmentally significant terrestrial and aquatic pests and diseases.

In relation to human health, the Panel notes that the current memorandum of understanding between the Department of Health and Ageing and the Department of Agriculture, Fisheries and Forestry could more clearly set out the roles and responsibilities with respect to human health risks at the border. The Department of Health and Ageing should provide clear operational guidelines and requirements to the National Biosecurity Authority. The memorandum of understanding should also set out procedures for validating health biosecurity measures, training and competency of inspection staff, resources, data collection, reporting and communication. The Authority's performance against these requirements should fall within the audit role of the Inspector General of Biosecurity (see Chapter 8).

The Panel has also recommended a memorandum of understanding between the National Biosecurity Commission and the Department of Health and Ageing in relation to human health elements of Biosecurity Import Risk Analyses (see Chapter 5).

Recommendation

46 A new memorandum of understanding should be developed between the Department of Health and Ageing and the National Biosecurity Authority on delivery of human biosecurity services at the border, including clear operational guidelines for the Authority and procedures for validating health biosecurity measures, training and competency of inspection staff, resources, data collection, reporting and communication.

7.4.3 Food safety risks

Risk-return principles should also be applied to imported foods. The Panel recommends that the current performance-based approach to border sampling and analysis arrangements be continued. In addition, the National Biosecurity Authority needs to have the capacity to accredit and audit food supply chain safety systems of importers including their product providers. The National Biosecurity Authority should be empowered to require, as a condition of entry to the Australian market, that importers provide certification by the exporting country's competent government authorities that Australian food safety standards are met.

The Panel considers that, providing food safety management systems meet Australian standards, importing food businesses could be regulated by the National Biosecurity Authority through compliance agreements. These arrangements should be analogous to those under the *Quarantine Act 1908* and should provide for a power of audit, inspection, suspension or removal of approvals, and penalties where appropriate for breaches of the compliance agreement. There should be consultation with state food safety authorities to ensure mutual recognition and avoid duplication.

As noted earlier, the Panel is concerned that Australia's imported food legislation does not empower Australia to require competent authority certification of imported foods from the exporting country. This is particularly an issue where safety can only be assured by the application of food safety management systems during production and processing. As with certification processes under the *Quarantine Act 1908*, the Australian authorities should reserve the right to review and accredit, and subsequently audit, these certification arrangements (see Chapter 8).

Further cooperation with New Zealand in harmonising measures for imported food control is desirable. This is particularly relevant given that the *Trans Tasman Mutual Recognition Arrangement* facilitates free trade between Australia and New Zealand.

Recommendations

47 The Authority should enter into compliance agreements to recognise formally the food safety management systems of importing businesses. These arrangements should provide for a power of audit, inspection, suspension or removal of approvals, and penalties where appropriate for breaches.

48 The National Biosecurity Authority should be empowered to require in specific circumstances, as a condition of entry to the Australian market, that importers provide certification by the exporting country's competent government authorities that Australian food safety standards are met.

7.4.4 Strategic intelligence to underpin risk-return

Australia can only know which risk pathways and commodities are most threatening if it has collected and analysed relevant information. Good strategic intelligence on the animal and plant pest and disease status of neighbouring countries and trading partners is vital. This information ensures that biosecurity agencies can respond appropriately, including possibly modifying import requirements.

For example, information on the distribution or prevalence of a pest or disease within the territory of a trading partner allows Australia to substantiate claims of regional disease freedom and ensure biosecurity arrangements remain appropriate for products imported from areas (regionalisation) or businesses (compartmentalisation) claimed to be disease-free. This practice benefits Australia and its trading partners by allowing trade to continue while also managing biosecurity risks.

Traditional information collection methods rely on data from international organisations such as the OIE and International Plant Protection Convention. While these processes are useful, the Panel heard that this information should not be the only intelligence source in a modern, timely biosecurity system. Instead, Australia should be investing in a proactive intelligence gathering service—using essentially open source material—to improve risk management decision making.

The Panel considers that Australia should be cooperating more closely with major trading partners and neighbouring countries to share pest and disease intelligence. This information could be obtained by strengthening data sharing programs such as:

- the Biosecurity Consultative Group on Biosecurity Cooperation—Australia and New Zealand;

- the 'Quads'—Quadrilateral Animal and Plant Health Groups—Australia, Canada, United States and New Zealand;
- the Northern Australia Quarantine Strategy—with Indonesia, Papua New Guinea and East Timor;
- the Australian Fumigation Accreditation Scheme—in Indonesia, Malaysia, Thailand and India, and planned for the Philippines, Papua New Guinea and China;
- capacity building programs through AusAID—predominantly in Asia and the Pacific; and
- greater utilisation of overseas agricultural counsellors.

The information from these initiatives should be provided to a pre-border intelligence gathering unit in the National Biosecurity Authority. This unit would create collaborative links with similar units overseas, such as the team in the United Kingdom's Department for Environment, Food and Rural Affairs. The unit should analyse international scientific literature, agriculture and food industry publications and media to find relevant information on exotic animal and plant pests and diseases and outbreaks.

When data is generated from intelligence gathering and analysis activities, it should, wherever consistent with the *Privacy Act 1988*, and where appropriate, be shared freely between jurisdictions in Australia and abroad, and with business groups and the research community (see Section 7.4.7).

Recommendations

49 The National Biosecurity Authority should work with other countries and the states and territories to share pest and disease intelligence and consider working together with trading partner countries on issues such as regionalisation and compartmentalisation assessments and systems assurance.

50 The National Biosecurity Authority should establish an intelligence gathering and assessments group to monitor animal and plant pest and disease status internationally, with a particular focus on the region and our trading partners.

7.4.5 Border surveillance to underpin risk management

The Panel has found that the information collected on biosecurity risk material at the border is either incomplete or not in a suitable form to support systematic analysis. One reason is that quarantineable items found in interceptions at the border are not necessarily analysed. When goods are rejected on the suspicion

of a pest or disease, or on the basis of not meeting the import requirements, the specific pest or disease is not usually identified because the importer is given the choice to treat the item (for example, fumigate), have it re-exported or destroyed. Usually the least cost alternative is chosen, which seldom allows the identification of the biosecurity concern.

To support an evidence-based risk-return approach, the National Biosecurity Authority should have the capacity to ensure that a proportion of interceptions are pursued through to diagnosis at public expense. Data from interceptions and diagnosis need to be collected in a way that informs future risk profiling and modification of import conditions if appropriate. The information should also be shared with the states and, as appropriate, with businesses and others involved in the import chain.

Recommendations

51 To improve the management of biosecurity risks, a sample sufficient to identify risks and risk pathways should be collected and analysed from cases where imported goods have been rejected because of suspicion of an exotic pest or disease. This should be done at the public expense.

52 The National Biosecurity Authority should undertake a continuing program of analysis of risk pathways using data collected from pre-border intelligence and border inspections at control points along the continuum. The results of this analysis should be used to update risk management strategies and measures.

7.4.6 Comprehensive post-border monitoring and surveillance

The Panel believes that there is a strong case for a substantially greater effort to assist in detecting and managing post-border risks. As outlined in Chapter 2, the Panel is recommending that the Commonwealth extend its legislative reach to assist in this effort.

The Panel recommends that the Commonwealth establish a comprehensive monitoring and surveillance program for national priority exotic pests and diseases—covering terrestrial and aquatic environments as well as traditional agriculture. The design of the program should reflect the risk pathways and probability of occurrence to ensure early detection. The data collected should provide early warning for new or emerging pathogens or alternatively demonstrate Australia's freedom from exotic pests and diseases.

The program should include the Northern Australia Quarantine Strategy. Consistent advice to the Panel is that this is a highly effective Commonwealth

investment that with some relatively minor changes, could be enhanced significantly. In particular, the current limit on the conduct of activities (no more than 20km from the coast) should be replaced with a risk-return approach to the geographic coverage. Part of this should include increasing the frequency of surveillance in higher risk areas to provide greater confidence of detecting significant pests and diseases.

The monitoring and surveillance program should also incorporate existing port surveillance activities, such as the monitoring for Asian gypsy moth and various species of exotic fruit fly. These activities should be consolidated into a single program, ensuring that they are conducted on a risk-return basis and promoting collation and analysis of information collected. If deemed appropriate, port surveillance should be expanded to other insect species that could be carried into Australia on, for example, cargo containers or ships.

Responsibility for investigating suspected pest and disease detections associated with imports that have cleared the border was discussed in Chapter 2. The Panel concluded that this should be a responsibility of the Commonwealth, in line with its expanded legislative reach. This task should be incorporated into the national monitoring and surveillance program, to promote collation and analysis of information nationally.

In line with the expanded role for the Commonwealth in relation to ballast water (see Chapter 2), the post-border program should include monitoring of national priority marine pests and diseases at selected locations around the coast. This element of the program should serve as an early warning system for new marine incursions or the spread of species already established in other areas of Australia. The analysis of data generated by the monitoring program could underpin risk-based exemptions from ballast water management to coastal ships operating where there is a low risk of translocating pests of concern.

The monitoring and surveillance program should address exotic pests and diseases in Australia's flora and fauna and within feral populations. As evidenced by the work of the Australian Wildlife Health Network, relatively small investments in this area can achieve valuable biosecurity benefits. Investment in community based surveillance, including in peri-urban areas and through indigenous land managers, may also increase the range and effectiveness of the Commonwealth's national program.

National Sentinel Hive Program

Given the substantial economic cost of a varroa mite incursion, the Panel's view is that appropriate monitoring and surveillance arrangements need to be in place to support early detection. The investment required for this is insignificant relative to the risk of losses to the Australian economy that could result from an incursion.

The existing National Sentinel Hive Program should be continued until a more comprehensive arrangement is developed based on an assessment of risks. This more comprehensive arrangement would most likely use a mix of approaches at or around possible entry points (ports and airports)—including sentinel hives and bait hives (traps) that contain pheromones to attract bees. The mix of hives and traps would need to be in sufficient numbers with regular inspection to increase the likelihood of early detection. To ensure that it remains risk-based and effective, the new comprehensive arrangement should be built into the Commonwealth's national monitoring and surveillance program.

Recommendation

53 The National Biosecurity Authority should develop and maintain, in consultation with the states and territories and business organisations, a comprehensive post-border monitoring and surveillance program for national priority exotic pests and diseases, which should include:

- a an enhanced Northern Australia Quarantine Strategy that extends beyond the current 20km zone to provide coverage for at-risk areas around international airports, seaports and vulnerable areas of Australia's coastline;
- b existing and additional port surveillance activities;
- c the Commonwealth's responsibility for investigating suspected post-border detections of pests and diseases in imports;
- d strategic surveillance to support Australia's pest and disease free export claims and the conduct of Biosecurity Import Risk Analyses;
- e national priority marine pests and diseases to support the Commonwealth's expanded role in relation to managing risks associated with ballast water; and
- f the current National Sentinel Hive Program and its eventual replacement with a more comprehensive approach based on an assessment of risks.

7.4.7 Information sharing

The Panel considers that information obtained from biosecurity activities should be shared with governments, businesses and research organisations to the maximum extent feasible. Data sharing will enable further insights to be drawn by groups outside the National Biosecurity Authority. This will assist independent verification of risk pathways and reinforce a partnership approach to risk analysis. The National Biosecurity Authority should provide information to initiatives such as the National Biosecurity Information Network that are enabling data sharing and analysis within Australia.

The Panel notes that under the *Privacy Act 1988*, there may be limitations on the disclosure of personal information including the proposed sharing of information with other Commonwealth and state agencies. These limitations could be overcome if the proposed Biosecurity Act provides for the establishment of a data sharing scheme with provision for state agency involvement. This would provide statutory authority for information sharing in accordance with a number of Information Privacy Principles contained in the *Privacy Act 1988*.

Recommendation

54 The information and analysis obtained from pre-border, border and post-border biosecurity activities should be made available for use by state and territory governments, industry and research organisations. This should be done in a manner consistent with obligations under the *Privacy Act 1988* and should be supported by a biosecurity risk information sharing protocol and data sharing infrastructure.

7.4.8 Information technology systems to support risk management

The Panel believes that current information technology systems are lacking in a number of areas. Existing information technology systems do not meet the requirements for effective risk management, biosecurity research or trade facilitation.

The Panel recommends a comprehensive redesign of biosecurity information technology systems. In principle, the redesigned system should support the risk-return approach advocated earlier in this Chapter. It should be compatible with business and trading partner systems as far as possible, as well as those of other Commonwealth agencies and state governments. It is particularly important that the new system link smoothly with that of the Australian Customs Service. Consideration could be given to the opportunity to use an Australia-Pacific Economic Cooperation working group to support regional integration, as the Australian Customs Service has done. The Panel also encourages the exploration of opportunities to improve functionality and useability.

The Panel is aware that there is a considerable risk with developing software systems that strive to be 'all things for all people'. That is, as systems become more complex, development, training and maintenance costs can soar and the useability of systems can suffer. This trade-off will need to be carefully judged by the National Biosecurity Authority.

The resourcing implications of redesigning biosecurity support systems are discussed in Chapter 9.

Recommendation

55 Redevelopment of biosecurity information technology systems for the National Biosecurity Authority should occur promptly. As part of this task:

a information technology systems should be developed to provide intuitive and user friendly interfaces and processes;

b biosecurity risk research should be supported by providing reports and data in formats that are useful for government and other researchers, preferably via a free-to-access web interface;

c paper work generated between the Authority and businesses should be eliminated wherever feasible through electronic interfaces, on-line approval systems and electronic certification; and

d connectivity with other border agencies (particularly Customs) should be central and should also be enabled where possible with trading partner authorities, particularly with New Zealand.

7.4.9 Skills to support risk management

Efforts to improve the management of Australia's biosecurity risks may well be constrained by the limited availability of people with the expertise to implement a risk-return system. The Panel observes that suitably qualified science graduates may be insufficient to meet anticipated demand given prospective retirements. The skills shortages would become acute during an incursion where a surge response is needed to control it. Working with the states, businesses, research laboratories and academic institutions to address this risk will be crucial for the National Biosecurity Authority.

Options that the Authority could consider include developing partnerships with universities to offer holiday placements within biosecurity agencies, new postgraduate programs, scholarships, and sponsored research programs. The National Biosecurity Authority could also consider providing cadetships and other means of support for studies in for example, taxonomy, entomology, epidemiology and marine biology.

To raise awareness about biosecurity career options, the Panel recommends that a national biosecurity course be developed for incorporation into the curricula for agriculture and veterinary science colleges and universities. The biosecurity course should also be adapted for and delivered to all National Biosecurity Authority staff.

Recommendation

56 The National Biosecurity Authority should work with state and territory agencies, professional associations and higher education providers to develop a general biosecurity course to be incorporated in health, environmental, marine biology, veterinary and agriculture science curricula. All staff employed in the National Biosecurity Authority should be taught an appropriate adaptation of the general biosecurity course upon commencement of their employment in the agency.

7.4.10 Research and infrastructure to support risk management

The Panel heard conflicting views about arrangements for prioritising biosecurity research in Australia. AusBIOSEC was cited as a strategy for improving coordination in this area however, no single arrangement or institution was identified as leading research prioritisation and resourcing. The Panel sees a role for the Authority in this regard, and recommends that it develop a set of national priorities for biosecurity research. It should then work with research bodies to coordinate the research effort towards the national priorities. In developing the national priorities, the Authority should research needs in relation to new technologies, for example updating of in-line x-rays, new rapid diagnostic tools, vaccines, pest and disease control methods and humane animal disposal methods.

The National Biosecurity Authority, in conjunction with the states, should review the capacity of Australia's diagnostic laboratories to handle the anticipated workflow arising from a major incursion and rectify identified shortcomings. The Authority should also review the capacity of laboratories to act collaboratively, noting that a National Animal Health Laboratory Strategy is currently under development. The Panel notes that significant challenges remain in connecting public and private diagnostic laboratories into a national system for plant pests and diseases. The Panel also notes that more needs to be done to strengthen laboratory networks for animal and plant health, including the environment.

A significant biosecurity research issue is the availability of rapid and reliable diagnostic tests and vaccines for exotic plant and animal pests and diseases of national priority. The Panel was provided with evidence that access to exotic pest and disease material to develop these tests and vaccines is important, but currently difficult. Live foot and mouth disease virus was mentioned as a specific example. The Panel's view is that access to positive control samples, such as the foot and mouth disease virus, is vital and should be permitted under the strictest import permit conditions to approved laboratories such as the Australian Animal Health Laboratory.

While some plant research is undertaken in overseas facilities, there is a need for improved facilities within Australia. This may be achieved by identifying and upgrading existing laboratory capability. A high level containment facility would be required if extensive research into major exotic plant pest threats were to be undertaken in Australia.

At the same time, the National Biosecurity Authority should work with other regulatory agencies, such as the Australian Pesticides and Veterinary Medicines Authority and the Office of the Gene Technology Regulator, to harmonise requirements for approving facilities for animal and plant research. The existing standards arrangement is complex and confusing for those seeking approval. This is not in the interests of Australia's biosecurity system. The Panel's view is that the regulatory agencies involved need to agree a single standard for the approval of biosecurity requirements for animal and plant health laboratories.

Recommendations

57 The National Biosecurity Authority should develop national research priorities, including for new technologies to better address biosecurity risk, and should work with research bodies to coordinate the research effort towards those priorities.

58 The National Biosecurity Authority should ensure Australia has the laboratory capability and capacity to manage exotic pest and disease incursions of national significance. The Panel recommends that the Authority, working with the states and territories, should improve the quality and use of state and territory laboratories to support national biosecurity priorities.

59 The import of positive control samples (including the foot and mouth disease virus) for use in laboratory diagnostic research and capacity building for exotic disease pathogens is vital and should be permitted under strict import permit conditions to laboratories such as the Australian Animal Health Laboratory.

60 The Commonwealth government should move toward a unified coordinated system for the approval of quarantine facilities (for animal and plant research laboratories). This would require agreement between the National Biosecurity Authority, Australian Pesticides and Veterinary Medicines Authority and the Office of the Gene Technology Regulator for one system of approval of laboratories.

7.4.11 Post-arrival quarantine stations

Having access to appropriate post-arrival quarantine facilities for imported animals and plants is a fundamental part of managing biosecurity risks.

The Panel recommends that the uncertainty of the Commonwealth-operated quarantine stations should be resolved urgently. The Panel shares Commissioner Callinan's view that there has been an unacceptable delay in resolving the number of Commonwealth-operated stations and their lease tenure arrangements. Leases on existing stations are due to expire within the next few years and, given the time to establish alternative facilities, the Commonwealth is fast running out of time to make considered decisions.

The Panel believes the assumption that the Commonwealth should be exclusively responsible for services for high biosecurity risk plants and animals is flawed—an example of the successful private provision of such high-risk biosecurity facilities is the operation over many years of egg hatching facilities by major poultry businesses. The Panel reiterates the Nairn Report's conclusion that with appropriate auditing, there is no reason why private sector operators cannot also provide biosecurity services, even for high-risk imports.

Equally, the Panel believes there is a case for the Commonwealth to own and operate specialised facilities where monopoly rents might be charged (either to the Commonwealth in a lease-back arrangement, or to biosecurity customers) if such facilities were operated privately. In the case of low volume products, the private provision of biosecurity services may not be viable. One view is that such imports should simply be not allowed, but the Panel considers that facilities need to be provided to ensure a legal and biosecurity-safe method of importing organisms. An example is the importation of honeybee brood stock which could be smuggled into the country if no accessible, legitimate means were made available.

An anti-smuggling subsidy has been paid for several years to reduce the cost of importing some high-risk plant material and therefore the incentive to smuggle. The Panel notes that this was primarily intended for commercial horticultural material, to improve local production or provide new species. The Panel received no evidence one way or the other on the effectiveness of the subsidy, the real value of which has declined significantly. The Panel considers that other avenues for improving compliance with biosecurity requirements should be explored. These include investigating options for reducing the commercial incentive to smuggle by enhancing the scope to use private quarantine approved premises to 'bulk-up' (propagate additional material for commercial release) plant material once initial testing is complete. The Panel's recommendations to increase the rigours of pre-border biosecurity assessments, improve risk management at the border and enhance prosecutions for smuggling offences, are all relevant. The Panel also recommends a review of the penalties for smuggling.

Recommendations

61 The Commonwealth should own and operate specialised quarantine facilities where monopoly rents might be charged if such facilities were operated privately.

62 The Commonwealth should immediately clarify its intentions with respect to the future ownership, management and operation of the quarantine facilities currently located at Eastern Creek and Knoxfield.

63 All quarantine stations that manage equivalent risks should have their performance accredited and audited to equivalent standards, irrespective of whether the quarantine station is privately or publicly owned and operated.

64 The effectiveness of the anti-smuggling subsidy for plant material should be reviewed, with other avenues explored for improving compliance with biosecurity requirements, including a review of smuggling penalties.

7.4.12 Risk management for exports

The Panel notes that inspection and certification systems for exports are generally working well, although some sectors have suggested that costs are unnecessarily high and standards are imposed beyond those required for domestic food safety and biosecurity purposes. The Panel acknowledges the commercial imperative for business to comply with export requirements. The Panel notes there are opposing views regarding the acceptance of domestic standards for export certification purposes.

The Panel recognises that in some cases, the export specifications to meet the requirements of importing countries are additional to Australian standards. The Panel notes that state food inspection agencies have, or are, developing inspection systems based on quality assurance arrangements for major agricultural commodities. In some cases (for example, in the dairy sector), these appear to deliver nationally consistent assurance. The Panel concludes that the Australian standards could be appropriate as the basis for export in some, but not all, agricultural commodities, providing this is accepted by importing authorities. The Panel strongly supports efforts to overcome artificial barriers to exports including the recognition of equivalence of Australian standards meeting importing country requirements where possible.

To support such an approach, the Panel recommends that Australia should expend more effort in ensuring that the performance of state systems for regulating food and agricultural commodities are consistent with agreed national standards through a national auditing process.

The Panel notes that 'AQIS export certification' carries considerable status internationally. As discussed in Chapter 3, the provision of export certification should be a function of the National Biosecurity Authority.

8 THE INTEGRITY OF THE SYSTEM

8.1 Introduction

Demonstrable integrity in the measures and activities taken to meet Australia's biosecurity requirements is vital. This is true whether the National Biosecurity Authority is relying on (and then auditing) actions taken by others or applying the measures itself.

This is not a new insight. The Nairn Report recommended adoption of a total quality management approach to the development and implementation of biosecurity policies and programs. Total quality management is recognised as fundamental to successful business practice throughout the economy.

Commissioner Callinan made specific recommendations in relation to auditing and verification. While his Inquiry was limited to the equine influenza outbreak, a number of his comments pointed to more systemic failures. His findings were referred to the Panel by the Minister for Agriculture, Fisheries and Forestry.

8.2 Current arrangements

8.2.1 Auditing

Ensuring that Australia's biosecurity activities are managed effectively is a complex task. There are many risks to be controlled at different sites, by different jurisdictions, both within Australia and offshore. Inherent risks change, patterns of trade change, and so therefore do the appropriate risk management measures. To ensure these risks are being managed or controlled, inspection activities are placed at appropriate points along the continuum.

An effective risk management system should also include formal auditing activities. Auditing provides a structured process of checking the inspection system to obtain the evidence needed to verify the extent to which the biosecurity measures are being met. It also provides a mechanism to detect and respond to changes more effectively. Auditing improves the overall confidence in the system and can be conducted internally by AQIS or externally by an independent agent. Both inspection and audit functions are verification activities. The definitions for these terms are in Box 27.

BOX 27 Definitions

Inspection – Examination of product or systems for biosecurity control of animal, plant, food and human health including in-process and finished product testing, in order to verify that they conform to requirements.

Audit – Systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which the criteria are fulfilled. The *audit* process includes a desk assessment of documentary material and where necessary, on-site verification through an examination of the systems in place.

Verification – Confirmation through the provision of objective evidence that specified requirements have been fulfilled. Includes *Inspection* and *Audit* activities.

Audit activities can be categorised as follows.

- Internal audits are carried out by an internal group which is independent of line management and can report directly to the chief executive officer (for example, compliance programs or national verification systems).
- External audits are conducted by independent bodies such as the Australian National Audit Office or an importing country's authorities. Some other countries have specialist external audit functions concerned with biosecurity. In Europe this role is played by the Food and Veterinary Office, and in the United States by specialists within the office of the Inspector General for the Department of Agriculture.

Internal audits are designed to improve the operations of an organisation. They provide a systematic approach to evaluating the internal control environment as well as assessing broader management processes. Internal audit programs should review:

- program implementation to assess compliance with objectives and whether operations are being carried out as stipulated;
- compliance with policies, procedures and legal obligations, including international treaties;
- the effectiveness of management systems; and
- financial management and the efficiency and effectiveness with which resources are used.

External audit provides additional verification that systems are achieving objectives. It also provides independent and public assurance that the system, including the internal audit process, is performing and has the ability to respond appropriately to changing patterns of risk.

8.2.2 Internal audit systems

AQIS audit activities include verifying import and export inspection and certification programs and compliance agreements with businesses. AQIS also audits private or other government agencies that perform regulatory activities on its behalf, such as privately run Quarantine Approved Premises and food export inspection functions conducted by state authorities.

Auditing activities for imports

The auditing activities for imports can be separated into pre-, border and post-border systems. In general, current audit arrangements focus on requirements for import permits. For example, import requirements often include evidence of inspection by an overseas authority or some form of treatment such as fumigation. This evidence is usually in the form of a certificate. There has been little systematic audit of the controls or systems that underpin certification, except in relation to fumigation.

Offshore systems audits are an example of **pre-border** audit and verification. They are occasionally conducted by AQIS and Biosecurity Australia and can take a number of forms, from a desk audit of information supplied by individual facilities to an extensive *in situ* audit of official controls over whole supply chains. These audits improve confidence that Australia's import requirements are being met.

A **border** example is the auditing by AQIS of effectiveness measures associated with Increased Quarantine Intervention targets. This is to ensure the pre-determined inspection targets are being met consistently and are effective in detecting items of biosecurity concern.

For imported foods, AQIS accepts certification from competent authorities of exporting countries in lieu of routine border testing. In most cases the foreign government's certification has been accepted primarily on the basis of desk audits by AQIS of the relevant foreign export inspection and certification system. This is supplemented by randomly inspecting 5 per cent of imported product at the border to audit the validity of the system that underpins the certification. As noted in Chapter 7, AQIS does not have the legal ability to audit the food safety management systems implemented by Australian import businesses.

Border audit activities also include arrangements for Quarantine Approved Premises and compliance agreements with importers.

AQIS categorises Quarantine Approved Premises according to the activities they undertake. AQIS determines the appropriate level of biosecurity containment that is needed and then specifies their auditing requirements.

A failure to comply with AQIS requirements results in a corrective action request. This may lead to a follow-up audit visit to validate resolution of the issue, greater audit frequency, or in cases of significant non-compliance, a suspension of the agreement with AQIS until the corrective action is undertaken.

Similarly, AQIS has compliance agreements with registered importers and conducts audits based on an assessment of risk (see Chapter 4).

An example of **post-border** audit arrangements is the Animal Health Performance Standards, a self-assessment arrangement developed by government and business organisations. The Animal Health Performance Standards ensure that contributors to Australia's animal health system perform to appropriate standards in all activities that affect Australia's animal health status.

In addition, a number of national exotic pest and disease preparedness exercises have tested the effectiveness of Australia's response strategies. The best known recent examples are Exercise Minotaur, which was conducted in 2002 for foot and mouth disease, and Exercise Eleusis, conducted in 2005 for avian influenza.

Auditing activities for exports

AQIS has relatively well-developed inspection and auditing activities to verify export risk management systems. Export establishments are registered on the basis that AQIS will conduct:

- inspections to verify that export products meet importing country requirements; and
- regular audits to confirm that establishments remain compliant with their approved arrangements and legislative requirements.

Arrangements for the export meat program are outlined in Box 28. Audits are not always conducted by AQIS itself, for example, dairy export establishments are audited by state regulatory authorities. Organic/biodynamic products are audited by AQIS-accredited certifying organisations.

Internal compliance investigations

The AQIS Compliance and Investigations Branch is responsible for detecting, investigating and prosecuting breaches of quarantine and imported food legislation. Its role includes the application of product integrity standards under export legislation, working with businesses to reduce non-compliant behaviour and identifying and reporting regulatory risks to AQIS management. This Branch is the only regulatory area within AQIS that has achieved full certification to ISO 9000 Quality Management Systems.

BOX 28 Export Meat Program – inspection and audit activities

Industry and third party verification: registered export meat establishments have a quality system that is monitored via an AQIS internal audit and systems review. AQIS verification occurs on a daily basis at abattoirs and most boning rooms, but only annually in the case of meat freight forwarders. Audit frequency also depends on the importing country requirements and the history of a company's compliance.

Supervisory verification: AQIS Area Technical Managers conduct monthly performance evaluations of AQIS on-plant inspection activities.

Program verification: AQIS Field Operations Managers undertake critical analysis and audit of registered meat establishments. They also oversee the implementation of any corrective actions that resulted from overseas audits.

In addition to routine verification audits, a systematic check of specific aspects of an export meat establishment's Approved Arrangement is undertaken according to the AQIS National Establishment Verification System. Different activities are the focus of monthly checks (for example, pest control and good hygienic practices). This ensures that over a twelve month period there is a comprehensive check of a range of specified activities across the establishment's approved meat inspection program.

Internal verification: AQIS has a National Verification Unit to ensure that the meat inspection program has control systems in place (documented and implemented) to manage legislation, importing country requirements and certification. The National Verification Unit audits the National Establishment Verification System each year and includes some site visits.

External verification: The main form of external verification comes from trading partners auditing Australia's export meat program. In 2007, external systems audits were conducted by Taiwan, the European Union, the United States of America, Russia and Malaysia.

8.2.3 External systems

External audits and reviews are undertaken on various elements of Australia's biosecurity system. Some specific examples include:

- reviews by the Quarantine and Exports Advisory Council of the Northern Australia Quarantine Strategy, the Import Clearance Program and regular advice on AQIS quarantine and exports programs;
- Australian National Audit Office performance audits, such as *Managing for Quarantine Effectiveness* (2001a and 2005) and *Export Certification: Australian Quarantine and Inspection Service* (2006); and
- the *Review of Australia's Quarantine Function* conducted by the Australian Parliament's Joint Committee of Public Accounts and Audit (2003) focused on Increased Quarantine Intervention funding.

AQIS has also contracted private consultants to audit specific areas of its quarantine programs. For example, Ernst & Young has conducted a number of reviews of AQIS systems including *A Review of Lapsing Quarantine Funding* (2004) and *A Review of Quarantine Border Security Strategy and Policies* (2007).

Australian export programs are also subject to regular external assessment and evaluations by trading partners (see Box 28). The purpose of these evaluations is to provide the importing country with confidence that AQIS is competent to act as its agent in ensuring that export requirements are met. For example, the European Commission has conducted five audits since 2005 of various aspects of Australia's export system.

8.2.4 International auditing standards

The International Organization for Standardization has developed auditing standards and guidelines for conformity assessment, such as ISO/IEC 17021: 2006 – *Conformity assessment - Requirements for bodies providing audit and certification of management systems* and ISO 19011: 2002 – *Guideline for quality and/or environmental management systems auditing.* The ISO standards form the basis of complementary work undertaken by the OIE, the International Plant Protection Convention and the Codex Alimentarius Commission.

These international bodies are now also directing effort to develop auditing standards to cover the assessment of food safety and animal and plant health. The OIE has recently developed a tool for assessing countries' veterinary services—the Performance of Veterinary Services tool. The OIE is carrying out a program of training assessors in the use of this tool, and conducting assessments mainly on developing countries. The assessments include country visits or audits by teams of assessors, including some from Australia. Over 50 countries have already been assessed and audited with a similar number being assessed over the next two years. It is possible that this tool will be accepted as a *de facto* standard in the future and countries, including Australia, will expect to see the results of a Performance of Veterinary Services assessment as part of normal trade negotiations.

The Codex Alimentarius Commission has guidelines for the design, operation, assessment and accreditation of food import and export inspection and certification systems (CAC/GL 26-1999). These guidelines include procedures enabling an importing country to assess and verify the inspection and certification systems of an exporting country. The Codex Alimentarius Commission also recently approved new work on the development of *Principles and Guidelines for the Conduct of Foreign On-site Audits*.

The International Plant Protection Convention has a Phytosanitary Capacity Evaluation tool that can be applied to identify gaps in a biosecurity system. It is essentially a technical assistance tool for developing countries and has not yet been applied to the Australian phytosanitary system. The tool does not define acceptable levels of capacity—it is up to the country to determine what level of phytosanitary systems it needs.

Like Australia, many countries have developed official auditing systems to verify that their domestic produce and imported goods meet specified standards. The European Commission's Food and Veterinary Office has developed a significant auditing program that is applied to imported food and agricultural products (see Box 29).

BOX 29 The European Commission's Food and Veterinary Office

The Food and Veterinary Office, based in Grange, Ireland, conducts assessments to ensure compliance with European Commission's import requirements by both domestic producers and those countries that export to the European Union. Its mission is to:

- promote effective control systems in the food safety and quality, veterinary and plant health sectors;
- check on compliance with the requirements of European Union food safety and quality, veterinary and plant health legislation within the European Union and in third countries exporting to the European Union;
- contribute to the development of European Union policy in the food safety and quality, veterinary and plant health sectors; and
- to inform stakeholders of the outcome of evaluations.

The Food and Veterinary Office develops an annual inspection program that is published on its website. The program focuses on priority areas and countries for inspection. Each inspection results in a report, together with conclusions and recommendations that are published (at the draft stage) on its website. The relevant competent authority may comment before a final report is published.

Australia is subject to periodic audits conducted by the Food and Veterinary Office for a number of commodities. In 2007, the Office conducted audits to assess fisheries products including aquaculture products and live bi-valve molluscs; milk and milk-based products, bovine semen for artificial insemination, programs covering public health and animal health related to red meat production.

Source: http://ec.europa.eu/food/fvo/index_en.htm

The United States Department of Agriculture's Office of the Inspector General was established in 1978 to perform independent audits of the Department's programs and operations. Its responsibilities are outlined below (see Box 30).

BOX 30 United States Department of Agriculture's Office of the Inspector General

The *Inspector General Act of 1978* requires the Inspector General to independently and objectively:

- perform audits and investigations of the United States Department of Agriculture's programs and operations;
- work with the United States Department of Agriculture's management team in activities that promote economy, efficiency, and effectiveness or that prevent and detect fraud and abuse in programs and operations, both within the United States Department of Agriculture and in non-Federal entities that receive United States Department of Agriculture assistance; and
- report its activities to the Secretary of the Department and the United States Congress every six months.

Source: http://www.usda.gov/oig

8.3 Current debates and views in submissions

It was put to the Panel that there are significant shortcomings in the current approach to auditing and verifying the integrity of Australia's biosecurity systems across the continuum. The need for a more strategic approach has been emphasised, in particular through:

- improved pre-border audit systems to ensure that Australian import requirements are being met;
- improved auditing and review of border inspection arrangements; and
- auditing the appropriateness of post-border emergency preparedness and pest and disease surveillance activities.

Examples of criticisms made in submissions to the Panel include:

> 'While it is understood that some breaches are to be expected, the current system has no independent auditing of the delivery of the quarantine service by AQIS.' (Western Australian Government submission, p. 14)

> 'To ensure that the AQIS facilities are effective in managing the substantial risks, a system of independent audit should be introduced.' (Peter Lawrence and David Spence submission, p. 4)

This issue was also examined by Commissioner Callinan who made a number of recommendations in relation to internal and external audit arrangements for the importation of horses. He found that:

> '… policies current at August 2007 did not provide for premises to be approved and inspected by AQIS, Biosecurity Australia or another qualified person before they could be used for pre-export quarantine. Nor did they require that such premises have fully documented procedures drawn up in accordance with a Hazard Analysis Critical Control Point system. Nor were there any arrangements for implementation of those procedures to be audited from time to time by AQIS, Biosecurity Australia or another qualified person. Introduction of those measures would reduce risk of infection of horses during pre-export quarantine.' (Callinan 2008, p. xxiv)

Commissioner Callinan formed the view that there were three areas where implementation of biosecurity measures needed to be checked regularly. These were:

> '… the proposed written procedures for pre-export quarantine facilities; the other requirements imposed by the import conditions before a horse is transported to Australia; and the operating procedures for the clearance and quarantine of horses once they arrive in Australia.' (Callinan 2008, p. xxvii)

Commissioner Callinan argued that compliance in these areas should be subject to regular checking and reporting to the Minister. In Commissioner Callinan's view, past shortcomings were such that this role should not be undertaken by AQIS or Biosecurity Australia, to ensure an appropriate level of independence. He therefore recommended that an external auditor be appointed for this function (the Inspector General of Horse Importation). In addition, he recommended that a senior person within AQIS be appointed to take responsibility and accountability for the oversight of horse importation. Commissioner Callinan pointed out that these positions were required because:

> '… of the number of different AQIS national programs and regions engaged in the formation or implementation of policy for the importation of horses and the position and role of Biosecurity Australia.' (Callinan 2008, p. xxvii)

8.3.1 Lack of consistency and a systematic approach

The Panel noted discrepancies in the approach to quality management procedures used across AQIS programs. This was particularly evident in comparing systems for export and import programs. As mentioned earlier, an auditing approach is used in export programs, with exporting businesses required to have business management systems in place based on elements of ISO 9000 Quality Management Systems. The ISO system includes internal review,

training, corrective action and incorporates food safety controls such as Hazard Analysis and Critical Control Points. Requirements for importing businesses are less prescribed, hence system auditing is more problematic.

The differences between the audit systems for exports and imports may be attributed at least in part, to the incentives that drive compliant behaviour of stakeholders. For exporters there are powerful incentives to 'get it right', with inspection rates linked to performance, sanctions for non-compliance and the ever present threat of the loss of priority overseas markets. For imports, specific inspection rates are driven by mandated and rigid Increased Quarantine Intervention targets that do not provide clear incentives or reward compliance with import requirements.

Differences in approaches taken at the Eastern Creek and Sandown Quarantine Stations were also found by Commissioner Callinan. He noted that the use of systems such as Hazard Analysis and Critical Control Points, and a review or audit of procedures had not occurred at the Eastern Creek quarantine station, observing that:

> 'For the purposes of overcoming biosecurity deficiencies, the documented procedures applying at the privately operated quarantine facility for horses at Sandown in Victoria provide a useful and obvious point of comparison.' (Callinan 2008, p. 250)

Some submissions to the Panel linked program-level differences to AQIS management arrangements. For example, the Community and Public Sector Union claimed inconsistent work practices from region to region, despite the fact that regional programs are supposed to operate as a national program (Community and Public Sector Union submission). Other observations included:

> 'Existing monitoring and review mechanisms for biosecurity and quarantine are not always effective. Areas of potential weakness include validation, verification and sanctions polices for operational areas.' (Western Australian Government submission, p. 14)

> 'One of the essential bases of third party certification is independent auditing of the certifying agencies. This principle needs to be extended to program delivery within AQIS to ensure consistency of delivery, continual correction of shortcomings and continual improvement in the standards.' (Quarantine and Exports Advisory Council submission, p. 18)

A number of stakeholders expressed the view that improved business management systems would identify and correct these inconsistencies, leading to more reliable delivery of services. For example, the New South Wales Department of Primary Industry submission recommended a quality assurance approach.

> ‘There is a need for a Quality Assurance system to be implemented within the pre-border and border quarantine system to ensure consistency of operations and to instil an ongoing commitment to continual improvement.’ (NSW Department of Primary Industry submission, p. 5)

8.3.2 Lack of clear internal auditing procedures

There does not appear to be a clearly defined, consistent or systematic policy for auditing the various programs and controls along the biosecurity continuum. Moreover, without effective data from routine audits, it is more difficult to make improvements to risk control systems based on data analysis.

This shortcoming appears especially acute for pre-border import systems. The current pre-border evaluation system is variable in terms of scope, auditor competency standards, reporting and subsequent approval processes. Several submissions proposed the establishment of a dedicated audit unit within AQIS.

> ‘It is QEAC’s view that the delivery of all quarantine and market access programs within AQIS should be subject to audit by a dedicated audit unit.’ (Quarantine and Exports Advisory Council submission, p. 18)

> ‘Consideration should be given to having a dedicated group within the department that provides an internal audit function of operations. I am aware that some Programs in AQIS have gone down this path (e.g. Verification Unit in Import Clearance) however this should be expanded across all Programs that deliver Quarantine functions.’ (Greg Hankins submission, p. 1)

Lack of a clear policy has the potential to expose Australia to domestic and international criticism regarding consistency in audit application. Australian Pork Limited argued that audits must be able to be defended as being equivalent to those applied to similar goods produced within Australia to avoid substantive criticism.

> ‘APL believes that in the interests of equivalency, standards the same as, or procedures shown to be in practice equivalent to current Australian standards, must be in place in establishments approved to export to Australia.’ (Australian Pork Limited submission, p. 32)

8.3.3 Enhanced use of pre-border audit and inspection

The need for a regular pre-border audit and inspection program was discussed in a number of submissions, particularly in relation to the certifications provided by foreign governments or manufacturer declarations.

> 'Regular inspection or audit of exporting country regulation of pre-border activity is needed.' (Australian Veterinary Association submission, p. 18)

> 'APL has sought verification from both BA (during the IRA process) and AQIS as to how it satisfies itself that overseas abattoirs and processing plants conform to Australian standards, that audits by Australian authorities are of an equivalence and intensity expected of Australia by its competitors and how it intends to address the issues of identification and segregation.' (Australian Pork Limited submission, p. 32)

The approach to auditing pork producing establishments, following the pigmeat Import Risk Analysis in 2004, provides a useful case study. Audits were undertaken by AQIS in a number of countries, including the United States, Finland, Denmark, Italy, Spain and the United Kingdom, over the period 2004 to 2007. While these assessments were conducted professionally, they lacked transparent policy guidelines or clearly defined audit management programs. Pigmeat products can now be imported providing the mandatory animal health certification is attached. However, there is no strategic program to monitor compliance in these countries on a risk assessed basis. Ensuring compliance relies on the border inspection process.

A more comprehensive approach is applied under the Australian Fumigation Accreditation Scheme where a pre-border audit program identifies off-shore control points that need to be targeted to ensure compliance with Australia's fumigation requirements. The Scheme is unique in that it educates fumigators and the government certification authorities on Australia's requirements as well as having a follow-up audit system to ensure compliance. Several submissions pointed to the Australian Fumigation Accreditation Scheme as an example of how effective auditing combined with education awareness programs can help mitigate pre-border risks.

Following the outbreak of equine influenza, AQIS introduced a systematic approach to the supervision of pre-export quarantine facilities for horses, including inspecting all consignments and facilities prior to shipment. To date, it has been on a consignment by consignment basis rather than system-wide.

8.3.4 Lack of independent external systems audit

As mentioned previously, external audits are conducted by various importing countries (for example, the European Commission's Food and Veterinary

Office) or by the Australian Government. These audits have provided useful recommendations that have been acted upon by AQIS. However, in general, independent audits conducted by the Australian Government have focused on AQIS business performance, including its financial and legal functions, rather than an assessment of systematic risk management efforts.

Commissioner Callinan recommended the establishment of an Inspector General of Horse Importation with a high, statutorily guaranteed, level of independence. The Australian Veterinary Association supported the broadening of this position to cover all commodities.

> 'The Callinan Inquiry has directed discussion toward an independent Inspector General for horses. This person could monitor/ audit such activities and for all commodities.' (Australian Veterinary Association submission, p. 18)

8.4 Panel's consideration

Improvement in the performance of biosecurity functions across the continuum is imperative. There is evidence that the lack of a rigorous auditing and verification system identified by Commissioner Callinan in the horse context is systemic. The Panel has concluded that there is a real need to improve the management of policies and programs and to verify the effectiveness of risk management activities. There is a need for quality assurance processes for biosecurity systems, including those that are shared between the Commonwealth and the states and those that are managed by the private sector to meet Commonwealth requirements.

8.4.1 A uniform business approach to risk management

Functions carried out by AQIS need to be comprehensive and uniform. The Panel considers that the National Biosecurity Authority needs a rigorous system incorporating clear specifications and standards, backed by objective assurances provided via internal and external audit. These are fundamental to good business management. They need to contain a commitment to continuous planning, sufficient information technology support and review processes that lead to routine corrective adjustments. Specific elements that the Panel considers critical for reliable implementation of biosecurity functions include:

- adoption and maintenance of a quality management approach;
- validation procedures to ensure that risk management measures and service delivery models applied address identified risks in the most effective way;

- verification that the activities implemented to deal with risk are appropriate to the task;
- documentation control, particularly where requirements may be varied following review, and clear status of the documentation available to staff, businesses and other stakeholders;
- program planning that includes measureable performance indicators;
- implementation of a staff training policy for auditing;
- a sanctions policy to deal with non-compliant implementation of requirements;
- a reward and penalty policy to enable recognition of consistent compliance;
- legislative capacity to effectively trace goods beyond the border; and
- good business practices in the spheres of communication, complaints handling, and document control.

The Panel acknowledges that within AQIS programs, there is a range of quality assurance systems. The ISO 9000 certification of the Compliance and Investigation Branch and the procedures and systematic approach of the Australian Fumigation Accreditation Scheme show the benefits of defined documented systems that include internal audit programs. Other programs have elements of quality management approaches, such as the recent (post-Callinan) development of Standard Operating Procedures and work plans. However, these alone will not achieve better assurance systems with inbuilt feedback loops. Existing elements should be recognised with the objective being to upgrade the organisation's management systems and capability.

Recommendation

65 The National Biosecurity Authority should develop quality management systems that:

a incorporate consistent quality management approaches across its programs;

b include periodic audit of external assurances such as official certification provided by overseas authorities and accredited third-party systems; and

c include, where relevant, ISO 9000 and other quality standards in introducing these quality management strategies and systems.

8.4.2 Improving internal auditing systems

As part of effective risk management systems, the National Biosecurity Authority should have a strong internal audit capability. Similarly, sufficient

resources and information technology support to enable data collection and analysis are essential. Fundamental requirements for auditing systems include consistency with World Trade Organization Members' obligations, with particular reference to the SPS Agreement and relevant international guidelines and standards.

The audit activities should cover the biosecurity continuum as follows:

- pre-border assessments and audits that include competent authority evaluations; animal and plant pest and disease status (including recognition of regions or compartments as free of pests and diseases); individual commodity evaluations (for example, pigmeat and citrus); risk pathway evaluations (mail and shipping containers); and treatment evaluations (for example, the effectiveness of fumigation and irradiation treatments);
- assessments and auditing of border inspection control points to verify their effectiveness, including imported goods and transport (ships, aircraft, and containers) and passengers; Quarantine Approved Premises and Pre- and Post-Entry quarantine stations; and
- post-border assessments and auditing of government and business biosecurity plans; emergency preparedness plans; animal and plant health performance standards; monitoring and surveillance activities for national priority exotic pests and diseases; and product integrity systems.

The Panel considers that to achieve a consistent risk-based systems approach to auditing, a unit should be established within the National Biosecurity Authority to undertake these tasks. The unit should work closely with the pest and disease intelligence gathering and assessment group (see Chapter 7). It should also audit across the continuum by examining pathways, especially for linkages between pre-border and border control systems. There also needs to be greater accountability and responsibility for auditing post-border biosecurity arrangements.

The program of audits and their reports should be provided to the Director of Biosecurity and the National Biosecurity Commission. The Panel recommends that the National Biosecurity Commission should determine the audit activities to be conducted by the National Biosecurity Authority in relation to Biosecurity Import Policy Determinations. The Commission should also review the overall audit program of the Authority and advise the Director of Biosecurity on its appropriateness.

The Panel also recommends that the National Biosecurity Authority recognise and adequately resource and train enforcement officers with a

remit to cover biosecurity issues along the continuum. Enforcement officers should have the ability to conduct investigations, to support prosecutions for offences against all the legislation the Authority administers and, subject to agreement with the Director of Public Prosecutions, carry out prosecutions for minor offences.

AQIS uses 'on-the-spot' fines (infringement notices) for quarantine offences by travellers, administered within the Airports Program. The Panel's view is that the biosecurity legislation should widen the range of pecuniary penalties for misdemeanours and the use of infringement notices should be expanded beyond the airports environment to include other quarantine breaches that are high in volume with minimal complexity.

The new infringement notice scheme should be consistent with Commonwealth guidelines on infringement notice schemes (such as Australian Law Reform Commission report number 95, *Principled Regulation: Federal Civil and Administrative Penalties in Australia*) and match other 'best practice' infringement notice schemes such as the *Customs Act 1901* model.

The issuing of an infringement notice should be consistently applied and administered for all undeclared and misdeclared quarantinable items (see Chapter 4). The Panel believes that consideration should be given to making them non-discretionary. This would require a prior public awareness program and very clear warning to inbound passengers, customs brokers and others engaged in trade or tourism. This would act as a quick and visible deterrent. New Zealand has operated such a scheme and reports considerable success in reducing the incidence of undeclared biosecurity risk items.

The National Biosecurity Authority should make arrangements with the Director of Public Prosecutions to cover proceedings for all prosecutions including pecuniary penalties. These arrangements should be agreed under a memorandum of understanding, or similar agreement, such as those between the Director of Public Prosecutions and the Australian Tax Office and Australian Securities and Investments Commission. The Director of Public Prosecutions will maintain its role in relation to all prosecutions:

- for minor offences, the National Biosecurity Authority would issue pecuniary penalties under the broad supervision of the Director of Public Prosecutions to ensure consistency with the prosecution policy of the Commonwealth; and
- for all other offences, the National Biosecurity Authority would investigate and refer matters to the Director of Public Prosecutions to determine whether a prosecution should be instituted.

Recommendations

66 The National Biosecurity Authority should establish an internal audit group to inquire and report on the adherence by the Authority to its policies and their adequacy to deal with risks across the biosecurity continuum.

- a The responsibilities of this group should include both financial and performance audits of the Authority's programs.
- b The internal audit program should cover the National Biosecurity Authority's activities over an audit cycle.
- c The audit reports should be provided to the National Biosecurity Commission and the Director of Biosecurity.

67 In relation to the National Biosecurity Authority's internal audit program, the National Biosecurity Commission should have:

- a a determinative role for audit activities that relate to Biosecurity Import Policy Determinations; and
- b an advisory role in relation to the overall internal audit program.

68 The National Biosecurity Authority should maintain an enforcement branch with the resources and expertise to investigate breaches of the biosecurity legislation, with this function being afforded a high priority. Arrangements should be made with the Director of Public Prosecutions in relation to the conduct of prosecution of offences against the biosecurity legislation including to provide:

- a protocols to facilitate the commencement of proceedings by the Authority in cases involving the non-payment of infringement notices which cover high-volume matters of minimal complexity; and
- b for the recovery of pecuniary penalties by the Authority.

8.4.3 Improving independent audit systems

The Panel considers that independent audits provide indispensable assistance in verifying the performance of individual programs and providing an objective overview of the organisation. As indicated in Chapter 3, the Panel recommends an independent audit function to assess activities along the biosecurity continuum through the establishment of the position of the Inspector General of Biosecurity. The Panel noted that the United States Department of Agriculture has a somewhat similar Office of the Inspector General.

The Inspector General of Biosecurity should be located within the Department of Agriculture, Fisheries and Forestry. The Minister should be able to refer matters to it and commission it to investigate matters and report to him/her. The Inspector General's powers should include the ability to obtain access to

premises and documents sufficient to ensure that all parts of the biosecurity continuum are comprehensively assessed. This task would include the audit of biosecurity programs related to health and environment responsibilities that are currently undertaken by AQIS on behalf of the Department of Health and Ageing and the Department of the Environment, Water, Heritage and the Arts.

The time periods for audits will be determined by the Inspector General of Biosecurity on a systematic risk-based approach, for example, every five years, annually, or on an *ad hoc* or even random basis, depending on the component to be audited and its risk.

The Inspector General of Biosecurity would be required to provide regular independent reports to the Minister for Agriculture, Fisheries and Forestry on the performance of the risk management measures across the biosecurity continuum. These reports would be copied to the Director of Biosecurity and the National Biosecurity Commission to provide valuable feedback to improve biosecurity programs and systems. These reports would be publicly available (unless there were very specific reasons to the contrary) to improve accountability and therefore the public confidence in the process.

Regular communication between the Inspector General of Biosecurity and the Director of Biosecurity would be critical. The Inspector General of Biosecurity should be free to contract auditing to outside bodies that meet specified requirements. The Biosecurity Advisory Council should also provide advice to the Director of Biosecurity on inspection and audit activities.

The establishment of the Inspector General of Biosecurity will not preclude compliance and performance assessments and reviews conducted by the Australian National Audit Office. The Panel regards these audits and reviews as particularly useful in providing external accountability on the performance of biosecurity programs.

Audits are also conducted by the competent inspection authority of overseas governments. These audits provide an additional layer of accountability, particularly for our export certification systems. Their results need to be incorporated into the feedback loops to management.

It will be to Australia's advantage to create a specialist independent audit function. Its existence will provide trading partners with additional comfort about the effectiveness of Australia's biosecurity system. This can be important in negotiations concerning both market access and in relation to measures adopted or proposed by Australia with respect to imports.

Recommendations

69 The Minister for Agriculture, Fisheries and Forestry should be enabled under the legislation to require the Inspector General of Biosecurity to inquire into any matter which is the responsibility of the National Biosecurity Authority.

70 The Inspector General of Biosecurity should develop a program of audit on appropriate timescales (for example, five years, one year and to allow for *ad hoc* audits).

71 The Inspector General of Biosecurity should provide regular independent reports to the Minister with these reports copied to the Director of Biosecurity and the National Biosecurity Commission. These reports should be made public unless a strong contrary reason exists. The Director of Biosecurity and the National Biosecurity Commission, as relevant, should report to the Minister on actions taken on recommendations by the Inspector General. The reports and responses to them should be reflected in the National Biosecurity Authority's annual report to Parliament.

72 The Biosecurity Advisory Council should provide advice on inspection and audit activities to the Director of Biosecurity.

9 RESOURCING AND STAFFING

9.1 Introduction

Resourcing, staffing and management issues all impact on the Commonwealth's biosecurity effectiveness. Commissioner Callinan raised significant concerns about these issues in his report on the equine influenza outbreak, in particular on cost recovery for horse importation, AQIS's management structure and staff rotation and training. Many submissions expressed similar views.

The Panel's earlier recommendations will only be effective if the National Biosecurity Authority is adequately resourced and able to adopt a risk-return approach to allocating its resources. Cost recovery arrangements cannot be an excuse for this not occurring. A risk-return approach also requires sufficient senior management capacity to ensure the Authority is able to look beyond its day-to-day workload to comprehend its strategic direction. The management structure should provide clear national priorities, standards and operating directions and allow for tactical allocation of resources at a regional level.

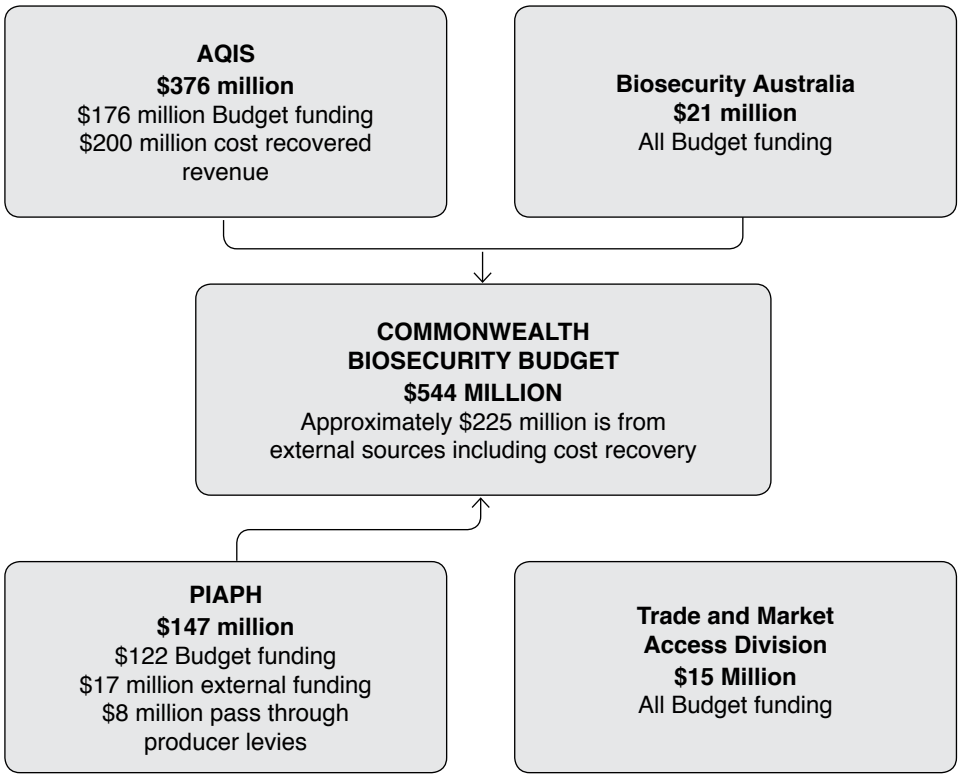
9.2 Current arrangements

9.2.1 Commonwealth funding arrangements

In 2007-08, the budget for the Commonwealth's biosecurity activities was approximately $544 million. Revenue was generated through a combination of taxpayer funding from Budget appropriations and cost recovery from users of import clearance and export inspection and certification systems. Division of this revenue across AQIS, Biosecurity Australia and PIAPH is summarised in Figure 9.

The Government also invests in additional biosecurity-related activities. For example, in 2007-08 around $15 million was allocated for market access activities managed by the Trade and Market Access Division of the Department of Agriculture, Fisheries and Forestry. Market access activities include the cost of officers located overseas, technical market access negotiations, bilateral, regional and multilateral trade negotiations, international agricultural cooperation, and capacity building. This funding is also shown in Figure 9 and is additional to the $544 million total.

Figure 9 Commonwealth biosecurity budget for 2007-08



9.2.2 The use and justification of cost recovery

Governments provide a range of services to the community, from defence, law and order, support for the disadvantaged and the elderly and investment in infrastructure, to the provision of regulatory frameworks which support community health and safety and protect the environment. In most cases, Commonwealth activity is funded directly from the Budget—that is, by taxpayers—as it is not possible or appropriate to charge individuals or businesses directly for the government activity. However, where there are 'private good' characteristics associated with a government activity, it may be appropriate to recover these costs from users or beneficiaries (Productivity Commission 2001).

The principle that those who create the need for regulation should bear its costs is well established. Cost recovery achieves this by charging businesses and consumers directly for the government-provided products that they consume. This has both efficiency and equity dimensions.

> ‘Because cost recovery can be used to make firms and consumers pay more directly for the products they receive from the government, it can be used as a tool for improving economic efficiency and equity.’ (Productivity Commission 2001, p. 11)

In efficiency terms, cost recovery ensures that consumers of a product being regulated face what is referred to as its ‘full social cost’. This enables consumers to make informed decisions about whether to consume more or less of the product in comparison with other products which may have lower biosecurity risks and hence lower associated regulatory expenditure.

Efficiency considerations also mean that exporters must consider the costs of meeting biosecurity regulations imposed by importing countries, some of which are incurred in Australia. These costs may influence exporters to decide which export markets they should target. They also provide a motivation for those paying the relevant fees (such as customs agents, shippers or exporters) to probe the basis of cost recovery determinations and advocate more efficient ways of reducing costs and risks.

In equity terms, cost recovery means that those Australians who use or consume high risk, high regulatory cost imports, do not ask their fellow citizens to pay. Equally, it means that Australian exporters who earn income from overseas markets because of regulatory services provided by the Australian government are not asking Australian taxpayers to fund the health and biosecurity protection of the citizens of other countries.

9.2.3 AQIS’s use of cost recovery

Cost recovery was first introduced for AQIS in 1979 although it did not come into full effect until the early 1990s. At that stage, the Commonwealth’s role was largely export related, as quarantine functions were handled by the states. When quarantine activities began to be transferred back to the Commonwealth in the mid 1990s, cost recovery was extended to cover import activities as well.

The introduction of cost recovery for export certification drove significantly greater efficiency and accountability for the way in which regulatory functions were delivered. Full cost recovery for export functions continued through until 2001, when the Government decided on a 40 per cent Budget contribution, a subsidy that is due to lapse on 30 June 2009.

AQIS’s cost recovery arrangements are managed on a program-by-program basis, in consultation with the relevant Industry Consultative Committee. AQIS cost recovery guidelines assist with these processes and are based on the broader *Australian Government Cost Recovery Guidelines* (Department of Finance and Administration 2005). The AQIS Guidelines specify that direct and indirect costs

should be taken into account in determining fees and charges. They also set out the principles for setting fees and charges, which include:

- equity, with no cross-subsidisation between user groups;
- efficiency in revenue collection;
- price stability, seeking to minimise the number and level of price variations; and
- transparency including providing information at a level of detail agreed with business representatives.

Managers are required to document the model used to calculate fees, including matching revenue to major types of activity and/or client groups. A Cost Recovery Impact Statement must be developed prior to fees being set or changed.

The split of Budget versus cost recovered revenue for AQIS programs in 2007-08 is shown in Table 4.

TABLE 4 Budget versus cost recovered revenue for AQIS programs – 2007-08

Program	Budget revenue ($000)	Cost recovered ($000)	Total revenue ($000)	% cost recovered
Airports*	77,920	1,890	79,810	2
Northern Australia Quarantine Strategy	12,924	1,690	14,614	12
International mail	18,445	3,655	22,100	17
Seaports	1,503	12,222	13,725	89
Import clearance	649	112,213	112,862	99
Animal quarantine stations	367	4,504	4,871	92
Post-arrival plant quarantine	1,488	854	2,342	36
Horticultural exports	2,541	3,706	6,247	59
Grain exports	3,619	5,247	8,866	59
Live animal exports	2,140	3,033	5,173	59
Meat inspection	29,497	43,660	73,157	60
Organic food exports	63	80	143	56
Dairy exports	737	1,079	1,816	59
Fish exports	2,169	3,206	5,375	60
Technical standards	3,341	0	3,341	0
Other	18,614	3,109	21,723	14
TOTAL	**176,017**	**200,148**	**376,165**	**53**

* See Section 9.2.4 Passenger Movement Charge for offsetting revenue

9.2.4 The Passenger Movement Charge

The Passenger Movement Charge is levied under the *Passenger Movement Charge Act 1978*. The charge, previously called the Departure Tax, is levied on passengers leaving Australia for an overseas destination and is collected by airlines and shipping companies as part of their ticketing arrangements.

When introduced, this charge was, at least in part, to offset the costs of customs, immigration and quarantine processing at Australia's borders. However, the revenue is not hypothecated and over time the linkage to border processing has diminished to the point where in 2000, the Australian National Audit Office stated that the charge was no longer solely linked to cost recovery of these functions (Australian National Audit Office 2000-01b). Having said that, a functional linkage was reiterated in the Second Reading Speech for the *Passenger Movement Charge Amendment Bill* in 2001, which saw the charge increased to $38.

> 'The purpose of this bill is to amend the Passenger Movement Charge Act 1978 (as amended) to increase the rate of the Passenger Movement Charge (the charge) by $8, to $38, with effect from 1 July 2001. The increase was announced by the Treasurer in the 2001-02 budget and will fund increased passenger processing costs as part of Australia's response to the threat of the introduction of foot and mouth disease.' (HR Hansard 2001)

Based on passenger numbers and a charge of $38 per outgoing passenger, the Passenger Movement Charge would have generated approximately $430 million in 2007-08. This revenue is not included in Table 5 above and it should be noted that there are many non-quarantine costs associated with passenger movements at international airports including customs and security.

9.2.5 Current management structures

Biosecurity Australia, PIAPH and the Trade and Market Access Division have vertically integrated management structures with lines of responsibility extending from executive managers (or the Chief Executive in the case of Biosecurity Australia) down through to general managers (or branch heads) and then on to specific program managers.

AQIS is a much larger organisation with over 3,000 full-time staff working across Australia. It employs a 'matrix management' structure, sharing responsibility between national programs and regions. Under this management model, policies, standards and work instructions are set nationally and applied regionally.

Executive managers are responsible to the AQIS Executive Director for the overall direction of programs. National branch managers report to the executive managers. The branch manager's role is to ensure that biosecurity programs give effect to government policies and strategies within approved budgets and cost recovery arrangements. AQIS regions are responsible for services in accordance with business plans and budgets determined through the AQIS corporate management framework. Regional managers have responsibility for ensuring that work practices are in line with national policies, standard operating procedures and work instructions.

9.3 Current debates and views in submissions

A number of matters were raised with the Panel in relation to Commonwealth resourcing mechanisms, particularly the impact of cost recovery and resourcing levels. The Panel has dealt with these two issues separately. Management and staffing issues were also raised with the Panel, including management structures and the staff rotation policy that exists within AQIS regional offices. Commissioner Callinan commented on all of these issues in his report on the equine influenza outbreak.

9.3.1 Cost recovery and implications for managing risk

The principle of cost recovery was generally supported in submissions. For example, the Quarantine and Exports Advisory Council confirmed the general principle that those who create a need for regulation should contribute to its costs.

> 'For quarantine risk, this usually means that those parties responsible for creating the risk (usually those associated with imports), should meet the majority of the cost where this can be cost-effectively achieved. Similarly, for exports and market access, Australian parties have responsibility for ensuring that risk to international customers (and customer regions/countries) is effectively mitigated at the cost of the risk-creator.' (Quarantine and Exports Advisory Council submission, p. 27)

However, the Panel was told that cost recovery constrains AQIS's ability—both at a program management level and a regional operational level—to redirect resources to manage risks. Concerns about avoiding cross-subsidisation, reinforced by business pressure and audits conducted by the Australian National Audit Office, appear to have led AQIS into a program-centric mode. Programs are tightly defined in terms of the activities that form the basis of a particular set of fees, rather than encouraging efficient and responsive management from a whole-of-organisation perspective. The Quarantine and Exports Advisory Council also drew attention to this issue.

> 'AQIS's capacity to reallocate resources flexibly across programs to address areas of emerging risk is limited. For example, if it were determined that the balance of risks required that resources were to be shifted from Import Clearance to International Mail, the current funding and cost recovery arrangements would make this very difficult to achieve.' (Quarantine and Exports Advisory Council submission, p. 28)

The way in which fees are determined, and the extent to which AQIS responds to those most sensitive to fee increases, is said to have discouraged investments in training and information technology.

Additionally, cost recovery can be a disincentive for collection of data to support risk management. As an example, the Panel was advised that when an item of biosecurity concern is intercepted at the border, the importer is given the option of having the pest or disease diagnosed and/or treated appropriately or having the item destroyed or re-exported. As discussed in Chapter 7, importers are most likely to choose the least cost option, which in many cases is treatment without diagnosis. As a result, knowledge about risks and risk pathways does not increase.

Some submissions argued that diagnosis is in the public interest and, in view of the lack of private incentives to have a pest or disease diagnosed, should be funded by government.

The administrative burden of managing cost recovery was also criticised. Cost recovery models are developed at the program level and fees are negotiated with Industry Consultative Committees. Over time, fees have become more complex and narrow—not just in terms of being program specific, but within programs as well. For example, there are now 59 different fees associated with import clearance, 23 for the care of plants in a quarantine station and 31 associated with animals in a quarantine station. Some import fees are shown in Table 5 to illustrate the complexity.

Commissioner Callinan's view was that fees for horse importation were too low and did not meet the full cost of the regulatory function. He made a number of recommendations about what should be covered by fees, including the full cost of documentation, adequate staffing levels, capital costs and audit activities. He also suggested that a contingency factor should be built into the fee structure. Until a new fee structure could be developed, Commissioner Callinan recommended a fee of not less that $165 per day for thoroughbred stallions and not less than $65 per day for other horses (Callinan 2008). This compares with the current fee of $34 per day per horse.

Aside from these specifics, Commissioner Callinan also noted a tendency within AQIS to regard its work as service delivery to clients, rather than a regulatory

Table 5 Examples of AQIS fees	
Service	**Fee**
Electronic lodgement of an entry on an AQIS entry management system	For each entry - $7
Manual lodgement of an entry on an AQIS management system	For each entry, in addition to the appropriate assessment fee: (a) if a self-assessed clearance declaration has been lodged on the Integrated Cargo System - $20 (b) if a full import declaration has been lodged on the Integrated Cargo System - $12
Assessing an entry not subject to a compliance agreement	For each entry: (a) based only on the information in the entry - $30; and (b if the officer requires additional information - an additional $30
Assessing an entry subject to a compliance agreement	For each entry: (a) if the goods are of quarantine concern - $6; or (b) if the goods are of both quarantine and imported food concern - $30
Care and maintenance of a plant at a quarantine station	
(a) a plant grown from imported seed	For each square metre, or part of a square metre, of space occupied by the plant at the quarantine station - $4 per day
For holding any of the following animals in quarantine:	
(a) ruminant animals, including cattle	(a) for up to 25 such animals in a consignment - $40 a day for each animal
(b) equine animals	(a) in the intake period for an animal – nil (b) in the official quarantine period for up to 25 such animals in a consignment - $34 a day for each animal

function required to manage the risk associated with importing horses. His view was that this perception contributed to fees being lower than actually required to deliver an effective regulatory function.

> ‘I was also influenced by a tendency … on the part of AQIS to treat some of its work at the quarantine stations as ‘service delivery’ to ‘clients’, rather than as work and resources provided as a necessary facet of quarantine. As a consequence, I formed the impression that AQIS’s costings and charges should be more than they were, and that, if they were, biosecurity and quarantine to prevent another outbreak of equine influenza would be improved.’ (Callinan 2008, p. 328)

The Panel also noted the confusion over AQIS’s role as regulator versus service provider, or somewhere between the two. The Productivity Commission termed this phenomenon ‘user pays, user says’ in its report into cost recovery by Government agencies (Productivity Commission 2001). The Panel has not been provided with information to suggest that the regulatory function is being compromised as a result of a ‘user says’ tendency, but it is clear that it has led to tension in the relationship between AQIS and importers and exporters—especially during detailed negotiations over costs—and a tendency for AQIS to defer much needed expenditure on information technology systems and research.

Cost recovery can ensure that revenue keeps pace with increasing workloads, in contrast with some Budget funding. For example, the extended Increased Quarantine Intervention funding has been static at $67.7 million over the three years 2006-07 to 2008-09, a period in which air passenger arrivals are forecast to increase by 19 per cent (passenger numbers supplied by AQIS). A consequence is that the cost recovered Import Clearance Program’s resources have kept pace with growth, while the Airports Program (which is largely Budget funded) has increasing difficulty in meeting its government determined intervention and effectiveness targets.

The Ernst & Young *Review of Quarantine and Border Security Strategies and Policies* made specific comment on budget sustainability (Ernst & Young 2007). It found that in 2005-06, the Airports, Northern Australia Quarantine Strategy and Detector Dog programs were in a ‘negative net position’, that is their expenditure was greater than revenue. By contrast, the Australian Customs Service and the Department of Immigration and Citizenship have sensibly negotiated Budget funding to be indexed to growth in passenger numbers. The Tourism and Transport Forum noted this difference in its submission and suggested that:

> ‘AQIS funding should be subject to a funding formula (like that applied to the Australian Customs Service) that provides increases in funding in line with the growing number of passengers coming through airports and number of airports serviced.’ (Tourism and Transport Forum submission, p. 4)

9.3.2 Management and staffing

Management structures

AQIS's management structure was commented upon in a number of submissions to the Panel, some advocating that arrangements remain, others that they should change. Commissioner Callinan was in no doubt, concluding that the current structure was dysfunctional.

> 'Having heard the evidence and having examined in detail the management structure of AQIS in the course of the Inquiry, I can only respond that it would be difficult to imagine a more complex and dysfunctional structure so far as it relates to horse importation than the one under which the failure occurred.' (Callinan 2008, p. 315)

Commissioner Callinan stated that the matrix management structure had contributed to the equine influenza outbreak by blurring responsibility and accountability.

> '… I have heard and seen enough to have reached a strong conviction that matrix management in the form in which it has come to be practiced in AQIS (not by design) has contributed to many inefficiencies and played its part in the ultimate failure of AQIS in relation to horse importation. It has done so by blurring lines of responsibility, and therefore accountability, in ways I need not repeat here.' (Callinan 2008, p. 322)

Commissioner Callinan's comments on horse imports were echoed in a number of submissions to the Panel as having wider applicability.

A former Executive Director of AQIS, Ms Meryl Stanton, had a different view. She argued that the size of the organisation and complexity of the task made some form of matrix management unavoidable.

> 'In a more complex and fast moving world, there is now little option for large private or public sector organisations but to implement some form of matrix management, with lines of responsibility and authority across as well as down the organisation.' (Meryl Stanton submission, p. 2)

Lack of Senior Executive Service staff

The Panel received evidence that there is an inadequate number of Senior Executive Staff within both AQIS and Biosecurity Australia. In Biosecurity Australia, the equine influenza outbreak resulted in numerous senior staff being removed from their normal duties for extended periods to give evidence to the Equine Influenza Inquiry and now to implement the recommendations arising from that Inquiry process. As a result they have been unable to progress regular duties including managing and finalising Import Risk Analyses.

The Panel was advised that in the case of AQIS, a lack of Senior Executive Service officers has inhibited critical decision making. Table 6 shows that, as at 30 June 2007, AQIS had a considerably higher ratio of staff to Senior Executive Service officers than several comparable Commonwealth agencies, for example, the Australian Customs Service. As a specific example, the Australian Customs Service has a division comprising four branches (each managed by a Senior Executive Service officer) that is responsible for the clearance of passengers and their goods across the border. AQIS has a single program managed by one Senior Executive Service officer. Customs also has areas dedicated to strategic development, intelligence gathering, risk analysis and risk targeting. AQIS operates without those structures, although a Quarantine Systems Division was established following the equine influenza outbreak.

Table 6 Staff per Senior Executive Service (SES) officer

Organisation		Number
AQIS	SES staff	15
	Total staff	3,276
	Average staff per SES	218
Australian Customs Service	SES staff	47
	Total staff	5,730
	Average staff per SES	122
Department of Immigration and Citizenship	SES staff	95
	Total staff	6,425
	Average staff per SES	68
Whole of Australian Public Service	SES staff	2,509
	Total staff	143,525
	Average staff per SES	57

Source: AQIS and Australian Public Service Commission 2007

Staff rotation and use of contractors

A number of submissions were critical of the AQIS staff rotation policy, in particular its implications for job knowledge and risk management. Under current arrangements, rotation periods can be as short as four months, although they are normally two or three years. Some AQIS officers suggested that the policy should be offered on a voluntary basis, while others suggested that the rotation program should be dismantled. For example:

> 'Consideration should be given to the dismantling of the formalised staff rotation system operated in NSW (and other Regions) … A massive amount of effort is put into orientation and training of rotated staff. By virtue of the size of this activity in NSW it is inevitable there are staff placed in positions that they simply have no interest and/or talent for.

> Consideration of should be given to filling positions based on merit, being assessed against skills and training relevant to the position.' (Greg Hankins submission, p. 1)

The Northern Territory Department of Primary Industries, Fisheries and Mines argued that under the policy, staff did not receive appropriate training and were unable to develop expertise in any field.

> 'The current AQIS policy of rotating staff to different positions every few years does not allow staff to become experts in a field and receive appropriate training.' (Northern Territory Government submission, p. 3)

The Community and Public Sector Union also noted the negative effect of the policy.

> '… a compulsory staff rotation policy has contributed to increased biosecurity risk, organisational risk, reduced operational efficiency, a weakening of standards in field operations, and a loss of expertise.' (Community and Public Sector Union submission, p. 6)

The Union raised a further concern about the use of contractors within AQIS, arguing that biosecurity functions should operate solely under the governance structure of the Australian Public Service.

> 'Labour hire and contractor arrangements also devolve employer responsibility for professional development and training; outsource accountability of service delivery outcomes; public liability; and potentially offload employer OH&S responsibilities to other parties.' (Community and Public Sector Union submission, p. 3)

9.4 Panel's consideration

9.4.1 Resourcing in aggregate and across the continuum

As described earlier in this Report the increasing volume and range of international trade, growth in tourism, intensification of agriculture and changing climatic patterns mean that the task of managing the biosecurity system is becoming more challenging. The Panel's view is that Australia's best chance of maintaining its favourable pest and disease status is to take a managed risk approach across the whole continuum, and to increase the overall pre-, border and post-border effort.

To do this, the National Biosecurity Authority will need additional resources. A proper costing will need to be prepared. However, the Panel's estimate is that an increase, building over time to an amount in the order of $260 million per

annum, will be required—shared between businesses, through cost recovery, and the public through the Commonwealth Budget, including the Passenger Movement Charge. This figure is equivalent to nearly 50 per cent of current Commonwealth outlays. In addition, the Panel is recommending a remediation investment of approximately $225 million over a number of years to upgrade information technology and business systems for the National Biosecurity Authority. This investment is discussed in more detail below.

Without these additional resources, the National Biosecurity Authority will not be able to deliver the **One Biosecurity: a working partnership** model envisaged by the Panel. While some efficiency will arise from amalgamating Biosecurity Australia, AQIS and PIAPH and adopting a risk-return approach, it is impossible to escape the conclusion that the agencies are significantly under-resourced, putting Australia's economy, people and environment at significant risk. Without an overdue catch-up, the adoption of a risk management approach will be seriously constrained by a lack of intelligence on risks and pathways, and a limited capacity, in systems and people, to analyse the information that is available. In turn, Australia would then be forced to rely on border interventions rather than keeping risks offshore as far as possible through pre-border activities. The post-border monitoring and surveillance effort would also remain variable, putting at risk Australia's ability to respond quickly to possible pest and disease incursions and diminishing its ability to meet export market information requirements.

The consequences of continuing to under-resource the biosecurity system could be severe. For example, as discussed in Chapter 7, a 2002 Productivity Commission study found that a 'short' foot and mouth disease outbreak would result in a Gross Domestic Product loss of $2-3 billion. This figure would rise to between $8 billion and $13 billion for a 12 month outbreak, demonstrating the significant value of being able to detect, contain and eradicate an outbreak quickly (Productivity Commission 2002).

As mentioned in Chapter 1, an economic assessment found that the net present value of the potential cost of red imported fire ant in Australia over a thirty year period was approximately $8.9 billion. Using an eradication cost of $120 million, the study found that for each $1 spent on eradication the benefit would be $25 in avoided damage costs (Kompas and Che 2001). Prevention of arrival, or very early detection and eradication, are likely to be less expensive and would produce even higher benefit-to-cost ratios.

In the case of the equine influenza outbreak, the Commonwealth alone has already spent more than $342 million dealing with the outbreak itself and providing financial assistance to affected individuals and businesses. There have also been considerable costs to the states and to businesses or individuals

arising from their inability to move horses and the virtual cessation of the horse racing industry in a number of states for several weeks.

These types of costs, and the real prospect of reducing their likelihood of occurring by building a more effective **One Biosecurity: a working partnership** system, provide a compelling case for the additional outlays and cost recoveries the Panel is recommending. The following sections amplify the Panel's recommendations as they affect the components of the biosecurity continuum.

Pre-border

The Panel recommends that investment in pre-border activities needs to be increased to allow for more of Australia's biosecurity risk to be kept offshore. As discussed in Chapter 7, the Panel's view is that investment in pre-border activities can reduce the pressure on mitigating risks at the border. The major areas for investment include:

- strategic intelligence activities that underpin a risk-return approach;
- building biosecurity capacity in neighbouring countries to reduce the risk of pest and disease incursions;
- increasing the use of offshore audit activities as well as pre-departure risk management systems for incoming passengers;
- improving and broadening Biosecurity Import Risk Analysis capacity by engaging staff with environmental, aquatic and economic skills and investing in strategic research;
- reducing the backlog of uncompleted Import Risk Analyses and developing initial capacity within the Authority to implement the proponent-based Biosecurity Import Risk Analysis process proposed by the Panel (see Chapter 5); and
- enhancing Australia's participation in international standard setting bodies and improving capacity to provide scientific and technical policy advice to support trade and market access negotiations.

Of the additional $260 million, the Panel's view is that approximately 25 per cent should be allocated to pre-border efforts, some of which (such as increased offshore audit activities) may be cost recovered from businesses.

Border

As discussed in Chapter 7, the Panel's recommendation is that a risk-return approach should be adopted at the border in place of the mandated intervention targets that currently exist. This would mean, for example, less effort screening low risk pathways such as air canisters. However, even under a risk-return

approach, overall resourcing levels at the border are currently inadequate. Additional investment will be needed in the following areas:

- implementing new screening processes at airports that use sophisticated risk profiling—noting that more use of infringement notices (see Chapter 8) may help to reduce biosecurity offences at the border in the medium term;
- selectively examining cargo within shipping containers, as opposed to inspecting just the outside of the container itself;
- wider use of detector dogs at airports, seaports and mail centres in the interests of efficiency and effectiveness;
- diagnosing pests and diseases identified at the border (Chapter 7);
- improving audit activities at the border, for example, targeted checking of consignments against documentation, verifying import permit documentation and increasing audits for quarantine approved premises and companies operating under compliance agreements; and
- implementing the enhanced Commonwealth role in relation to ballast water and biofouling discussed in Chapter 2.

The Panel's assessment is that approximately 20 per cent of the additional $260 million expenditure should be allocated to border activities.

Based on existing cost recovery to budget funded ratios, approximately half the additional pre-border and border investment would be cost recoverable. For the border component, the additional Budget contribution would approximate 5 per cent of the expected Passenger Movement Charge revenue in 2008-09.

Post-border

As discussed earlier in this Report, the Panel recognises that a zero risk biosecurity regime is neither desirable nor possible. Australia cannot afford to search every passenger or every container of cargo arriving in the country, nor can it prevent the arrival of disease or vectors on air currents. Consequently, it is inevitable that there will be pest and disease incursions. A strong coordinated post-border capability minimises the chances of those pests and disease becoming established.

The Panel's view is that considerable improvements can be made in post-border activities. It has recommended an extended legislative reach for the Commonwealth (Chapter 2) and more post-border investment by the Commonwealth to strengthen Australia's biosecurity system overall (Chapters 2 and 7). The Panel's assessment is that this will require approximately 50 per cent of the additional $260 million.

Over half of this post-border investment should be allocated to the monitoring and surveillance program for national priority exotic pests and diseases. This program, discussed in Chapters 2 and 7, would cover terrestrial and aquatic systems, from a production and an environmental perspective, and would include:

- an expanded Northern Australia Quarantine Strategy (noting that this also has pre-border and border elements to it);
- more comprehensive port surveillance;
- a regime for investigating suspected post-border detections of pests and diseases in imports;
- continuation of the National Sentinel Hive Program until a more comprehensive program is developed based on an assessment of risks;
- strategic surveillance to strengthen and support Australia's export market access claims and to inform Biosecurity Import Risk Analyses; and
- monitoring and surveillance for national priority marine pests and diseases associated with ballast water.

The remaining post-border funding would be used to develop the risk-based traceability scheme referred to in Chapter 2, support post-border communication and awareness activities, invest in addressing peri-urban biosecurity issues and to enhance Australia's emergency preparedness and response arrangements, including activities such as:

- building the National Biosecurity Authority's capacity to provide national leadership and coordination in emergency response situations—for human, animal and plant health, including terrestrial and aquatic pests and diseases;
- harmonising and improving pest and disease databases and emergency management information systems;
- improving capabilities in epidemiology and pest and disease modelling; and
- developing diagnostic protocols for all national priority exotic pests and diseases.

It is vital that the states do not see the Commonwealth's additional post-border investment as an opportunity to step back from their own biosecurity obligations. Post-border work has traditionally been a state responsibility. For example, the states allocate significant resources, in terms of staffing, infrastructure and program funding, to pest and disease prevention, surveillance, preparedness, incursion response and biosecurity management. It is estimated that in 2007-08, Queensland, South Australia, Victoria, the Northern Territory and the Australian Capital Territory spent over $145 million on these activities (information sought by the Panel was not provided by the other states). This contribution is essential. During consultations with the Panel, states generally recognised the necessity of their continued involvement, several explicitly so.

The Panel's post-border recommendations will only strengthen the biosecurity system if state governments continue their post-border efforts. To ensure that this occurs, the Panel recommends that the Commonwealth's additional post-border investment be tied to an agreement with the states on appropriate matching commitments. In the Panel's view it would be preferable that the states increase their investment to match the Commonwealth to a significant extent.

Investments across the continuum

In Chapter 7, the Panel discussed ways of overcoming biosecurity skills shortages. Its recommendations included developing a general biosecurity course to be incorporated into relevant curricula and ensuring that staff of the National Biosecurity Authority are appropriately trained. The Panel also noted options such as support for cadetships and studies in areas of identified skills shortage—such as taxonomy, nematology, epidemiology and marine biology. The Panel's assessment is that of the recommended $260 million in additional funding, approximately 5 per cent should be allocated to skills development each year. At least 75 per cent of this should be spent on the training needs of the Authority to ensure that its staff has the skills needed to adopt the sophisticated risk-return and systems-based approaches recommended by the Panel.

The Panel's assessment is that there has been a substantial underinvestment in information technology systems for biosecurity at the Commonwealth level. AQIS has lagged significantly behind other border agencies, notably the Australian Customs Service, at considerable cost to the Australian economy and some risk to biosecurity. As discussed in Chapter 7, a significant investment in information technology systems will be needed as an integral component of the risk-return approach proposed by the Panel.

A comprehensive redevelopment of existing information technology systems will be a major undertaking. The Australian Customs Service spent in the order of $205 million on its Cargo Management Re-engineering project, including the development and implementation of the Integrated Cargo System and the electronic gateway. These costs were incurred between 1999, when the project commenced, and 2006, when the imports version of the Integrated Cargo System was implemented.

The Customs project was arguably narrower in scope than the system the Panel believes is necessary for the National Biosecurity Authority. The Panel considers that at a minimum, an equivalent level of resourcing—or around $225 million in 2008 dollars—should be appropriated for the redevelopment of information technology and business systems. The project would need to be properly costed following a formal design and consultation process and expenditure would occur over a number of years.

Although these system improvements should ultimately be funded through cost recovery mechanisms (which should cover depreciation costs, for example), the Panel recommends that the project should be funded from the Budget as a one-off remediation contribution, in addition to the $260 million of recurrent expenditure, to rectify past underinvestment and ensure that immediate progress is made.

Beyond the resources mentioned above, Budget funding will be required for:

- the Inspector General of Biosecurity and a small supporting unit within the Department of Agriculture, Fisheries and Forestry, with an appropriate travel and consultancy budget;
- establishing the National Biosecurity Authority;
- supporting drafting of the new Biosecurity Act; and
- the additional resources required by both the Administrative Appeals Tribunal and National Biosecurity Authority as a result of the introduction of merits review for a limited range of decisions taken by the Authority.

Recommendations

73 The Commonwealth should increase its biosecurity investment by an amount in the order of $260 million per annum, subject to a full costing by departments, to meet the recommendations of this report. A significant part of this increase in resources should be funded through cost recovery and an adjustment to the Passenger Movement Charge.

74 The Commonwealth's additional post-border investment should be tied to an agreement with the states and territories on appropriate matching commitments (see also Recommendation 3).

75 Recognising past underinvestment, an additional $225 million should be appropriated through the Commonwealth Budget over a number of years for investment in information technology and business systems for biosecurity. Future cost recovery arrangements should be adjusted to cover depreciation and replacement of that infrastructure.

9.4.2 Cost recovery and Budget funding

The Panel has considered the important question of which functions are appropriate for cost recovery and which should be funded by taxpayers at large. It supports the principle that those who create the need for regulation should bear its costs and notes the efficiency and equity benefits that can be achieved through cost recovery.

However, these benefits need to be weighed up against the cost of implementing cost recovery and whether cost recovery maintains the incentives for appropriate behaviour by businesses (import and export) and travellers. The *Australian Government Cost Recovery Guidelines* acknowledge that cost recovery may not be warranted where it is not cost effective and that adopting a very precise approach to charging can be administratively costly.

Over time, AQIS has implemented cost recovery in an increasingly narrow and program-centric way. Concern about subsidisation across programs, vigorously pursued by Industry Consultative Committees, has resulted in cost recovery charges often being finely disaggregated and directly linked to support of particular programs and organisation units. Such finely disaggregated charges increase the administrative costs of collection as a proportion of revenue raised. Linking them to particular programs and activities has made it difficult for AQIS to allocate resources flexibly from a risk and business management perspective.

More importantly, in the process of negotiating charges, AQIS appears to have excluded, or not considered, the full cost of its regulatory functions, including related and necessary investments in systems development, staff training and verification. It is not clear that charges associated with provision and replacement of capital, including an allowance for the opportunity cost of capital items such as buildings and plant, have been comprehensive. These charges should follow normal commercial practices. Excluding these costs is not consistent with the guidelines but might be a response to concerns expressed by less profitable sectors facing cost recovered regulation. Encouragingly, most business representatives the Panel met said they had never objected to reasonable charges and had at times urged charges appropriate to providing both the biosecurity needed, and advantages which would flow from better, more user friendly systems (for example, electronic import permit processing).

Overall the Panel has found, as did Commissioner Callinan, that current AQIS cost recovery conflicts with the policy objective of managing biosecurity risks.

There are three options:

- changing the mix between cost recovery and Budget funding to increase the Budget resources for functions that are currently underfunded;
- adopting an alternative cost recovery mechanism, such as a tax-based charge spread over a larger base with less precise accounting requirements and a consequential increase in expenditure flexibility; or

- changing the way that cost recovery is administered, for example, aggregating charging structures with the objective of simplifying administration and providing greater flexibility.

The Panel found no general case for replacing the existing cost recovery regime with general taxpayer funding. This would lose the efficiency advantages and equity gains from cost recovery arrangements.

The Panel concurs with the Productivity Commission's finding that even imperfect cost recovery arrangements may still improve economic efficiency overall relative to higher general taxation (Productivity Commission 2001). Accordingly, the Panel's view is that moving away from cost recovery in a significant way would represent a step backwards in efficiency terms and would fail to acknowledge the private benefits that arise from import clearance and export certification activities.

Moving to a tax-based cost recovery system could reduce transaction costs and provide a greater capacity to manage functions on a risk-return basis. However, such an approach would inevitably dilute efficiency signals, for the regulator as well as the importer and exporter. In addition, tax-based cost recovery carries with it a risk that over time, gaps will emerge between costs and revenue, possibly resulting in over-recovery of costs. Equally, unless hypothecation is tightly ensured, gaps can emerge between revenue collected, and the revenue allocated to the regulator via appropriations to provide the regulatory function.

Therefore the Panel's recommendation is that fee-based cost recovery should be retained as the principal mechanism. There is, however, a need to change the way that cost recovery is administered, particularly if the Panel's earlier recommendations regarding a risk-return approach are to be implemented effectively.

As a first step, charges for 'like' activities should be aggregated across programs with the number of charges significantly reduced. This sort of arrangement is provided for in the *Australian Government Cost Recovery Guidelines* based on efficiency and effectiveness (Department of Finance and Administration 2005). Reducing the number of charges will simplify the administration of cost recovery and allow the Authority to make internal resourcing decisions that maximise the long run risk-return payoff and deliver efficiencies in the longer-term (for example, from the ability to manage regional staff more flexibly across programs).

As a second step, charging levels need to be set at a level that provides a properly funded regulatory function, including:

- long-term and strategic investment in infrastructure, including information technology and information systems to support a risk-return approach;
- appropriate staffing levels and resources for training; and
- the cost of audit activities.

Business groups should continue to be involved in examining the Authority's costs, proposing efficiencies and comparing revenue with expenditure. However, while consultation is important, the ultimate responsibility of the Authority should be to present a cost recovery package to the portfolio Minister that will properly fund the regulatory function as outlined above. This will inevitably mean some difficult discussions about longer-term needs versus short-term fixes. Complaints from some business sectors can be expected. However, the Authority and the Minister should support the principles enunciated above for the long term good of the overall biosecurity system.

Recommendations

76 Programs that currently use cost recovery should continue in this mode but charges for like activities should be aggregated, leading to a significant reduction in the number of individual charges.

77 In developing cost recovery arrangements, the National Biosecurity Authority should consult with business groups, but have the ultimate responsibility of recommending to the responsible Minister a cost recovery package that will support the provision of an effective and efficient regulatory function including:

a adequate and long-term investment in infrastructure, including information technology and information services;

b appropriate funding for staff and training;

c the costs of auditing pre-border and border biosecurity certification; and

d the cost of diagnosing a proportion of interceptions to inform a risk-return approach to activities.

In addition, the Panel recommends that an external review of costs and revenue should be conducted on a periodic basis (every five years would be appropriate), with the reports to be provided to business groups and the Authority. The external review should examine the efficiency of cost recovery, whether appropriate aggregation of charges is occurring, and whether unnecessary constraints are being placed on the use of revenue from a risk-return perspective.

Recommendation

78 Cost recovery by the National Biosecurity Authority should be subject to periodic external review to ensure that:

a cost recovery reflects efficient costs and provides appropriate efficiency signals to the Authority;

b the cost recovery structure provides appropriate price signals for business performance;

c there is no long-term over-recovery; and

d costs are being aggregated wherever possible and that unnecessary constraints are not being placed on the use of revenue from a risk-return perspective.

A separate issue for the export programs is the Government's current 40 per cent subsidy of the cost of delivering the regulatory function. This subsidy, which is due to expire at the end of June 2009, does not align with the *Australian Government Cost Recovery Guidelines*, which state that partial cost recovery is generally not appropriate. The circumstances in which partial cost recovery may be acceptable include:

- where cost recovery is being 'phased in' for new arrangements; or
- where an agency adjusts charges for particular groups of clients in order to meet Australian Government endorsed community service obligations or for explicit policy purposes.

The policy objectives of the 40 per cent subsidy, which was introduced in 2001, are unclear, and are unlikely to qualify against the community service obligation criteria outlined above. The Panel's recommendation is that the subsidy should be allowed to lapse as scheduled at the end of June 2009, although this would require an early decision and announcement by the Government to allow businesses to prepare for the additional costs as well as for the necessary consultation on revised fee structures.

As a corollary, the Panel recommends that this move should be linked with greater use of co-regulatory arrangements, such as compliance agreements, to reduce the cost of the regulatory service wherever possible. This would only be feasible where agreed between business groups, the National Biosecurity Authority and international trading partners.

In addition, the Commonwealth should enhance efforts to defend Australia's export systems and gain additional market access, including through biosecurity-related technical market access and multilateral, regional and bilateral negotiations. These functions should be funded from the Commonwealth Budget rather than via cost recovery mechanisms. The Panel's view is that

this role is not one for the National Biosecurity Authority, but should be conducted within the Department of Agriculture, Fisheries and Forestry with technical advice and assistance provided by the National Biosecurity Authority as needed (see Chapter 3).

Recommendations

79 Export certification functions should return to 100 per cent cost recovery as scheduled at the beginning of July 2009, noting that this would require an early decision and announcement by the Government to allow businesses to prepare for the additional costs as well as for the necessary consultation on revised fee structures.

80 The Government should enhance Budget funding for activities which support biosecurity-related technical market access for Australian exporters.

9.4.3 Linking Budget funding to demand

As mentioned above, one of the advantages of cost recovery is that there is a direct link between revenue and the increasing demand for the regulatory service. This relationship does not necessarily exist for Budget funded programs. For example, as also mentioned above, the Budget funded Airports Program has moved into 'a negative net position'—that is, expenditure exceeds revenue—a position that is predicted to continue (Ernst & Young 2007).

Removal of mandated intervention targets and adoption of a risk-return approach would go part way to enabling biosecurity protection to be maintained within existing resources. However, it is clear that a static funding base is not sustainable, given increasing passenger numbers, greater numbers of passengers from higher risk countries and increasing cost items such as employee salaries and rent. In the future, revenue needs to be linked more closely to growth in demand, for example, via a Workload Growth Agreement as currently exists for the Australian Customs Service. Linkages could be made directly with growth/changes in passenger numbers, or through more sophisticated mechanisms such as growth in demand from countries with higher biosecurity risks. Either way, this linkage would align the program more closely with the cost recovery arrangements applied to other programs, and would address the budget sustainability issues that have already arisen and will only intensify in future.

As recommended above (Recommendation 73) a possible source for these increased funds could be the Passenger Movement Charge levied under the *Passenger Movement Charge Act 1978*. This charge, which moves in sympathy with passenger movements, would in any case provide a close to perfect revenue hedge to the Budget for changing expenditures arising from a Workload Growth Agreement.

Recommendations

81 Funding for the Airports Program should be adjusted in future on the basis of a Workload Growth Agreement established between the National Biosecurity Authority and the Department of Finance and Deregulation that links passenger numbers with Budget appropriations.

82 The Workload Growth Agreement should reflect a risk-return strategy for managing intervention rates and make appropriate allowances for productivity.

9.4.4 Management structures and staffing

The establishment of the National Biosecurity Authority provides an opportunity to re-evaluate the management arrangements most suitable for managing biosecurity risks. In the Panel's view, consideration should be given to a more functionally-based management system, rather than the current matrix approach. Under that arrangement, principles and policies would be set nationally for adoption by operational staff, including ensuring that staff are provided with adequate training and support, and oversighting the development of compliance and accreditation systems.

The regional arms of the organisation would be managed by a regional director who would be a Senior Executive Service staff member with sufficient experience and knowledge of the organisation from a central perspective. The regional director would have responsibility for the tactical allocation of resources to activities to achieve functional priorities and outcomes. As far as possible, the management services of the Authority would be centralised, including human resources and payroll services.

The Panel discovered that the current organisation with the Department was more akin to a series of stovepipes, with limited communication and collaboration. The senior management within the newly established Authority will have a critical role in developing a common corporate culture and a sense of unity and purpose throughout the organisation.

As discussed in Section 9.3.2, the current regional rotation policy within AQIS was highly criticised by a number of people. While there are obvious advantages to be gained through staff rotation, such as the avoidance of regulatory capture and the career development of staff, there are also disadvantages in terms of the loss of expertise, administrative expense and additional training and supervisory burdens for the organisation. The Panel found that the existing rotation policy was overly rigid and that in some cases, the rotation periods had been too short. The Panel observed that staff rotations were not always based on improving

the capability and effectiveness of individual staff members. Instead they were sometimes influenced by industrial considerations, such as a perception of 'equitable' access to overtime or shift loadings, which are issues that should be dealt with through other mechanisms. The management of the Authority will need to develop a carefully thought through policy on staff rotation. In the Panel's view, this policy should address more than just regional staff rotation, and be expanded to include the issue of rotating staff between policy and operational roles.

The biosecurity risk management approach advocated by the Panel in previous chapters will require a strong capacity for strategic thinking within the Authority. In addition, the Authority will need the ability to respond to significant biosecurity events without sacrificing its day-to-day responsibilities. The Panel's view is that the current Senior Executive Service staffing levels within AQIS and Biosecurity Australia are lower than required and that additional resources should be allocated to increase these numbers. In deciding the appropriate staffing levels, consideration should be given to the management load of comparable front-line biosecurity agencies such as the Australian Customs Service. In terms of Biosecurity Import Risk Analysis capability, the Authority will require senior staffing levels that allow the organisation to continue with its important workload in the face of biosecurity events such as equine influenza or the current World Trade Organization dispute over apples from New Zealand.

The Panel also noted the views put forward on the use of contractors within various programs of AQIS. The Panel considered that on balance the use of contractors improves the flexibility of the organisation and provides access to skills that it may not be able to obtain otherwise. The Panel also recognised that a contracted workforce also poses challenges to the organisation in terms of training and motivation. The Authority must take proactive steps to ensure contracted workers are in tune with the objectives of the organisation.

Recommendations

83 In developing the detailed budget for biosecurity functions, the Government should recognise the need for a significant enhancement in senior management capacity in the National Biosecurity Authority.

84 The National Biosecurity Authority should review staff training and rotation practices to ensure that they provide an optimum balance between development of broadly skilled officers, the deepening of expertise through experience in a role and the avoidance of regulatory failure through officers developing inappropriately close relationships with the clients they are servicing.

10 INTERNATIONAL BENCHMARKING

10.1 Introduction

As part of its consultation program, the Panel met with a number of trading partners to seek their views on Australia's biosecurity system. The Panel also sought information from trading partners on the systems they use to manage risks across the biosecurity continuum. Discussions were held with government officials and business representatives in New Zealand, North America and Europe. The Panel also met with senior World Trade Organization staff and representatives from the World Trade Organization Member countries in Geneva. Additional meetings were held with overseas embassy officials based in Australia and a number of submissions were received from foreign governments (see Appendix D for a complete list of submissions received and Appendix E for a complete list of consultations with international stakeholders).

The terms of reference state that 'In undertaking this review, the Panel should consult with relevant domestic and international stakeholders and, where appropriate, benchmark Australia's arrangements in an international quarantine context.'

The Panel sought to obtain comparable information on elements where trading partners were particularly critical of Australia's system, for example, the length of time taken to complete an Import Risk Analysis and the perception that Australia is more conservative than its Appropriate Level of Protection would imply.

Some of the variations which exist in the biosecurity systems and pest and disease status of each country make it difficult to conduct benchmark analysis in the normal sense of the word. None of the countries consulted were able or willing to provide statistical data on, for example, the length of time taken to respond to market access requests or conduct import risk assessments. Quantitative evaluation of performance is impractical. Nevertheless the Panel was impressed by the genuinely helpful approach taken by international authorities during its consultations. The Panel used the information it gathered to carry out a qualitative comparison of particular elements of Australia's

system with a number of trading partners. Some differences have already been alluded to earlier in the report.

Differences in the biosecurity arrangements of Australia's trading partners typically reflect their different endemic pest and disease status, the extent of land borders with neighbouring countries and capability levels. Australia and New Zealand are similar in that they do not share land borders with other countries, are geographically isolated and, largely as a consequence, have a favourable pest and disease status. Other developed island nations, such as the United Kingdom, have histories of large trading volumes and the regular movement of people that pre-date the development of even the most rudimentary biosecurity protocols. Continental nations have land borders that are inevitably open to the movement of some pests and diseases. Developing countries often have not had the biosecurity capability necessary to analyse and manage risks. These factors have variously influenced the pest and disease status of our neighbours and trading partners and the relative emphasis they place on border controls or the capacity to identify and respond to pest and disease outbreaks quickly.

The following sections examine the approach adopted by other countries in:

- articulating the Appropriate Level of Protection;
- developing and implementing biosecurity measures; and
- structuring agencies responsible for biosecurity.

10.2 Appropriate Level of Protection

A nation's Appropriate Level of Protection is fundamental to the World Trade Organization's SPS Agreement, as described in Chapter 5. It is therefore surprising that few countries attempt to articulate their Appropriate Level of Protection with any precision, including those that criticise Australia for ambiguity or lack of clarity in this respect.

Some countries are currently examining the definition but others view the Appropriate Level of Protection as being circularly defined by what they do to manage risk. As discussed in Chapter 5, Australia has used the term 'very low but not zero'. Other countries refer to 'negligible level' or 'reasonable certainty of no harm'.

The European Commission described its Appropriate Level of Protection in a recent publication as follows:

> 'For serious threats to human health and the rural economy, we must strive to reduce the risk to a negligible level.' (European Commission 2007, p. 12)

During the World Trade Organization challenge brought against Japan by the United States on measures affecting the importation of apples, Japan expressed its Appropriate Level of Protection as:

> 'the level of protection that is achieved by the import prohibition.' (World Trade Organization Dispute Settlement Body 1998, p. 95)

In 2003, despite a comprehensive review leading to the adoption of a 'Biosecurity Strategy for New Zealand', New Zealand did not take the opportunity to articulate its Appropriate Level of Protection. More recently, in the context of a review of the BSE policy for New Zealand the following comment was made:

> 'No country has expressed an explicit appropriate level of protection (ALOP) for the prevention of disease in humans, including vCJD. The levels of control taken by various countries suggest implicit ALOPs.' (Hellstrom 2005, p. 22)

The Panel discussed the subject with Ms Gretchen Stanton, Secretary of the SPS Committee at the World Trade Organization. She confirmed that few countries attempt to define their Appropriate Level of Protection, noting that a proxy is the measures actually applied to manage risk.

10.3 Developing and implementing biosecurity measures

Although countries operate different biosecurity systems, there are two distinct processes used for assessing market access requests. The first, often referred to as the negative list approach, permits the importation of commodities unless they are listed as prohibited. This approach tends to be adopted by countries with a long history of endemic or recurrent animal and plant pests and diseases. Such countries have less need to be concerned about exotic pest and disease threats and are confident in their ability to identify threats when they occur.

For example, the European Union's regulatory system for the importation of plants and plant products is based upon the European Commission's *Plant Health Directive*. The Directive sets out measures to prevent the introduction into, and spread within the European Union of serious pests and diseases of plants and plant products. Except where otherwise identified in the Directive, all plant commodities are permitted entry. This aligns with the European Union's generic approach to import risk assessments as a number of significant pests and diseases are endemic in parts of the European Union such as bovine tuberculosis, BSE and bluetongue virus in relation to animals, and Mediterranean fruit fly, fire blight and Dutch elm disease in relation to plants. The European Union initiates assessments using the basic standards and guidelines set out by international

standard setting bodies, the OIE and International Plant Protection Convention for notifiable pests and diseases. Assessments of market access requests are then based on the ability of the product (or exporting country) to meet the existing policy directive.

Government representatives in the United Kingdom told the Panel that Australia's relatively heavy emphasis on the border contrasts with that in the United Kingdom where the focus is on being able to respond quickly to contain pest and disease outbreaks. This reflects the fact that the United Kingdom has no trade border with its European Union neighbours. Representatives from the European Commission informed the Panel that they mitigated risks by shifting responsibility to the country of origin, with border controls being a secondary safeguard.

The second approach, often referred to as the positive list approach, lists commodities for which importation is permissible—all other commodities are barred. This approach is typically used by countries which have a relatively short history of exposure to exotic pests and diseases, and/or a history of successful eradication of incursions. These countries, being relatively free from a broad range of pests and diseases, face a greater number of biosecurity risks from imports. The positive list approach allows these countries to assess risks and control importation in a structured way, particularly in response to market access requests.

Australia implemented a positive list approach in the 1930s following increased volumes of trade in commodities which could provide pathways for the introduction of pests and diseases. Other countries using the positive list approach include the United States, New Zealand, and Japan. These countries conduct Import Risk Analyses at an individual commodity level to ensure there are sufficient measures to mitigate the risks posed.

The United States Codes of Federal Regulations 7CFR319.56 (fruits and vegetables) and 9CFR93.101 (animals, birds, and poultry, and related products) prohibit or restrict importation of commodities into the United States from certain parts of the world to prevent the introduction of pests and diseases that are new to, or not widely distributed within, the United States. The regulations list those commodities that are permitted entry and the specific sanitary and phytosanitary measures that must be applied to them.

Similarly, New Zealand's *Biosecurity Act 1993* allows for 'import health standards' which specify risk management requirements for 'risk goods'. There is no requirement to issue an import health standard in cases where risks from importation cannot be effectively managed. The importation of risk goods without an import health standard is prohibited.

Although the Panel heard complaints from trading partners regarding the timeliness of Australia's Import Risk Analysis process, no other country provided information which demonstrated it operated a more timely process. The Panel noted that there are numerous cases where market access requests for Australian agricultural exports have taken well over a decade to finalise, for example, Australia's request for access for bees to the United States and the request to the European Commission for recognition that many Australian regions are free of bluetongue disease and therefore should be allowed to export ruminant animals to the European Union. Maintaining access to some markets has also been problematic for some Australian agricultural products. For example, after 15 years of export of stone fruit and cherries to Taiwan without any detection of pests within exports, access was removed in January 2006 when Queensland fruit fly was moved from a precautionary pest to a prohibited pest. Trade has still not been re-established.

The Panel noted that a significant number of specific trade concerns have been made against Australia in the World Trade Organization's SPS Committee meetings (see Table 7). It is not uncommon for biosecurity measures that are adopted to become a source of disagreement between countries. It could be observed that most of the complaints by World Trade Organization members at the SPS Committee are against the major importing countries with higher valued markets such as the European Union and the United States. Due to their value, access to these markets has become the goal for many exporting countries and consequently their import standards become, by default, international benchmarks. However, complaints within the World Trade Organization may not be an accurate reflection of the validity of a country's measures as, in many cases, including those involving Australia, such disagreements may also be discussed and resolved bilaterally outside the World Trade Organization. The Panel also heard positive acknowledgement of the transparent nature of Australia's biosecurity arrangements.

Australia's trading partners acknowledge the recent changes Australia has made to the Import Risk Analysis process, including capping the timeframes for an Import Risk Analysis within legislation. They note that Australia is the only World Trade Organization Member to make such a commitment. This desirable measure should go a long way to responding to the claims of excessive time taken to undertake an Import Risk Analysis. Unless there is a significant increase in resources, however, many import access requests will continue to spend a long time waiting for an Import Risk Analysis to be commenced, a scepticism noted by several overseas representatives to the Panel.

Table 7	Number of specific trade concerns raised against each WTO member

WTO member country	No.[a]
European Union[b]	46
United States	22
Japan	20
Australia	16
China	12
Korea	11
Brazil	10
India	9
Argentina, Canada, Indonesia, Panama	7
Chile, Czech Republic, Mexico, Venezuela	5
Chinese Taipei, El Salvador, Israel, Poland, Slovak Republic, Spain	4
Bolivia, Honduras, New Zealand, Romania, Turkey	3
Belgium, Croatia, Cuba, France, Germany, Guatemala, Hungary, the Philippines, South Africa, Switzerland, Thailand	2
Austria, Bahrain, Barbados, Colombia, Costa Rica, Dominican Republic, Egypt, Greece, Iceland, Italy, Kuwait, Malaysia, Netherlands, Norway, Oman, Qatar, Singapore, Slovenia, Trinidad and Tobago, United Arab Emirates, United Kingdom, Uruguay	1

[a] As of December 2007, some concerns identify measures maintained by various members, so the total of this Table exceeds the total number of concerns raised.
[b] Where the concern relates to a measure maintained by an individual EU member State and not the EU as a whole, these are included elsewhere in Table 7.
Source: Stanton 2008

10.4 Structure of agencies

Countries have used a range of structural approaches to manage biosecurity risks across the continuum.

The United Kingdom, United States and Canada have adopted a multiple agency approach to managing risks across the biosecurity continuum, including devolving the management of border activities to a single, multi-functional border agency, albeit for different reasons. In the United Kingdom, a government-wide directive in 2003 to separate policy development from

service delivery saw Her Majesty's Revenue and Customs take on responsibility for protecting the border from all threats, including biosecurity risks, while the Animal Health Agency is responsible for biosecurity behind the border. The Health and Safety Executive provides regulatory oversight of the major biosecurity research laboratories. Policy development and direction is provided by the Department of Environment, Food and Regional Affairs. Her Majesty's Revenue and Customs performs interventions at the border based on risk profiling information for various countries supplied by the Department of Environment, Food and Rural Affairs. Pre-border assessments and audits for products entering the United Kingdom are conducted by the European Commission's Food and Veterinary Office.

The United States integrated border security functions into the Department of Homeland Security following 11 September 2001 when a high emphasis was placed on border integrity for counter-terrorism purposes. The United States Department of Agriculture and the United Kingdom's Department of Environment, Food and Rural Affairs maintain responsibility for certification, risk assessments and intelligence. They are also the lead agencies for emergency preparedness, national responses to post-border incursions, and the monitoring and surveillance of endemic pests and diseases. The Panel found that many of these structural changes were adopted as a result of a shift in policy focus from environmental and economic concerns to human health and/or food safety concerns.

Few people involved in biosecurity operations in the United Kingdom or the United States were convincingly positive about these structural changes. Most regard the single border agency approach as losing a valuable link between risk management strategies, priorities and measures across the biosecurity continuum to mitigate risk. In the Panel's view, this disjunct between the pre-border and post-border elements of the biosecurity continuum is at odds with the integrated **One Biosecurity: a working partnership** approach it believes is essential for Australia.

In addition the Panel was told that, even with the best of intentions, it is difficult to maintain a timely flow of information between border agencies whose principal focus is not biosecurity, and the agencies responsible for developing and implementing risk management measures. It is clear to the Panel that the single border agency in the United States (the Department of Homeland Security) placed its primary focus on security, narcotics and illegal immigrants rather than biosecurity. This was encapsulated by a line the Panel heard during its consultations describing relative risk priorities 'guns, drugs and thugs - not bugs'.

Canada has also adopted a similar structural approach to managing biosecurity risks to the systems used by the United States and the United Kingdom.

Three agencies within Canada maintain responsibility for managing various elements of the biosecurity continuum. These agencies are the Canadian Food Inspection Agency, the Canada Border Services Agency and the Public Health Agency of Canada. In December 2003, the Canada Border Services Agency took responsibility for the initial import inspection of food, agricultural inputs and agricultural products. The Canadian Food Inspection Authority sets the policies and regulations for these importations and they are enforced by the Canada Border Services Agency at Canadian entry points. As required, shipments are referred to the Canadian Food Inspection Agency for follow-up action. The Panel was told during consultations that this structural approach was implemented to reflect the Canadian Food Inspection Agency's priority of food safety and the migration from management of risks at the border to a more social and environmental approach with less emphasis on economic factors. The Canadian Food Inspection Agency is also the lead agency for the national management of post-border incursions affecting the food chain. However, the Public Health Agency of Canada takes responsibility for managing the response to outbreaks of zoonotic diseases.

In contrast to the approaches taken by the United States, United Kingdom and Canada, New Zealand has adopted the approach of a single agency managing the biosecurity system for animal and plant health. In July 2007, New Zealand integrated two former business groups within the Ministry of Agriculture and Fisheries—Biosecurity New Zealand and the Ministry of Agriculture and Fisheries Quarantine Services—to establish Biosecurity New Zealand. Biosecurity New Zealand manages all elements of the continuum from the setting of policy, to intervening to prevent harmful organisms crossing and establishing within New Zealand's borders, and on to post-border monitoring and surveillance to reduce the effects of pests and diseases already established.

The Panel considered the single agency management of the whole continuum approach taken by New Zealand to be the most analogous to the structural direction Australia should take to achieve the Panel's vision of **One Biosecurity: a working partnership**.

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APPENDIX B
TERMS OF REFERENCE

Review of Quarantine and Biosecurity

Australia's biosecurity and quarantine systems operate on a science-based policy of managed risk, with:

- an Appropriate Level of Protection (ALOP) of very low but not zero risk;
- a 'continuum of quarantine' so that intervention measures progressively reduce risk through pre-border, border and post-border activities; and
- responsibility shared between the different layers of government, importers, exporters and the community.

These systems must serve to protect Australia's pest and disease status, consistent with community expectations and international obligations.

As such, it is vital that all operational arrangements are appropriate, effective and efficient. This includes the resourcing, legal, administrative and institutional frameworks that underpin, for example:

- animal and plant risk assessment;
- targets for quarantine intervention;
- import inspections and certification;
- incursion response mechanisms; and
- roles of and relationships between the Australian, state and territory governments and the community.

In this context, the Australian Government has appointed an independent Panel to review current biosecurity and quarantine arrangements, including but not limited to the functions of Biosecurity Australia and the Australian Quarantine and Inspection Service.

Specifically, the Panel is to provide recommendations on the appropriateness, effectiveness and efficiency of:

1) current arrangements to achieve Australia's ALOP;
2) public communication, consultation and research and review processes;
3) resourcing levels and systems and their alignment with risk in delivering requisite services; and

4) governance and institutional arrangements to deliver biosecurity, quarantine and export certification services.

In undertaking this review, the Panel should consult with relevant domestic and international stakeholders and, where appropriate, benchmark Australia's arrangements in an international quarantine context. The Panel should also have regard for the 1996 Nairn Review into quarantine, and other relevant reports.

The Department of Agriculture, Fisheries and Forestry will provide secretariat services, including appropriate scientific, technical, policy and administrative support.

The Panel will provide a final report, including recommendations, to the Minister for Agriculture, Fisheries and Forestry by 30 September 2008.

APPENDIX C
THE QUARANTINE AND BIOSECURITY REVIEW PANEL

Mr Roger Beale AO (Chair)
Roger Beale is a Senior Associate with the Allen Consulting Group. He has extensive experience at senior levels in national economic and environment policy, as well as in corporate governance in the private and public sectors. He held Commonwealth department head level posts in the environment, transport and prime ministerial portfolios, and is currently Chair of the ACT Electoral Commission, Chair of the Advisory Board of the National Institute of Governance and a director of a number of companies.

Dr Jeff Fairbrother AM
Jeff Fairbrother is a former Executive Director of the Australian Poultry Industries Association and the Australian Chicken Meat Federation. He has represented industry in a range of government and industry committees and has been heavily involved with the development of regulatory policies on animal health and welfare, food safety standards and quarantine and biosecurity matters. He is currently Chairman of the Australian Poultry Cooperative Research Centre.

Mr Andrew Inglis AM
Andrew Inglis is a South Australian grain farmer, former Deputy Chairman of the Quarantine and Exports Advisory Council and a member of the 1996 'Nairn Review' of quarantine. He is the current Chairman of the Future Farm Industries Cooperative Research Centre and is a former Chairman of Plant Health Australia. He has held a variety of positions in Australia's grain industry and was a member of the National Petroleum Advisory Committee and the National Dryland Salinity Board.

Mr David Trebeck
David Trebeck is a director of several companies, including Graincorp, PrimeAg and Maersk Australia. He has dryland farming interests in the Lachlan catchment in south western NSW. He is a former commissioner of the National Water Commission, a member of the Agriculture and Food Policy Reference Group which prepared a long term policy report for the Agriculture Minister in 2005, a former managing director of ACIL Consulting, and former Deputy Director of the National Farmers Federation.

APPENDIX D
SUBMISSIONS RECEIVED

Government and business
A3P – Australian Plantation Products and Paper Industry Council
ABB Grain Ltd
AgForce
Agribusiness Research and Management Pty Ltd
Animal Health Alliance
Animal Health Australia
Animal Health Australia Industry Forum
Animals Australia
Apple and Pear Australia Ltd
Austral Fisheries Pty Ltd, WA Seafood Exporters Pty Ltd, Vee Jay Fisheries and Austfish Pty Ltd (joint submission)
Australasian Plant Pathology Society Inc
Australasian Regional Association of Zoological Parks and Aquaria
Australian Almonds
Australian Banana Growers' Council Inc
Australian Biosecurity Cooperative Research Centre for Emerging Infectious Disease
Australian Chicken Growers' Council Limited
Australian Chicken Meat Federation Inc
Australian Dairy Industry Council Inc and Dairy Australia (joint submission)
Australian Food and Grocery Council
Australian Government Department of the Environment, Water, Heritage and the Arts
Australian Government Department of Foreign Affairs and Trade
Australian Government Department of Resources, Energy and Tourism
Australian Grains Industry Alliance
Australian Honey Bee Industry Council
Australian Horse Industry Council
Australian Horticultural Exporters' Association
Australian Institute of Agricultural Science and Technology
Australian International Movers Association
Australian Livestock Exporters' Council and Australian Livestock Export Corporation Limited
Australian Lot Feeders' Association
Australian Maritime College
Australian Meat Industry Council
Australian Pork Limited

Australian Prawn Farmers Association
Australian Racing Board Limited
Australian Registry of Wildlife Health
Australian Seed Federation
Australian Shipowners Association
Australian Spatial Information Business Association
Australian Veterinary Association
Australian Wildlife Health Network
Australian Wool Education Trust
Australian Wool Testing Authority Ltd
Barwon Game Meats
Benalla Airport
Board of Airline Representatives of Australia
Bromeliad Society of South Australia
Cattle Council of Australia
Century Orchards
Cherry Growers of Australia Inc
Community and Public Sector Union
Complete Agricultural Consulting Services
Confectionery Manufacturers of Australasia Limited
Conference of Asia Pacific Express Carriers
Consumers' Federation of Australia
Coolmore Australia
Cooperative Research Centre for National Plant Biosecurity Ltd
Council for the National Interest
Council of Australasian Weed Societies Inc
Council of Heads of Australasian Herbaria
Cooperative Research Centre for Australian Weed Management
CropLife Australia Limited
Cruise Lines International Association, Inc
CSIRO
Customs Brokers and Forwarders Council of Australia Inc
DigsFish Services Pty Ltd
Fertilizer Industry Federation of Australia
Fletcher International Exports Pty Ltd
Food and Beverage Importers Association
Food Standards Australia New Zealand
Frog Decline Reversal Project, Inc. and the Cairns Frog Hospital
Fruit Growers South Australia
Fruit Growers Tasmania Inc
Future Farm Industries Cooperative Research Centre
Geodis Wilson Australia Pty Ltd
Geoff Neumann and Associates Pty Ltd
GrainCorp Limited
Grow SA

Growcom
Hans Continental Smallgoods
Harness Racing Australia Inc
Haverick Meats Pty Ltd
Horticulture Australia Council
Horticulture Australia Limited
Horticulture Plant Health Consultative Committee
Inchcape Shipping Services
Industry Working Group on Quarantine
International Meat Trade Association
Invasive Animals Cooperative Research Centre
Invasive Species Council Australia
Jubilee Almonds
The Maritime Union of Australia
Meat and Livestock Australia
Melbourne Airport
National Animal Health Laboratory Strategy Reference Group
National Aquaculture Council Inc
National Association of Testing Authorities, Australia
National Civic Council - President
National Civic Council - Vice President
National Civic Council (NSW)
National Farmers' Federation
National Herd Improvement Association of Australia Inc
National Vine Health Steering Committee
New South Wales Government
Nordiko Quarantine Systems Pty Ltd
Northern Co-operative Meat Company Ltd
Northern Territory Government
NSW Apiarists' Association
NSW Council of Freshwater Anglers Inc
NSW Farmers' Association
NSW Food Authority
Nursery and Garden Industry Australia
Oz Adeniums
Pacific Seeds Pty Ltd
Penfold, Liz MP
Perth Zoo
Pine Creek Fish Hatchery
Plant Health Australia
Pollination Australia
Ports Australia
Priam Australia Pty Ltd and Zoos Victoria
Primo Smallgoods Australia, KR Castlemaine Foods Pty Ltd and Ridder Fresh Smallgoods (joint submission)

Princess Cruises, Cunard Line
Productivity Commission
Qantas
Quarantine and Exports Advisory Council
Quarantine and Inspection Resources Pty Ltd
Queensland Citrus Growers Inc
Queensland Farmers' Federation
Queensland Government
Queensland Seafood Industry Association Inc
Royal Caribbean Cruises Ltd
Rural Conservation Service
Rural Industries Research and Development Corporation
Safe Food Production Queensland
Seafood Importers Association of Australasia
Seafood Services Australia
Sheepmeat Council of Australia
Shipping Australia Limited
Sontari Foods
South Australian Government
South West Enviro Centre Inc
Stock Feed Manufacturers' Council of Australia
Sydney Airport Corporation Limited
Sydney Fish Market Pty Ltd
Tasmanian Farmers and Graziers Association
Tasmanian Freight Logistics Council
Tasmanian Government
Tasmanian Salmonid Growers Association Ltd
Toolangi Certified Strawberry Runner Growers Cooperative and Victorian Strawberry Industry Certification Authority
Tourism and Transport Forum
Tradegate Australia Limited
Vanlai Customs
Veterinary Advisory Services
Veterinary Manufacturers and Distributors Association Ltd
Victorian Farmers Federation
Victorian Government
Victorian Wine Industry Association
WA Hygienic Bees
Western Australian Farmers Federation
Western Australian Fruit Growers' Association
Western Australian Government
Western Australian Pork Producers' Association
Western Australian Vine Improvement Association
Wildlife Disease Association
Winemakers' Federation of Australia
WWF - Australia

Individuals	
Ahearn, Laura	McKenna, Keith
Auty, John	Mitchell, Andrew
Boland, Pat	O'Brien, Edward
Bowtell, B. L	O'Callaghan, Des
Brown, Graham	Parkin, John
Byrd, David	Pedersen, Peter
Byrden, J	Phillips, Peter
Carle, Alan	Reilly, Robert
Carter, Edward	Rogers, Nathan
Caruana, Guy	Schwinghamer, Mark
Conkey, Howard	Spence, David and Lawrence, Peter
D'Elia, Bruno M	Stanton, Meryl
Drew, Karen	Steel, Robert
Franklin, James	Teese, Colin
Grave, Warwick	Thomas, Anthony
Greenslade, Penelope	Turner, Rosanne
Hankins, Greg	Wallace, Jane
Hansen, Antony	Walsh, David
Hilder, Chris	Warren, Kristin
Kearney, Robert	Whitten, Max
LeBrun, Marlene	Widders, Phillip
Magree, Brian	Windsor, Richard
McDonald, Peter	

Foreign governments
China Administration of Quality Supervision, Inspection and Quarantine
European Commission Directorate-General for Trade
India Department of Commerce
Japan
The Philippines Department of Agriculture - Policy, Planning, Research and Development
United States of America United States Department of Agriculture

APPENDIX E STAKEHOLDER CONSULTATIONS

Government and business
A3P - Australian Plantation Products and Paper Industry Council
AgForce
Agriculture Protection Board of Western Australia
Animal Health Australia
Apple and Pear Australia Ltd
AQIS Aviation Industry Consultative Committee
AQIS Biologicals Consultative Group
AQIS Grains Industry Consultative Committee
AQIS Horticulture Exports Consultative Committee
AQIS Organic Industry Export Consultative Committee
AQIS/Industry Cargo Consultative Committee
AusAID
AusBIOSEC Steering Group
Australasian Plant Pathology Society Inc
Australasian Regional Association of Zoological Parks and Aquaria
Australia Post
Australian Almonds
Australian Banana Growers' Council Inc
Australian Barley Board
Australian Biosecurity Cooperative Research Centre for Emerging Infectious Diseases
Australian Bureau of Agricultural and Resource Economics
Australian Centre of Excellence for Risk Analysis
Australian Customs Service
Australian Food and Grocery Council
Australian Government Attorney-General's Department
Australian Government Department of Agriculture, Fisheries and Forestry
Australian Government Department of the Environment, Water, Heritage and the Arts
Australian Government Department of Finance and Deregulation
Australian Government Department of Foreign Affairs and Trade
Australian Government Department of Health and Ageing

Government and business (continued)
Australian Government Department of Immigration and Citizenship
Australian Government Department of Infrastructure, Transport, Regional Development and Local Government
Australian Government Department of the Prime Minister and Cabinet
Australian Government Department of the Treasury
Australian Government Solicitor
Australian Honey Bee Industry Council
Australian Horse Industry Council
Australian Institute of Agricultural Science and Technology
Australian Livestock Exporters' Council
Australian Maritime College
Australian Meat Industry Council
Australian Pork Limited
Australian Prawn Farmers Association
Australian Public Service Commission
Australian Quarantine and Inspection Service
Australian Registry of Wildlife Health
Australian Seed Federation
Australian Veterinary Association
Australian Wildlife Health Network
Australian Wool Testing Authority Ltd
Biosecurity Australia
Chicken Meat Federation of Australia
Community and Public Sector Union
Cooperative Research Centre for National Plant Biosecurity Ltd
Council of Australasian Weed Societies Inc
CSIRO
Custom Brokers and Forwarders Council of Australia Inc
Dairy Australia
Dairy Export Industry Consultative Committee
Dairy Farmers Australia
Dairy Food Safety Victoria
Department of Agriculture and Food, Western Australia
Department of Environment and Climate Change, New South Wales
Department of Environment and Conservation, Western Australia
Department of Fisheries, Western Australia
Department of Natural Resources and Water, Queensland
Department of Premier and Cabinet, New South Wales
Department of Premier and Cabinet, Queensland
Department of Primary Industries, New South Wales
Department of Primary Industries, Victoria
Department of Primary Industries and Fisheries, Queensland
Department of Primary Industries and Resources, South Australia
Department of Primary Industries and Water, Tasmania

Government and business (continued)
Department of Primary Industry, Fisheries and Mines, Northern Territory
Department of Sustainability and Environment, Victoria
Department of Territory and Municipal Services, Australian Capital Territory
Department of Water, Land and Biodiversity Conservation, South Australia
Eminent Scientists Group
Environmental Protection Agency, Queensland
Export Wild Game Meat Industry Consultative Committee
Fletcher International Exports Pty Ltd
Food and Beverage Importer Association
Food Standards Australia New Zealand
Forest Products Commission, Western Australia
Fruit Growers Tasmania Inc
Future Farms Industries Cooperative Research Centre
Geodis Wilson Australia Pty Ltd
GrainCorp
Growcom
Homeland and Border Security Review
Horticulture Australia Limited
Horticulture Australia Limited members
Inchcape Shipping Services
Invasive Animals Cooperative Research Centre
Invasive Species Council Australia
Livestock Export Industry Consultative Committee
Hon Tony Burke MP, Minister for Agriculture, Fisheries and Forestry
Hon David Llewellyn MP, Minister for The Tasmanian Department of Primary Industries and Water
The Maritime Union of Australia
Meat and Livestock Australia
National Aquaculture Council Inc
National Farmers' Federation
Northern Territory Horticultural Association
NSW Farmers' Association
NSW Food Authority
Nursery and Garden Industry Australia
Pine Creek Fish Hatchery
Plant Health Australia
Pollination Australia
Ports Australia
Post Entry Plant Industry Consultative Committee
PrimeSafe
Productivity Commission
Quarantine and Exports Advisory Council
Queensland Farmers' Federation
Queensland Health

Government and business (continued)	
Queensland Seafood Industry Association Inc	
Review of Export Policies and Programs	
Royal Caribbean Cruises Ltd	
Rural Industries Research and Development Corporation	
Safe Food Production Queensland	
SAFEMEAT	
Seafood Importers Association of Australasia	
Tasmanian Farmers and Graziers Association	
Tasmanian Salmonid Growers Association Ltd	
Tassal Group	
Victorian Farmers Federation	
Walgett Game Meat Processing Works	
Western Australian Farmers Federation	
WWF - Australia	

Individuals	
The Hon Ian Callinan AC	Dr Gardner Murray
Mary Harwood	Peter Shergold AC
Joanna Hewitt AO	Meryl Stanton PSM
Miller, Russell	

International stakeholders
European Union
Directorate-General for Agriculture and Rural Development
Directorate-General SANCO
Directorate-General Trade
European Commission Agriculture and Rural Development Committee
Neil Parish, Member of the European Parliament for South West England and Gibraltar, and Chairman of the Committee on Agriculture and Rural Development
Permanent Representative of Denmark to the European Union
Permanent Representative of the Federal Republic of Germany to the European Union
Permanent Representative of the Republic of Ireland to the European Union

International stakeholders (continued)
World Trade Organization
The Panel met with Permanent Representatives of the following WTO Members: Brazil Canada Chile China European Union Indonesia Republic of Korea Mexico Pacific Island Forum Pakistan Peru Philippines Taiwan Thailand United Arab Emirates United States of America
World Trade Organization
United Kingdom
Her Majesty's Revenue and Customs
United Kingdom Department of Environment, Food and Rural Affairs
United Kingdom Health and Safety Executive
United States of America
Department of Homeland Security - Office of Health Affairs
United States Department of Agriculture
United States Department of Agriculture - Animal and Plant Health Inspection Service
United States Department of Agriculture - The Food Safety Inspection Service
United States Department of State
United States Food and Drug Administration
United States Trade Representative
American Farm Bureau Federation
American Seed Trade Association
National Chicken Council
National Corn Growers Association
National Pork Producers Council
Western Growers
Acord, Bobby (former Head of Animal and Plant Health Inspection Service)
Masters, Barbara (former Head of the Food Safety Inspection Service)

International stakeholders (continued)
Canada
Canadian Food Inspection Agency
New Zealand
Hon Jim Anderton, Minister of Agriculture and Minister of Biosecurity
Hon David Carter, Agriculture Spokesman, New Zealand National Party
Ministry of Agriculture and Forestry and Biosecurity New Zealand
Ministry of Foreign Affairs and Trade
Minter Ellison Rudd Watts
Federated Farmers of New Zealand
Representative missions to Australia
High Commission of Malaysia
Embassy of the Philippines
Royal Thai Embassy
Taipei Economic & Cultural Office in Australia